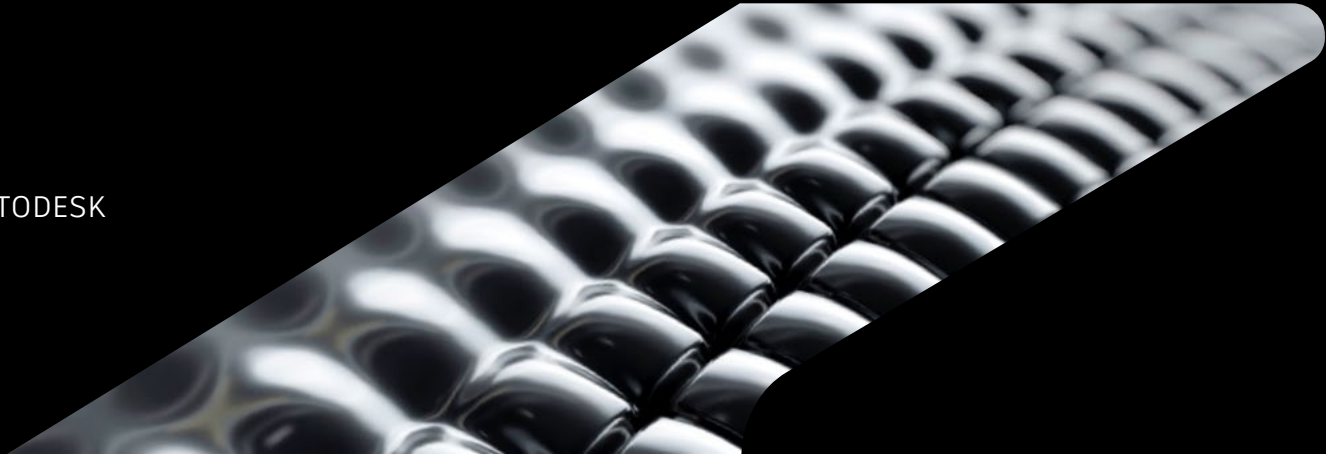




Building Custom Bridge Components

.....for Idiots!

Andrew Manze
Technical Marketing Manager | AUTODESK



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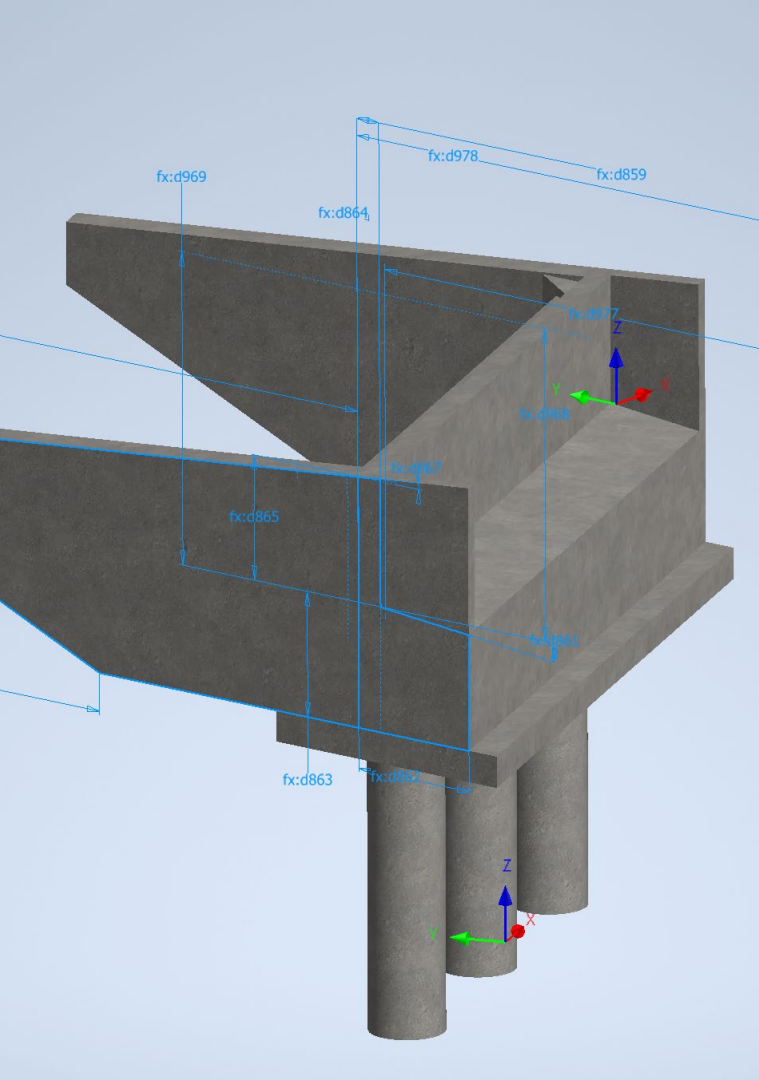
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Agenda

- What is the workflow?
 - Civil 3D
 - InfraWorks
 - Inventor
 - Revit
 - Structural Bridge Design / Robot





