ANCHORAGE
Pipe Support Systems & Components

Anchorage
Revit Content Introduction & User Guide

June 2020

This document provides an overview of the Revit content library supplied by Anchorage. The parametric content is all created natively in Revit, allowing users the ability to design and document a range of pipe supports, pipe clamps, pipe hanger Components.

Also covered in this document is an overview of the Revit content development methodologies used by IGS BIM Solutions in creating the Revit families, ensuring a consistent, robust and reliable Revit library. Ultimately, the Anchorage Revit families should require minimal, firm-specific localisation / standardisation to become the 'go-to' Revit families when pipe accessories are required in a Revit project.

Should you require Anchorage pipe accessory options outside the range of products detailed in this Anchorage Revit content library, please to contact Anchorage about future ranges to be developed in Revit and one-off requests.

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1.0 Family Creation Considerations

Anchorage Revit families have been created to a consistent, high standard with the objective of finding a balance between complexity of use, functionality, documentation output, file size and performance in a project environment. Primary Anchorage Revit content creation insights and considerations are listed below:

1. Families supplied in Revit 2018 format.

2. Native Revit geometry used throughout, including nested families. (E.g. no AutoCAD or SAT files etc.)

3. Loadable families have been created with host types appropriate to their use, this is outlined for each family type in section 2.

4. Consistent family and shared parameters (ANZRS and standard IGS parameters) have been used sparingly, allowing for Anchorage attributes to be scheduled in the Revit project environment.

5. Reference Planes have been applied, named, tidied and set to the correct 'Is Reference'. Thought has been given to the likely end user requirements in placement / alignment and dimensioning of the families. The Origin Point has also been applied accordingly.

6. Detail Level settings applied to 3D geometry improving model performance.

7. All Warnings have been reviewed and removed where possible.

8. The families have been fully Purged and all additional Materials, Line Patterns and Fill Patterns removed.

9. Logical and consistent Type naming has been applied across all families.

10. OmniClass and UniClass Classification has been set appropriately.

11. The family file sizes have been optimised to be relatively small when the family's overall capabilities are considered, ensuring large Revit projects are not burdened by Anchorage families.

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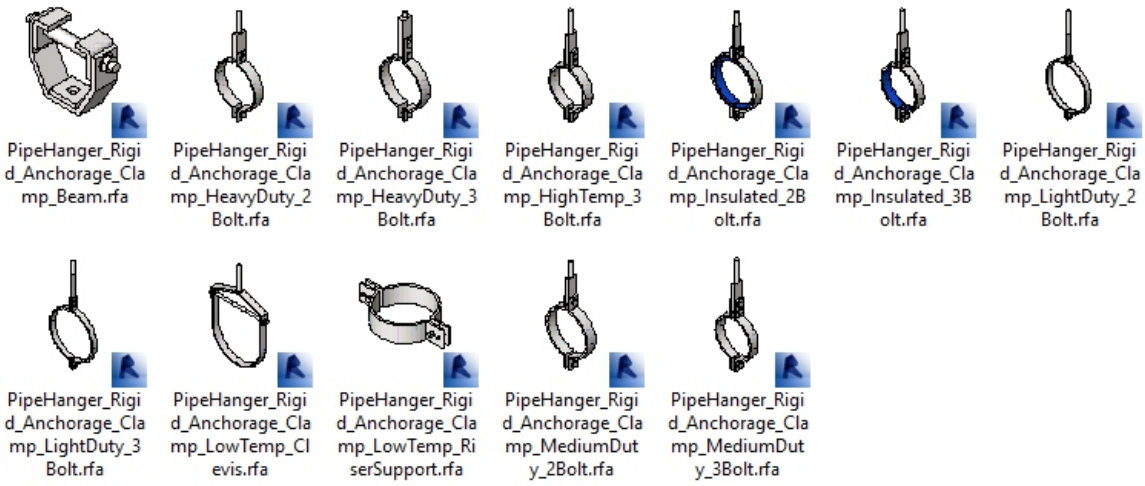
2.0 Revit Content Library Overview

The Anchorage Revit Content library is comprised of 6 product ranges, 43 Families that can represent 43 products and their 667 respective variations.

