# Factory Design – How to Show an Architectural Overlay as a 3D Solid

By default any architectural elements (walls, doors etc.) in the .dwg overlay from AutoCAD Architectural will be displayed as a wireframe representation. In FDS 2012 there is no option to change this, however this workaround may help.

Intermediate Inventor Users, Factory Layout Designers

Note that the following instructions will create a <u>non-associative</u> solid model of the architectural elements, so this will need re-creating and re-inserting if the facility layout changes.

1) In AutoCAD Architectural, type the command CONVERTTO3DSOLIDS. Then select all the elements (remember to select doors, windows etc. as elements). To enable editing of the original elements, don't erase the originals when prompted.
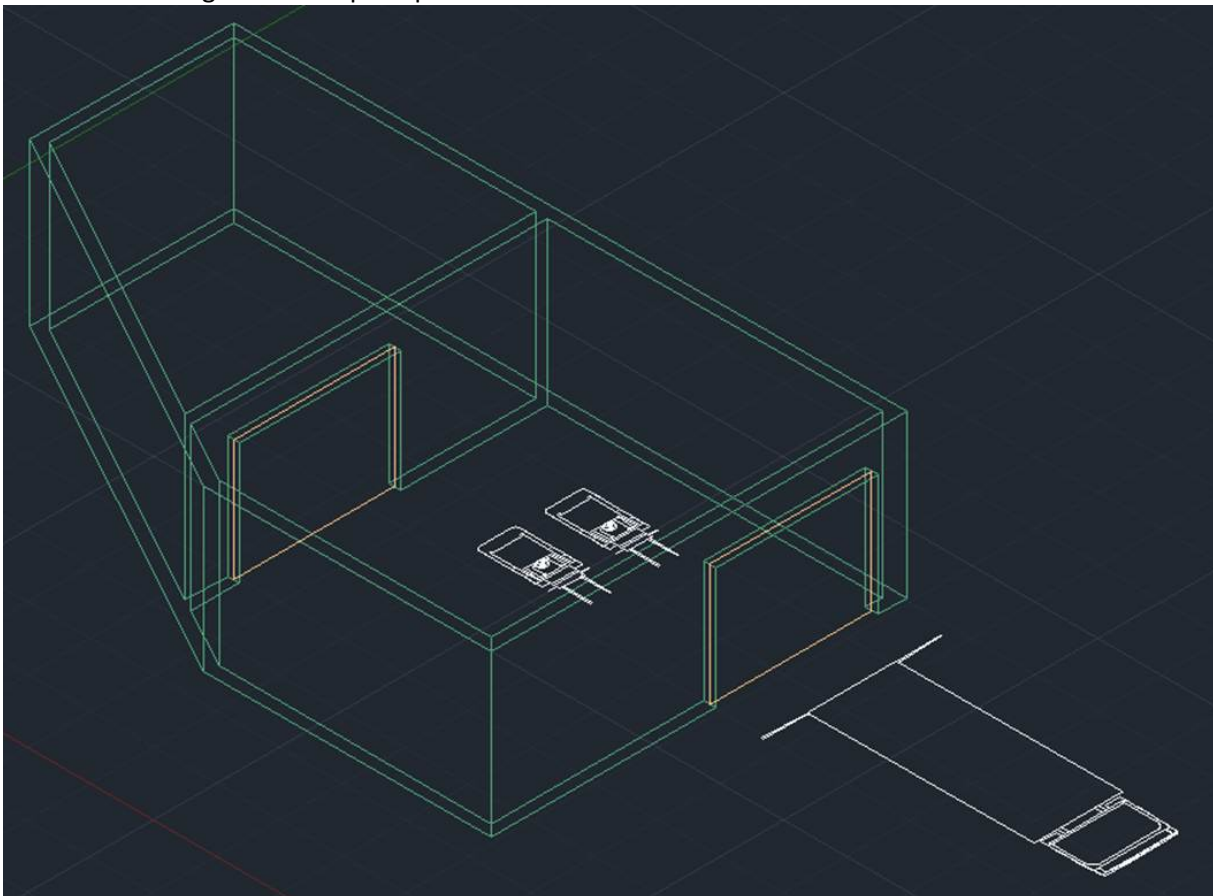
2) Save and close the file. Also make sure to also save and close the Inventor 3D layout file if it is open, as the next step won't work unless you do this.

