

## Table of contents

*Introduction*

*Testlist*

*Concepts*



## 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 Structure 2013 is v2.9.0 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	22	1	24
Beam_01 / 2x3	10	7	2	1
Beam_02 / 2x3	12	8		4
Beam_03 / 2x3	6	3		3
CharsetTest-01S / 2x3	2	1	1	
Column 01 / 2x3	11	6	5	
Column_02 / 2x3	6	3		3
Grid 01 / 2x3	11	8	2	1
Member_01S / 2x3	10	7		3
Pile 01 / 2x3	19	11	1	7
PlateFastener-01 / 2x3	66	41		25
RampSlab-01 / 2x3	18	13	5	
RandomStruc-X1 / 2x3	11	7		4
RandomStruc-X2 / 2x3	8	6		2
RandomStruc-X3 / 2x3	8	8		
RandomStruc-X4 / 2x3	8	8		
RandomStruc-X5 / 2x3	26	26		
Reinforcement-01 / 2x3	93	61		32
Roof 01 / 2x3	15	8		7
Roof 02 / 2x3	12	10		2
Site 01 / 2x3	14	11	1	2
Site 02 / 2x3	13	11	1	1
Slab 01S / 2x3	11	10	1	
Slab 02S / 2x3	22	10	1	11
StairSlab-01 / 2x3	19	16	2	1
UnitTest-01S / 2x3	3	1	2	



Supported



Restricted

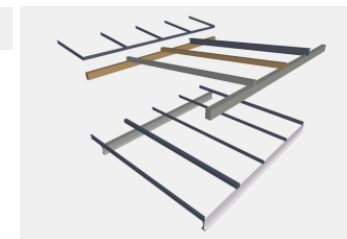


Not Supported




Name test	concepts total	manually checked		
		<div><div></div></div>	<div><div></div></div>	<div><div></div></div>
Wall 01 / 2x3	19	11	3	5
Wall 02 / 2x3	14	7	1	6
WallStandardCase 01S / 2x3	15	12	2	1
WallStandardCase 02S / 2x3	11	10	1	
WallStandardCase 03S / 2x3	8	6	2	
WallStandardCase 04S / 2x3	7	4	3	

## Concepts

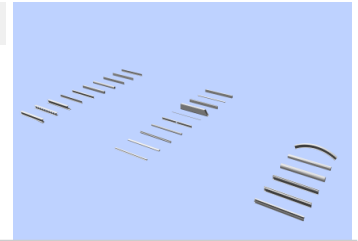
## Beam\_01 / 2x3



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	■		

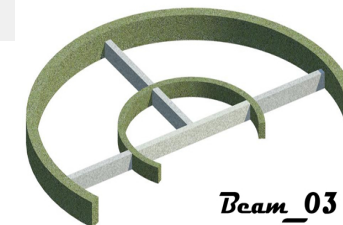
200 Material		
200-1 Single Material	 In this test case, there are instructions to create a material with two different colors. In Revit 2013, this becomes two materials with two unique names. The restriction comes from having the second name.	
210 Property Set		
210-1 Property Set IFC Common		
General	<i>company statement</i>	<i>Beam_01 / 2x3</i>
_G4 Remarks		

## Beam\_02 / 2x3



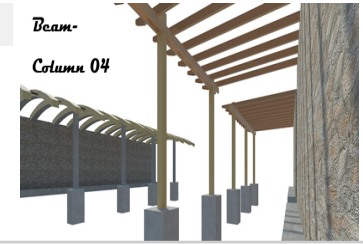
103 IfcBeam	company statement		Beam_02 / 2x3
010 Naming	■		
030 Geometry			
030-2 Geometry Axis	■		
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-2 Geometry Clipping	■	In this test case, the beams with openings were exported as BReps.	
030-6-5 Geometry Explicit	■		
050 CAD Layer	■		
070 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
030 Geometry 030-1 Geometry Box  030-2 Geometry Axis  030-6 Geometry Body 030-6-1 Geometry SweptSolid  030-6-2 Geometry Clipping	<div data-bbox="685 571 712 598">■</div> This concept was optional for this test case, and not included in the Revit 2013 export.  <div data-bbox="685 662 712 689">■</div>  <div data-bbox="685 758 712 785">■</div> Revit 2013 will occasionally place the beam axis of a sloped beam on the wrong plane. This is a limitation of the current export.  <div data-bbox="685 849 712 876">■</div> Revit 2013 exports some geometries that are conceptually clipped extrusions as Breps.		
300 Type 300-5 Type Property Set	<div data-bbox="685 992 712 1019">■</div>		
General	company statement		Beam_03 / 2x3
_G4 Remarks	<div data-bbox="685 1088 712 1115">■</div>		













## BeamColumn 04 / 2x3



BeamColumn 04 / 2x3

103 IfcBeam	company statement	
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		This is incorrectly marked as "not supported" - this concept is supported.
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		
200 Material		
200-1 Single Material		



210 Property Set	
210-1 Property Set IFC Common	 This is incorrectly marked as "restricted" - this concept is supported.
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	
104 IfcColumn	<i>company statement</i> <span style="float: right;"><i>BeamColumn 04 / 2x3</i></span>
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	 This is incorrectly marked as "not supported" - this concept is supported.