The metrics of the Revit library and intended use of each component are listed below:

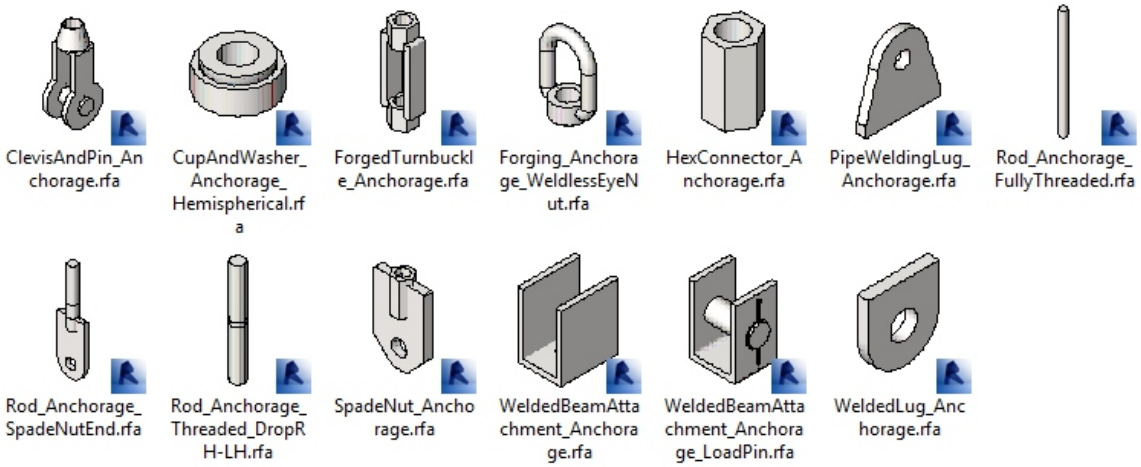
2.1 Pipe Clamps

12 x Pipe Clamp families have been included. These are work-plane based with'Always vertical' check box ticked on.



2.2 Pipe Hanger Components

13 *x* Pipe Hanger Components families have been included. These are work plane based.



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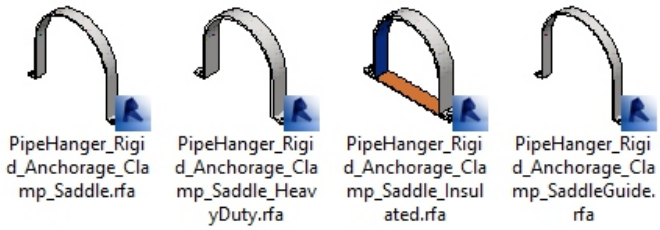
2.3 Saddle Clamps and Guides

4 x Saddle Clamp and Guide families have been included. These are work plane based.

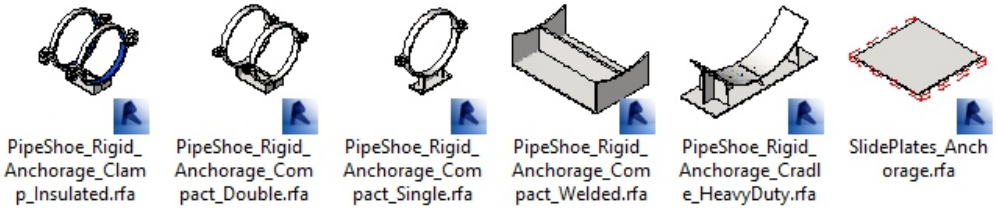


2.4 U-Bolt Clamps and Guides

5 x U-Bolt Clamp and Guide families have been included. These are work plane based.

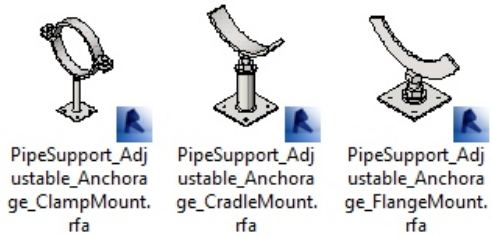
2.5 Pipe Shoes

6 x Pipe Shoe families have been included. These are non-hosted.



2.6 Height Adjustable Supports

3 x Height Adjustable Support families have been included. These are non-hosted.



