

Civil 3D Plus

Taking Civil 3D to the next level

July 14, 2017

A Replacement for Part Builder? We'll see...

Posted by Brian Hailey under [Civil3D](#), [Infraworks](#) | Tags: [Civil 3D](#), [Customize](#), [InfraWorks](#), [Part Builder](#), [Pipe Networks](#), [Sanitary](#), [Storm](#), [Water](#) |

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Creating custom parts for your storm sewer or sanitary sewer networks in Civil 3D is not fun. If you've ever had to go into Part Builder, you know what I'm talking about; secret variables, odd objects (what's a COL object anyways?), and sometimes things just don't work (haven't been able to create a cut plane in Part Builder in almost a decade). Most of the time when people need to create a new part for a network in Civil 3D, they end up saying, "Whatever is already there, is probably close enough and I'll just use that instead of doing it right."

I have good news for you. In the latest version of InfraWorks (InfraWorks 2018.1) there is a new tool called the Project Infrastructure Parts Editor.

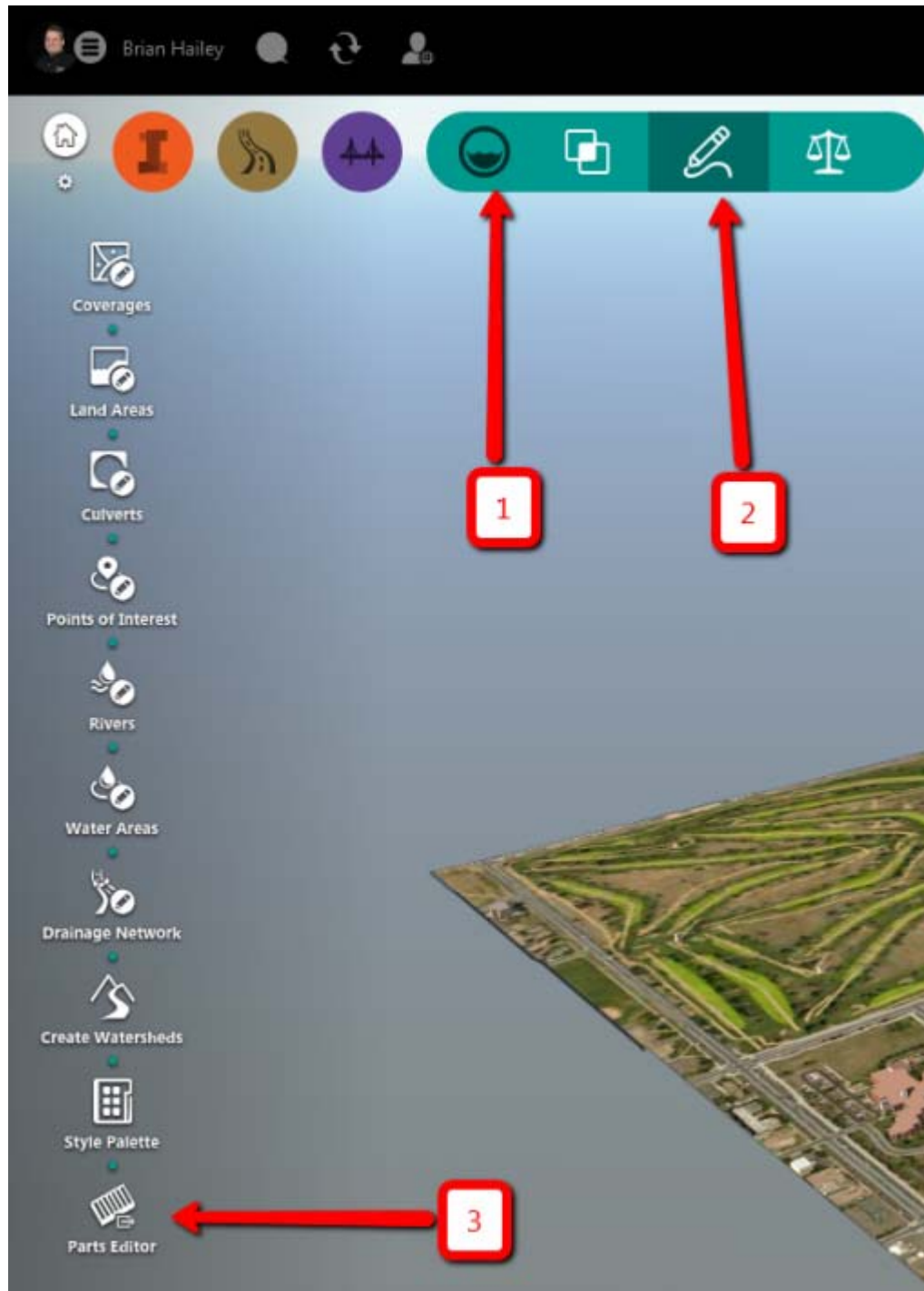


Loading Assembly: PresentationFramework\SystemXmlLinq ...

Infrastructure Parts Editor in InfraWorks 2018.1

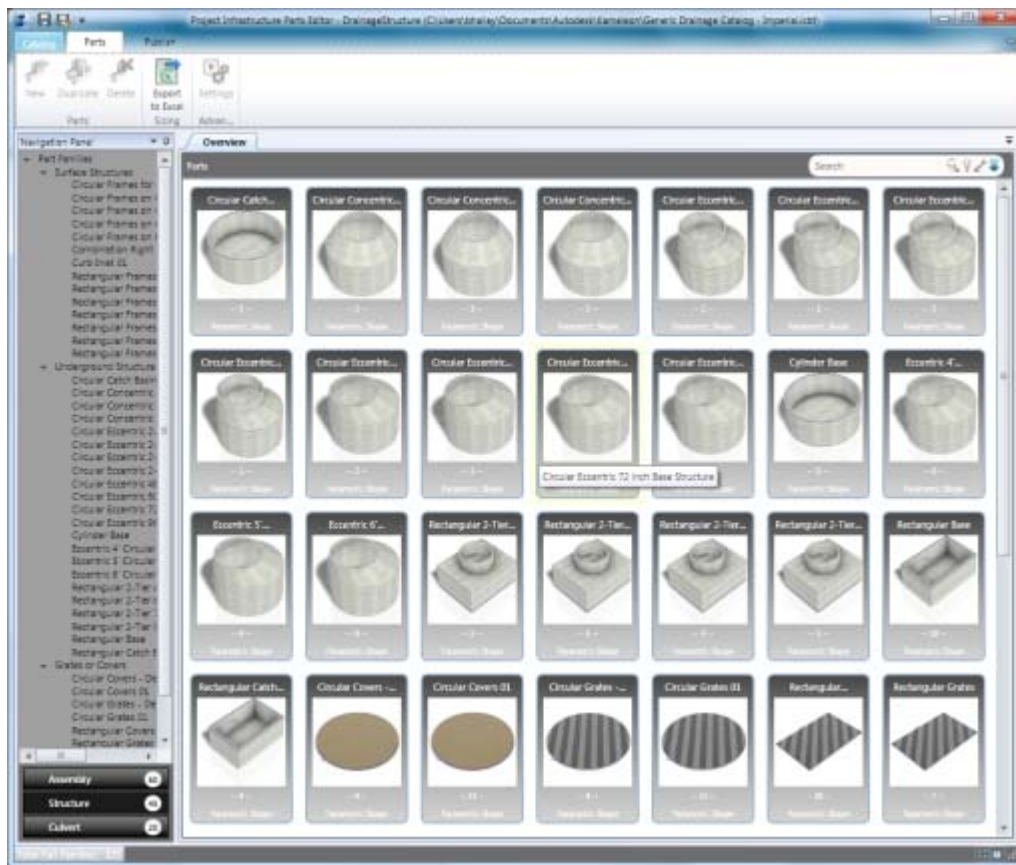
The Infrastructure Parts Editor has been around for quite a while in the Autodesk Labs (it was known as Project Kameleon, yes, with a K) but has recently graduated from labs and is now a full blown program. This tool will allow you to create new parts for use with InfraWorks as well as Civil 3D.