3) Go to Inventor and Open the AutoCAD .dwg file directly.

4) When you get the layer imports options select only the layers required. These will probably be called something similar to 'A-Wall'
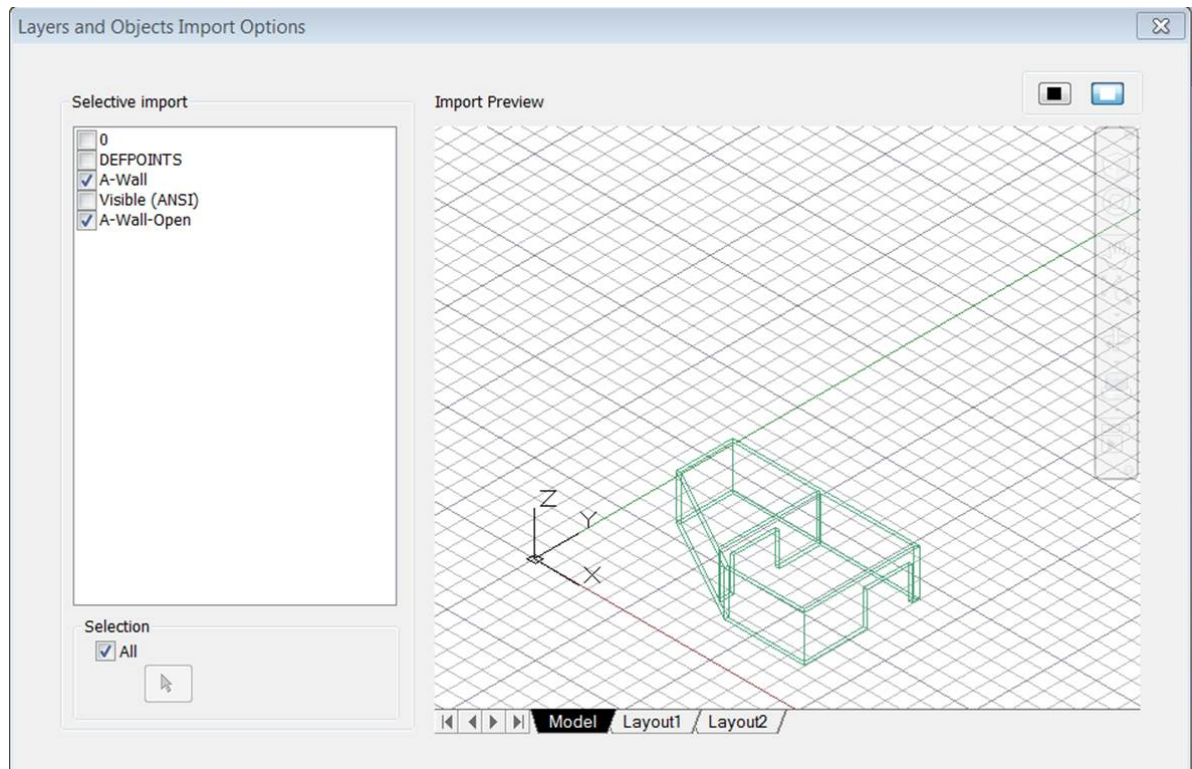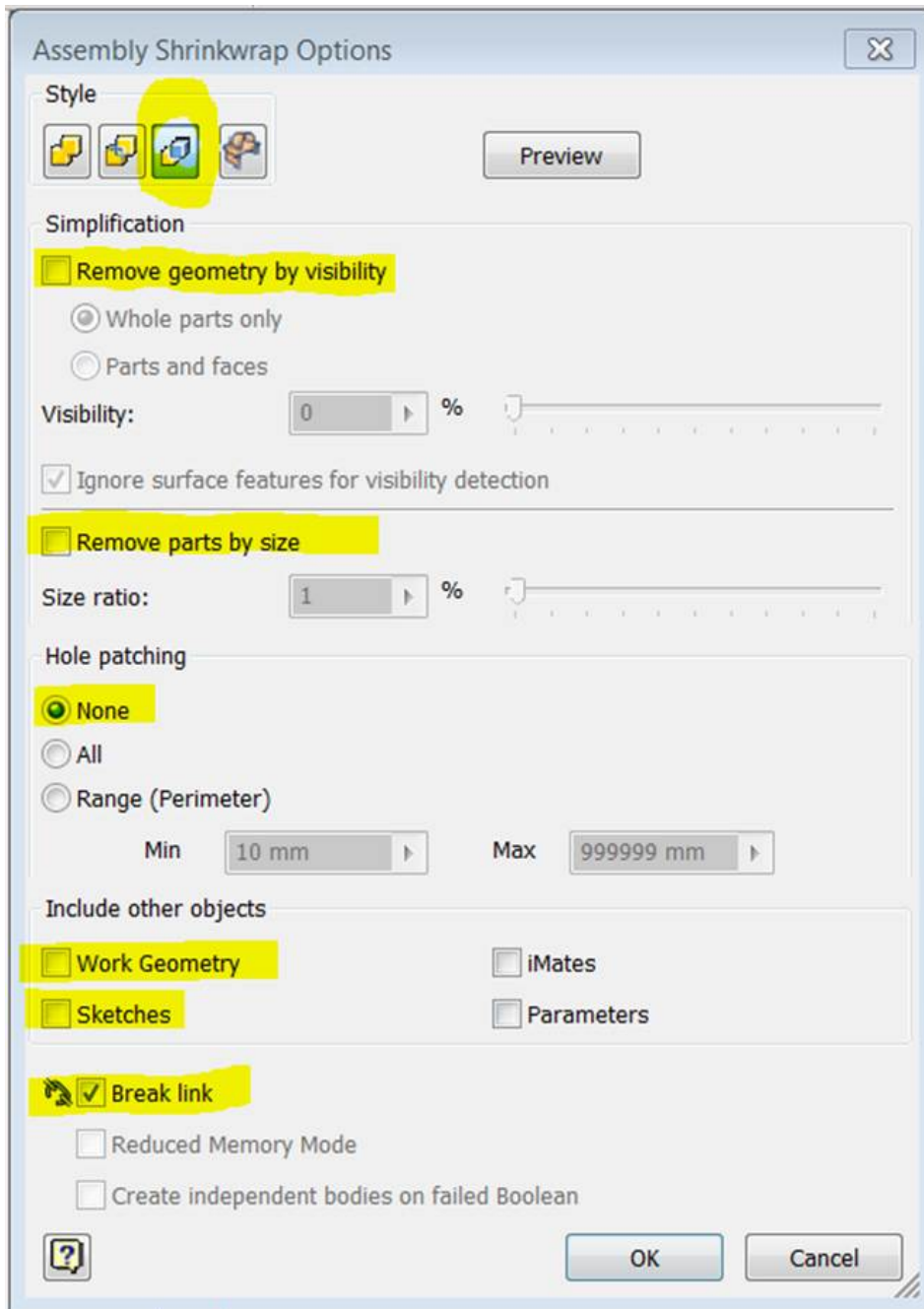

5) Click 'Next' and select the options on the Import Destination screen as follows: You can also save the configuration for next time if you wish.