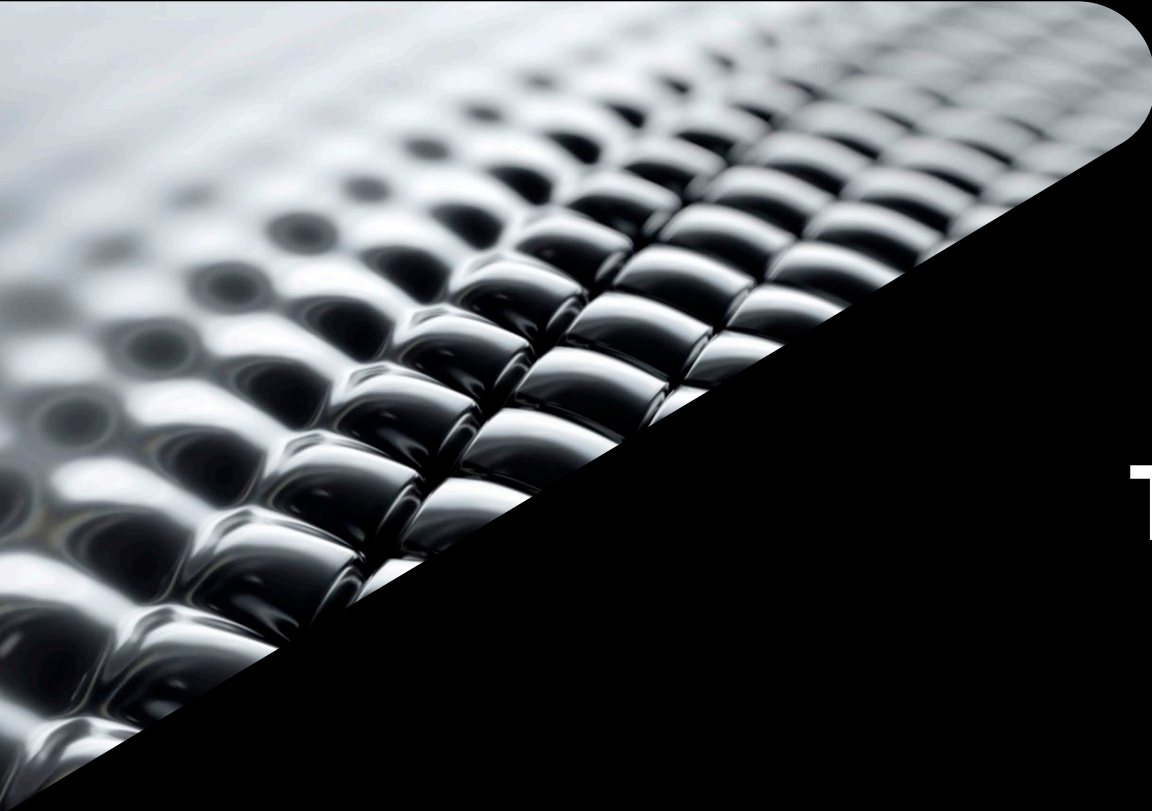
Agenda

- Custom Components!
 - Component Categories
 - Decks
 - Girders
 - Piers
 - Abutments
 - Foundations
 - Generic Objects
 - General Sample Components

