

Walk-in Slide: AU 2014 Social Media Feed

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Dynamic Blocks and Annotative Scaling: They Will Make Your Life Easier

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@DirigDesign



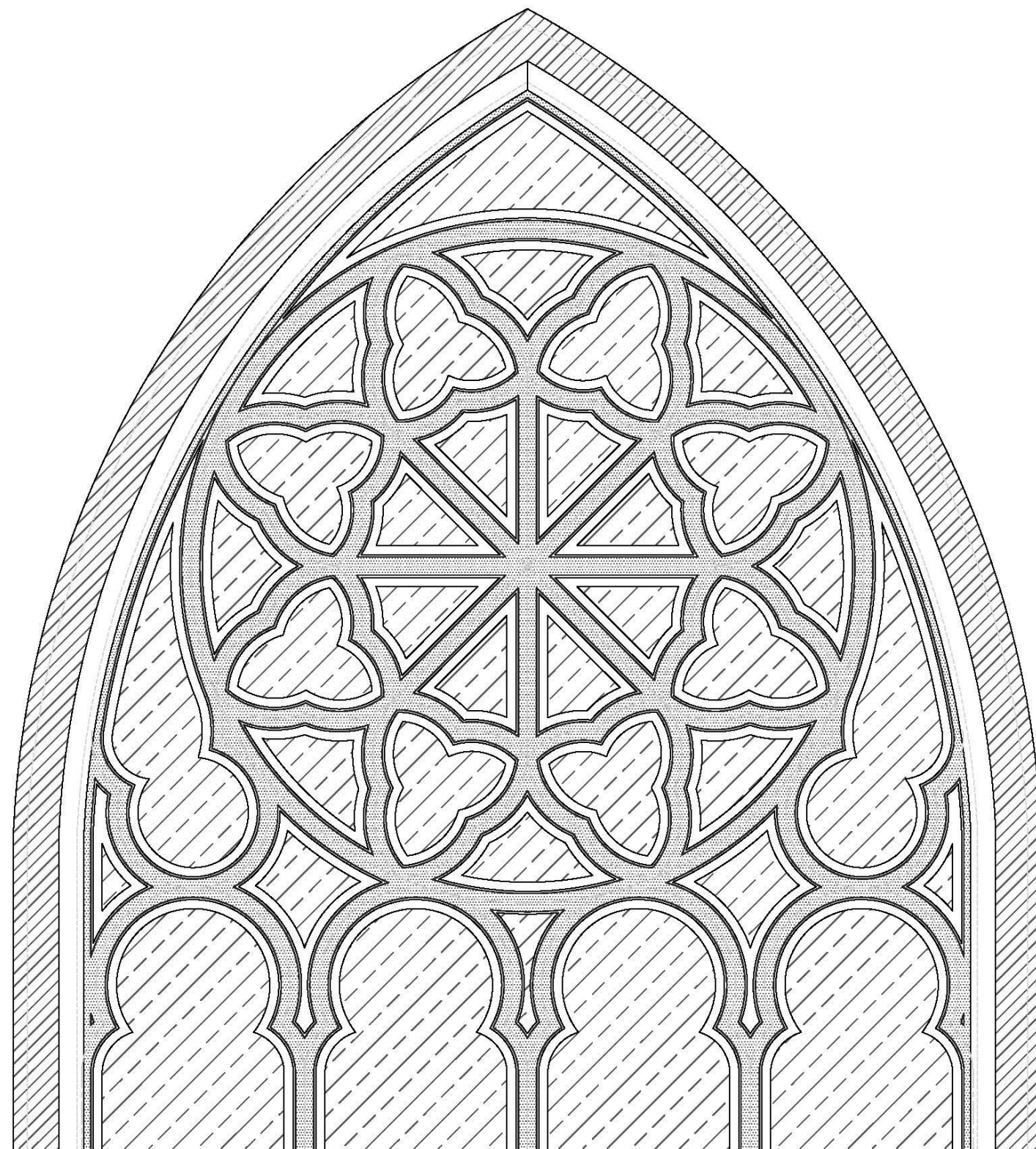
Adam Dirig

About the Speaker

Adam is the owner and CAD manager of Dirig Design, Inc., which provides technical drawings for architectural millwork shops across the United States. Adam an AutoCAD Certified Professional, has been using AutoCAD software since 2003. He holds a degree in woodworking and cabinetry. His career began as a cabinetmaker and he later transitioned to CAD designer and computer numerical control (CNC) programmer/operator before starting Dirig Design in 2009. He enjoys learning new technologies and strongly believes that using the most up-to-date software to its greatest potential can lead to an increasingly streamlined workflow as well as growth for his business and the businesses of those he serves. Additionally, as a subcontractor for multiple customers, he has seen a wide variety of drawing methods and has gleaned from their successes or failures in order to improve his own techniques. He enjoys teaching and will provide clear, practical knowledge of AutoCAD software's lesser-known features that can greatly benefit the everyday user.



Dirig Design, Inc. is a drafting company that specializes in architectural millwork shop drawings and rendering services for the millwork industry. We service fifty to sixty architectural millwork shops from all across the United States. We work with the latest software and tools to ensure the best possible final product. Dirig Design, Inc. also has a laser sales division www.advanceddimensions.com that sells laser measurement and 3D templating tools to people all across the US.



Class summary

Learn how to set up and use Dynamic Blocks with everyday CAD. This class will show the benefits and abilities of Dynamic Blocks, a newer, powerful feature of AutoCAD software. Dynamic Blocks provide the ability to customize the blocks individually, while still being able to edit the block as you would normally. This class will also discuss the benefits of annotative scaling in the drawing environment using AutoCAD software to automate your scaling and greatly decrease your time with manual annotation, dimensions, text, leaders, and blocks. These 2 newer features of AutoCAD software will increase productivity and decrease time spent on repetitive tasks.

Key learning objectives

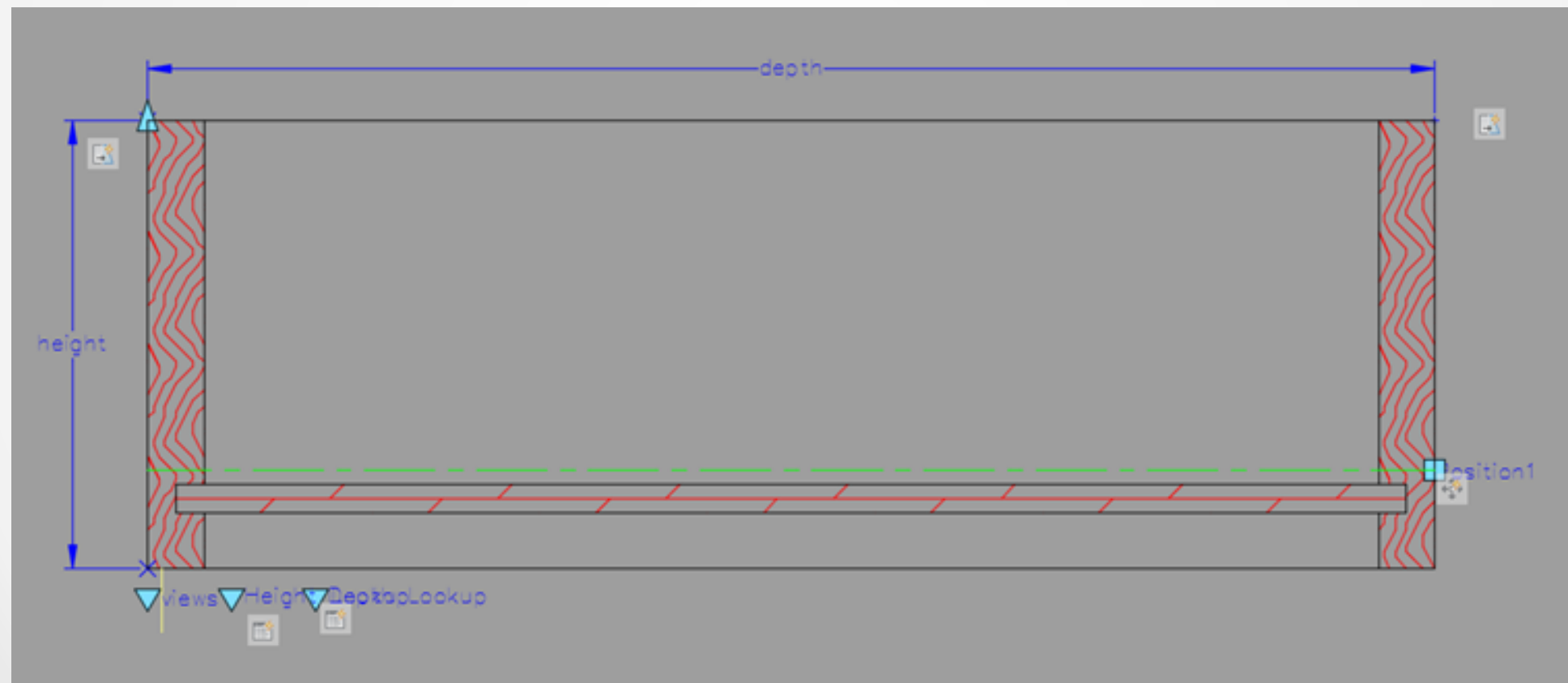
At the end of this class, you will be able to:

