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## Introduction

### IFC Export for Revit 2013

Revit 2013 ships with IFC support. Users can download upgraded versions of both the exporter and the exporter UI from either the Autodesk Exchange Apps store or from SourceForge. In addition, the source code for the exporter and UI can also be downloaded from SourceForge. The certified version for Autodesk Revit Architecture 2013 is v2.8.1 for the exporter, and v1.8.1 for the UI. The versions of the exporter and UI from the app store contain access to help documentation; additional help can be found at the Autodesk and SourceForge Wikis. Although there is currently no automatic update of the exporter and UI, all users that download the applications from the Autodesk Exchange Apps store will receive an update email with links to the current version(s).

SourceForge wiki: <https://sourceforge.net/p/ifcexporter/home/Home/>

## Testlist

Name test	concepts total	manually checked		
				
BeamColumn 04 / 2x3	47	23	1	23
Beam_01 / 2x3	10	6	4	
Beam_02 / 2x3	12	9		3
Beam_03 / 2x3	6	3	1	2
CharsetTest-01A / 2x3	2	2		
Column 01 / 2x3	11	6	5	
Column_02 / 2x3	6	3		3
CoveringFurnishing-01 / 2x3	57	34	3	20
CurtainWall-01 / 2x3	29	19	5	5
Door 01 / 2x3	22	20	1	1
DoorWindow-02 / 2x3	11	7	4	
Grid 01 / 2x3	11	9	2	
Member 01A / 2x3	10	9		1
Pile 01 / 2x3	19	11	1	7
RampRailing-01 / 2x3	28	19	5	4
RandomArch-X1 / 2x3	17	10		7
RandomArch-X2 / 2x3	10	8		2
RandomArch-X3 / 2x3	9	8	1	
RandomArch-X4 / 2x3	10	6		4
RandomArch-X5 / 2x3	13	13		
Roof 01 / 2x3	15	8	1	6
Roof 02 / 2x3	12	10	1	1
Site 01 / 2x3	14	11	1	2
Site 02 / 2x3	13	12	1	
Slab 01A / 2x3	9	8	1	
Slab 02A / 2x3	24	9	2	13






Supported



Restricted

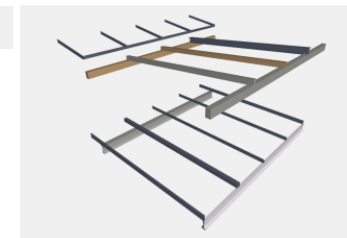


Not Supported




Name test	concepts total	manually checked		
				
Space 01A / 2x3	12	9	1	2
StairSlab-01 / 2x3	19	16	2	1
UnitTest-01A / 2x3	3	2	1	
Wall 01 / 2x3	20	13	3	4
Wall 02 / 2x3	14	7	1	6
WallSlab 03 / 2x3	32	27		5
WallStandardCase 01A / 2x3	15	11	3	1
WallStandardCase 02A / 2x3	11	10	1	
WallStandardCase 03A / 2x3	9	8		1
WallStandardCase 04A / 2x3	8	6	1	1
Window 01 / 2x3	22	13	4	5

## Concepts

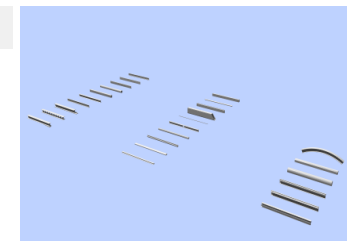
## Beam\_01 / 2x3



103 IfcBeam	company statement		Beam_01 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■	This test case required the use of specific IfcProfileDefs for the definitions of extrusions. Revit 2013 currently supports IfcArbitraryProfileDef, IfcShapeProfileDef, IfcRectangularProfileDef, IfcCircleProfileDef and IfcCircleHollowProfileDef on export.	
030-6-2 Geometry Clipping	■	Revit 2013 exports some geometries that are conceptually clipped extrusions as Breps.	
040 Presentation			
040-1 Geometric Presentation	■		
040-2 Material Presentation	■		
120 Spatial Containment	■		

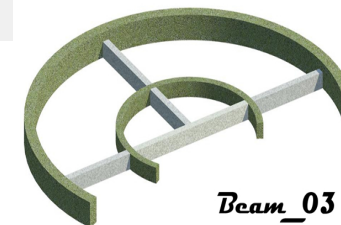
200 Material 200-1 Single Material	 In this test case, there are instructions to create a material with two different colors. In Revit 2013, this becomes two materials with two unique names. The restriction comes from having the second name.
210 Property Set 210-1 Property Set IFC Common	 In this test case, we were required to create non-load bearing beams. In Revit 2013, all beams are load bearing.
General	<i>company statement</i> <span style="float: right;"><i>Beam_01 / 2x3</i></span>
_G4 Remarks	

## Beam\_02 / 2x3



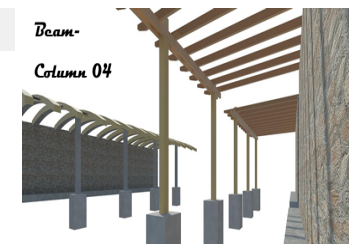
103 IfcBeam	company statement		Beam_02 / 2x3
010 Naming	■		
030 Geometry			
030-2 Geometry Axis	■		
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-2 Geometry Clipping	■		
030-6-5 Geometry Explicit	■		
050 CAD Layer	■		
070 Voiding			
070-1 Voiding Geometry Explicit	■	In this test case, the beams with openings were exported as BReps.	
070-2 Voiding Geometry Mapped	■	In this test case, the beams with openings were exported as BReps.	
070-3 Voiding Geometry SweptSolid	■	In this test case, the beams with openings were exported as BReps.	
120 Spatial Containment	■		
200 Material			
200-1 Single Material	■		
General	company statement		Beam_02 / 2x3
_G4 Remarks	■		

## Beam\_03 / 2x3



103 IfcBeam	company statement	Beam_03 / 2x3
<p>030 Geometry</p> <p>030-1 Geometry Box</p> <p>030-2 Geometry Axis</p> <p>030-6 Geometry Body</p> <p>030-6-1 Geometry SweptSolid</p> <p>030-6-2 Geometry Clipping</p>	<p>■ This concept was optional for this test case, and not included in the Revit 2013 export.</p> <p>■ Revit 2013 will occasionally place the beam axis of a sloped beam on the wrong plane. This is a limitation of the current export.</p> <p>■</p> <p>■ Revit 2013 exports some geometries that are conceptually clipped extrusions as Breps.</p>	
<p>300 Type</p> <p>300-5 Type Property Set</p>	<p>■</p>	
General	company statement	Beam_03 / 2x3
<p>_G4 Remarks</p>	<p>■</p>	















## BeamColumn 04 / 2x3













103 IfcBeam	company statement		BeamColumn 04 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid		■	
030-6-9 Geometry Mapped		■	Revit 2013 exports beams as extrusions or BReps.
070 Voiding			
070-1 Voiding Geometry Explicit		■	In this test case, the beams with openings were exported as BReps.
070-2 Voiding Geometry Mapped		■	In this test case, the beams with openings were exported as BReps.
070-3 Voiding Geometry SweptSolid		■	In this test case, the beams with openings were exported as BReps.
130 Grouping			
130-1 Grouping General		■	This concept was optional for this test case, and not included in the Revit 2013 export.
200 Material			
200-1 Single Material		■	