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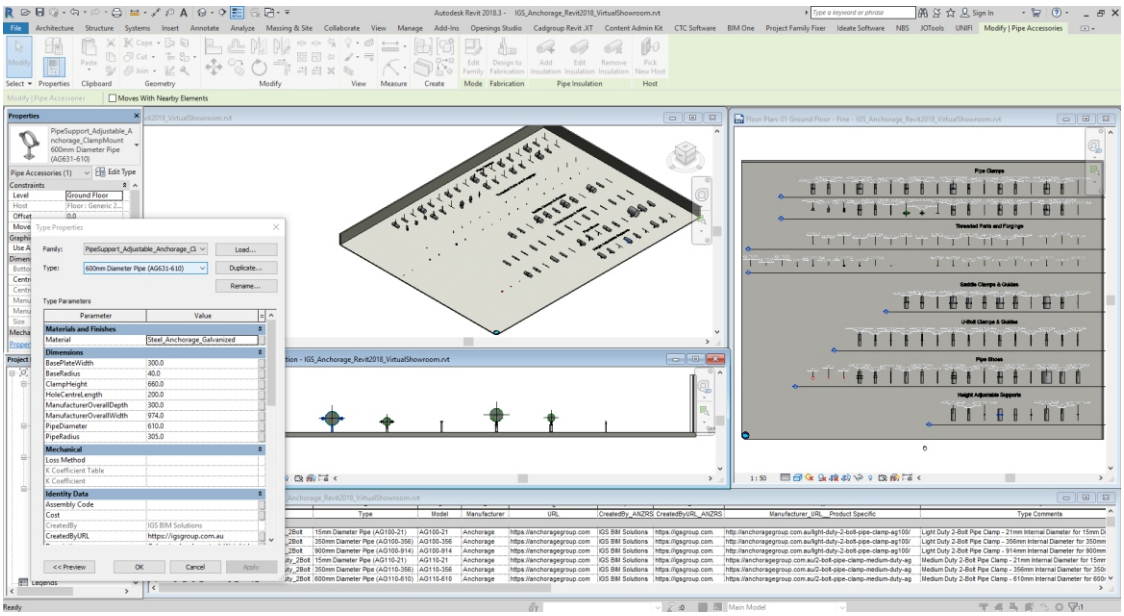
2.7 Virtual Showroom / QA Project File

A sample Revit project has been created that contains all families and types laid out side by side. This project contains sample Floor Plans, Elevations, Sections, 3D perspectives and a preconfigured Schedule allowing Revit users to quickly assess the families' performance in a project environment.

These Revit assets can be 'Copied & Pasted' into another Revit project as an alternative workflow to loading the separate families into your project.



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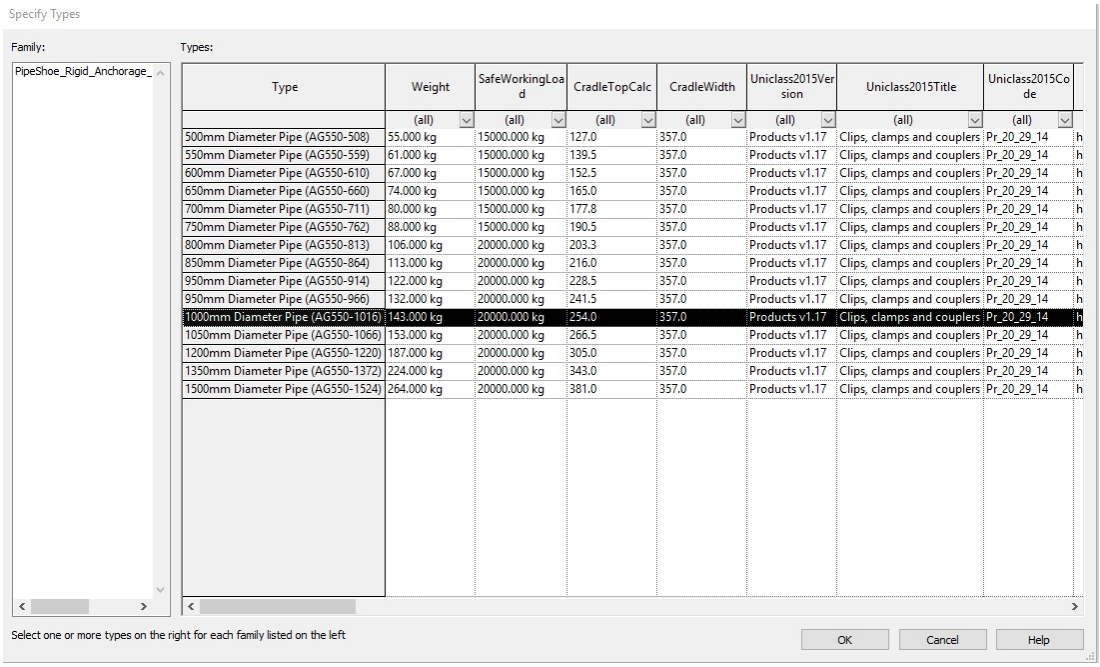
3.0 Technical Details

3.1 Type Catalog Families

To minimise unnecessary types being loaded into a Revit project, all families have been created with a correspondingT ype Catalog file. When an Anchorage family is loaded into a Revit project, the 'Specify Types' dialog opens. This window allows the user to select only the variations relevant to their project. For example, you may want the Heavy Duty Pipe Cradle for a 1000mm diameter pipe. Properties can be filtered at the top to narrow down your selection.