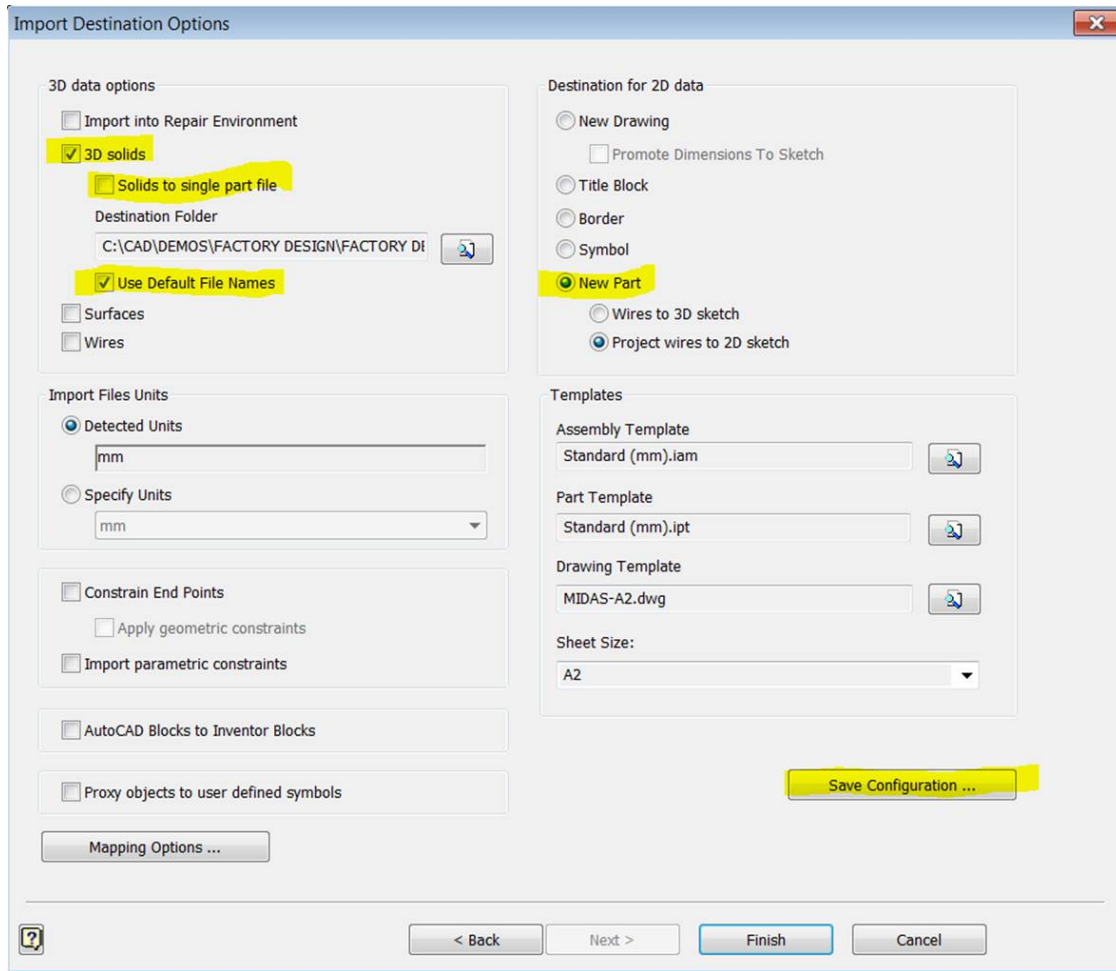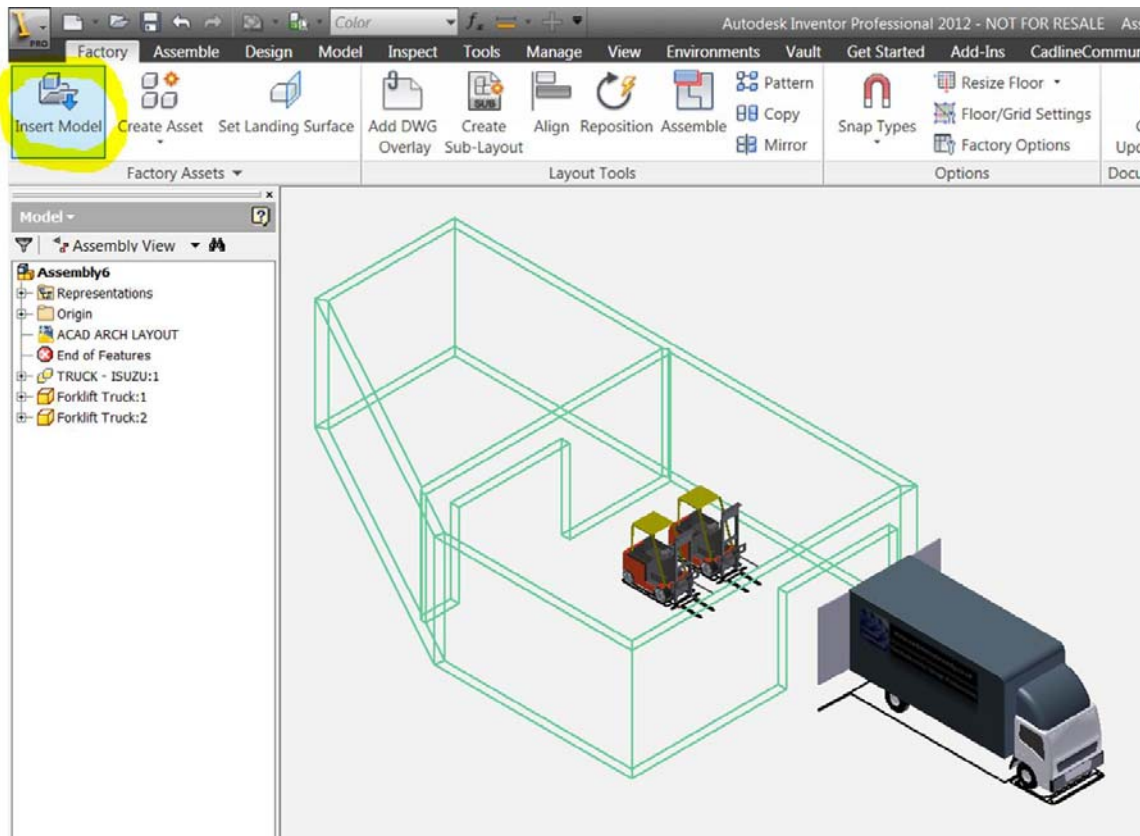
6) You should now have an assembly file. Now to simplify this file you can create a Shrinkwrap to convert it to a single part.
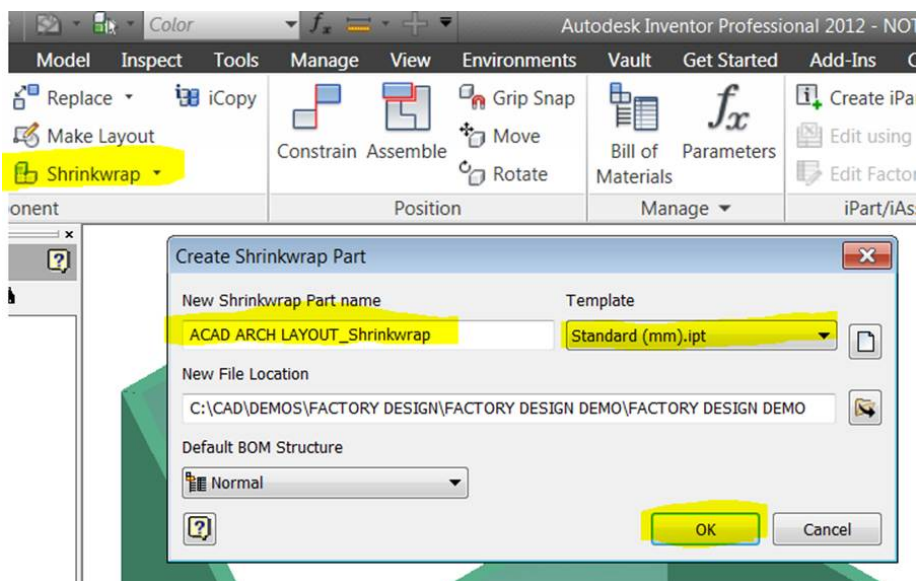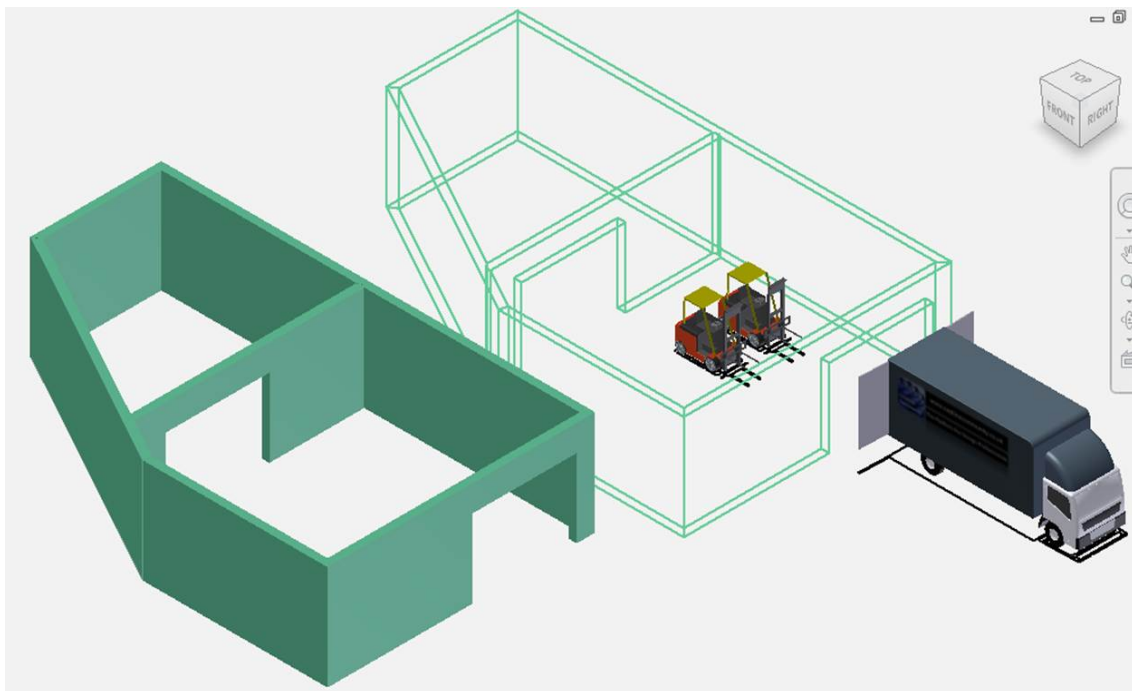