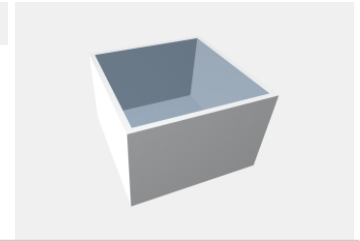
210 Property Set	
210-1 Property Set IFC Common	■
210-3 Property Set User Defined	■ Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base export.
300 Type	
300-1 Type Geometry	■ Revit 2013 does not currently export IfcBeamType.
300-2 Type Naming	■ Revit 2013 does not currently export IfcBeamType.
300-3 Type Material	■ Revit 2013 does not currently export IfcBeamType.
300-5 Type Property Set	■ Revit 2013 does not currently export IfcBeamType.
104 IfcColumn	<i>company statement</i> <i>BeamColumn 04 / 2x3</i>
001 GUIDs	■
002 History	■
010 Naming	■
020 Placement	
020-2 Placement Relative	■
030 Geometry	
030-6 Geometry Body	
030-6-1 Geometry SweptSolid	■
030-6-9 Geometry Mapped	■

070 Voiding		
070-1 Voiding Geometry Explicit		The columns with openings in this test case are exported as BReps or with boolean clipping.
070-2 Voiding Geometry Mapped		The columns with openings in this test case are exported as BReps or with boolean clipping.
070-3 Voiding Geometry SweptSolid		The columns with openings in this test case are exported as BReps or with boolean clipping.
130 Grouping		
130-1 Grouping General		This concept was optional for this test case, and not included in the Revit 2013 export.
200 Material		
200-1 Single Material		
210 Property Set		
210-2 Property Set IFC any		
300 Type		
300-1 Type Geometry		This concept was optional for this test case, and not included in the Revit 2013 export.
300-2 Type Naming		This concept was optional for this test case, and not included in the Revit 2013 export.
300-3 Type Material		
300-5 Type Property Set		This concept was optional for this test case, and not included in the Revit 2013 export.
403 IfcFooting	company statement	
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-1 Placement Relative		

030 Geometry	
030-6 Geometry Body	
030-6-1 Geometry SweptSolid	
030-6-9 Geometry Mapped	 Revit 2013 exports footings as extrusions or BReps.
130 Grouping	
130-1 Grouping General	 This concept was optional for this test case, and not included in the Revit 2013 export.
200 Material	
200-1 Single Material	
210 Property Set	
210-2 Property Set IFC any	 Revit 2013 does not currently export any common property sets for IfcFooting. Revit 2013 does export internal property sets, but that option was unused in this test case.
300 Type	
300-1 Type Geometry	 This concept was optional for this test case, and not included in the Revit 2013 export.
300-2 Type Naming	 This concept was optional for this test case, and not included in the Revit 2013 export.
300-3 Type Material	 This concept was optional for this test case, and not included in the Revit 2013 export.
300-5 Type Property Set	 This concept was optional for this test case, and not included in the Revit 2013 export.
General	<i>company statement</i>
_G4 Remarks	

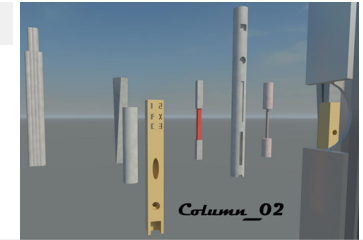
BeamColumn 04 / 2x3

## CharsetTest-01A / 2x3



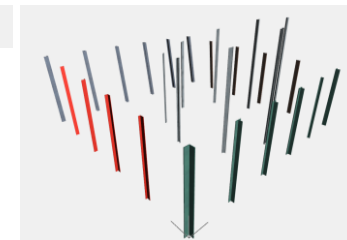
General	company statement		CharsetTest-01A / 2x3
_G1 Character sets		■	
_G4 Remarks		■	

## Column\_02 / 2x3





IfcColumn	company statement	
030 Geometry 030-6 Geometry Body 030-6-1 Geometry SweptSolid 030-6-5 Geometry Explicit	<div> <div> <div></div> </div> <div> <div></div> </div> </div>	Column_02 / 2x3
070 Voiding 070-1 Voiding Geometry Explicit 070-2 Voiding Geometry Mapped 070-3 Voiding Geometry SweptSolid	<div> <div> <div></div> <div>Revit 2013 exports some geometries that have complex openings as Breps.</div> </div> <div> <div></div> <div>Revit 2013 exports some geometries that have complex openings as Breps.</div> </div> <div> <div></div> <div>Revit 2013 exports some geometries that have complex openings as Breps.</div> </div> </div>	
General	company statement	
_G4 Remarks	<div> <div> <div></div> </div> </div>	Column_02 / 2x3

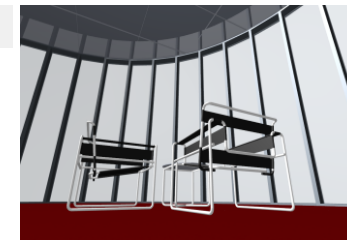
## Column 01 / 2x3



lfcColumn	company statement		Column 01 / 2x3
010 Naming		■	
020 Placement			
020-2 Placement Relative	■	Revit 2013 internally stores all coordinates relative to a global origin. On export, we create a local placement closer to the geometry and place the geometry in that local coordinate system. This is valid for all Brep representations and many extrusion representations, but does not extend to some mapped representations. This is a limitation of the current export.	
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■	Revit 2013 exports some geometries that are conceptually clipped extrusions as Breps.	
030-6-2 Geometry Clipping	■	Revit 2013 exports some geometries that are conceptually clipped extrusions as Breps.	
040 Presentation			
040-1 Geometric Presentation		■	
040-2 Material Presentation		■	
050 CAD Layer		■	
120 Spatial Containment		■	
200 Material			
200-1 Single Material	■	In this test case, there are instructions to create a material with two different colors. In Revit 2013, this becomes two materials with two unique names. The restriction comes from having the second name.	

210 Property Set	
210-1 Property Set IFC Common	 In this test case, we were required to create non-load bearing steel columns. In Revit 2013, these columns are considered load bearing.
General	<i>company statement</i> <span>Column 01 / 2x3</span>
_G4 Remarks	

## CoveringFurnishing-01 / 2x3



210 IfcFlowTerminal	company statement		CoveringFurnishing-01 / 2x3
001 GUIDs	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit	■	All IfcFlowTerminals in this test were exported as mapped representations.	
030-6-9 Geometry Mapped	■		
040 Presentation			
040-1 Geometric Presentation	■		
050 CAD Layer	■		
120 Spatial Containment	■		



210 Property Set		
210-1 Property Set IFC Common	■	Revit 2013 supports Pset_FlowTerminalAirTerminal, but the information for this property set was not included in his test case.
210-6 Property Set IFC any	■	Revit 2013 supports Pset_FlowTerminalAirTerminal, but the information for this property set was not included in his test case.
210-9 Property Set User Defined	■	Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base exporter, or they can create their own exporter based on the open source version.
300 Type		
300-1 Type Geometry	■	
300-2 Type Naming	■	
300-3 Type Material	■	
300-5 Type Property Set	■	In this test case, no property sets were included for IfcFlowTerminals.
303 IfcCovering	company statement	
		CoveringFurnishing-01 / 2x3
010 Naming	■	
020 Placement		
020-2 Placement Relative	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
030-6-9 Geometry Mapped	■	Revit 2013 exports ceilings as extrusions or Breps.
040 Presentation		
040-1 Geometric Presentation	■	
050 CAD Layer	■	