070 Voiding	
070-1 Voiding Geometry Explicit	■ In this test case, the columns with openings were exported as BReps.
070-2 Voiding Geometry Mapped	■ In this test case, the columns with openings were exported as BReps.
070-3 Voiding Geometry SweptSolid	■ In this test case, the columns with openings were exported as BReps.
130 Grouping	
130-1 Grouping General	■
200 Material	
200-1 Single Material	■
210 Property Set	
210-2 Property Set IFC any	■ In this test case, we did not export any internal Revit 2013 property sets, although that is a user option.
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	■
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.
403 IfcFooting	<i>company statement</i>
001 GUIDs	■
002 History	■
010 Naming	■
020 Placement	
020-1 Placement Relative	■

030 Geometry	
030-6 Geometry Body	
030-6-1 Geometry SweptSolid	<div></div> This is incorrectly marked as "not supported" - this concept is supported.
030-6-9 Geometry Mapped	<div></div> Revit 2013 exports footings as extrusions or BReps.
130 Grouping	
130-1 Grouping General	<div></div>
200 Material	
200-1 Single Material	<div></div> 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	
210-2 Property Set IFC any	<div></div> 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	<div></div> This concept was optional for this test case, and not included in the Revit 2013 export.
300-2 Type Naming	<div></div> This concept was optional for this test case, and not included in the Revit 2013 export.
300-3 Type Material	<div></div> This concept was optional for this test case, and not included in the Revit 2013 export.
300-5 Type Property Set	<div></div> This concept was optional for this test case, and not included in the Revit 2013 export.
General	company statement
_G4 Remarks	<div></div>

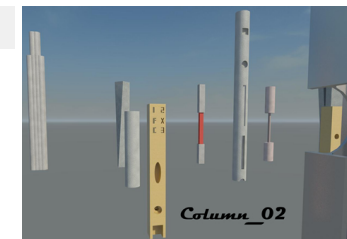
BeamColumn 04 / 2x3

CharsetTest-01S / 2x3



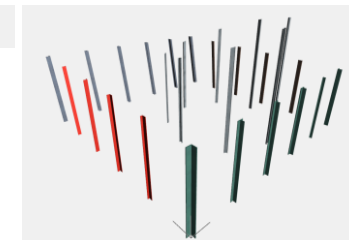
General	company statement		CharsetTest-01S / 2x3
_G1 Character sets	<div></div>	This concept was incorrectly set to restricted; it is supported.	
_G4 Remarks	<div></div>		

## Column\_02 / 2x3



104 IfcColumn	company statement		Column_02 / 2x3
030 Geometry 030-6 Geometry Body 030-6-1 Geometry SweptSolid 030-6-5 Geometry Explicit	<div data-bbox="685 619 714 651">■</div> <div data-bbox="685 667 714 699">■</div>		
070 Voiding 070-1 Voiding Geometry Explicit 070-2 Voiding Geometry Mapped 070-3 Voiding Geometry SweptSolid	<div data-bbox="685 762 714 794">■</div> Revit 2013 exports some geometries that have complex openings as Breps. <div data-bbox="685 826 714 858">■</div> Revit 2013 exports some geometries that have complex openings as Breps. <div data-bbox="685 890 714 922">■</div> Revit 2013 exports some geometries that have complex openings as Breps.		
General	company statement		Column_02 / 2x3
_G4 Remarks	<div data-bbox="685 1007 714 1038">■</div>		

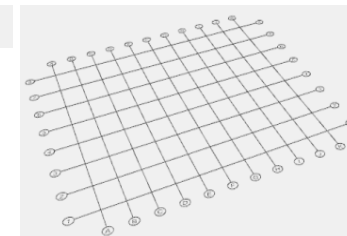
## Column 01 / 2x3



104 IfcColumn	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	<div></div> 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	<div></div>

## 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

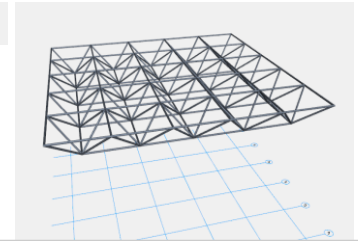


\_G4 Remarks

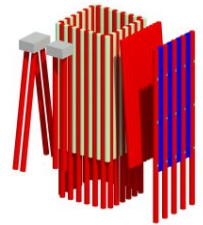


In this test case, one of the grids is defined with 4 different gid directions. However, the IfcGrid defintion in IFC2x3 allows for up to 3 different grid directions. Revit 2013 split this case into 2 IfcGrids.