Agenda

- Worked Examples
 - Inventor
 - Revit

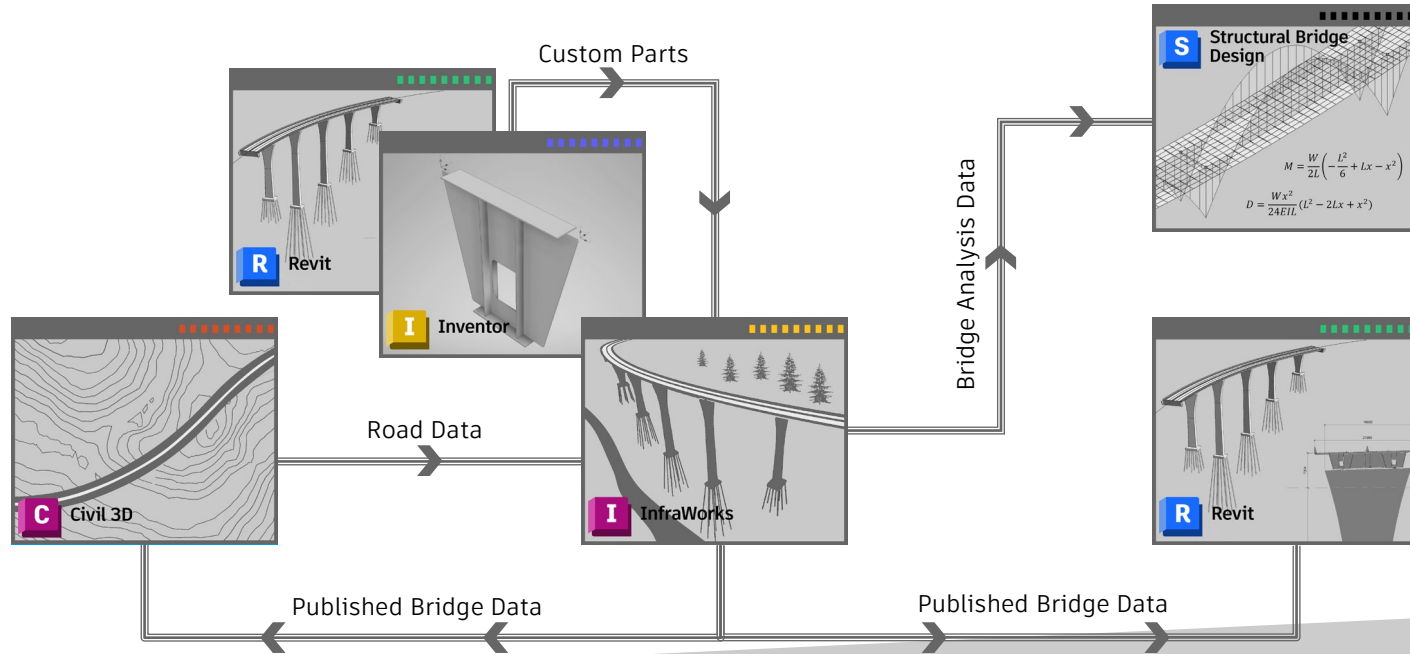




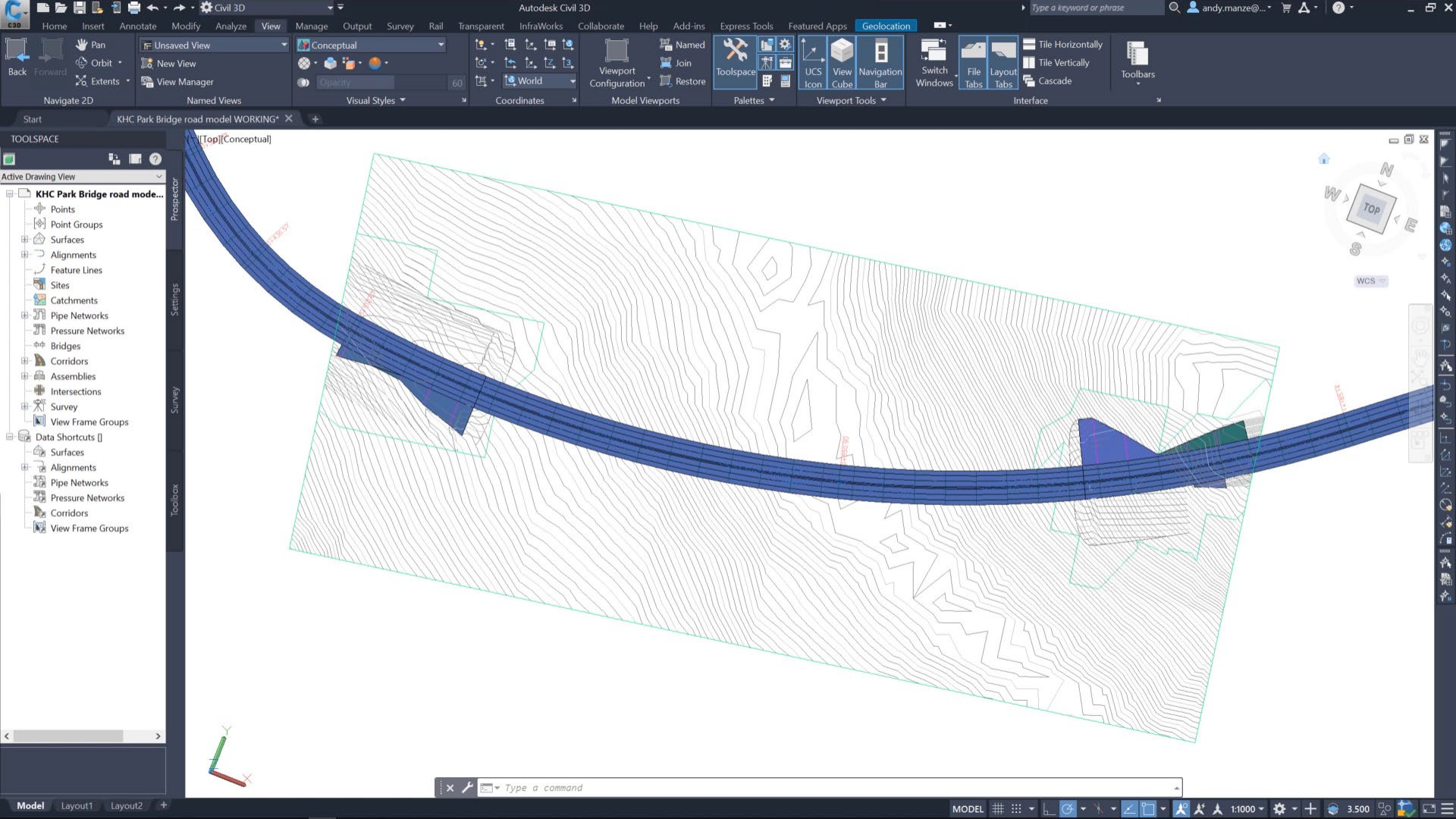
The Workflow

Civil Structures

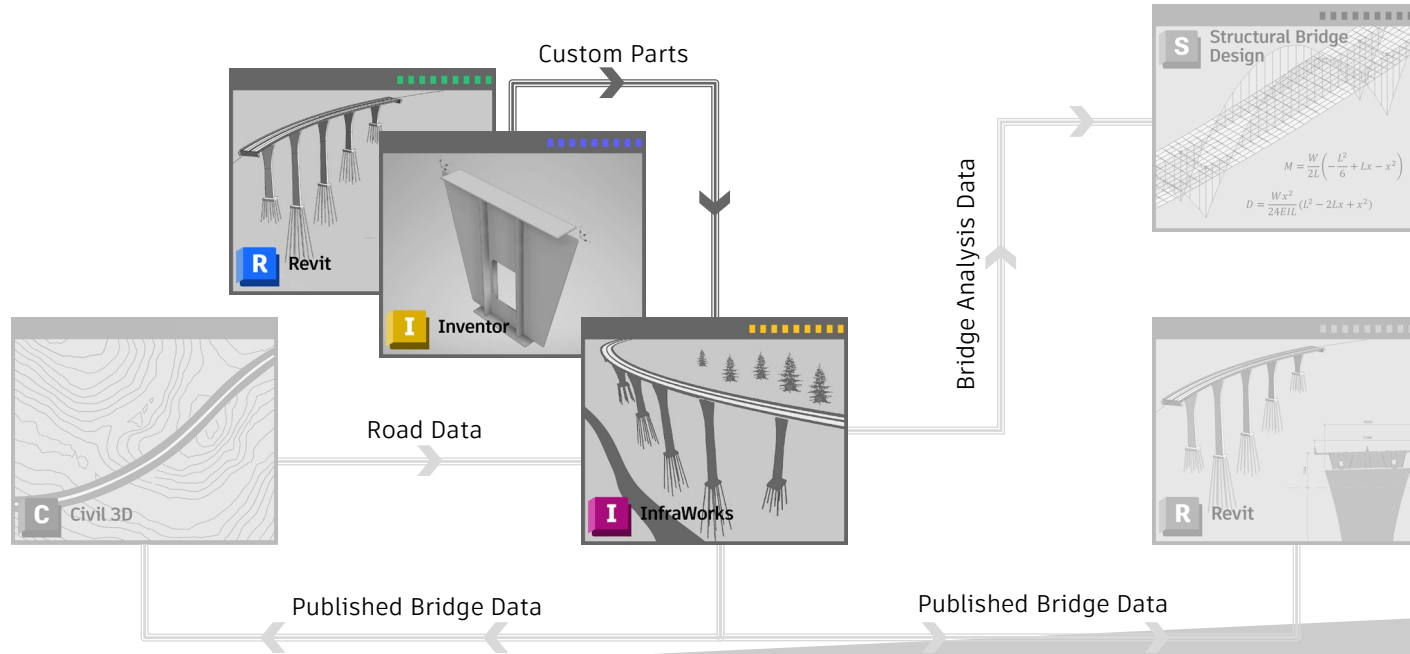
Bridge Design Workflow