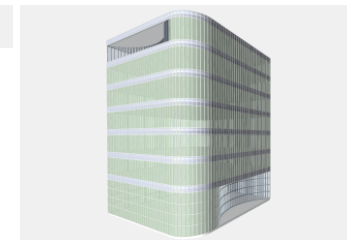
070 Voiding	
120 Spatial Containment	■
200 Material	
200-1 Single Material	■
200-3 Material Layer Set	■ This concept was incorrectly marked as restricted. It is supported.
210 Property Set	
210-1 Property Set IFC Common	■
300 Type	
300-1 Type Geometry	■ Revit 2013 does not export IfcCoveringType.
300-2 Type Naming	■ Revit 2013 does not export IfcCoveringType.
300-3 Type Material	■ Revit 2013 does not export IfcCoveringType.
300-5 Type Property Set	■ Revit 2013 does not export IfcCoveringType.
304 IfcFurnishingElement	<i>company statement</i> <span style="float: right;"><i>CoveringFurnishing-01 / 2x3</i></span>
001 GUIDs	■
010 Naming	■
020 Placement	
020-2 Placement Relative	■
030 Geometry	
030-6 Geometry Body	
030-6-5 Geometry Explicit	■ All IfcFurnishingElements in this test were exported as mapped representations.
030-6-9 Geometry Mapped	■

040 Presentation	
040-1 Geometric Presentation	<div></div> <p>In this test case, some of the furniture was exported with no color information. This was fixed in a later version of the exporter.</p>
050 CAD Layer	<div></div>
120 Spatial Containment	<div></div>
200 Material	
200-1 Single Material	<div></div> <p>Revit 2013 exports materials using IfcMaterialList.</p>
200-5 Material List	<div></div> <p>In this test case, some of the materials were incorrectly created in the test file.</p>
210 Property Set	
210-6 Property Set IFC any	<div></div> <p>Revit 2013 supports Pset_ManufacturerTypeInfoInformation, but the information for this property set was not included in his test case.</p>
210-9 Property Set User Defined	<div></div> <p>Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base exporter, or they can create their own exporter based on the open source version.</p>
300 Type	
300-1 Type Geometry	<div></div>
300-2 Type Naming	<div></div>
300-3 Type Material	<div></div> <p>In this test case, there are instructions to create a material with two different colors. In Revit 2013, this becomes two materials with two unique names. The restriction comes from having the second name.</p>
300-5 Type Property Set	<div></div> <p>In this test case, no type property sets were included for IfcFurnishingElement.</p>
505 IfcSpace	<p><i>company statement</i></p>

CoveringFurnishing-01 / 2x3













030 Geometry		
030-3 Geometry FootPrint	■	Revit 2013 does not export the IfcSpace footprint.
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
120 Spatial Containment	■	
130 Grouping		
130-3 Grouping to Zones	■	
230 Classification	■	This concept was optional for this test case, and not included in the Revit 2013 export.
508 IfcZone	company statement	
		CoveringFurnishing-01 / 2x3
001 GUIDs	■	
002 History	■	
010 Naming	■	
130 Grouping		
130-5 Is Group	■	
210 Property Set		
210-1 Property Set IFC Common	■	Revit 2013 supports Pset_ZoneCommon, but the information for this property set was not included in his test case.
210-9 Property Set User Defined	■	Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base exporter, or they can create their own exporter based on the open source version.
General	company statement	
		CoveringFurnishing-01 / 2x3
_G4 Remarks	■	

## CurtainWall-01 / 2x3



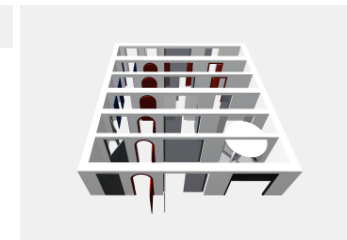
109 IfcCurtainWall	company statement		CurtainWall-01 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-1 Placement Relative		■	In this test case, the test instructions state that one of the curtain walls should be relative to Level 2. However, the curtain wall extends significantly below that level. As such, Revit relates it to the level below that. Since this is different than the test instructions, this is marked as restricted.
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit		■	In this test case, there are two places where default panels had to be used due to size and shape of the openings. This is a limitation of how the curtain wall was created in Revit 2013.
030-9 Geometry By Components		■	
040 Presentation			
040-1 Geometric Presentation		■	
050 CAD Layer		■	At the time this test was submitted, Revit 2013 did not allow mullions and panels to inherit the CAD layer override of the hosting curtain wall. This has since been fixed.
100 Element Aggregation			
100-2 Element Decomposition		■	
120 Spatial Containment		■	In this test case, the test instructions state that one of the curtain walls should be relative to Level 2. However, the curtain wall extends significantly below that level. As such, Revit relates it to the level below that. Since this is different than

the test instructions, this is marked as restricted.

<p>200 Material</p> <p>200-1 Single Material</p> <p>200-5 Material List</p>	<p> In this test case, there are instructions to create a material with two different colors. In Revit 2013, this becomes two materials with two unique names. The restriction comes from having the second name.</p> <p></p>
<p>210 Property Set</p> <p>210-1 Property Set IFC Common</p> <p>210-3 Property Set User Defined</p>	<p></p> <p> Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base exporter, or they can create their own exporter based on the open source version.</p>
<p>300 Type</p> <p>300-1 Type Geometry</p> <p>300-2 Type Naming</p> <p>300-3 Type Material</p> <p>300-5 Type Property Set</p>	<p> Revit 2013 does not currently export IfcCurtainWallType.</p> <p> Revit 2013 does not currently export IfcCurtainWallType.</p> <p> Revit 2013 does not currently export IfcCurtainWallType.</p> <p> Revit 2013 does not currently export IfcCurtainWallType.</p>
<p>501 IfcProject</p> <p>010 Naming</p>	<p><i>company statement</i></p> <p></p>
<p>502 IfcSite</p> <p>010 Naming</p>	<p><i>company statement</i></p> <p></p>
<p>060 Location</p> <p>060-1 Geographic Location</p> <p>060-2 Address</p>	<p></p> <p></p>
<p>503 IfcBuilding</p>	<p><i>company statement</i></p>

010 Naming		
020 Placement		
020-2 Placement Relative		
504 IfcBuildingStorey		<i>company statement</i> <span>CurtainWall-01 / 2x3</span>
010 Naming		
020 Placement		
020-2 Placement Relative		
060 Location		
060-4 Storey Elevation		
210 Property Set		
210-1 Property Set IFC Common		
General		<i>company statement</i> <span>CurtainWall-01 / 2x3</span>
_G4 Remarks		

## Door 01 / 2x3



302 IfcDoor	company statement		Door 01 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
030 Geometry			
030-5 Geometry Profile		■	Revit 2013 exports Footprint information for family instances. It does not export 2D elevation profiles.
030-6 Geometry Body			
030-6-5 Geometry Explicit		■	
030-6-9 Geometry Mapped		■	
040 Presentation			
040-1 Geometric Presentation		■	
050 CAD Layer		■	
080 Filling			
080-2 Is Filling		■	
120 Spatial Containment		■	