Use the Shrinkwrap options as shown below:

7) Click OK and save the resultant Shrinkwrap .ipt file.
8) Open the Inventor Factory Layout (Or click 'Send to Inventor' if it doesn't exist yet) and click to Insert Model.

9) Place the Shrinkwrap .ipt file created earlier. Don't worry about the positioning at this point.

10) Go to the Assemble tab and select 'Ground and Root Component' in the Productivity tools. Then select the solid building model to snap it to the correct location.
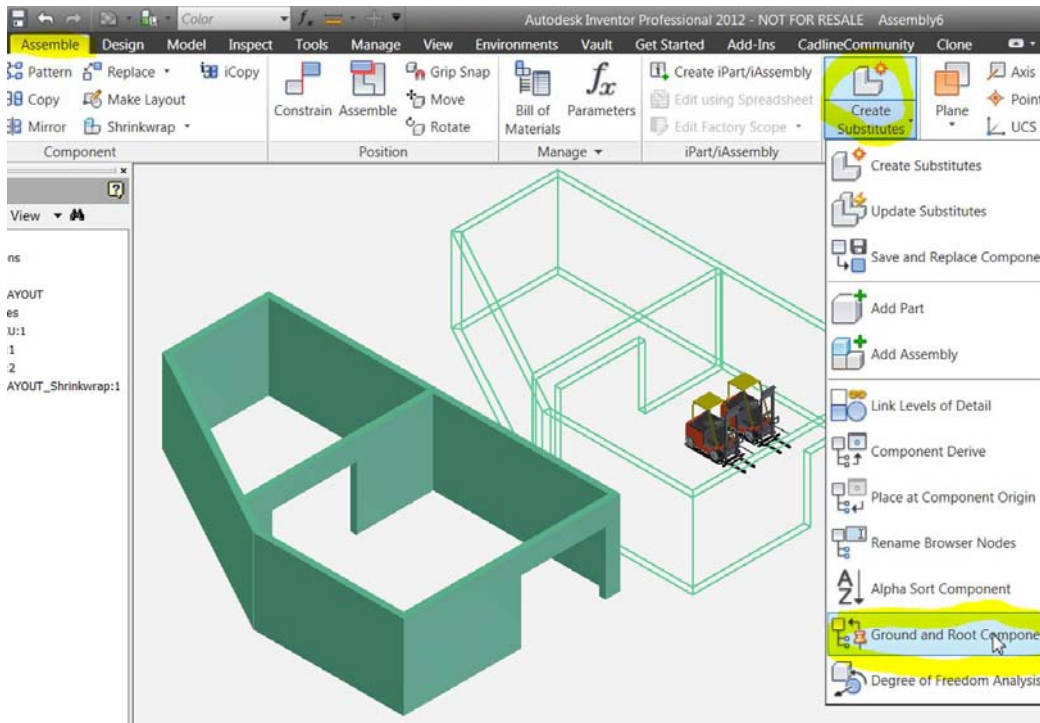
11) Turn off the visibility of the layers of the original 2D layout as required.