Type	Weight	SafeWorkingLoad	CradleTopCalc	CradleWidth	Uniclass2015Version	Uniclass2015Title	Uniclass2015Code
	(all)	(all)	(all)	(all)	(all)	(all)	(all)
500mm Diameter Pipe (AG550-508)	55.000 kg	15000.000 kg	127.0	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
550mm Diameter Pipe (AG550-559)	61.000 kg	15000.000 kg	139.5	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
600mm Diameter Pipe (AG550-610)	67.000 kg	15000.000 kg	152.5	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
650mm Diameter Pipe (AG550-660)	74.000 kg	15000.000 kg	165.0	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
700mm Diameter Pipe (AG550-711)	80.000 kg	15000.000 kg	177.8	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
750mm Diameter Pipe (AG550-762)	88.000 kg	15000.000 kg	190.5	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
800mm Diameter Pipe (AG550-813)	106.000 kg	20000.000 kg	203.3	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
850mm Diameter Pipe (AG550-864)	113.000 kg	20000.000 kg	216.0	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
950mm Diameter Pipe (AG550-914)	122.000 kg	20000.000 kg	228.5	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
950mm Diameter Pipe (AG550-966)	132.000 kg	20000.000 kg	241.5	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
1000mm Diameter Pipe (AG550-1016)	143.000 kg	20000.000 kg	254.0	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
1050mm Diameter Pipe (AG550-1066)	153.000 kg	20000.000 kg	266.5	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
1200mm Diameter Pipe (AG550-1220)	187.000 kg	20000.000 kg	305.0	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
1350mm Diameter Pipe (AG550-1372)	224.000 kg	20000.000 kg	343.0	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14
1500mm Diameter Pipe (AG550-1524)	264.000 kg	20000.000 kg	381.0	357.0	Products v1.17	Clips, clamps and couplers	Pr_20_29_14

To load a Type Catalog, you must load the family through the Revit ribbon bar 'Insert Family' command and browse to the file location. Dragging and dropping the RFA file into a Revit model will cause Revit to load the family with only a single generic type ignoring the associated Type Catalog list.

- The TXT file must be in the same directory as the RFA file, with the same filename. Take care if moving files into BIM libraries or project folders.
- The RFA family must be opened from a file menu in Revit – not through drag and drop.
- Only load variation you think will be needed to reduce the number of items in the list of available object types.

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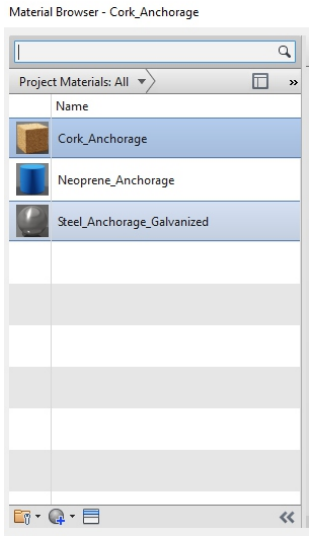
3.2 Basic Materials Library