To access the new tool, within InfraWorks click on the drainage tools, then click the pencil drawing a line, and then click on the button for the "Parts Editor".



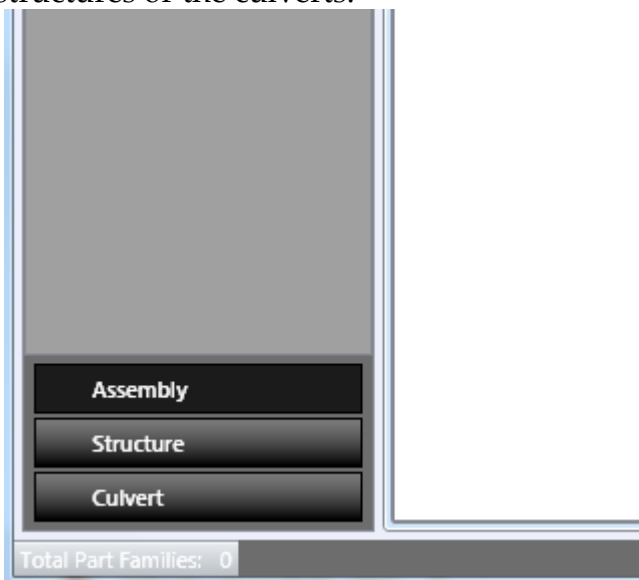
Where to find the Infrastructure Parts Editor in InfraWorks 2018.1

This will then open up an external application called, you guessed it, the Infrastructure Parts Editor.

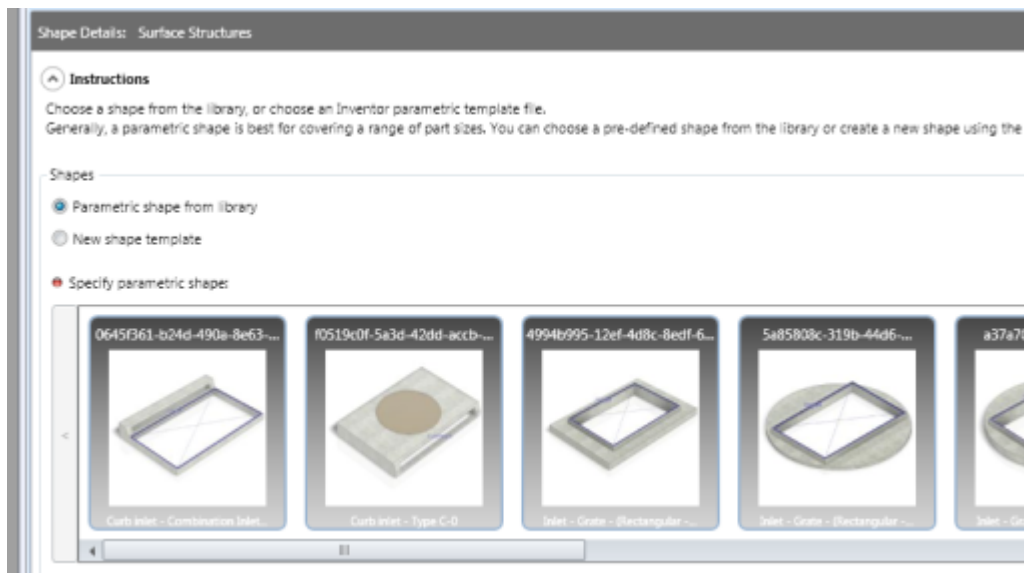


Infrastructure Parts Editor

How easy is this? Basically, it's just pick and choose the parts you want to use. When you create a new catalog (or edit an existing one), you'll see three options, Assembly, Structure, and Culvert. The parts that will be used in Civil 3D or InfraWorks are the Assemblies. Each assembly is made up of the structures or the culverts.