- Learn how to implement Dynamic Blocks in everyday CAD
- Troubleshoot common issues related to Dynamic Blocks
- Learn how to eliminate the need for added layers and styles to accomplish manual annotating
- Learn how to reduce the time spent editing blocks and annotating objects

Implement Dynamic Blocks in everyday CAD

Dynamic Blocks

Dynamic blocks are block definitions that have added parameters and actions that give them the ability to be changed without entering the Block Editor. Furthermore, these changes are on an individual basis, not collectively, for every instance of that specific block.



Block Editor

When the Block Editor is opened (by double clicking a block or entering the command “BEDIT”) the Block Authoring Palettes will open. This palette has four tabs:

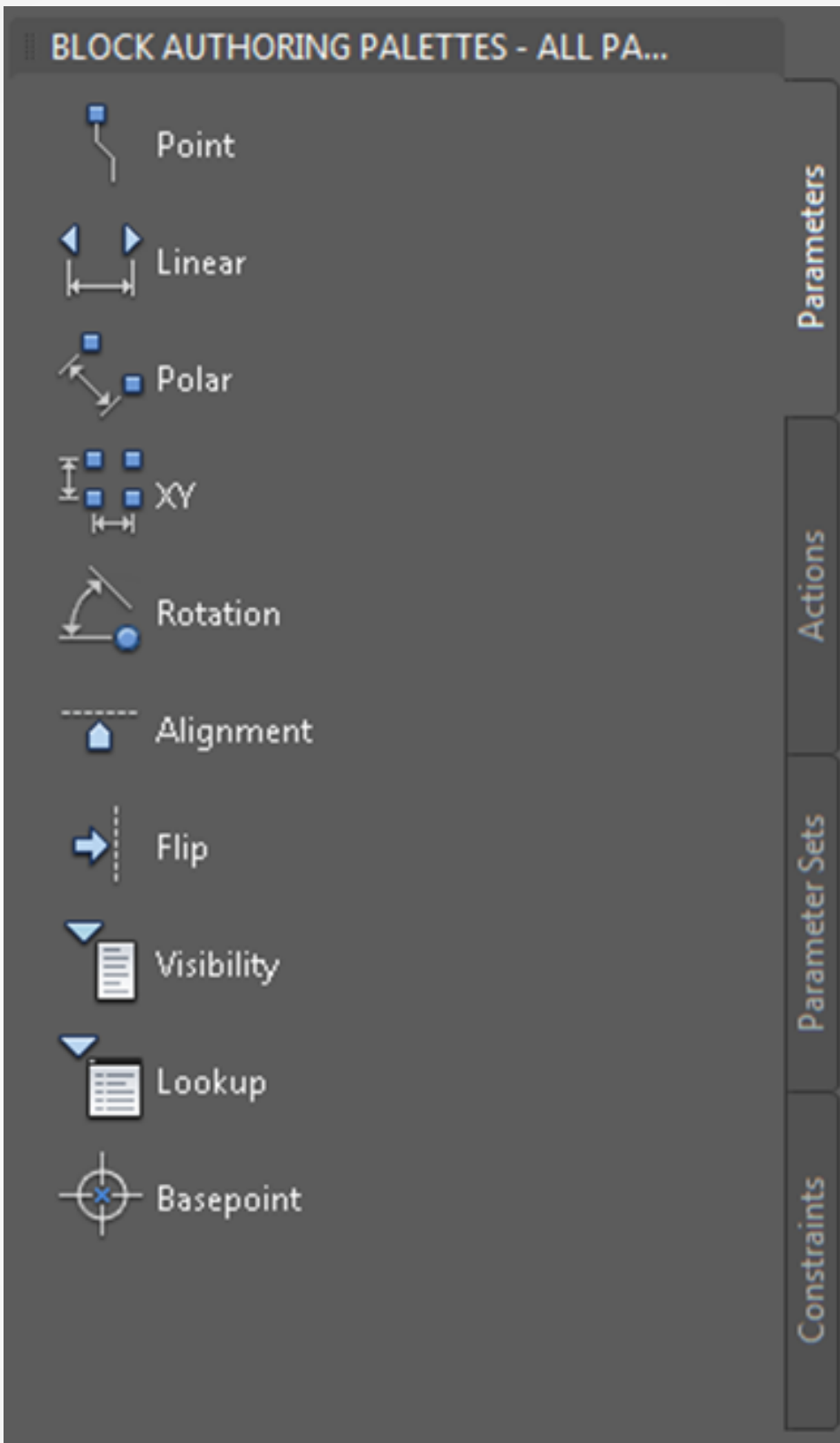
1. Parameters
2. Actions
3. Parameters Sets
4. Constraints

Parameters

Parameters are found within the Block Editor. There are 10 different parameters in AutoCAD 2015. Parameters are the foundation for actions. Each parameter can have multiple actions assigned to it.



NOTE: The important thing to know about parameters is that they do nothing unless you assign an action to them.