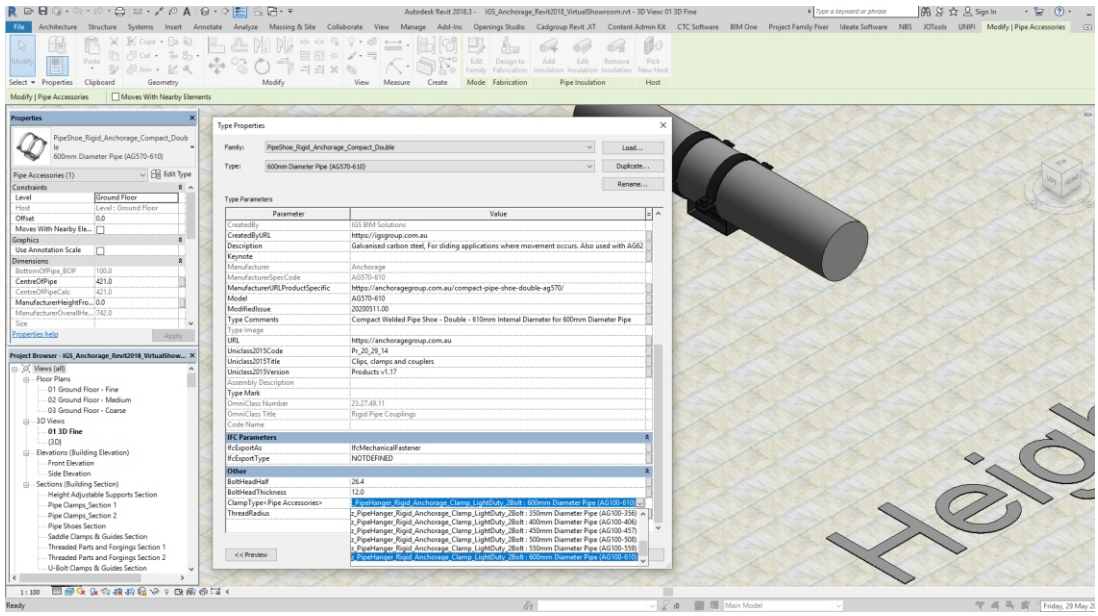
Basic, non-intrusive materials have been included in the Revit library.

Materials are named with the same hierarchical structure as the families:
<Type>_<Manufacturer>_<Descriptor> to fit in with existing material libraries.
All unused material assets have been deleted from the families, in addition to purging out all material assets where possible.



3.3 Nested Families

Where required, families are nested (inserted) into another family to create combined geometry. These nested families are named with 'z_' as a prefix and categorised under 'Other'. All Nested families are set to 'Non-Shared'.



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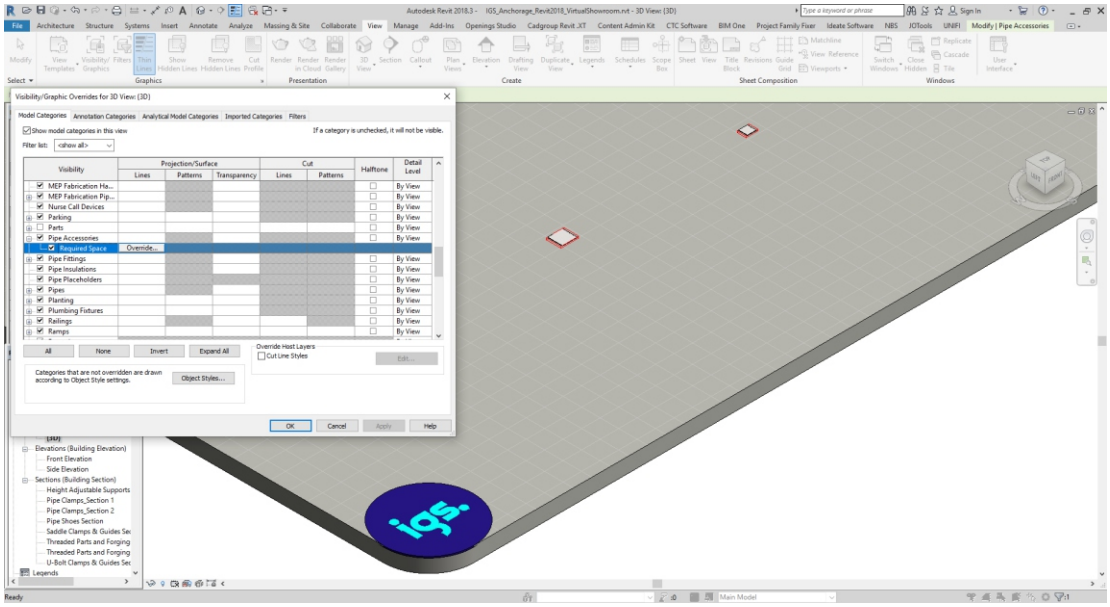
3.4 Clearance Zones

A Clearance Zone is used in family'Slide Plates – AG620'. It is included to allow a +/- 40mm sliding movement of the plate in both 3D and 2D. These clearance zones have been set to a specific Subcategory of 'Required Space' and can be turned off en-masse via View Templates. Note. Always access the most up-to-date product information and guidance in the product specific URL's present in each family.