## Member\_01S / 2x3









401 IfcMember	company statement		Member_01S / 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.	
110 Connectivity			
110-1 Connectivity Basic	■	Revit 2013 export does not support IfcRelConnectsElements for IfcMembers.	
110-3 Connectivity Realization			
110-3-1 Connectivity Realized	■	Revit 2013 export does not support IfcRelConnectsElements for IfcMembers.	
120 Spatial Containment	■		
200 Material			
200-1 Single Material	■		
300 Type			
300-1 Type Geometry	■		
General	company statement		Member_01S / 2x3
_G4 Remarks	■		



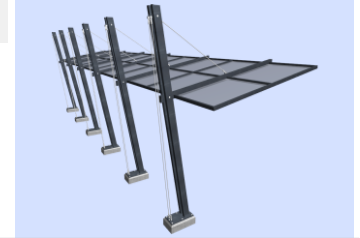
## Pile 01 / 2x3

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	■	In this test case, the IfcPiles were exported with swept solid or BRep geometry.	
030-6-9 Geometry Mapped	■	In this test case, the IfcPiles were exported with swept solid or BRep geometry.	
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 IfcPiles with holes were exported as BReps.	
100 Element Aggregation			
100-2 Element Decomposition	■	This concept was optional for this test case, and not modelled.	
120 Spatial Containment	■		

200 Material	
200-1 Single Material	
210 Property Set	
210-3 Property Set User Defined	 Revit 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	 Revit 2013 export does not support type information for IfcPiles, as there is no IfcPileType in IFC2x3.
300-3 Type Material	 Revit 2013 export does not support type information for IfcPiles, as there is no IfcPileType in IFC2x3.
300-5 Type Property Set	 Revit 2013 export does not support type information for IfcPiles, as there is no IfcPileType in IFC2x3.
General	<i>company statement</i>
_G4 Remarks	








Pile 01 / 2x3

## PlateFastener-01 / 2x3



103 IfcBeam		company statement	PlateFastener-01 / 2x3
001 GUIDs	■		
002 History	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-9 Geometry Mapped	■	Revit 2013 exports beams as extrusions or BReps.	
104 IfcColumn		company statement	PlateFastener-01 / 2x3
001 GUIDs	■		
002 History	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■	Revit 2013 exports most columns as mapped representations.	
030-6-9 Geometry Mapped	■		
100 Element Aggregation			
100-2 Element Decomposition	■	In this test file, there were no columns exported as compositions of elements.	














210 Property Set		
210-3 Property Set User Defined	 Revit 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	 Revit 2013 exports column materials at the instance, not type, level.	
300-5 Type Property Set	 This concept was optional for this test case, and not included in the Revit export.	
401 IfcMember	<i>company statement</i>	<i>PlateFastener-01 / 2x3</i>
001 GUIDs		
002 History		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	 In this test case, the members were exported as mapped representations.	
030-6-9 Geometry Mapped		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		

210 Property Set	
210-1 Property Set IFC Common	
210-3 Property Set User Defined	 Revit 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	
300-2 Type Naming	
300-3 Type Material	
300-5 Type Property Set	 Revit 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.
402 IfcPlate	<i>company statement</i> <span>PlateFastener-01 / 2x3</span>
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	 In this test case, the IfcPlates were exported as mapped representations with voids.
030-6-5 Geometry Explicit	 In this test case, the IfcPlates were exported as mapped representations with voids.

040 Presentation	
040-1 Geometric Presentation	■
050 CAD Layer	■
070 Voiding	
070-3 Voiding Geometry SweptSolid	■ In this test case, the IfcPlates were exported as mapped representations with voids.
120 Spatial Containment	■
200 Material	
200-2 Material Layer Set	■
210 Property Set	
210-1 Property Set IFC Common	■
210-3 Property Set User Defined	■ Revit 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	■ Revit 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.
403 IfcFooting	company statement