<b>200 Material</b> <i>200-1 Single Material</i> <i>200-5 Material List</i>	<div>■</div> <div>■</div>
<b>210 Property Set</b> <b>210-1 Property Set IFC Common</b> <b>210-2 Property Set IFC any</b> <b>210-3 Property Set User Defined</b>	<div>■</div> <div>■</div> <div>■</div> <p>Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base exporter, or they can create their own exporter based on the open source version.</p>
<b>300 Type</b> <i>300-1 Type Geometry</i> <i>300-2 Type Naming</i> <i>300-3 Type Material</i> <i>300-5 Type Property Set</i> <b>300-6 Type Predefined Properties</b> <b>300-6-1 Type Predefined Properties</b> <b>Door</b>	<div>■</div> <div>■</div> <div>■</div> <div>■</div> <div>■</div>
<b>General</b>	<i>company statement</i>
<i>_G4 Remarks</i>	<div>■</div>

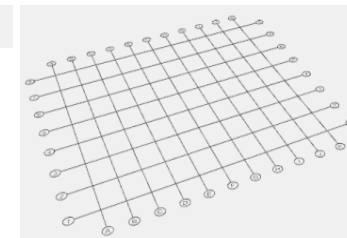
## DoorWindow-02 / 2x3



301 IfcWindow	company statement		DoorWindow-02 / 2x3
001 GUIDs	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit	■	In this test case, some of the parameters for the doors were not completely filled out, and as such were not exported.	
080 Filling			
080-2 Is Filling	■	This concept was incorrectly marked as restricted. It is supported.	
300 Type			
300-1 Type Geometry	■		
302 IfcDoor	company statement		DoorWindow-02 / 2x3
001 GUIDs	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit	■	In this test case, some of the parameters for the doors were not completely filled out, and as such were not exported.	

080 Filling	
080-2 Is Filling	 This concept was incorrectly marked as restricted. It is supported.
300 Type	
300-1 Type Geometry	
General	<i>company statement</i> <span>DoorWindow-02 / 2x3</span>
_G4 Remarks	

## Grid 01 / 2x3

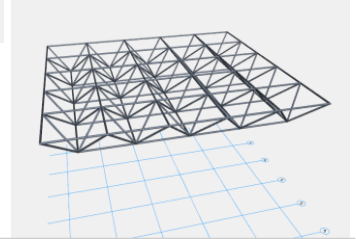


509 IfcGrid	company statement		Grid 01 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-3 Geometry FootPrint	■		
040 Presentation			
040-1 Geometric Presentation	■		
050 CAD Layer	■		
120 Spatial Containment	■		
210 Property Set			
210-3 Property Set User Defined	■	Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base exporter, or they can create their own exporter based on the open source version.	
270 Grid Usage			
270-1 Grid Axes	■	In this test case, the naming of the Grid axes is slightly different from those given in the instructions.	
General	company statement		Grid 01 / 2x3

\_G4 Remarks

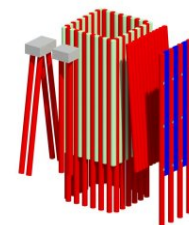


## Member 01A / 2x3











lfcMember	company statement		Member 01A / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-2 Geometry Clipping	■	Revit 2013 exports some geometries that are conceptually clipped extrusions as Breps.	
040 Presentation			
040-1 Geometric Presentation	■		
040-2 Material Presentation	■		
120 Spatial Containment	■		
200 Material			
200-1 Single Material	■		
300 Type			
300-1 Type Geometry	■		
General	company statement		Member 01A / 2x3
_G4 Remarks	■		

## Pile 01 / 2x3



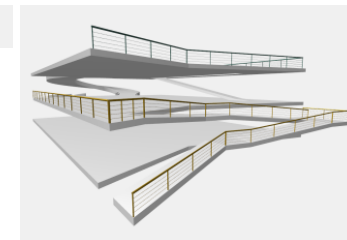
404 IfcPile	company statement		Pile 01 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-1 Placement Relative		■	
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid		■	
030-6-2 Geometry Clipping	■	Revit 2013 exports some geometries that are conceptually clipped extrusions as Breps.	
030-6-9 Geometry Mapped	■	Revit 2013 exports piles as extrusions or Breps.	
040 Presentation			
040-1 Geometric Presentation		■	
040-2 Material Presentation		■	
050 CAD Layer		■	
070 Voiding			
070-3 Voiding Geometry SweptSolid	■	In this test case, the piles are exported as Breps. As such, the pile is not supposed to have an IfcOpeningElement associated with it.	

100 Element Aggregation <i>100-2 Element Decomposition</i>	 Revit 2013 exports piles as extrusions or Breps.
120 Spatial Containment	
200 Material <i>200-1 Single Material</i>	
210 Property Set <i>210-3 Property Set User Defined</i>	 Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base export
300 Type <i>300-1 Type Geometry</i>  <i>300-3 Type Material</i>  <i>300-5 Type Property Set</i>	 As there is no IfcPileType in IFC2x3, Revit 2013 does not export type information for piles.   As there is no IfcPileType in IFC2x3, Revit 2013 does not export type information for piles.   As there is no IfcPileType in IFC2x3, Revit 2013 does not export type information for piles.
General	<i>company statement</i>
<i>_G4 Remarks</i>	











Pile 01 / 2x3



## RampRailing-01 / 2x3



107 IfcRamp	company statement		RampRailing-01 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-1 Placement Relative		■	
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit		■	
030-9 Geometry By Components		■	
040 Presentation			
040-1 Geometric Presentation		■	
050 CAD Layer		■	
100 Element Aggregation			
100-2 Element Decomposition		■	
120 Spatial Containment		■	In this test case, the ramps are all exported relative to Level 1. This is because of the way they were created.
200 Material			
200-1 Single Material		■	

210 Property Set		
210-1 Property Set IFC Common		The Revit 2013 IFC exporter does not currently export the ramp "Slope" parameter.
210-3 Property Set User Defined		Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base exporter, or they can create their own exporter based on the open source version.
108 IfcRailing	company statement <span>RampRailing-01 / 2x3</span>	
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-2 Placement Relative		In this test case, the ramps are all exported relative to Level 1. This is because of the way they were created.
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		In this test case, all of the ramps are exported as Breps.
030-6-5 Geometry Explicit		
030-6-9 Geometry Mapped		In this test case, all of the ramps are exported as Breps.
040 Presentation		
040-1 Geometric Presentation		In this test case, some of the railings are exported with no color information. This was based on an incorrect export option.
050 CAD Layer		
120 Spatial Containment		

200 Material	
200-1 Single Material	■
200-5 Material List	■
210 Property Set	
210-1 Property Set IFC Common	■ The Revit 2013 IFC exporter does not currently export the Diameter parameter for round railings.
210-3 Property Set User Defined	■ Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base exporter, or they can create their own exporter based on the open source version.
General	<i>company statement</i>
_G4 Remarks	■

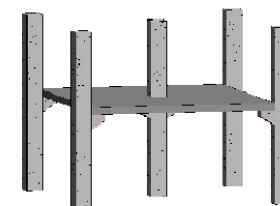
## RandomArch-X1 / 2x3



102 IfcWall	company statement		RandomArch-X1 / 2x3
040 Presentation			
070 Voiding			
070-3 Voiding Geometry SweptSolid	■		
080 Filling			
080-1 Has Filling			
080-1-1 Has Filling Door	■		
080-1-2 Has Filling Window	■		
100 Element Aggregation			
100-1 Element Composition	■	This concept was optional for this test case, and not modelled.	
100-2 Element Decomposition	■		
200 Material			
200-1 Single Material	■	According #CV-2x3-120, material information for decomposed elements shall only be given at the element part level.	
200-3 Material Layer Set	■	According #CV-2x3-120, material information for decomposed elements shall only be given at the element part level.	
210 Property Set			
210-1 Property Set IFC Common	■		
105 IfcSlab	company statement		RandomArch-X1 / 2x3
040 Presentation			