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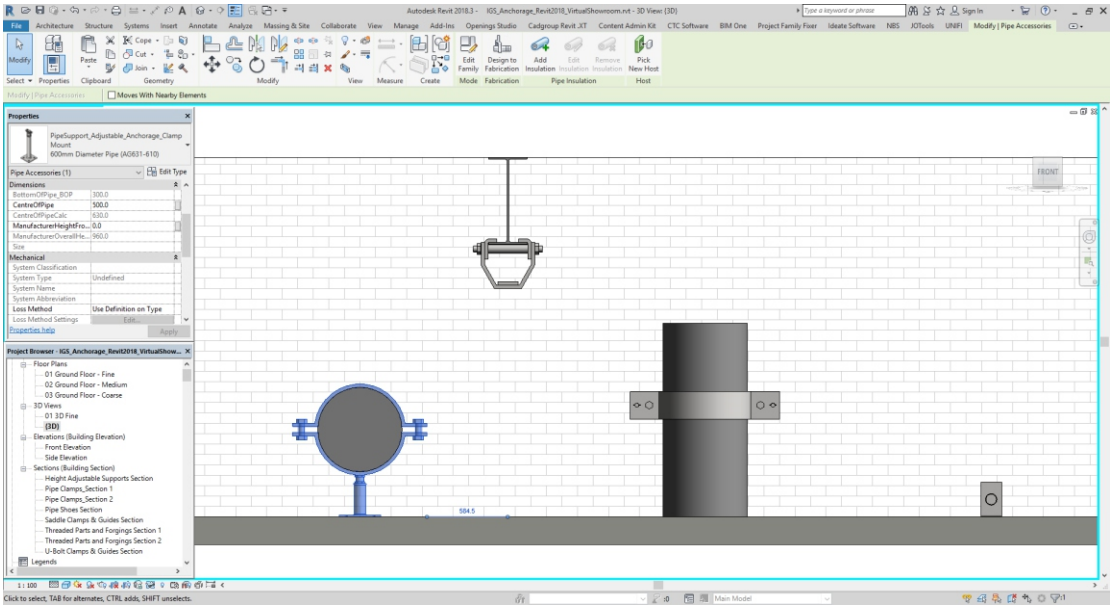
3.5 Default Mounting Heights

All families have a default mounting height applied. The shared parameter 'ManufacturerHeightFromFFL' is Instance based and can be changed as required in the Revit project. This parameter can also be included in a schedule, unlike the 'default Offset' parameter.

In the Pipe Hangers this parameter is to the 'underside of slab' above, CentreOfPipe can be used to offset the hanger downwards from that point.