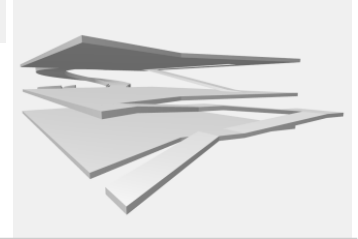
PlateFastener-01 / 2x3



030 Geometry	
030-6 Geometry Body	
030-6-1 Geometry SweptSolid	 Revit exports some geometries that are conceptually clipped extrusions as Breps.
030-6-2 Geometry Clipping	 Revit exports some geometries that are conceptually clipped extrusions as Breps.
405 IfcFastener	<i>company statement</i> <span style="float: right;">PlateFastener-01 / 2x3</span>
010 Naming	 No IfcFasteners were modelled for this test case.
020 Placement	
020-2 Placement Relative	 No IfcFasteners were modelled for this test case.
030 Geometry	
030-2 Geometry Axis	 No IfcFasteners were modelled for this test case.
406 IfcMechanicalFastener	<i>company statement</i> <span style="float: right;">PlateFastener-01 / 2x3</span>
001 GUIDs	
002 History	
010 Naming	
020 Placement	
020-2 Placement Relative	
030 Geometry	
030-6 Geometry Body	
030-6-1 Geometry SweptSolid	 In this test case, the IfcMechanicalFastener was exported with a mapped representation.
030-6-5 Geometry Explicit	 In this test case, the IfcMechanicalFastener was exported with a mapped representation.
030-6-9 Geometry Mapped	
040 Presentation	
040-1 Geometric Presentation	

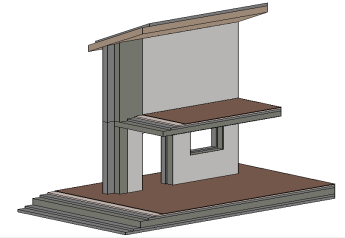
050 CAD Layer		
120 Spatial Containment		
200 Material <i>200-1 Single Material</i>		This concept was optional for this test case, and not included in the Revit export.
210 Property Set 210-6 Property Set IFC any 210-9 Property Set User Defined	 	Revit does not have the capability to create user-defined 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 <i>300-2 Type Naming</i> <i>300-3 Type Material</i> <i>300-5 Type Property Set</i>	   	  This concept was optional for this test case, and not included in the Revit export.  Revit 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.

## RampSlab-01 / 2x3



105 IfcSlab	company statement		RampSlab-01 / 2x3
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid		■	
040 Presentation			
040-1 Geometric Presentation		■	
040-2 Material Presentation		■	
070 Voiding			
070-3 Voiding Geometry SweptSolid		■	
107 IfcRamp	company statement		RampSlab-01 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	In Revit 2013 there is a limitation that one Ramp has only one slope, while one of the ramps in the test case has 3 different slopes. This ramp was modelled as three separate ramps.
020 Placement			
020-1 Placement Relative		■	
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit		■	In Revit 2013 there is a limitation that one Ramp has only one slope, while one of the ramps in the test case has 3 different slopes. This ramp was modelled as three separate ramps.
030-9 Geometry By Components		■	

040 Presentation	
040-1 Geometric Presentation	■
050 CAD Layer	■ In Revit 2013, the CAD Layer override did not work for some entities in containers, such as IfcRampFlights, and some IfcStairFlights.
100 Element Aggregation	
100-2 Element Decomposition	■
120 Spatial Containment	■
200 Material	
200-1 Single Material	■
210 Property Set	
210-1 Property Set IFC Common	■ In Revit 2013 there is a limitation that a Ramp is not allowed to end in a landing. One of the ramps in this test case ended in a landing, and was not able to be modelled using the standard Ramp tool. As such, some property sets were missing.
210-3 Property Set User Defined	■ Revit 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	■

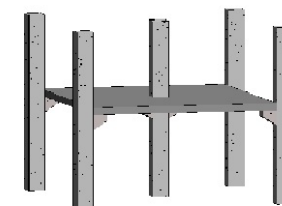


## RandomStruc-X1 / 2x3

102 IfcWall	company statement		RandomStruc-X1 / 2x3
070 Voiding			
070-3 Voiding Geometry SweptSolid	■	In this test case, all IfcBuildingElementParts were exported with BReps. By CV2.0 convention, we do not export openings for BReps.	
080 Filling			
080-1 Has Filling			
080-1-1 Has Filling Door	■	In this test case, all IfcWalls were exported with BReps. By CV2.0 convention, we do not export openings for BRep walls.	
080-1-2 Has Filling Window	■	In this test case, all IfcBuildingElementParts were exported with BReps. By CV2.0 convention, we do not export openings for BReps.	
100 Element Aggregation			
100-2 Element Decomposition	■		
210 Property Set			
210-1 Property Set IFC Common	■		
105 IfcSlab	company statement		RandomStruc-X1 / 2x3
100 Element Aggregation			
100-2 Element Decomposition	■		
210 Property Set			
210-1 Property Set IFC Common	■		
110 IfcRoof	company statement		RandomStruc-X1 / 2x3