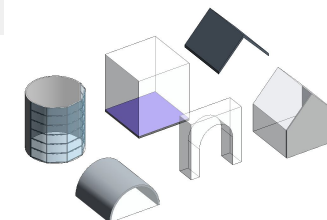
100 Element Aggregation	
100-1 Element Composition	■ This concept was optional for this test case, and not modelled.
100-2 Element Decomposition	■
200 Material	
200-1 Single Material	■ According #CV-2x3-120, material information for decomposed elements shall only be given at the element part level.
210 Property Set	
210-1 Property Set IFC Common	■
110 IfcRoof	company statement RandomArch-X1 / 2x3
040 Presentation	
100 Element Aggregation	
100-1 Element Composition	■ This concept was optional for this test case, and not modelled.
100-2 Element Decomposition	■
200 Material	
200-1 Single Material	■ According #CV-2x3-120, material information for decomposed elements shall only be given at the element part level.
210 Property Set	
210-1 Property Set IFC Common	■
General	company statement RandomArch-X1 / 2x3
_G4 Remarks	■

## RandomArch-X2 / 2x3



104 IfcColumn	company statement		RandomArch-X2 / 2x3
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-1 Geometry Box	■		
105 IfcSlab	company statement		RandomArch-X2 / 2x3
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
408 IfcElementAssembly	company statement		RandomArch-X2 / 2x3
001 GUIDs	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-1 Geometry Box	■	This concept was optional for this test case, and not included in the Revit 2013 export.	
030-2 Geometry Axis	■	This concept was optional for this test case, and not included in the Revit 2013 export.	
100 Element Aggregation			
100-1 Element Composition	■		

General	company statement	
_G4 Remarks		RandomArch-X2 / 2x3




## RandomArch-X3 / 2x3

101 IfcWallStandardCase		company statement	RandomArch-X3 / 2x3
020 Placement			
020-2 Placement Relative	■		
102 IfcWall		company statement	RandomArch-X3 / 2x3
020 Placement			
020-2 Placement Relative	■		
105 IfcSlab		company statement	RandomArch-X3 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■	In this test case, one IfcSlab has a local origin that is not close to the geometry.	
110 IfcRoof		company statement	RandomArch-X3 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
111 IfcBuildingElementProxy		company statement	RandomArch-X3 / 2x3
010 Naming	■		
503 IfcBuilding		company statement	RandomArch-X3 / 2x3
010 Naming	■		
General		company statement	RandomArch-X3 / 2x3
_G4 Remarks	■		



## RandomArch-X4 / 2x3

109 IfcCurtainWall	company statement		RandomArch-X4 / 2x3
001 GUIDs			
002 History			
010 Naming			
020 Placement			
020-1 Placement Relative			
030 Geometry			
030-6 Geometry Body			
030-6-9 Geometry Mapped		In this test case, all of the curtain walls are containers, and do not have their own geometry or materials. This is as designed.	
100 Element Aggregation			
100-1 Element Composition		This concept was optional for this test case, and not modelled.	
100-2 Element Decomposition			
200 Material			
200-1 Single Material		In this test case, all of the curtain walls are containers, and do not have their own geometry or materials. This is as designed.	
302 IfcDoor	company statement		RandomArch-X4 / 2x3
080 Filling			
080-2 Is Filling		In this test case, the door is a panel of the curtain wall, and does not cut anything. As such, it does not have the IfcRelFillsElement relation. This is as designed.	

General	company statement	RandomArch-X4 / 2x3
_G4 Remarks		

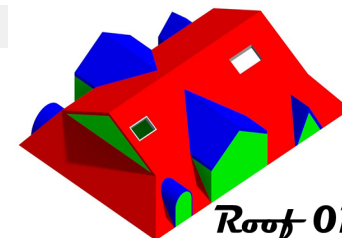
## RandomArch-X5 / 2x3

106 IfcStair		<i>company statement</i>	<i>RandomArch-X5 / 2x3</i>
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-1 Placement Relative	■		
030 Geometry			
030-9 Geometry By Components	■		
040 Presentation			
040-1 Geometric Presentation	■		
040-2 Material Presentation	■		
120 Spatial Containment	■		
108 IfcRailing		<i>company statement</i>	<i>RandomArch-X5 / 2x3</i>
001 GUIDs	■		
002 History	■		
020 Placement			
020-2 Placement Relative	■		
040 Presentation			
040-1 Geometric Presentation	■		
General		<i>company statement</i>	<i>RandomArch-X5 / 2x3</i>

\_G4 Remarks



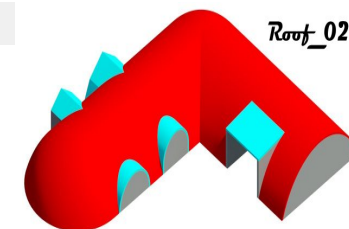
## Roof 01 / 2x3



101 IfcWallStandardCase	company statement <span>Roof 01 / 2x3</span>	
030 Geometry 030-6 Geometry Body 030-6-1 Geometry SweptSolid 030-6-2 Geometry Clipping	<div> <div></div> </div> <div> <div></div> </div>	
105 IfcSlab	company statement <span>Roof 01 / 2x3</span>	
030 Geometry 030-6 Geometry Body 030-6-1 Geometry SweptSolid 030-6-2 Geometry Clipping 030-6-9 Geometry Mapped	<div> <div></div>           In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.         </div> <div> <div></div>           In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.         </div> <div> <div></div>           In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.         </div>	
070 Voiding 070-3 Voiding Geometry SweptSolid	<div> <div></div>           In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.         </div>	
080 Filling 080-1 Has Filling 080-1-2 Has Filling Window	<div> <div></div>           In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs. As such, the window is not supposed to have an IfcOpeningElement associated with it.         </div>	
200 Material 200-2 Material Layer Set	<div> <div></div> </div>	

110 IfcRoof	company statement		Roof 01 / 2x3
030 Geometry			
030-1 Geometry Box	<div></div>	This concept was optional for this test case, and not included in the Revit 2013 export.	
040 Presentation			
040-1 Geometric Presentation	<div></div>		
040-2 Material Presentation	<div></div>		
100 Element Aggregation			
100-2 Element Decomposition	<div></div>	In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.	
120 Spatial Containment	<div></div>		
200 Material			
200-1 Single Material	<div></div>		
General	company statement		Roof 01 / 2x3
_G4 Remarks	<div></div>		

## Roof 02 / 2x3

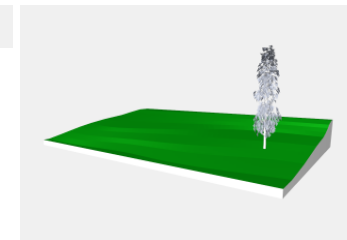


101 IfcWallStandardCase	company statement		Roof 02 / 2x3
010 Naming	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-2 Geometry Clipping	■		
050 CAD Layer	■		
110 IfcRoof	company statement		Roof 02 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit	■		
050 CAD Layer	■		
100 Element Aggregation			
100-2 Element Decomposition	■	This concept was optional for this test case, and not included in the Revit 2013 export.	