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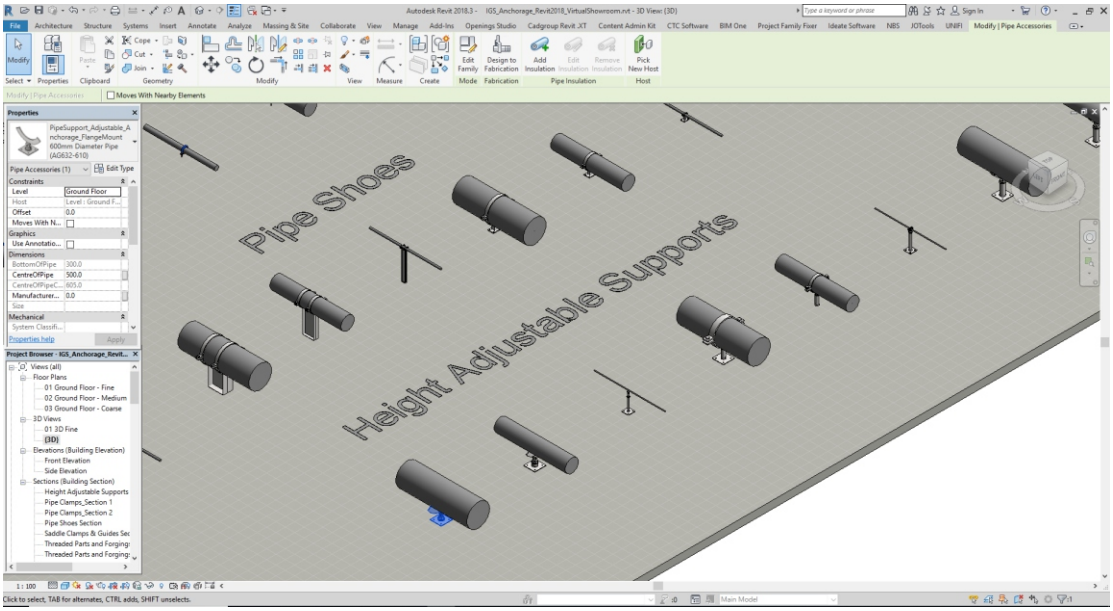
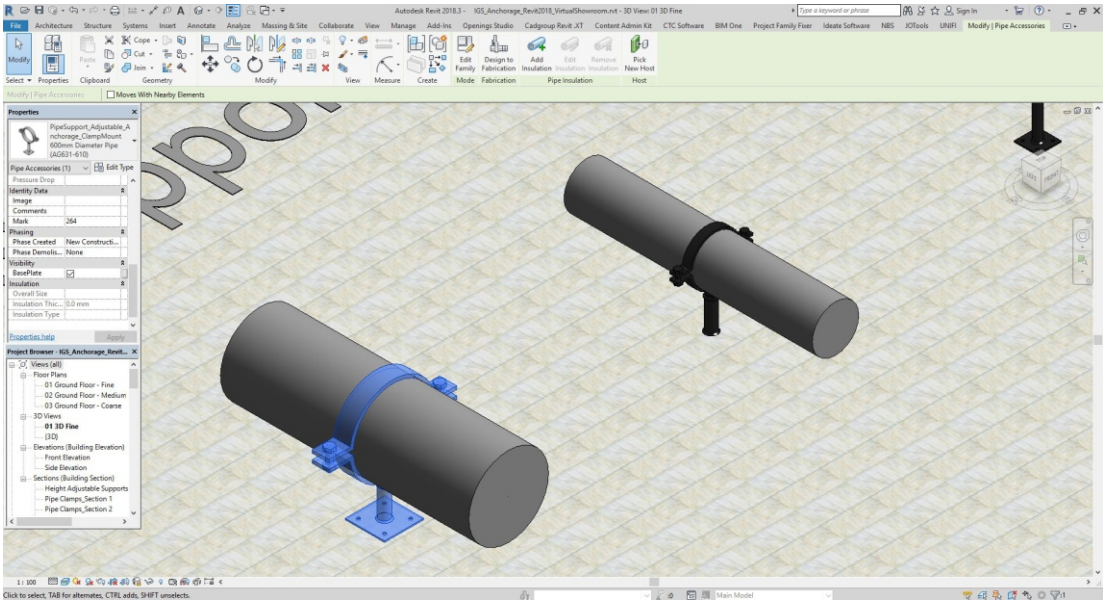
3.6 Dimension Parameter – 'CentreOfPipe'

An instance based dimension parameter named 'CentreOfPipe' is included in families when relevant. Where required, the content has 'Calc' parameters which will not allow the Revit content to exceed Anchorage's product constraints.

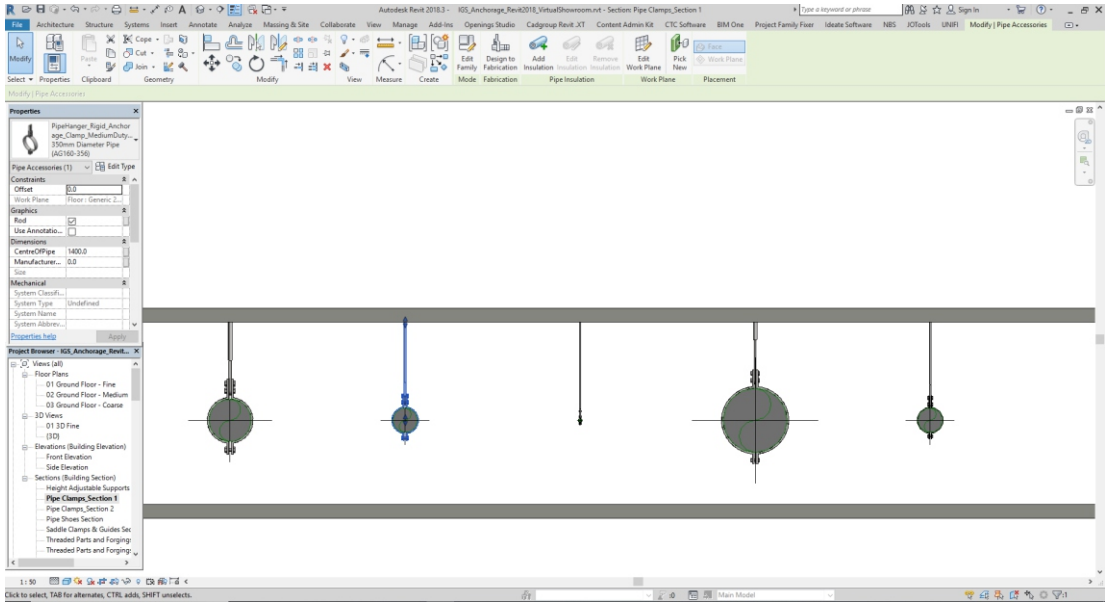


3.7 Visibility Parameter

An instance based visibility parameter has been included in the content where a product has options of support designs.