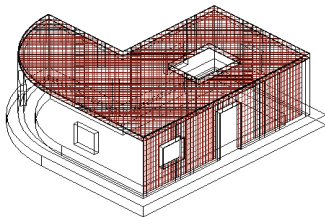
100 Element Aggregation	
100-1 Element Composition	<div></div> This concept was optional for this test case, and not modelled.
100-2 Element Decomposition	<div></div>
210 Property Set	
210-1 Property Set IFC Common	<div></div>
General	<i>company statement</i> <i>RandomStruc-X1 / 2x3</i>
_G4 Remarks	<div></div>

## RandomStruc-X2 / 2x3



103 IfcBeam	company statement		RandomStruc-X2 / 2x3
020 Placement			
030 Geometry			
408 IfcElementAssembly	company statement		RandomStruc-X2 / 2x3
001 GUIDs	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-1 Geometry Box	■		
030-2 Geometry Axis	■	This concept was incorrectly added to this test case.	
100 Element Aggregation			
100-1 Element Composition	■	This concept was incorrectly added to this test case.	
100-2 Element Decomposition	■		
General	company statement		RandomStruc-X2 / 2x3
_G4 Remarks	■		

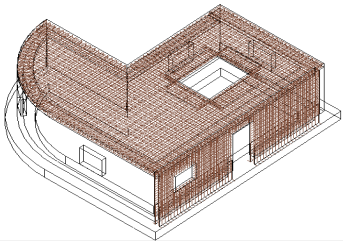
RandomStruc-X3 / 2x3



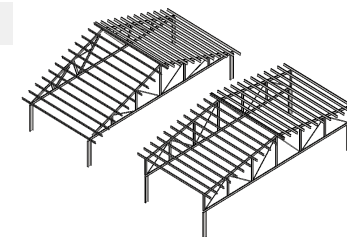
410 IfcReinforcingMesh		company statement	RandomStruc-X3 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
050 CAD Layer	■		
120 Spatial Containment	■		
200 Material			
200-1 Single Material	■		
General		company statement	RandomStruc-X3 / 2x3
_G4 Remarks	■		



RandomStruc-X4 / 2x3



409 IfcReinforcingBar		company statement	RandomStruc-X4 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
050 CAD Layer	■		
120 Spatial Containment	■		
200 Material			
200-1 Single Material	■		
General		company statement	RandomStruc-X4 / 2x3
_G4 Remarks	■		

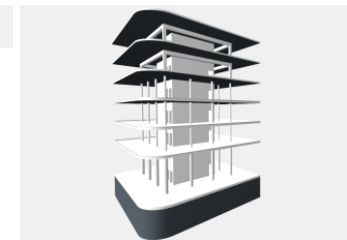


## RandomStruc-X5 / 2x3













103 IfcBeam	company statement		RandomStruc-X5 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
050 CAD Layer	■		
120 Spatial Containment	■		
200 Material			
200-1 Single Material	■		
104 IfcColumn	company statement		RandomStruc-X5 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
050 CAD Layer	■		
120 Spatial Containment	■		
200 Material			
200-1 Single Material	■		

403 IfcFooting		company statement	RandomStruc-X5 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-1 Placement Relative	■		
050 CAD Layer	■		
120 Spatial Containment	■		
200 Material			
200-1 Single Material	■		
408 IfcElementAssembly		company statement	RandomStruc-X5 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
General		company statement	RandomStruc-X5 / 2x3
_G4 Remarks	■		

## Reinforcement-01 / 2x3



101 IfcWallStandardCase	company statement		Reinforcement-01 / 2x3
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
120 Spatial Containment	■		
103 IfcBeam	company statement		Reinforcement-01 / 2x3
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
120 Spatial Containment	■		
104 IfcColumn	company statement		Reinforcement-01 / 2x3
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		

120 Spatial Containment		
105 IfcSlab	company statement	
		Reinforcement-01 / 2x3
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
120 Spatial Containment		
403 IfcFooting	company statement	
		Reinforcement-01 / 2x3
010 Naming		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
120 Spatial Containment		
210 Property Set		
210-3 Property Set User Defined		Revit 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.
407 IfcDiscreteAccessory	company statement	
		Reinforcement-01 / 2x3
001 GUIDs		In this test case, the instructions for how to include an IfcDiscreteAccessory were unclear, and as such no IfcDiscreteAccessories were modelled.
010 Naming		In this test case, the instructions for how to include an IfcDiscreteAccessory were unclear, and as such no IfcDiscreteAccessories were modelled.