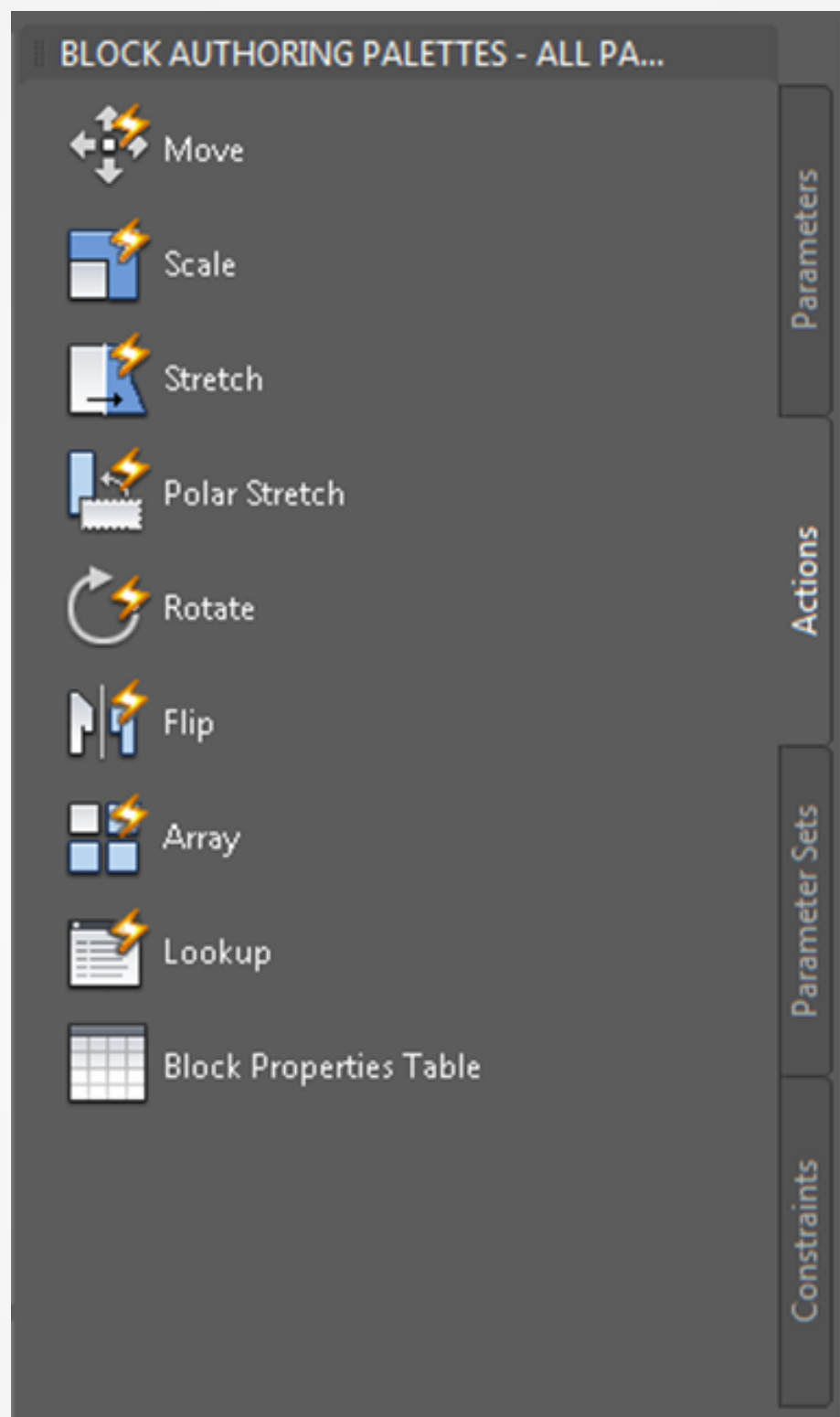


Actions

There are 9 different actions that can be assigned to the above parameters. Each action has a different function that it performs: move, scale, stretch, polar stretch, rotate, flip, array, lookup, and block properties table. These actions are similar to AutoCAD's standard modify commands. Multiple actions can be assigned to a given parameter to allow for better customization of the end block.



NOTE: Multiple actions can be assigned to a single parameter.























Parameter Sets

Parameter Sets are predefined combinations of parameters and actions. They speed up the process of creating dynamic blocks. These sets are able to be edited or created to best suit the needs of each user.

 NOTE: These save you lots of time!

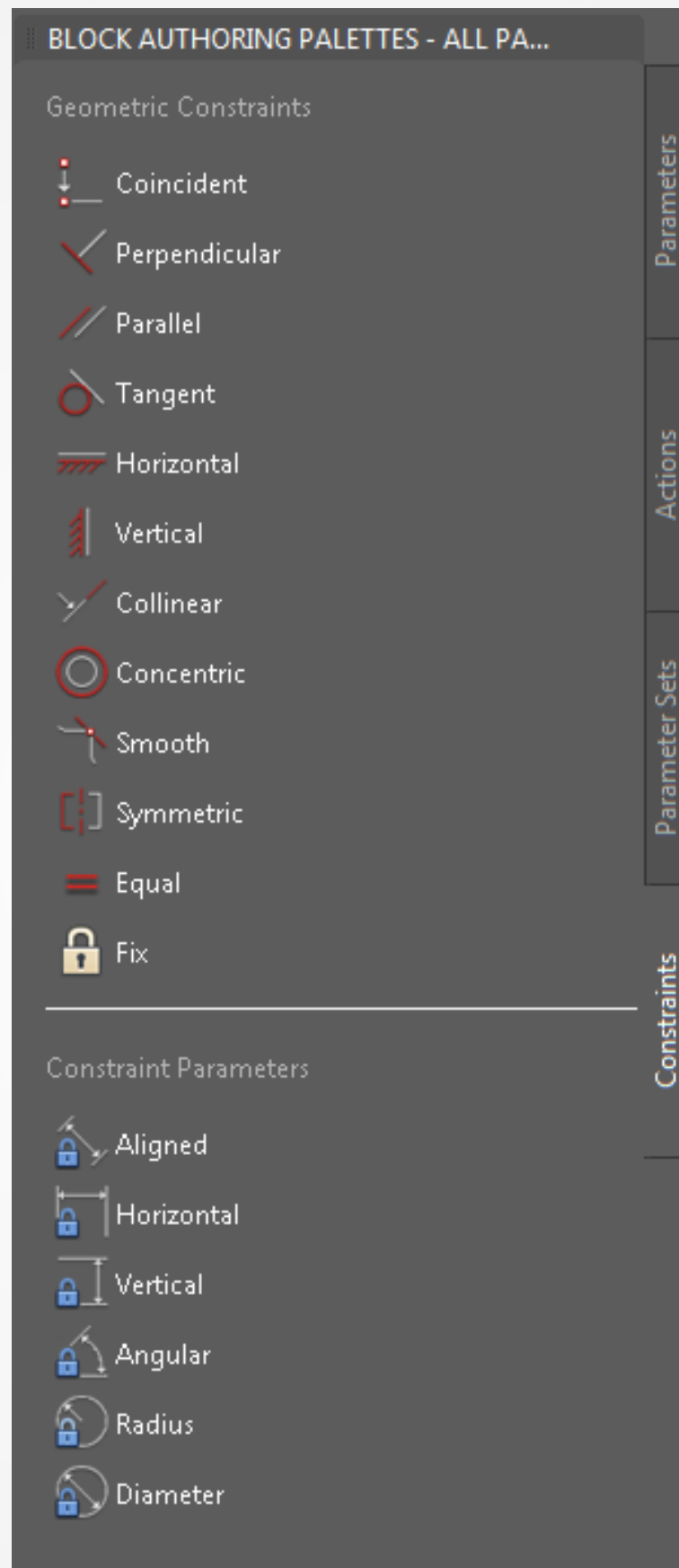
BLOCK AUTHORIZING PALETTES - ALL PA...

	Point Move	Parameters
	Linear Move	Parameters
	Linear Stretch	
	Linear Array	Actions
	Linear Move Pair	
	Linear Stretch Pair	Parameter Sets
	Polar Move	
	Polar Stretch	
	Polar Array	Constraints
	Polar Move Pair	
	Polar Stretch Pair	
	XY Move	
	XY Move Pair	
	XY Move Box Set	
	XY Stretch Box Set	
	XY Array Box Set	
	Rotation Set	
	Flip Set	
	Visibility Set	
	Lookup Set	

Constraints (Geometric Constraints & Constraint Parameters)