When you click on Structure, you'll see the three different components that make up the structures: Surface Structure, Underground Structure, and Grates or Covers. The Infrastructure Parts Editor has some parts already created that you can start with or you can create your own using Inventor or Inventor LT.

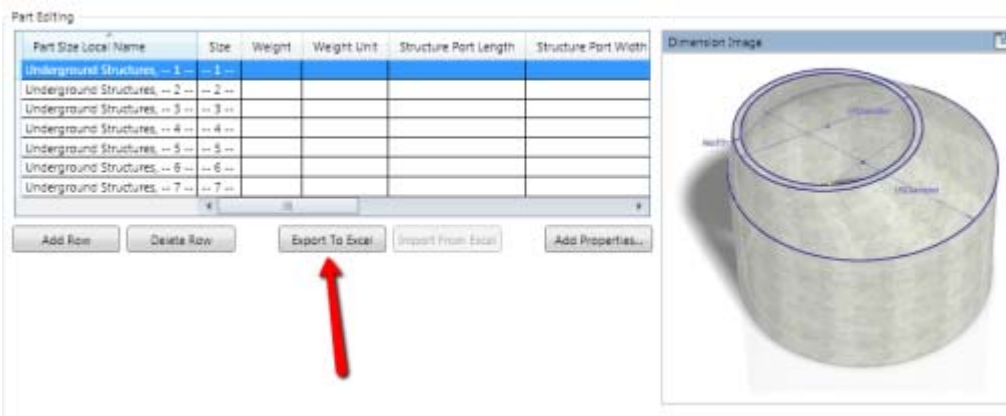


Sample of Surface Structures

As you can see in the previous image, if none of the predefined shapes work for you, you can create a new shape template and import a .ipt or a .iam file from Inventor.

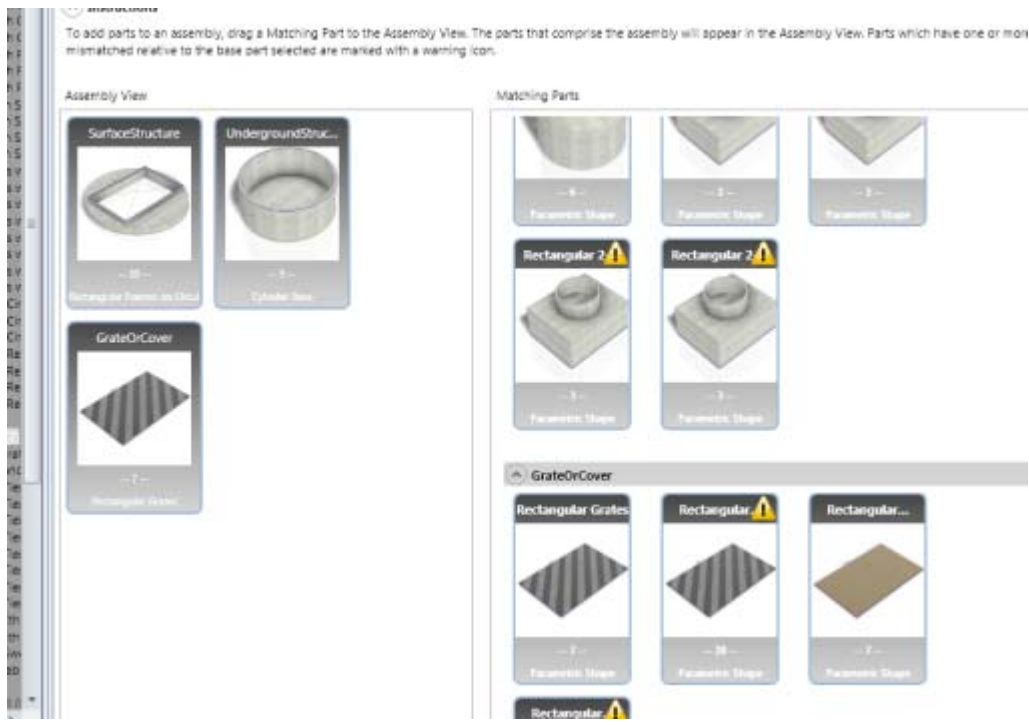
Additionally, when adding sizes to the different structures, there is an option to export to and import from Microsoft Excel. This should make editing the sizes much easier!