020 Placement	
020-2 Placement Relative	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
030 Geometry	
030-6 Geometry Body	
030-6-5 Geometry Explicit	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
030-6-9 Geometry Mapped	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
040 Presentation	
040-1 Geometric Presentation	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
050 CAD Layer	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
120 Spatial Containment	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
200 Material	
200-1 Single Material	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
210 Property Set	
210-9 Property Set User Defined	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
300 Type	
300-1 Type Geometry	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
300-2 Type Naming	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
300-3 Type Material	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
300-5 Type Property Set	<div></div> <p>In this test case, the instructions for how to include an IfcDiscreteAccesory were unclear, and as such no IfcDiscreteAccesories were modelled.</p>
408 IfcElementAssembly	company statement
001 GUIDs	<div></div>

Reinforcement-01 / 2x3
















010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-9 Geometry By Components		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		Revit 2013 exports IfcElementAssemblies as containers with no native geometry. As such, there is no geometry to attach a CAD layer to.
100 Element Aggregation		
100-2 Element Decomposition		
120 Spatial Containment		
210 Property Set		
210-9 Property Set User Defined		Revit 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.
409 IfcReinforcingBar	company statement	
001 GUIDs		
010 Naming		
020 Placement		
020-2 Placement Relative		

030 Geometry	
030-6 Geometry Body	
030-6-4 Geometry AdvancedSweptSolid	■
030-6-5 Geometry Explicit	■ Revit 2013 exports all IfcReinforcingBar with IfcSweptDiskSolid geometry.
030-6-9 Geometry Mapped	■ Revit 2013 exports all IfcReinforcingBar with IfcSweptDiskSolid geometry.
040 Presentation	
040-1 Geometric Presentation	■
050 CAD Layer	■
120 Spatial Containment	■
200 Material	
200-1 Single Material	■
210 Property Set	
210-9 Property Set User Defined	■ Revit 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	■ Revit 2013 exports all IfcReinforcingBars with IfcSweptDiskSolid geometry.
300-2 Type Naming	■ Revit 2013 does not support type export for IfcReinforcingBar, as there is no IfcReinforcingBarType in IFC2x3.
300-3 Type Material	■ Revit 2013 does not support type export for IfcReinforcingBar, as there is no IfcReinforcingBarType in IFC2x3.
300-5 Type Property Set	■ Revit 2013 does not support type export for IfcReinforcingBar, as there is no IfcReinforcingBarType in IFC2x3.
410 IfcReinforcingMesh	company statement
001 GUIDs	■
010 Naming	■



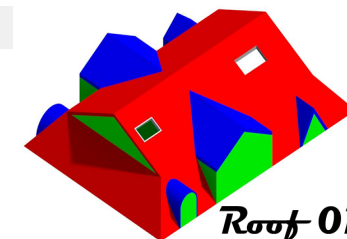
020 Placement	
020-2 Placement Relative	■
030 Geometry	
030-6 Geometry Body	
030-6-4 Geometry AdvancedSweptSolid	■
030-6-5 Geometry Explicit	■ Revit 2013 exports all IfcReinforcingMeshes with IfcSweptDiskSolid geometry.
030-6-9 Geometry Mapped	■ Revit 2013 exports all IfcReinforcingMeshes with IfcSweptDiskSolid geometry.
040 Presentation	
040-1 Geometric Presentation	■
050 CAD Layer	■
120 Spatial Containment	■
200 Material	
200-1 Single Material	■
210 Property Set	
210-9 Property Set User Defined	■ Revit 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	■ Revit 2013 does not support type export for IfcReinforcingMesh, as there is no IfcReinforcingMeshType in IFC2x3.
300-2 Type Naming	■ Revit 2013 does not support type export for IfcReinforcingMesh, as there is no IfcReinforcingMeshType in IFC2x3.
300-3 Type Material	■ Revit 2013 does not support type export for IfcReinforcingMesh, as there is no IfcReinforcingMeshType in IFC2x3.
300-5 Type Property Set	■ Revit 2013 does not support type export for IfcReinforcingMesh, as there is no IfcReinforcingMeshType in IFC2x3.
501 IfcProject	company statement

Reinforcement-01 / 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> <span>Reinforcement-01 / 2x3</span>
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-1 Placement Absolute		Revit 2013 always exports the IfcBuilding local placement relative to the IfcSite.
060 Location		
060-2 Address		
150 Spatial Aggregation		
150-1 Spatial Composition		
150-2 Spatial Decomposition		
504 IfcBuildingStorey		<i>company statement</i> <span>Reinforcement-01 / 2x3</span>
001 GUIDs		

002 History	■
010 Naming	■
020 Placement	
020-2 Placement Relative	■
060 Location	
060-4 Storey Elevation	■
120 Spatial Containment	■
150 Spatial Aggregation	
150-1 Spatial Composition	■
150-2 Spatial Decomposition	■