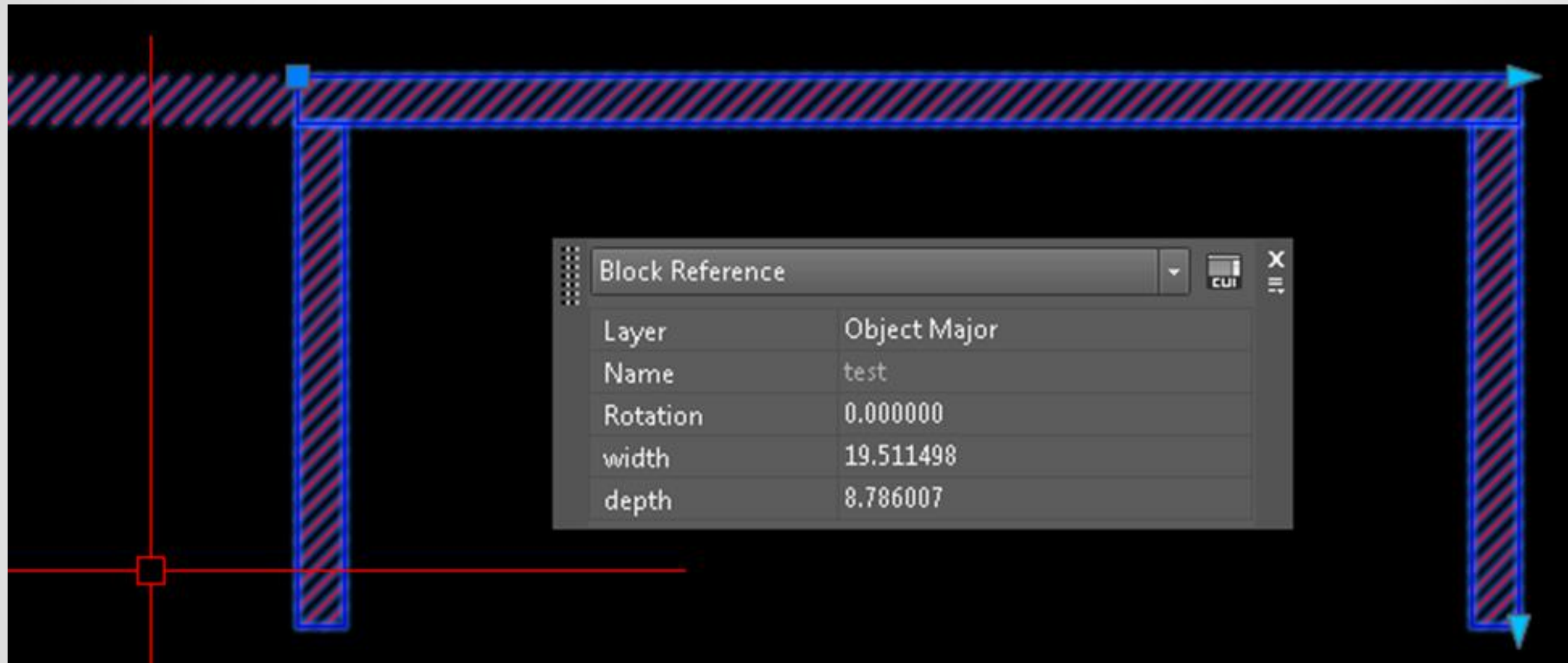
Geometric Constraints act the same in the Block Editor as in model space. They are used to maintain certain conditions as described in the constraint's name.

★ NOTE: Geometric Constraints cannot be edited outside of the Block Editor.