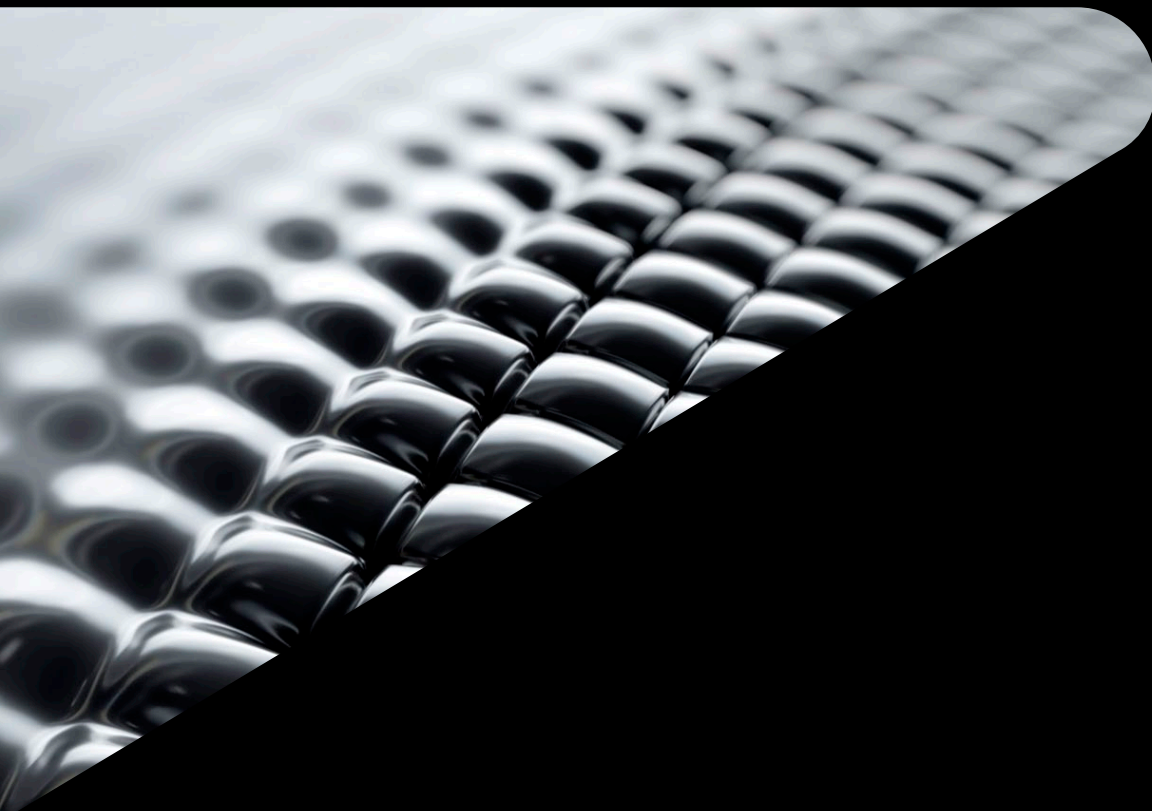


COMPLETE WORKFLOW



Bridge Design Workflow



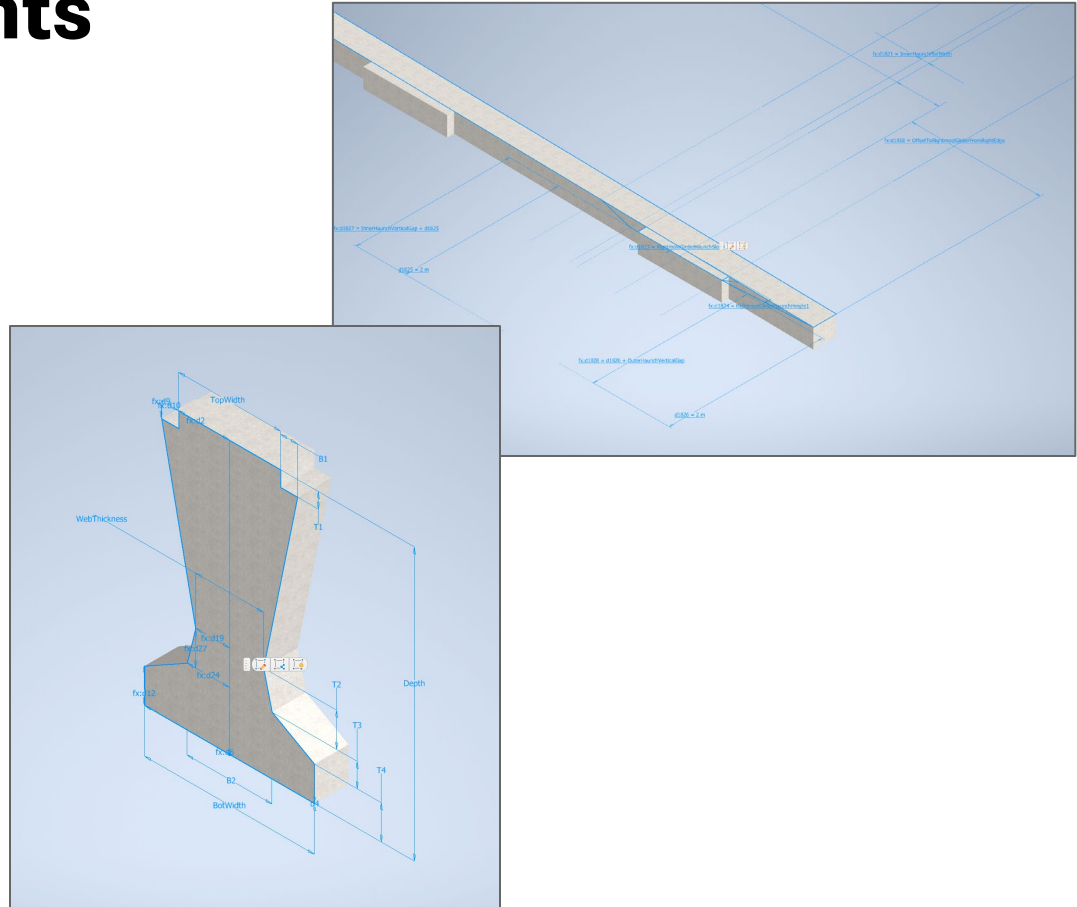


Custom Components

Civil Structures

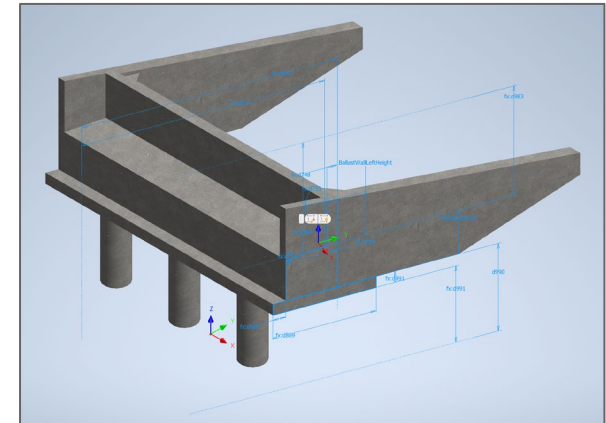
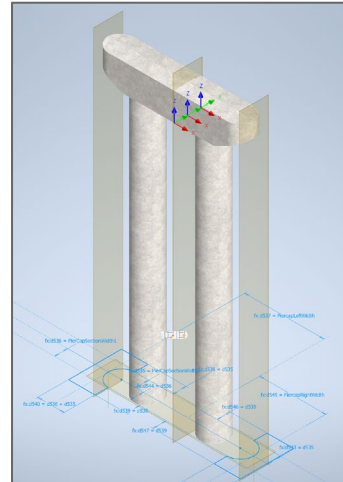