210 Property Set	
210-1 Property Set IFC Common	■
210-3 Property Set User Defined	■ In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.
General	<i>company statement</i> <span>Roof 02 / 2x3</span>
_G4 Remarks	■



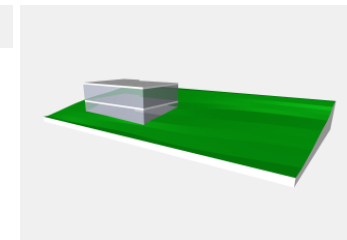
## Site 01 / 2x3



502 IfcSite	company statement		Site 01 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-1 Placement Absolute		■	
030 Geometry			
030-1 Geometry Box	■	This concept was optional for this test case, and not included in the Revit 2013 export.	
030-3 Geometry FootPrint	■	This concept was optional for this test case, and not included in the Revit 2013 export.	
030-6 Geometry Body			
030-6-5 Geometry Explicit		■	
040 Presentation			
040-1 Geometric Presentation		■	
050 CAD Layer		■	
060 Location			
060-1 Geographic Location		■	
060-2 Address		■	
120 Spatial Containment	■	In this case, a tree was intended to be directly contained in the IfcSite. However, in Revit 2013, the exporter indirectly contains it via the IfcBuilding and the IfcBuildingStorey.	

210 Property Set	
210-1 Property Set IFC Common	■
General	<i>company statement</i> Site 01 / 2x3
_G4 Remarks	■

## Site 02 / 2x3

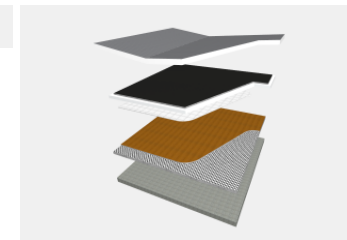


502 IfcSite	company statement		Site 02 / 2x3
010 Naming	■		
020 Placement			
020-1 Placement Absolute	■		
030 Geometry			
030-3 Geometry FootPrint	■		
030-6 Geometry Body			
030-6-5 Geometry Explicit	■		
150 Spatial Aggregation			
150-1 Spatial Composition	■		
150-2 Spatial Decomposition	■		
210 Property Set			
210-9 Property Set User Defined	■	Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base export	
503 IfcBuilding	company statement		Site 02 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		

150 Spatial Aggregation	
150-1 Spatial Composition	■
150-2 Spatial Decomposition	■
210 Property Set	
210-1 Property Set IFC Common	■
General	<i>company statement</i>
<i>_G4 Remarks</i>	■

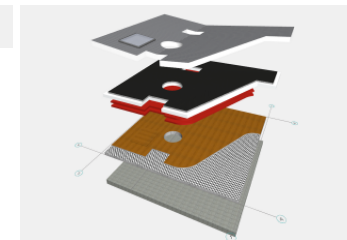
Site 02 / 2x3

## Slab 01A / 2x3
















105 IfcSlab	company statement		Slab 01A / 2x3
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid		■	
030-6-2 Geometry Clipping		■	Revit 2013 exports some geometries that are conceptually clipped extrusions as Breps.
050 CAD Layer		■	
200 Material			
200-2 Material Layer Set		■	
200-3 Material Layer Usage		■	
210 Property Set			
210-1 Property Set IFC Common		■	
General	company statement		Slab 01A / 2x3
_G4 Remarks		■	

## Slab 02A / 2x3



105 IfcSlab	company statement		Slab 02A / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-1 Geometry Box	■	This concept was optional for this test case, and not included in the Revit 2013 export.	
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■	In earlier versions of the Revit 2013 open source IFC exporter, some openings were incorrectly labelled as recesses, and vice versa. This has since been fixed.	
030-6-2 Geometry Clipping	■	Revit 2013 exports some geometries that are conceptually clipped extrusions as Breps.	
030-6-5 Geometry Explicit	■		
030-6-9 Geometry Mapped	■	This concept was optional for this test case, and not included in the Revit 2013 export.	
070 Voiding			
070-1 Voiding Geometry Explicit	■	This concept was optional for this test case, and not included in the Revit 2013 export.	
070-2 Voiding Geometry Mapped	■	Revit 2013 exports openings as extrusions or Breps.	
070-3 Voiding Geometry SweptSolid	■		

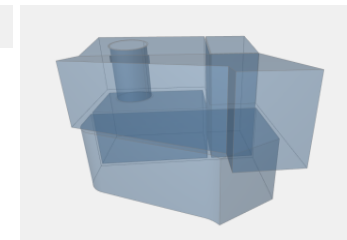
<p>080 Filling</p> <p>080-1 Has Filling</p> <p>080-1-1 Has Filling Door</p> <p>080-1-2 Has Filling Window</p>	<p> Revit 2013 does not support doors in floors.</p> <p> Revit 2013 does not support windows in floors.</p>
<p>120 Spatial Containment</p>	<p></p>
<p>130 Grouping</p> <p>130-1 Grouping General</p>	<p> This concept was optional for this test case, and not included in the Revit 2013 export.</p>
<p>200 Material</p> <p>200-1 Single Material</p> <p>200-2 Material Layer Set</p>	<p></p> <p></p>
<p>210 Property Set</p> <p>210-1 Property Set IFC Common</p> <p>210-2 Property Set IFC any</p> <p>210-3 Property Set User Defined</p>	<p> Revit 2013 can not determine the "Pitch Angle" property of Pset_SlabCommon.</p> <p></p> <p> Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base exporter, or they can create their own exporter based on the open source version.</p>
<p>300 Type</p> <p>300-1 Type Geometry</p> <p>300-2 Type Naming</p> <p>300-3 Type Material</p> <p>300-5 Type Property Set</p>	<p> Revit 2013 does not currently export IfcSlabType.</p> <p> Revit 2013 does not currently export IfcSlabType.</p> <p> Revit 2013 does not currently export IfcSlabType.</p> <p> Revit 2013 does not currently export IfcSlabType.</p>
<p>General</p>	<p>company statement</p>

\_G4 Remarks





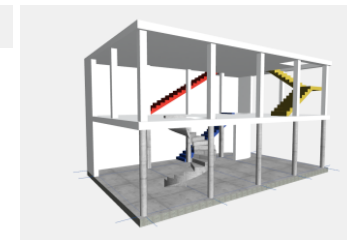
## Space 01A / 2x3












505 IfcSpace	company statement		Space 01A / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-2 Geometry Clipping	■	Revit 2013 exports space geometry as extrusions or Breps.	
040 Presentation			
040-1 Geometric Presentation	■	Spaces, derived from Revit 2013 rooms, do not have color or material information assigned to them.	
050 CAD Layer	■		
150 Spatial Aggregation			
150-1 Spatial Composition	■		
210 Property Set			
210-1 Property Set IFC Common	■		
210-6 Property Set IFC any	■	In this test case, we did not export any internal Revit 2013 property sets, although that is a user option.	