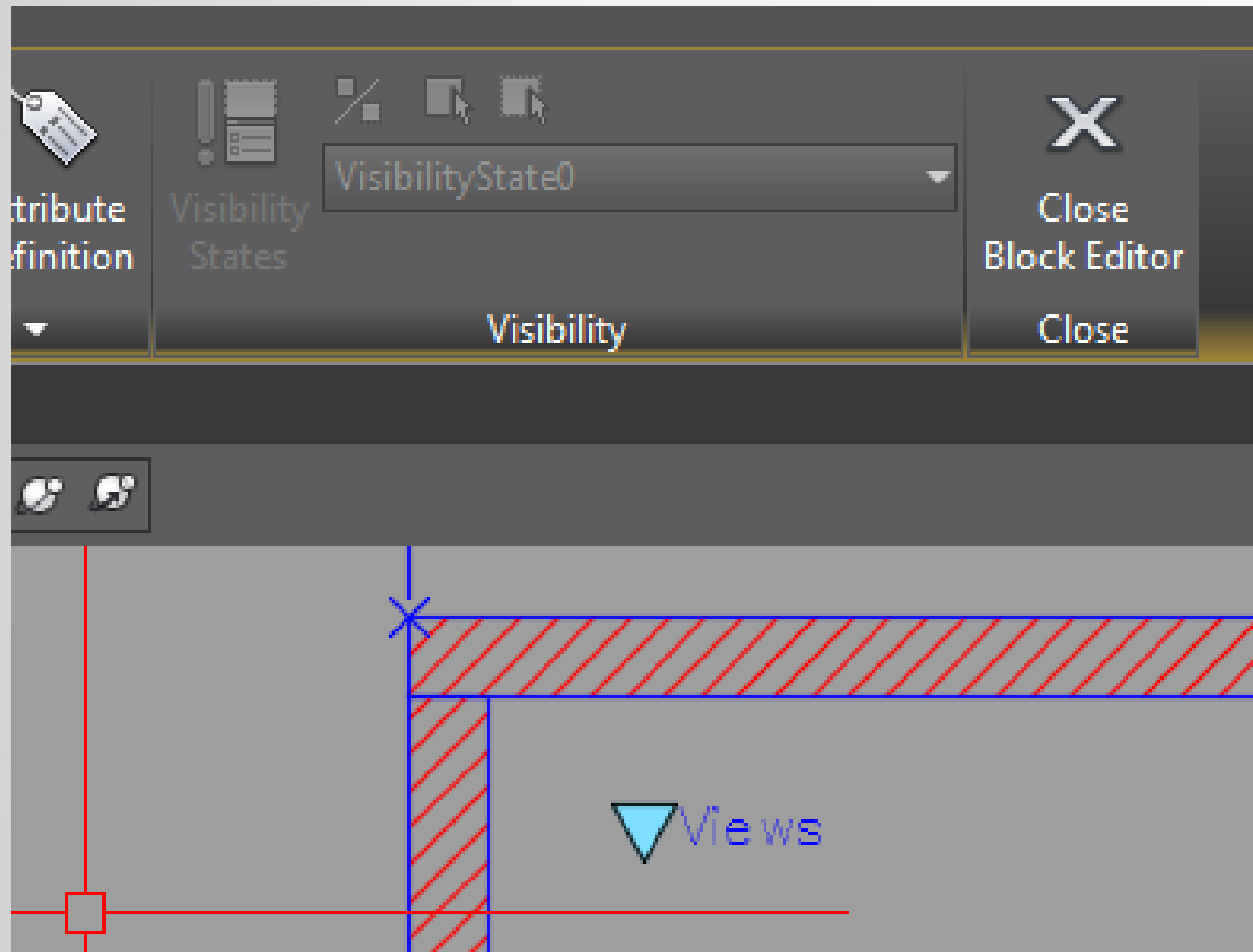


Troubleshoot common issues related to Dynamic Blocks

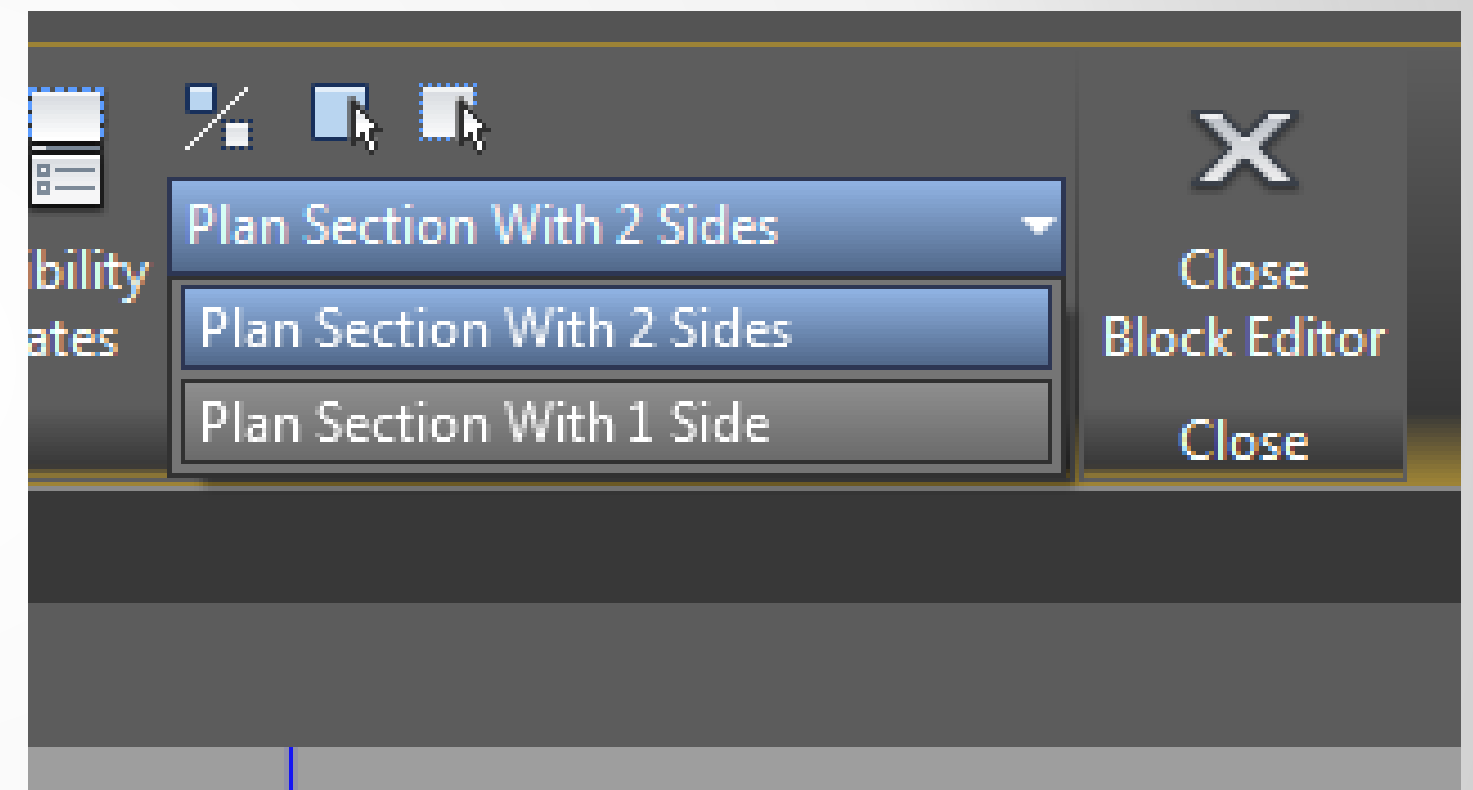
ISSUE #1: Hatches becoming non-associative



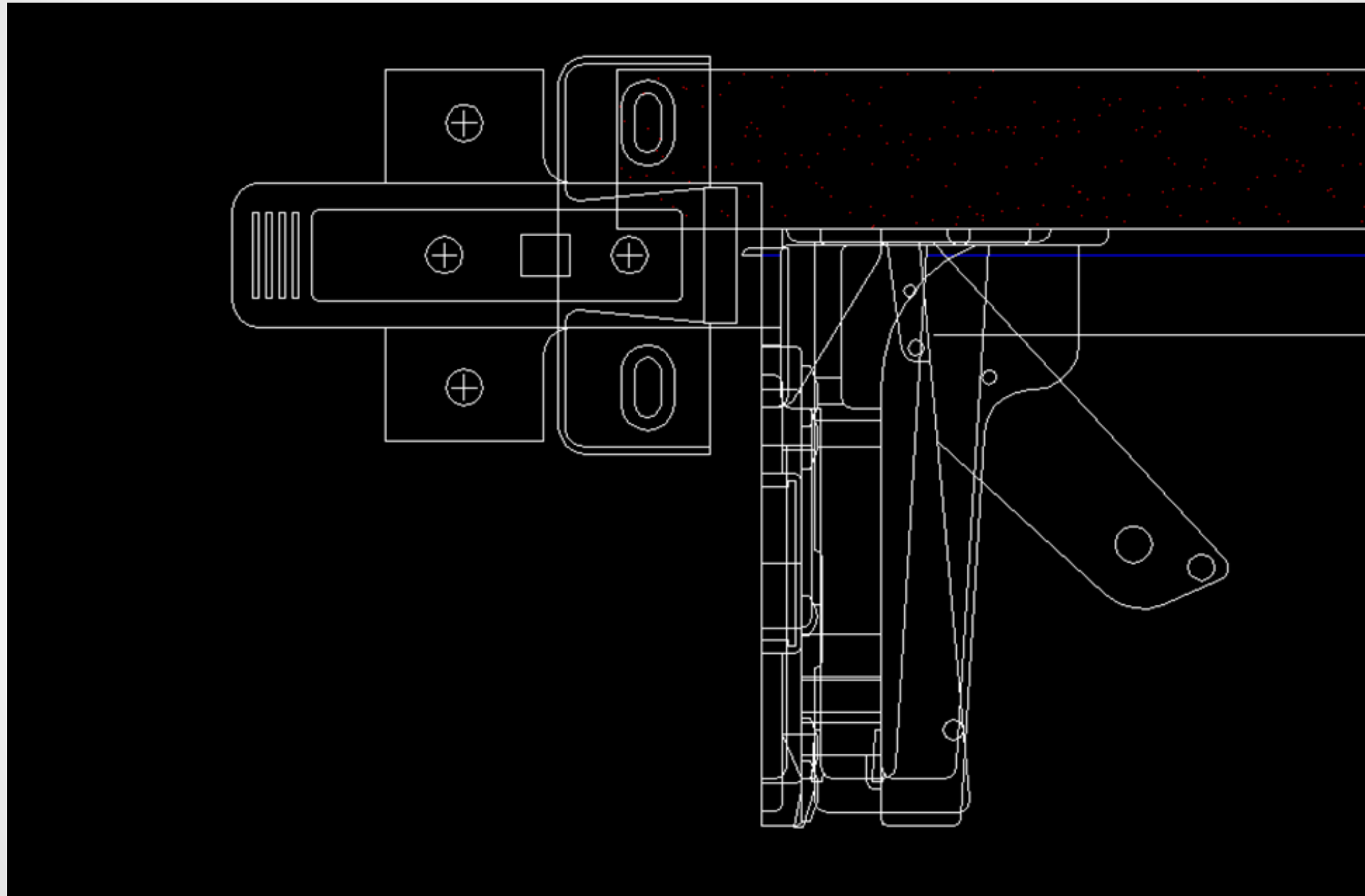
Issue #2: No views showing in block editor.