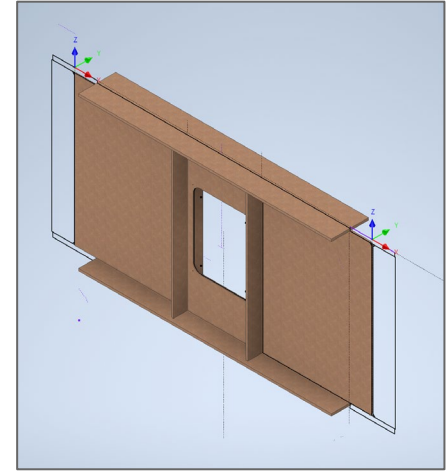
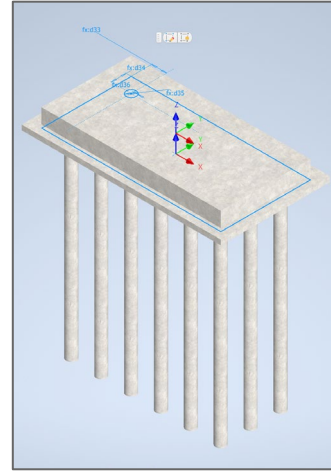
Custom Components

- 2 Dimensional
 - Decks
 - Girders
- Defined as 2D entities
 - Defined 2D parametrics
 - Extruded in InfraWorks