Optionally, the sizing table can be exported and edited in Excel.



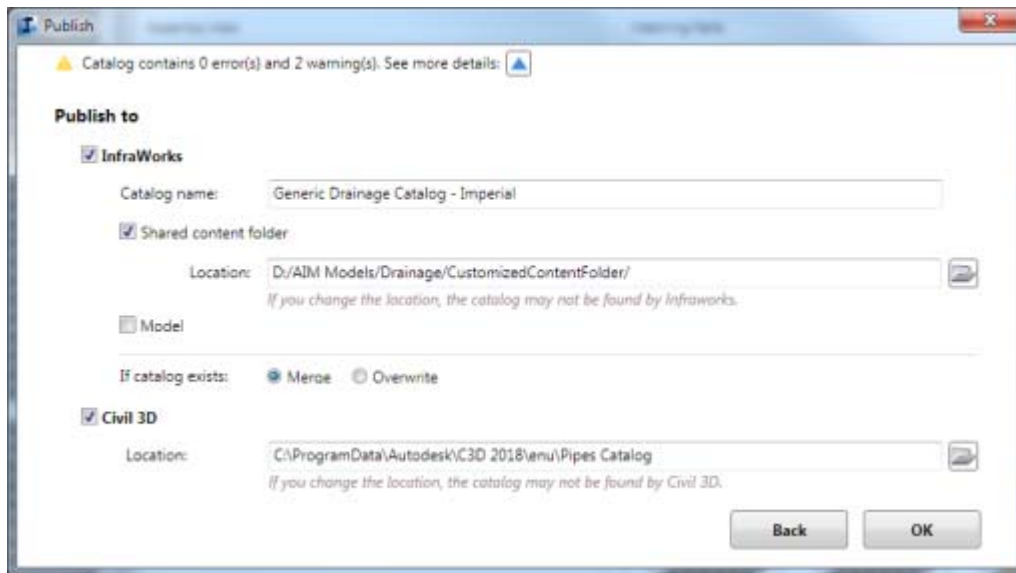
Export to Excel

Once all the structures have been created, they will then be combined to make the different assemblies. When creating an assembly (depending on the type of assembly being made), you'll simply select the three different structure components that you want to combine together. There's also a section to validate the sizes (don't want to put a 5' long grate on a 3' long inlet).