## Roof 01 / 2x3

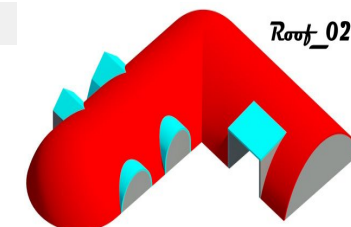


101 IfcWallStandardCase	company statement		Roof 01 / 2x3
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-2 Geometry Clipping	■		
105 IfcSlab	company statement		Roof 01 / 2x3
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■	In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.	
030-6-2 Geometry Clipping	■	In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.	
030-6-9 Geometry Mapped	■	In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.	
070 Voiding			
070-3 Voiding Geometry SweptSolid	■	In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.	
080 Filling			
080-1 Has Filling			
080-1-2 Has Filling Window	■		
200 Material			
200-2 Material Layer Set	■		
110 IfcRoof	company statement		Roof 01 / 2x3

030 Geometry <i>030-1 Geometry Box</i>	 This concept was optional for this test case, and not included in the Revit 2013 export.
040 Presentation  040-1 Geometric Presentation  <i>040-2 Material Presentation</i>	 In this test case, the roofs were exported with no color information. This was based on an incorrect export option.  
100 Element Aggregation  100-2 Element Decomposition	 In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.
120 Spatial Containment	
200 Material  200-1 Single Material	 
General	<i>company statement</i>
<i>_G4 Remarks</i>	

Roof 01 / 2x3

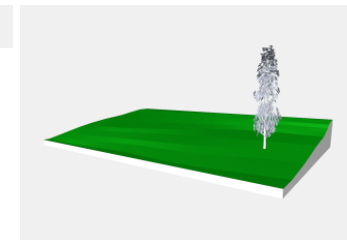
## Roof 02 / 2x3



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	■	In this test case, the roofs are exported as Breps, not as a collection of IfcSlabs.	

210 Property Set	
210-1 Property Set IFC Common	<div></div>
210-3 Property Set User Defined	<div></div> 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
General	<i>company statement</i>
_G4 Remarks	<div></div>

## Site 01 / 2x3

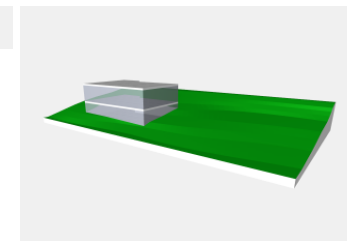


502 IfcSite	company statement		Site 01 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-1 Placement Absolute		■	
030 Geometry			
030-1 Geometry Box	■	This concept was optional for this test case, and not included in the Revit 2013 export.	
030-3 Geometry FootPrint	■	This concept 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> <span>Site 01 / 2x3</span>
_G4 Remarks	■

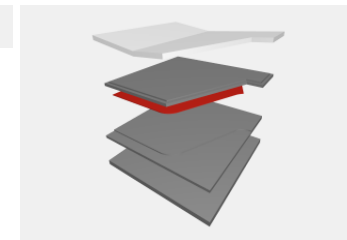
## Site 02 / 2x3



502 IfcSite	company statement		Site 02 / 2x3
010 Naming	■		
020 Placement			
020-1 Placement Absolute	■		
030 Geometry			
030-3 Geometry FootPrint	■	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	■		
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	■		

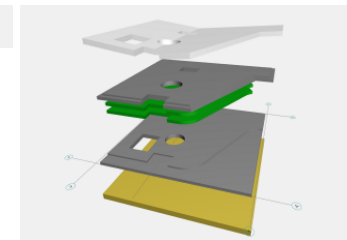
150 Spatial Aggregation	
150-1 Spatial Composition	■
150-2 Spatial Decomposition	■
210 Property Set	
210-1 Property Set IFC Common	■
General	<i>company statement</i>
<i>_G4 Remarks</i>	■

## Slab 01S / 2x3














105 IfcSlab	company statement		Slab 01S / 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	■		
040 Presentation			
040-1 Geometric Presentation	■		
040-2 Material Presentation	■		
050 CAD Layer	■		
200 Material			
200-2 Material Layer Set	■	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.	
200-3 Material Layer Usage	■		
210 Property Set			
210-1 Property Set IFC Common	■		
General	company statement		Slab 01S / 2x3
_G4 Remarks	■		

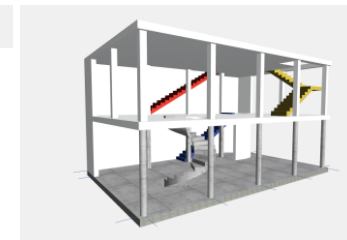
## Slab 02S / 2x3












105 IfcSlab	company statement		Slab 02S / 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		■	
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		■	Revit 2013 exports floors as extrusions or Breps.
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		■	This concept was optional for this test case, and not included in the Revit 2013 export.
070-3 Voiding Geometry SweptSolid		■	
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>200-1 Single Material</i> 200-2 Material Layer Set	 
210 Property Set 210-1 Property Set IFC Common 210-2 Property Set IFC any 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 <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>	 Revit 2013 does not currently export IfcSlabType.  Revit 2013 does not currently export IfcSlabType.  Revit 2013 does not currently export IfcSlabType.  Revit 2013 does not currently export IfcSlabType.
General	<i>company statement</i>
<i>_G4 Remarks</i>	