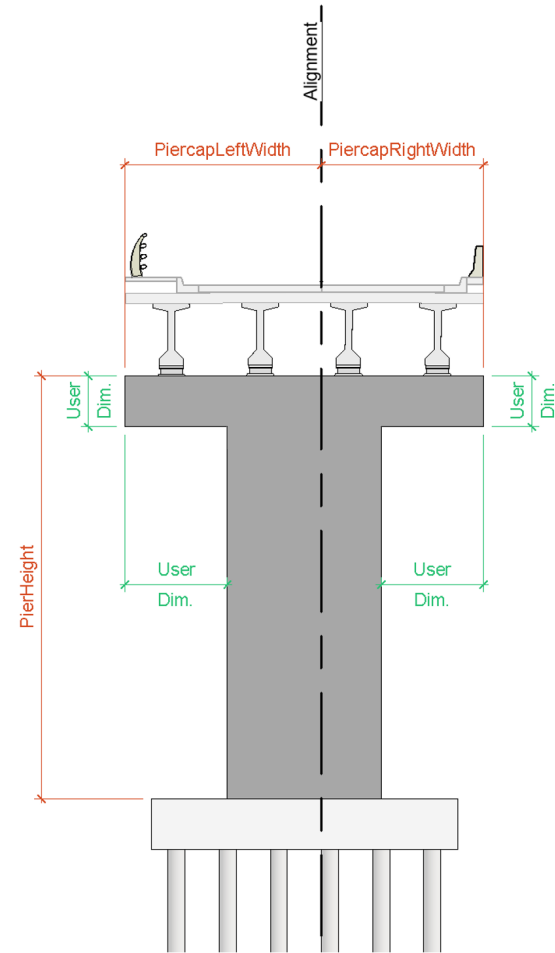
Custom Components

- 3 Dimensional
 - **Piers**
 - Abutments
 - Foundations
 - Generic Objects
 - For anything else!
- Defined as full 3D 'mini' models
 - Fully parametric 3D models driven by InfraWorks