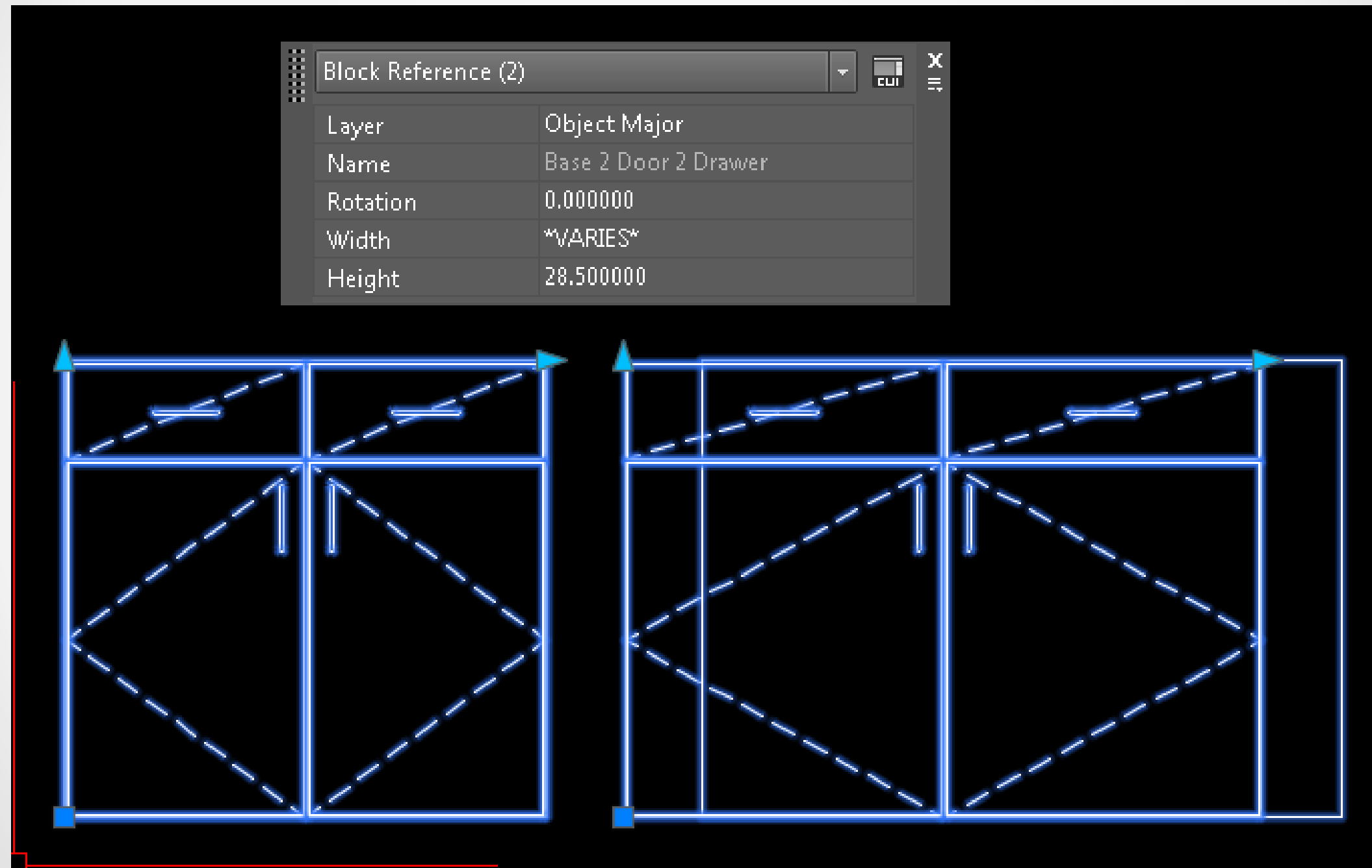
Vs.



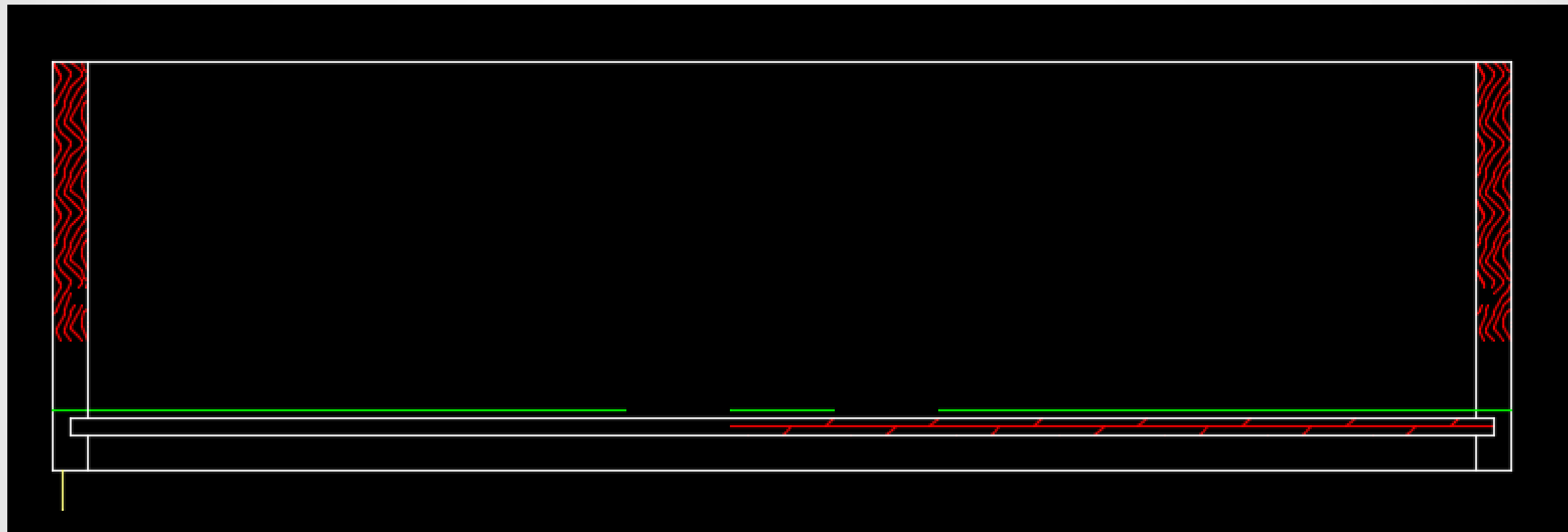
ISSUE #3: Exploded dynamic blocks show all geometry – oh my!