## 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	company statement
_G4 Remarks	

StairSlab-01 / 2x3

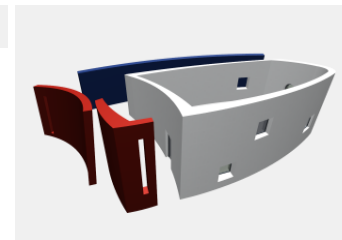


## UnitTest-01S / 2x3



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

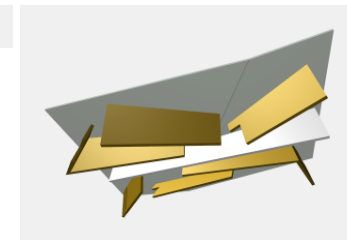
## Wall 01 / 2x3







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	■	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.
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

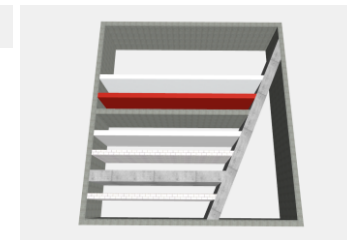


102 IfcWall	company statement		Wall 02 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-2 Geometry Axis	■	Revit 2013 does not generally export the geometry axis for Brep walls. In this test case, all IfcWalls were exported with BReps.	
030-6 Geometry Body			
030-6-1 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

## WallStandardCase 01S / 2x3

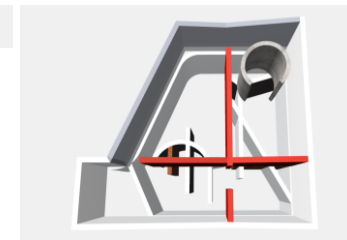


101 IfcWallStandardCase	company statement		WallStandardCase 01S / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-2 Geometry Axis	■		
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-2 Geometry Clipping	■	The Revit IFC exporter gets the wall geometry via 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.	
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, this becomes two materials with two unique names. The restriction comes from having the second name.	
050 CAD Layer	■		
110 Connectivity			
110-2 Connectivity Path	■		
120 Spatial Containment	■		

200 Material		
200-4 Material Layer Usage	■	
210 Property Set		
210-3 Property Set User Defined	■	Revit 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	company statement	
_G4 Remarks	■	

WallStandardCase 01S / 2x3

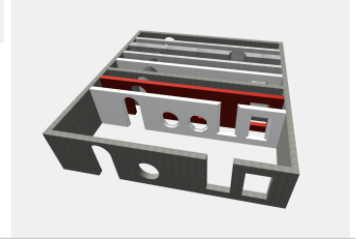
## WallStandardCase 02S / 2x3



101 IfcWallStandardCase	company statement		WallStandardCase 02S / 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		■	
210 Property Set			
210-1 Property Set IFC Common		■	
General	company statement		WallStandardCase 02S / 2x3
_G4 Remarks	■	One of the walls in this test case was exported as an IFCWALL instead of an IFCWALLSTANDARDCASE, as it did not meet Revit 2013's requirements for IFCWALLSTANDARDCASE.	

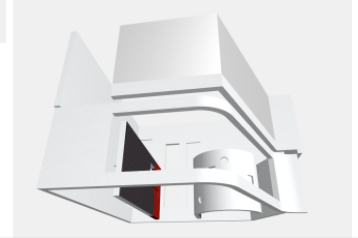


## WallStandardCase 03S / 2x3



101 IfcWallStandardCase	company statement		WallStandardCase 03S / 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	■	This concept was incorrectly marked as restricted. It is supported.	
070-2 Voiding Geometry Explicit	■		
120 Spatial Containment	■		
General	company statement		WallStandardCase 03S / 2x3
_G4 Remarks	■	This concept was incorrectly marked as restricted. It is supported.	

## WallStandardCase 04S / 2x3



101 IfcWallStandardCase	<i>company statement</i>	<i>WallStandardCase 04S / 2x3</i>
010 Naming	■	
030 Geometry		
030-2 Geometry Axis	■	
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■ This concept was incorrect marked as restricted. It is supported.	
070 Voiding		
070-1 Voiding Geometry SweptSolid	■ This concept was incorrect marked as restricted. It is supported.	
070-2 Voiding Geometry Explicit	■	
120 Spatial Containment	■	
General	<i>company statement</i>	<i>WallStandardCase 04S / 2x3</i>
_G4 Remarks	■ This concept was incorrect marked as restricted. It is supported.	