Assembly Creation – Drag and Drop

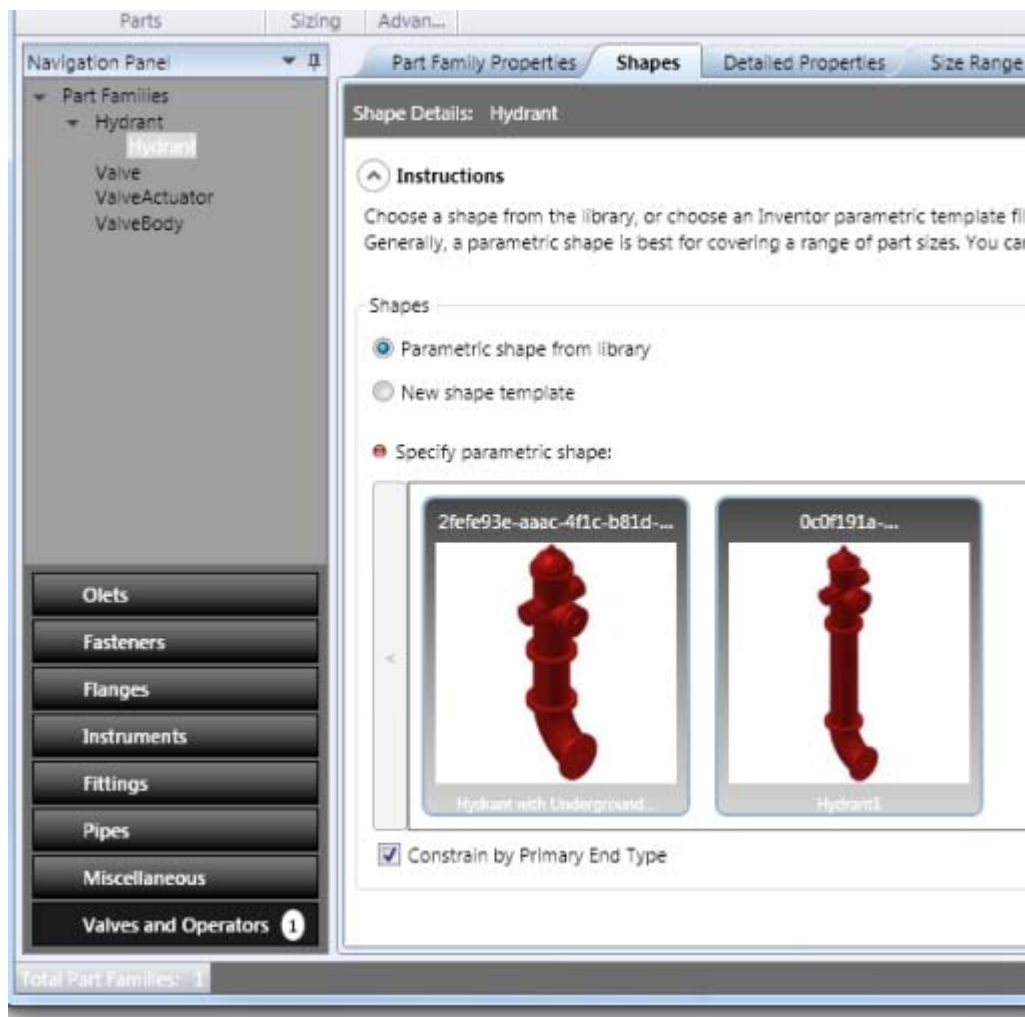
Once all your assemblies are made, you can then publish the catalog out to either InfraWorks or Civil 3D or both at the same time.



Publish Catalog

So, what do you think? Are you going to give this a try? Personally, I'm really excited about this tool and its capabilities for creating custom parts in Civil 3D.

p.s. It also does pressure network parts:



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3 Responses to “A Replacement for Part Builder? We’ll see...”

1. Martin Says:

July 14, 2017 at 3:41 pm

Excellent, but what can I use to create my own models if I don't have inventor?



Reply

1. Brian Hailey Says:

August 4, 2017 at 8:35 pm

You can get a short term license of Inventor LT as needed, as short as one month I believe.



Reply

2. Andrea Mueller Says:



July 15, 2017 at 7:53 am

I am very excited about the ability to modify parts in a much more user friendly environment. Part builder inside Civil 3D is basically a whole new program with its own terminology and until recently finding helpful resources was a challenge (autodesk, in my opinion, has really done some good work in the "help" dept across much of the civil design software it offers, wish more would have been around in 2010). I am actually upgrading to a subscription of the AEC collection next week from my current IDSP maintenance plan, and the first thing I will be attempting is to try to move the insertion point of a structure to any place other than center of structure! I never had the time (or required motivation) to figure out how to do this within part builder. Thanks for the post!

Andrea

Reply

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