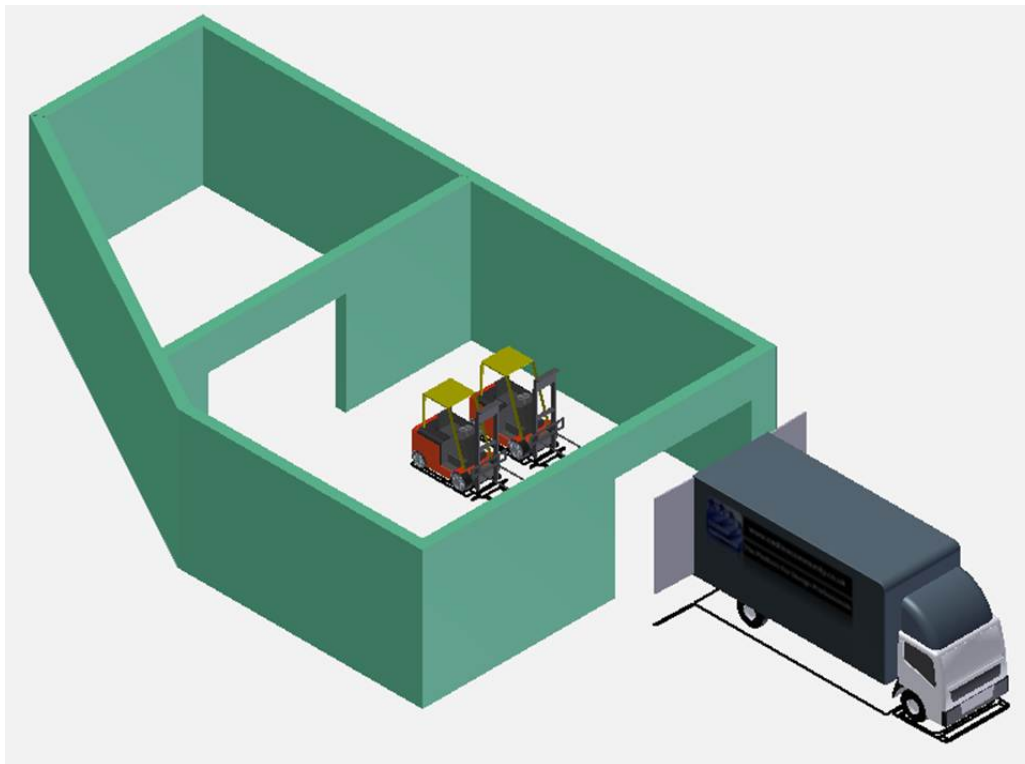
Hey presto! Remember this model is not associative to the original ACAD Architecture layout, so you'll probably want to do this later in the process, once the facility layout becomes more concrete, so to speak. Also if the model is complex it may slow down an already heavy model, so use it wisely. Enjoy!