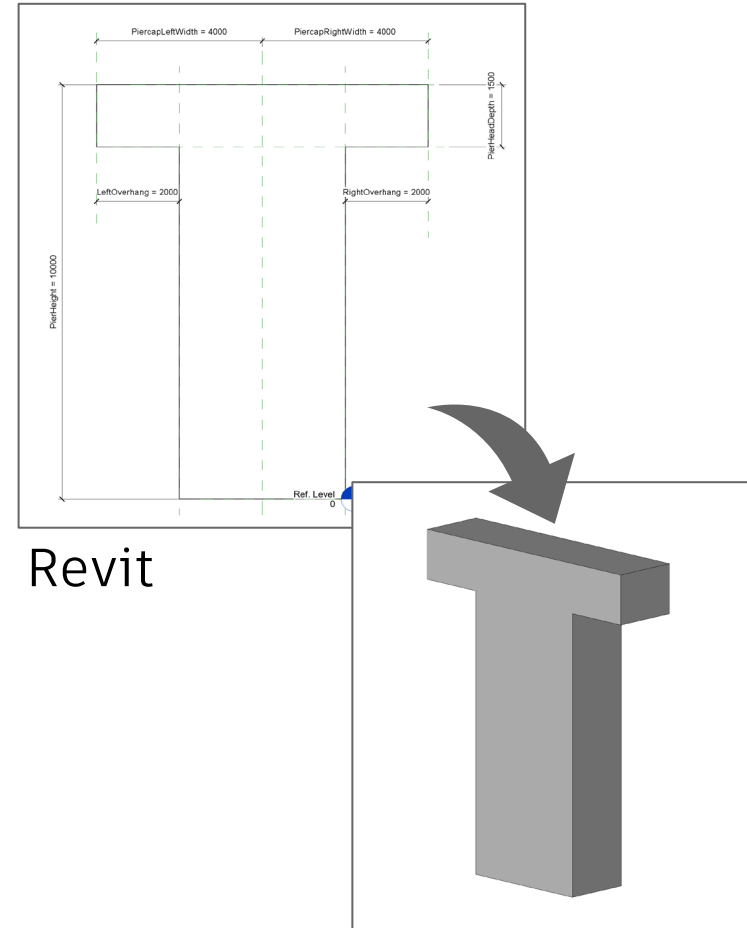
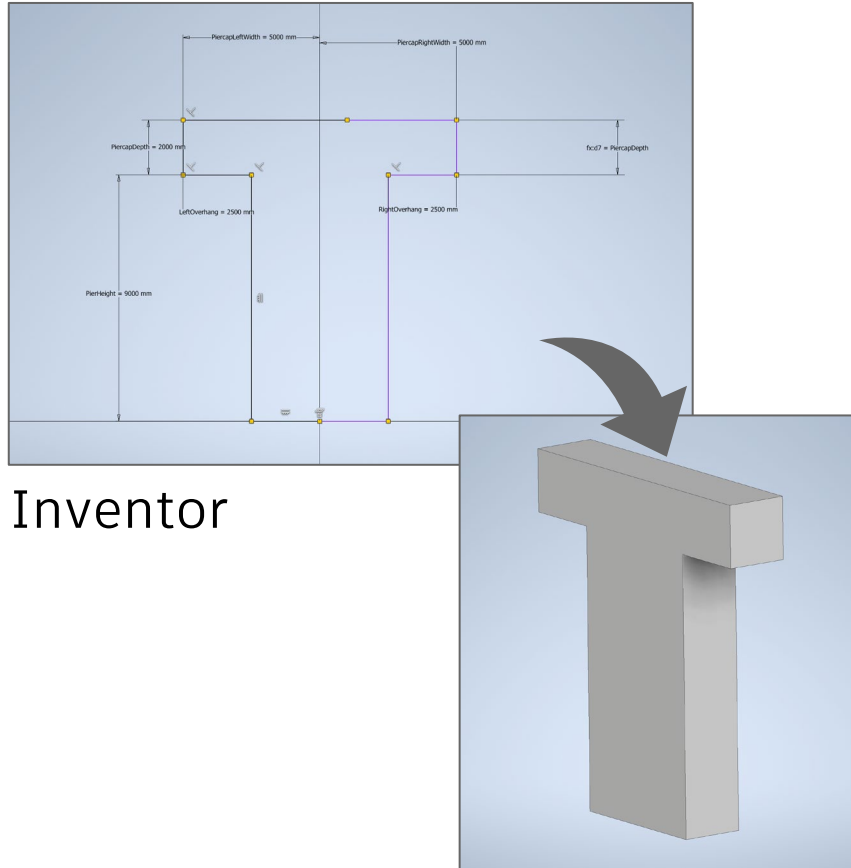