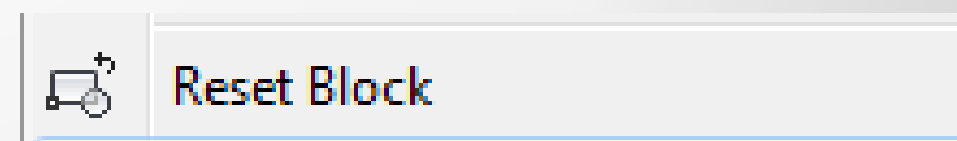
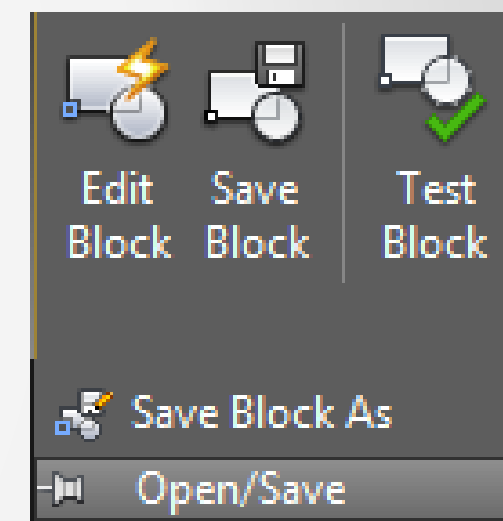
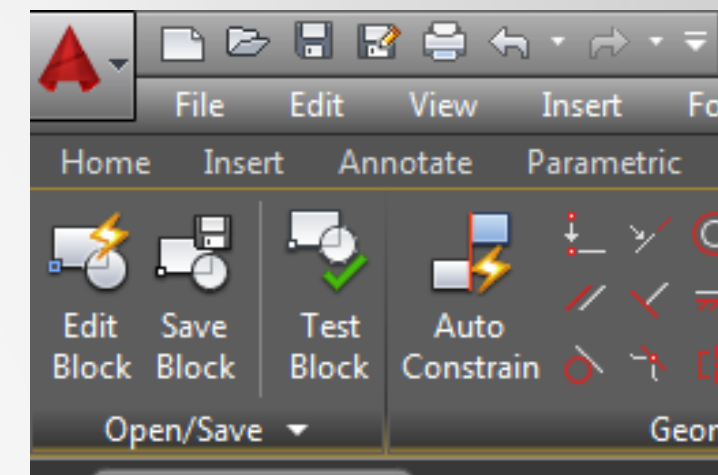
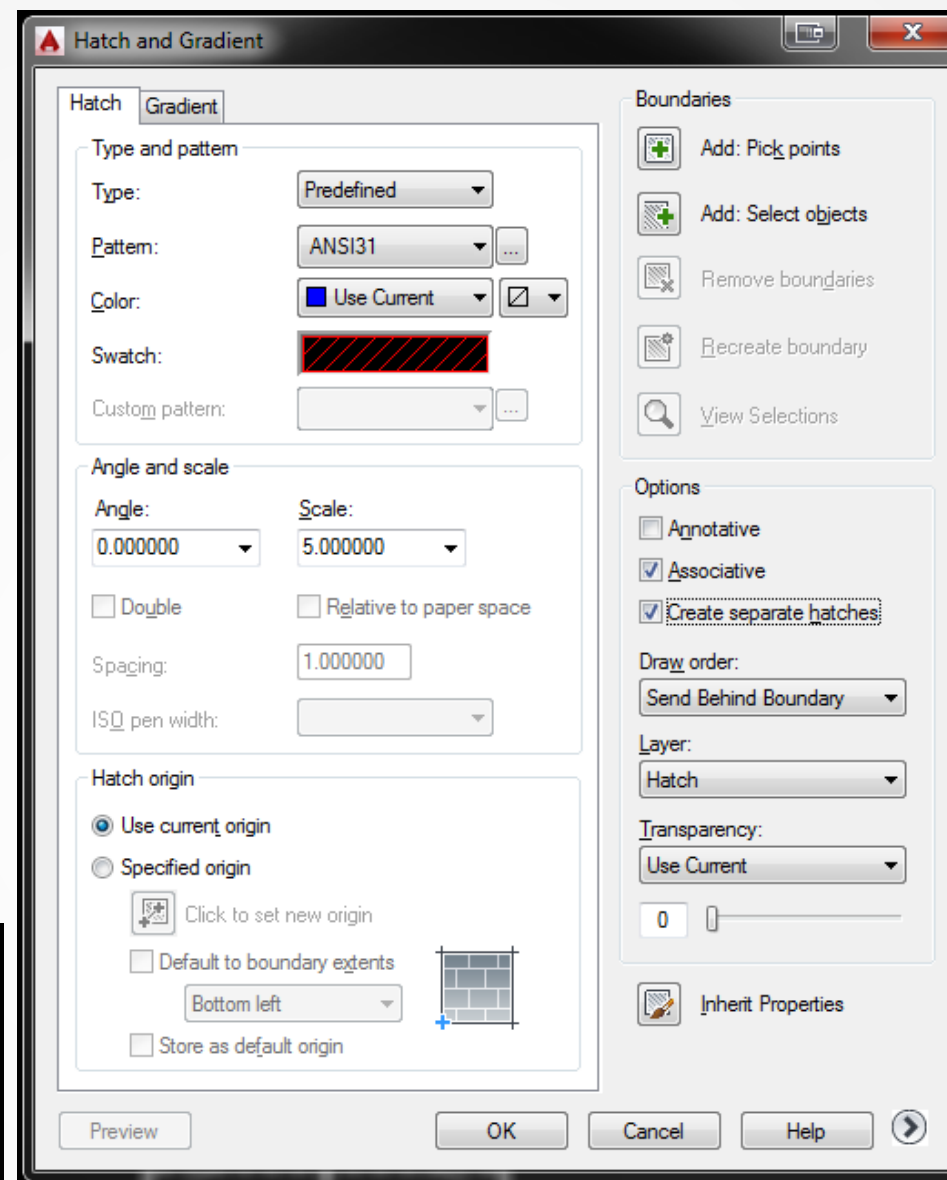
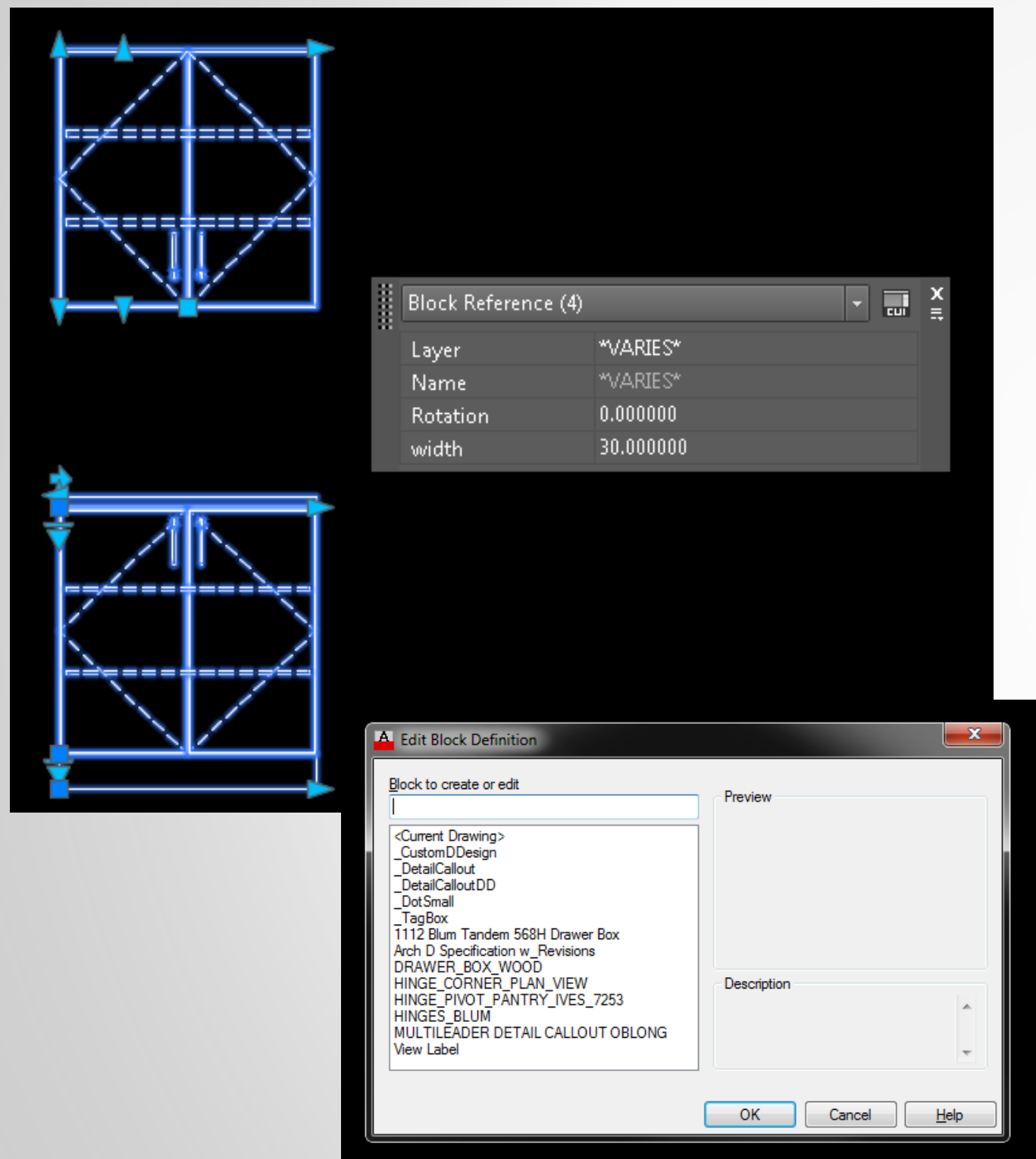
ISSUE #4: Dynamic block parameters and actions not working like they are supposed to!



ISSUE #5: My dynamic block hatches just went crazy!



Helpful Tips & Tricks with Dynamic Blocks.



Learn how to eliminate the need for added layers and styles to accomplish manual annotating

ANNOTATIVE SCALING

Eliminates the need for multiple layers, text styles, dimension styles, multi-leaders styles, etc. Annotative scaling will allow you to scale text height without the need of added layers and styles. No more charts, no more formulas, no more headache. Very easy to understand and implement!

Annotative scaling will eliminate things like this!