General	company statement	Space 01A / 2x3
_G4 Remarks		

## StairSlab-01 / 2x3

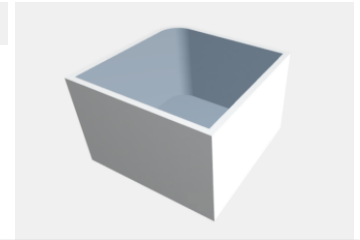


105 IfcSlab	company statement		StairSlab-01 / 2x3
001 GUIDs	■		
002 History	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
040 Presentation			
040-1 Geometric Presentation	■		
040-2 Material Presentation	■	In this test case, there are instructions to create a material with two different colors. In Revit 2013, this becomes two materials with two unique names. The restriction comes from having the second name.	
070 Voiding			
070-3 Voiding Geometry SweptSolid	■		
106 IfcStair	company statement		StairSlab-01 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-1 Placement Relative	■		

030 Geometry	
030-6 Geometry Body	
030-6-5 Geometry Explicit	 In this test case, the stairs are correctly exported as a container of stair flights and landings. As such, the stair doesn't have any native geometry.
030-9 Geometry By Components	
040 Presentation	
040-1 Geometric Presentation	
050 CAD Layer	
100 Element Aggregation	
100-2 Element Decomposition	
120 Spatial Containment	
200 Material	
200-1 Single Material	 In this test case, there are instructions to create a material with two different colors. In Revit 2013, this becomes two materials with two unique names. The restriction comes from having the second name.
210 Property Set	
210-1 Property Set IFC Common	
General	<i>company statement</i>
_G4 Remarks	

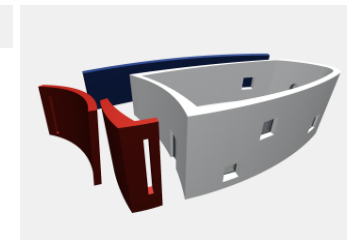
StairSlab-01 / 2x3

## UnitTest-01A / 2x3



501 IfcProject	company statement		UnitTest-01A / 2x3
005 Project Units			
005-1 Project Metric Units	■		
005-2 Project Imperial Units	■		
General	company statement		UnitTest-01A / 2x3
_G4 Remarks	■	Revit 2013 does not support Gradians as a unit of plane angle measure, so a Gradians test case could not be created.	

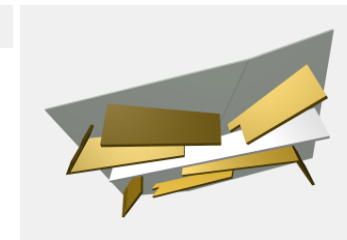
## Wall 01 / 2x3



102 IfcWall	company statement		Wall 01 / 2x3
002 History	■		
010 Naming	■	In this test case, there are instructions to create a material with two different colors. In Revit 2013, this becomes two materials with two unique names. The restriction comes from having the second name.	
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■	The Revit 2013 IFC exporter gets the wall geometry via the API, which is represented as a BRep. In some cases, it is not able to recreate an extrusion with clippings, and exports the BRep instead.	
030-6-2 Geometry Clipping	■	The Revit 2013 IFC exporter gets the wall geometry via the API, which is represented as a BRep. In some cases, it is not able to recreate an extrusion with clippings, and exports the BRep instead.	
030-6-5 Geometry Explicit	■		
040 Presentation			
040-1 Geometric Presentation	■		
040-2 Material Presentation	■		
070 Voiding			
070-1 Voiding Geometry Explicit	■	Revit 2013 exports openings as extrusions or Breps.	
070-3 Voiding Geometry SweptSolid	■		





080 Filling		
080-1 Has Filling		
080-1-1 Has Filling Door	■	
080-1-2 Has Filling Window	■	In this test case, one of walls had an unusual taper, which caused the glass plane of one window to differ slightly from the DWG provided with the test case.
200 Material		
200-1 Single Material	■	In this test case, there are instructions to create a material with two different colors. In Revit 2013, this becomes two materials with two unique names. The restriction comes from having the second name.
210 Property Set		
210-1 Property Set IFC Common	■	
300 Type		
300-3 Type Material	■	
300-5 Type Property Set	■	This concept was optional for this test case, and not included in the Revit 2013 export.
301 IfcWindow		<i>company statement</i> <span>Wall 01 / 2x3</span>
020 Placement		
020-2 Placement Relative	■	
302 IfcDoor		<i>company statement</i> <span>Wall 01 / 2x3</span>
020 Placement		
020-2 Placement Relative	■	
General		<i>company statement</i> <span>Wall 01 / 2x3</span>
_G4 Remarks	■	

## Wall 02 / 2x3



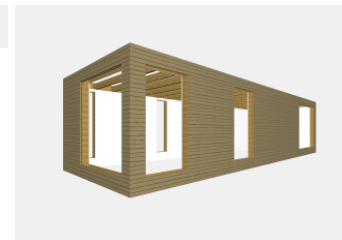
102 IfcWall	company statement		Wall 02 / 2x3
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
030 Geometry			
030-2 Geometry Axis		■	Revit 2013 does not generally export the geometry axis for Brep walls. In this test case, all IfcWalls were exported with BReps.
030-6 Geometry Body			
030-6-1 Geometry SweptSolid		■	In this test case, all IfcWalls were exported with BReps.
030-6-2 Geometry Clipping		■	In this test case, all IfcWalls were exported with BReps.
030-6-5 Geometry Explicit		■	
050 CAD Layer		■	
070 Voiding			
070-1 Voiding Geometry Explicit		■	In this test case, all IfcWalls were exported with BReps. By CV2.0 convention, we do not export openings for BRep walls.
070-3 Voiding Geometry SweptSolid		■	In this test case, all IfcWalls were exported with BReps. By CV2.0 convention, we do not export openings for BRep walls.
120 Spatial Containment		■	


















130 Grouping <i>130-1 Grouping General</i>	 This concept was optional for this test case, and not included in the Revit 2013 export.
200 Material <i>200-3 Material Layer Set</i>	
300 Type <i>300-2 Type Naming</i>	 In this test case, the type names needed to have the category appended to the name.
General	<i>company statement</i>
<i>_G4 Remarks</i>	

Wall 02 / 2x3

## WallSlab 03 / 2x3

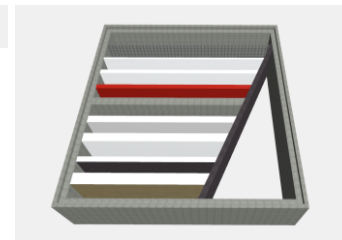


102 IfcWall	company statement	WallSlab 03 / 2x3
010 Naming	■	
020 Placement 020-2 Placement Relative	■	
030 Geometry 030-9 Geometry By Components	■ This concept was optional for this test case, and not included in the Revit 2013 export.	
070 Voiding 070-3 Voiding Geometry SweptSolid	■	
100 Element Aggregation 100-2 Element Decomposition	■ This concept was optional for this test case, and not included in the Revit 2013 export.	
210 Property Set 210-1 Property Set IFC Common	■	
105 IfcSlab	company statement	WallSlab 03 / 2x3
010 Naming	■	
020 Placement 020-2 Placement Relative	■	
030 Geometry 030-9 Geometry By Components	■ This concept was optional for this test case, and not included in the Revit 2013 export.	