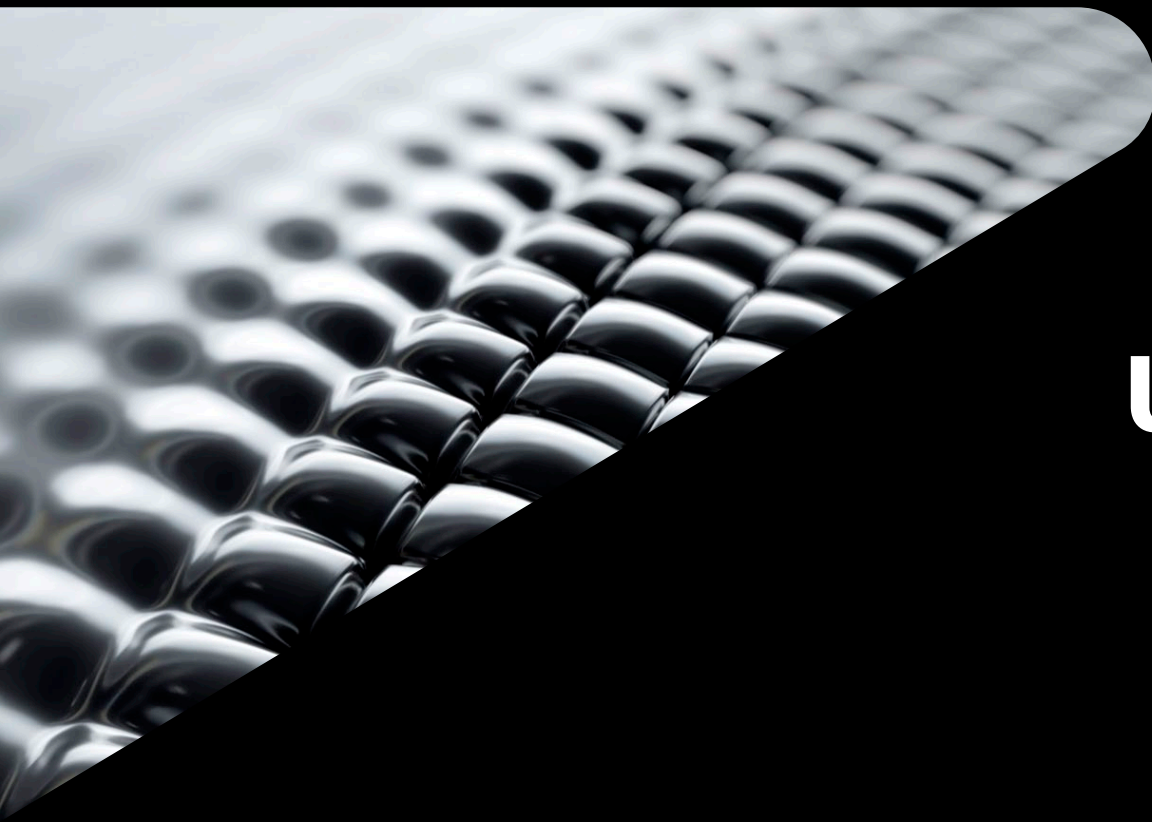
Required Parameters

- Specific parameters required for each category of part.
 - Must be defined in the Inventor or Revit file
 - Syntax
 - Substitution possible if they are incorrect in the InfraWorks Style Palette
 - Different rules on what they are defining
- Our Example: Piers have 3 required parameters;
 - PiercapLeftWidth
 - PiercapRightWidth
 - PierHeight



Custom Components



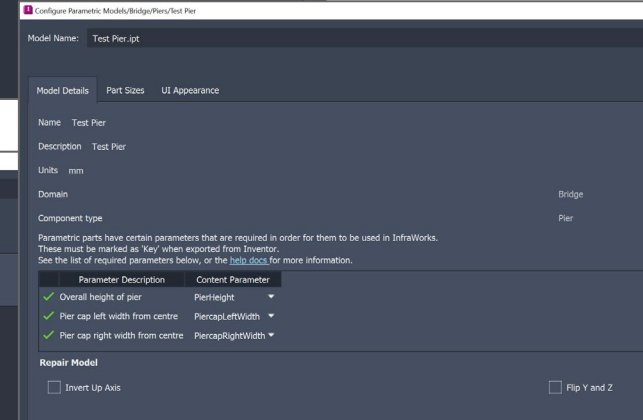
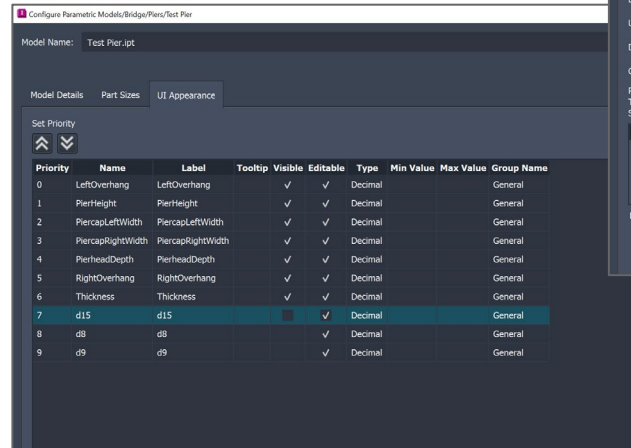
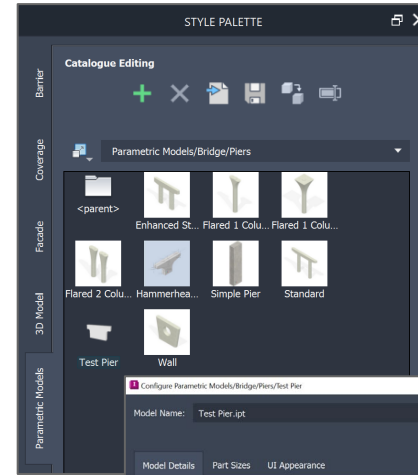


Using Custom Components

Civil Structures

Using Custom Components

- Style Palette Manages all new content.
 - Add a new style to Parametric Models
- Configure the new part
 - Model Details
 - Part Sizes
 - UI Appearance



Using Custom Components

- Apply the new component
 - Appears and behaves as a native component
 - Use the required parameters for base geometry
 - Respects the UI arrangement in the configuration steps







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