DIM_.25

DIM_.5

DIM_.75

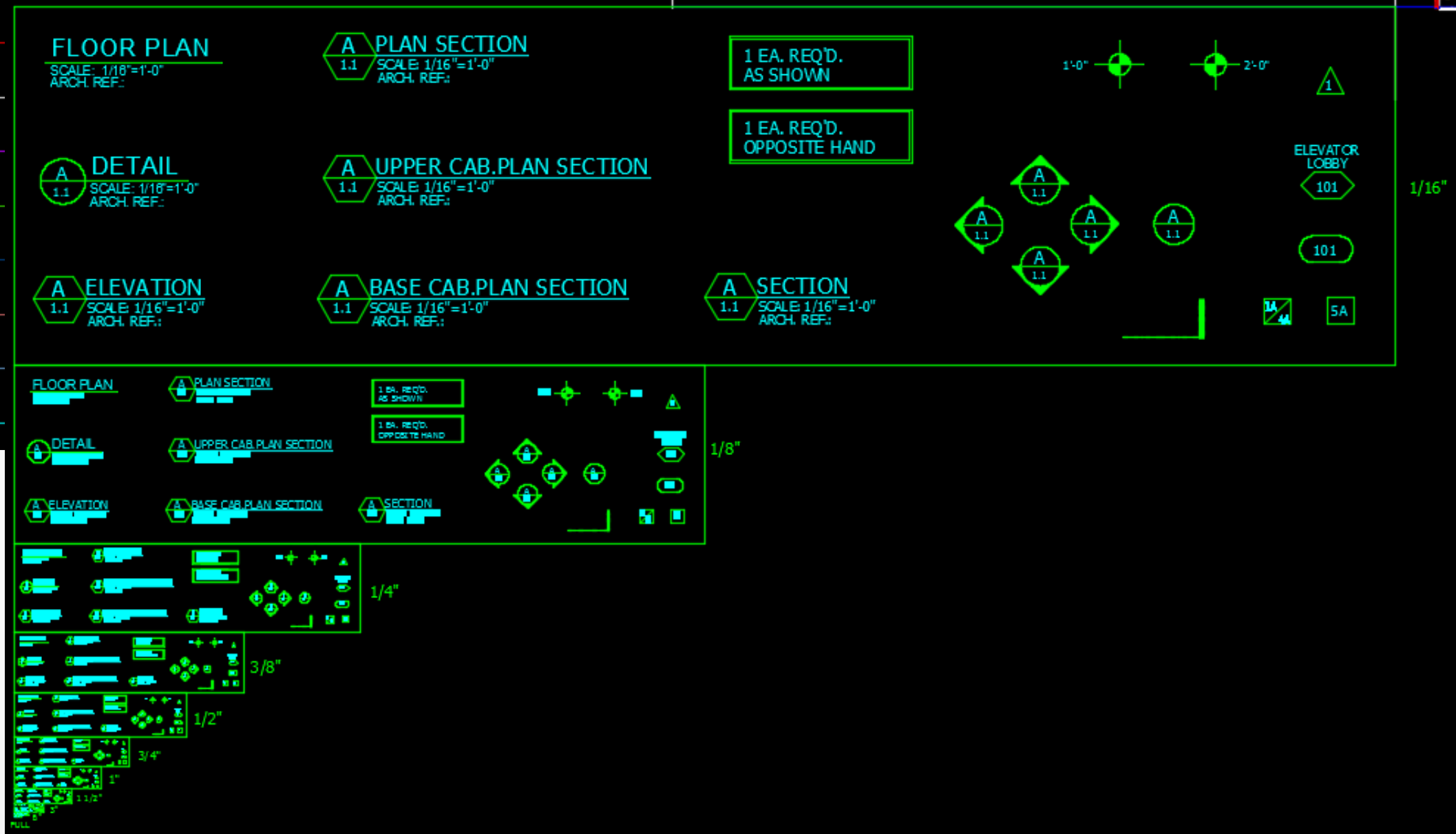
DIM_1

DIM_1.5

DIM_3

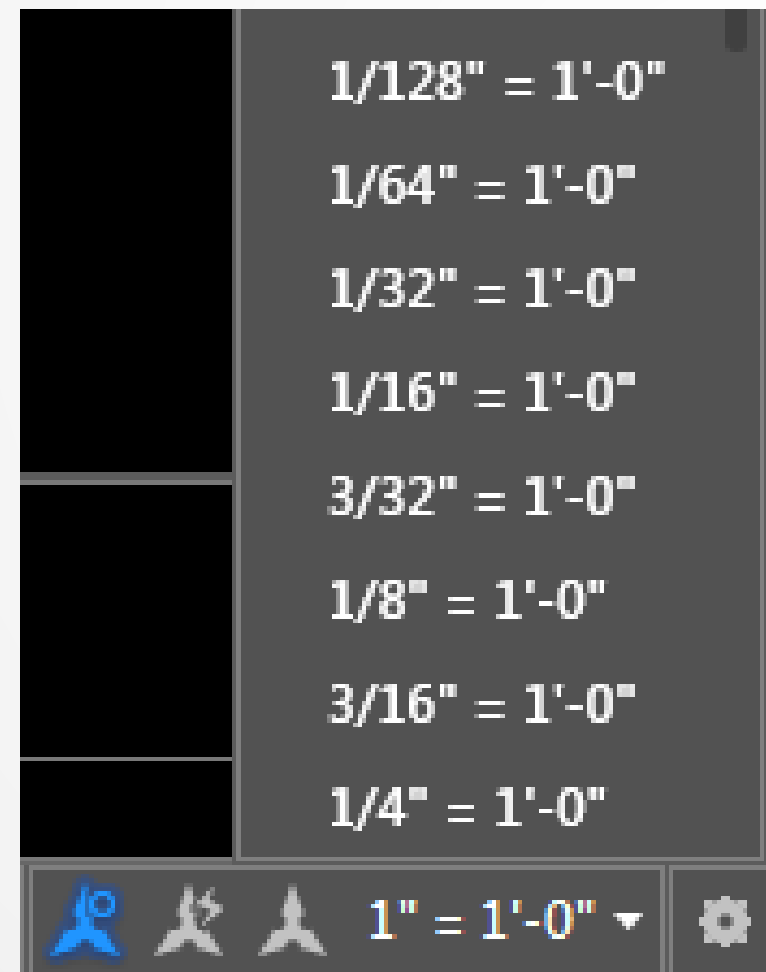
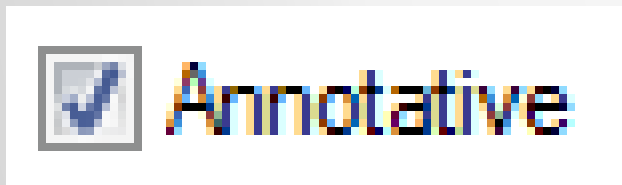
DIM_6

DIM_FULL



Annotative Scaling can be broken down to three important components.

- 1) Check the "Annotative" box
- 2) Set your desired paper space scale, then start annotating.
- 3) Make sure that the "Add scale to annotative object" icon is NOT checked!



Reduce the time spent editing blocks and annotating objects

ANNOTATIVE SCALING

Annotative scaling is not only intended for text styles, dimension styles, and multi-leader styles. It can also be used for block definitions and to scale blocks to a specific paper space scale. Section callouts, elevation symbols, grain direction symbols, material callouts, or any other block would benefit from the ability to scale!


 *NOTE: When creating an annotative block, set the annotation scale to “1:1” and create all text at “1:1” scale. This will allow for proper scaling.*

Block Definition

Name:

Base point

☒ Specify On-screen

 Pick point



X:

Y:

Z:

Objects

☐ Specify On-screen

 Select objects 

☐ Retain

☒ Convert to block

☐ Delete

1 object selected

Behavior

☒ Annotative

☐ Match block orientation to layout

☒ Scale uniformly

☒ Allow exploding

Settings

Block unit:

☐ Open in block editor

Description

Thank you!
**I hope you have found this class about Annotative Scaling
and Dynamic Blocks informative.**
Make your life easier!

If you have any further questions or comments please feel free to contact me at
adam@dirigdesign.com

Session Feedback

- Via the Survey Stations, email or mobile device
- AU 2015 passes given out each day!
- Best to do it right after the session
- Instructors see results in real-time







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