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Introduction

The purpose of this project is to provide a series of Canam Parametric Revit families to help Architects and Engineers that want to specify our Deck products in their Revit Models. The format chosen for this development is Revit 2012.

For the first release of the Canam Deck Revit families, we have made available the most commonly used Deck product fabricated by Canam Steel Deck and Canam-USD (United Steel Deck).

Please refer to our website for more information about our products: www.canam-construction.com

Here is the list of Canam Parametric Deck available for Revit 2012:

Canam Steel Deck:
- **Roof Deck**: P-3615 & P-3606, P2436 & P-2404,
- **Floor Deck Composite**: P-3615 & P-3606, P-3623, P-2432
- **Form Deck**: P-3012

Canam-USD (United Steel Deck):
- **Floor Deck Composite**: B-Lok, 2" Lok-Floor, 3" Lok-Floor, NLS (N-Lok), LF1.5 (Lok-Floor)
- **Floor Deck Composite Cellular**: BLCS, LFCS15, LFCS2, LFCS3, NLCS
- **Floor Deck Composite Cellular Acoustic**: LFCS3, LFCS2
- **Form Deck**: UFS, UF1X, UFX, LF2X, UF2X, LF3X, B-INV
- **Roof Deck Acoustic**: BA, NSA, JA, HA6, HA7.5
- **Roof Deck Cellular**: BCS, NCS, JCS, HC6S, HC7.5S
- **Roof Deck Cellular Acoustic**: BCAS, NCAS, JCSA, HCA6S, HCA7.5S

1. 2D Steel Deck Families

The 2D Steel Deck Revit Families are available for specification in Revit 2012 Detail Views. You can load our Canam Deck 2D Detail family the same way you load any Revit Family using the "Load Family" function or you can Open the "Canam Deck Sample Project" to Copy/Paste the Detail Items in your project. The "Canam Deck Sample Project" will be explained later in this document. The Canam 2D Deck Products are available in an individual Family for every product.

When you load a 2D Deck family in your project, this family will be available in the Project Browser (Families/Detail Items). You can find them by expanding the Detail Items group to reveal the Detail Item families loaded in your project.

The Canam 2D Deck Families are split in Types using the Deck Gage (Deck thickness) to distinguish the different types available in a family. You can find them by expanding the Deck Family group to reveal the available type for this family.

Various Gage values will be available depending on the selected 2D Deck Family. Every Canam 2D Deck Family also includes a "Generic" Type where the Gage value is set to zero. If you don’t know the deck gage at the deck creation, you can specify the
1.1 Create a 2D Deck Detail Item

To create a 2D Deck Detail item, simply select the type you need from the Project Browser and drag/drop in the Drafting View. The 2D Deck families can be drawn in the Drafting View by clicking 2 point (they are "Line Based" Families).

**Important:** The 2D Deck items should always be drawn from **left to right** if not, the deck will be drawn upside down.

We have two distinct 2D families for every Deck Profile:

1.2 The "Rib Section" family

The "Rib Section" families display the deck on the rib section side. With this family, the deck flutes are added along as you increase the length of the detail item by moving one of the detail component handles (blue dot).

1.2.1 The "Top/Ext" indicator

The "Rib Section" families have a visual indicator (TOP/EXT) that indicates if the section has been drawn upside down. You can deactivate the "TOP/EXT" visual indicator for this family by unchecking the "Top/Ext indicator Label" Parameter Checkbox from the Family Type Properties.

1.2.2 The "Bottom Mask"

The "Rib Section" families also have a control that allows you to mask the graphical elements that are under the Deck (ex: Concrete).

When you unchecked the **Bottom Mask** option, reveal the graphical elements that are under the Deck Rib 2D Item. The Bottom Mask check box is located in the Detail Item Properties. >>

By default, the "Bottom Mask" check box is checked meaning the masking is active.
1.3 The "Side" family

The Side families display the deck from its side view. Same as the "Rib Section" families, you can stretch these 2D details by moving one of the detail component handles (blue dot).

2. Canam Steel Deck in 3D Floor items

We also provided our Canam Deck Profiles so they can be used in the Revit "Floor System" families. As you probably know, it is not possible to load a "Floor System" family the same way you load a loadable family (like a Revit Beam family for example). The only possible way to import an existing Floor Type in your project is to Copy /Paste a Floor Type from another project into your current project. You can also create and customize your own floor family types by loading our 2D Deck Profile Families in your project and use these Deck Profiles to create your own customized Floor Types.

2.1 Canam Deck Sample Project

To simplify the use of the Canam Deck in the 3D Floor items, we have created the "Canam Deck Sample Project". The Sample Project is a Revit 2012 model that contains 3D Floor Type Samples already defined with our Deck products. Just Open the Sample Project, Select the Floor Types you need in your project and Copy them in your project or in your project template. The 3D Floor Type samples can be found in the "3D View" of the Sample Project.

The Canam Deck Sample Project also contains all the Canam Deck 2D Detail families mentioned previously in this document and can also be imported in your current project using the Copy /Paste method. The 2D Deck samples are located in the "Sample-Detail View" of the Sample Project.

2.2 3D Floor Sample Deck Types

When a 3D Floor Sample Type is pasted in your project, it will become available in the Project Browser (Family/Floors/Floor). They can be found by expanding the Families/Floors group to reveal the Floor families loaded in your project.

As explained above, the 3D System Family - Floor is not loaded in your project like the 2D Deck Families because it is already loaded in the system. This is the reason for which the Canam 3D Deck Products are not available in individual Families per product.

Because of this Revit functionality regarding the Floor System Family, the selection of the Canam 3D Deck Products is made at the same time that you select the Deck Gage by choosing the Floor Type.

Similar to the 2D Deck Types, various Gage values will be available depending on the Deck Family. We have also created a "Generic" Type for every Canam 3D Deck product.
2.3 Create a 3D Floor

When you create a Floor item using the Revit Structural Floor (SB) function, a 3D floor item is added in your model. Even if the Floor Type you have selected contains a Deck layer, you will not see the Deck in the 3D View.

<< In 3D, the Floor item will always look like a solid slab shape.

But if you create a Section View that cuts through the floor item, you will see the deck profile displayed in 2D in the section view. You will then be able to tag the floor and also be able to generate Deck surface reports. >>

The floor composition of our 3D Deck Samples Floor items always includes a layer for the Deck. This Layer is associated to the Deck Profile that matches the selected product. Some of our Deck samples will also include a layer for the concrete slab with a predefined slab thickness (when the intended use of the deck is to be with concrete).

If you need a different concrete thickness for these products, you can duplicate the type and rename the new copy with a representative name. Then edit the structure of the new Floor Type to change the thickness of the slab and save it.
3. Frequently Asked Questions (FAQ)

When should I use 2D instead of 3D?

The 2D detail components are intended to be used when the detail level and the view scale allow seeing the junction between the sheets and when this fixation method is to be illustrated on a detailed view. Unfortunately, it is not possible to align deck layer in structural floor system families at a specific location. Thus an overlay of detail components over the 3D elements can be used to show the requirements of the project.

How can I change the concrete thickness proposed for deck intended for use as a composite floor?

Simply select the element, modify type properties under edit structure, change the thickness of the concrete layer and then click ok twice. You can also refer to Autodesk Online Help for further information: [http://wikihelp.autodesk.com/Revit/enu/2013/Help/00001-Revit_He0/0328-Build_th328/0735-Structur735/0896-Structur896](http://wikihelp.autodesk.com/Revit/enu/2013/Help/00001-Revit_He0/0328-Build_th328/0735-Structur735/0896-Structur896)