100 Element Aggregation <i>100-2 Element Decomposition</i>	 This concept was optional for this test case, and not included in the Revit 2013 export.	
501 IfcProject	<i>company statement</i>	WallSlab 03 / 2x3
001 GUIDs		
002 History		
005 Project Units 005-1 Project Metric Units		
008 Representation Context 008-1 Representation Main Context 008-2 Representation Sub Context 008-2-2 Representation Sub Context 3D	  	
010 Naming		
150 Spatial Aggregation 150-2 Spatial Decomposition		
503 IfcBuilding	<i>company statement</i>	WallSlab 03 / 2x3
001 GUIDs		
002 History		
010 Naming		
020 Placement 020-1 Placement Absolute	 Revit 2013 always exports the IfcBuilding local placement relative to the IfcSite.	
150 Spatial Aggregation 150-1 Spatial Composition 150-2 Spatial Decomposition	 	
504 IfcBuildingStorey	<i>company statement</i>	WallSlab 03 / 2x3

001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-2 Placement Relative		
150 Spatial Aggregation		
150-1 Spatial Composition		
150-2 Spatial Decomposition		
505 IfcSpace		<i>company statement</i> WallSlab 03 / 2x3
010 Naming		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
General		<i>company statement</i> WallSlab 03 / 2x3
_G4 Remarks		

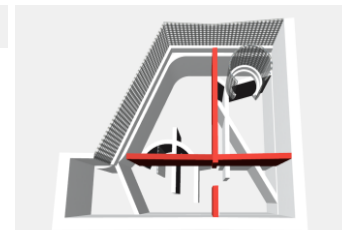
## WallStandardCase 01A / 2x3



101 IfcWallStandardCase	company statement		WallStandardCase 01A / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-2 Geometry Axis	■		
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■	Revit 2013 disallows creating material layers for host objects that are less than 1/16". In this test case, one of the walls had a 1mm thick layer, which we modelled as a 1/16" (1.6mm) layer instead.	
030-6-2 Geometry Clipping	■	Revit 2013 exports some geometries that are conceptually clipped extrusions as Breps.	
040 Presentation			
040-1 Geometric Presentation	■		
040-2 Material Presentation	■		
050 CAD Layer	■		
110 Connectivity			
110-2 Connectivity Path	■		
120 Spatial Containment	■		

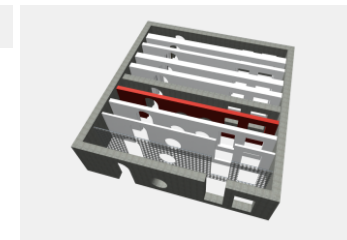
200 Material 200-4 Material Layer Usage	 Revit 2013 disallows creating material layers for host objects that are less than 1/16". In this test case, one of the walls had a 1mm thick layer, which we modelled as a 1/16" (1.6mm) layer instead.
210 Property Set 210-3 Property Set User Defined	 Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base exporter, or they can create their own exporter based on the open source version.
300 Type 300-3 Type Material	
300-5 Type Property Set	
General	<i>company statement</i>
_G4 Remarks	

## WallStandardCase 02A / 2x3



101 IfcWallStandardCase		company statement	WallStandardCase 02A / 2x3
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
030 Geometry			
030-2 Geometry Axis		■	
030-6 Geometry Body			
030-6-1 Geometry SweptSolid		■	
030-6-2 Geometry Clipping		■	
050 CAD Layer		■	
110 Connectivity			
110-2 Connectivity Path		■	
120 Spatial Containment		■	
200 Material			
200-4 Material Layer Usage		■ In this test case, there are instructions to create a material with two different colors. In Revit 2013, this becomes two materials with two unique names. The restriction comes from having the second name.	
210 Property Set			
210-1 Property Set IFC Common		■	
General		company statement	WallStandardCase 02A / 2x3
_G4 Remarks		■	

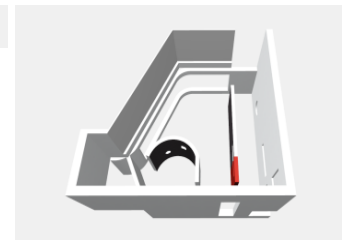
## WallStandardCase 03A / 2x3



101 IfcWallStandardCase	company statement		WallStandardCase 03A / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-2 Geometry Axis	■		
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
070 Voiding			
070-1 Voiding Geometry SweptSolid	■		
070-2 Voiding Geometry Explicit	■		
070-3 Voiding Geometry Mapped	■	Revit 2013 exports openings as extrusions or Breps.	
120 Spatial Containment	■		
General	company statement		WallStandardCase 03A / 2x3
_G4 Remarks	■		



## WallStandardCase 04A / 2x3














101 IfcWallStandardCase	company statement		WallStandardCase 04A / 2x3
010 Naming	■		
030 Geometry			
030-2 Geometry Axis	■		
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
070 Voiding			
070-1 Voiding Geometry SweptSolid	■	In this test case, there are openings that span multiple walls. Revit 2013 creates a separate IfcOpeningElement for each wall/opening pair. The test expects only one IfcOpeningElement.	
070-2 Voiding Geometry Explicit	■		
070-3 Voiding Geometry Mapped	■	Revit 2013 exports openings as extrusions or Breps.	
120 Spatial Containment	■		
General	company statement		WallStandardCase 04A / 2x3
_G4 Remarks	■		

## Window 01 / 2x3



301 IfcWindow	company statement		Window 01 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
030 Geometry			
030-5 Geometry Profile	■	Revit 2013 exports Footprint information for family instances. It does not export 2D elevation profiles.	
030-6 Geometry Body			
030-6-5 Geometry Explicit	■	In this test case, there is a stepped window which is incorrectly exported as an extrusion, instead of two extrusions. This is a bug in our native code that can't be fixed in Revit 2013.	
030-6-9 Geometry Mapped		■	
040 Presentation			
040-1 Geometric Presentation	■	In this test case, some of the windows are exported with no color information. This was based on an incorrect export option.	
050 CAD Layer		■	
080 Filling			
080-2 Is Filling		■	
120 Spatial Containment		■	

<p>200 Material</p> <p>200-1 Single Material</p> <p>200-5 Material List</p>	<p> Revit 2013 exports windows with IfcMaterialList, not IfcMaterial.</p> <p></p>
<p>210 Property Set</p> <p>210-1 Property Set IFC Common</p> <p>210-2 Property Set IFC any</p> <p>210-3 Property Set User Defined</p>	<p></p> <p> In this test case, we did not export any internal Revit 2013 property sets, although that is a user option.</p> <p> Revit 2013 does not have the capability to create user-defined parameter groups, corresponding to IFC property sets. The Open Source IFC exporter allows for the programmatic creation of user-defined property sets. A user can add these sets to the base exporter, or they can create their own exporter based on the open source version.</p>
<p>300 Type</p> <p>300-1 Type Geometry</p> <p>300-2 Type Naming</p> <p>300-3 Type Material</p> <p>300-5 Type Property Set</p> <p>300-6 Type Predefined Properties</p> <p>300-6-1 Type Predefined Properties Window</p>	<p> Although Revit 2013 exports IfcWindows with IfcMappedRepresentation, the mapped representation is not attached to the IfcWindowStyle.</p> <p></p> <p></p> <p> The Revit 2013 exporter does not currently associate type property sets with IfcWindowStyle.</p> <p></p>
<p>General</p>	<p><i>company statement</i></p> <p>Window 01 / 2x3</p>
<p>_G4 Remarks</p>	<p> In this test case, there is a stepped window which is incorrectly exported as an extrusion, instead of two extrusions. This is a bug in our native code that can't be fixed in Revit 2013.</p>