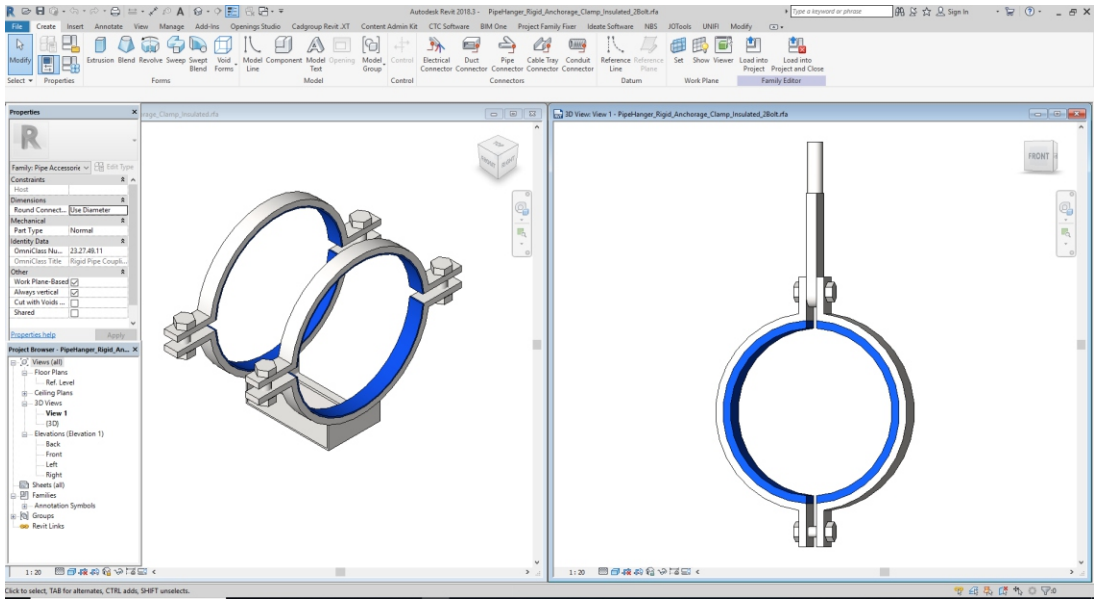


Clamps have been modelled as a pipe hanger; a generic suspension rod has been used which can be ticked-off when not required.



3.8 Work Plane Based

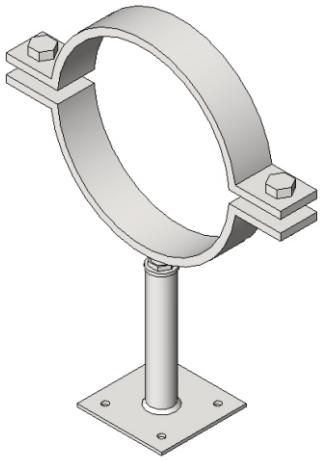
Work plane based families are used in certain family types to help components or nested sub-components in a project environment to reside on a specific plane. This is outlined in section 2.0.

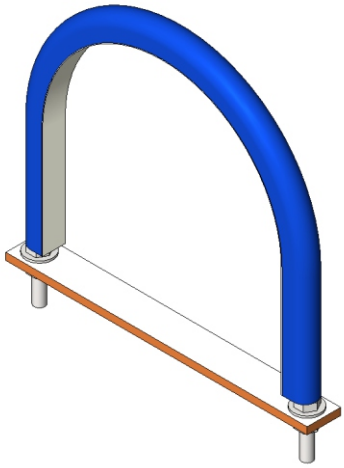


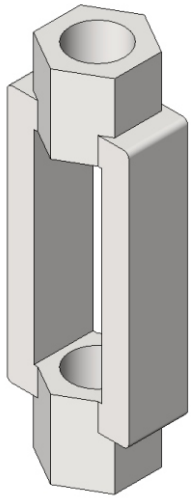
4.0 Closing Statement

The overarching goal in creating this Anchorage Revit content library is to increase the ease in which Revit users can design, document and specify Anchorage products within the Revit environment. Anchorage is committed to the continued development of this Revit content library as the industry and BIM workflows evolve over time.

We welcome your feedback and insights to ensure we can continue to accommodate your Revit content requirements.







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