

USAI[®] Lighting

Revit User Guide

USAI Lighting offers a complete portfolio of Revit files to support specification of USAI Lighting's product range in architectural projects.

For architects and designers utilizing Building Information Modeling (BIM) software, Revit files can significantly streamline the design process. USAI's comprehensive offering of Revit files ensures that lighting fixtures are accurately represented within the project's virtual model. Please reference this guide for further details on how to most efficiently implement USAI's Revit files and streamline project coordination. Our commitment to customer service ensures that your project's specific lighting needs will be handled with expertise and attention to detail.

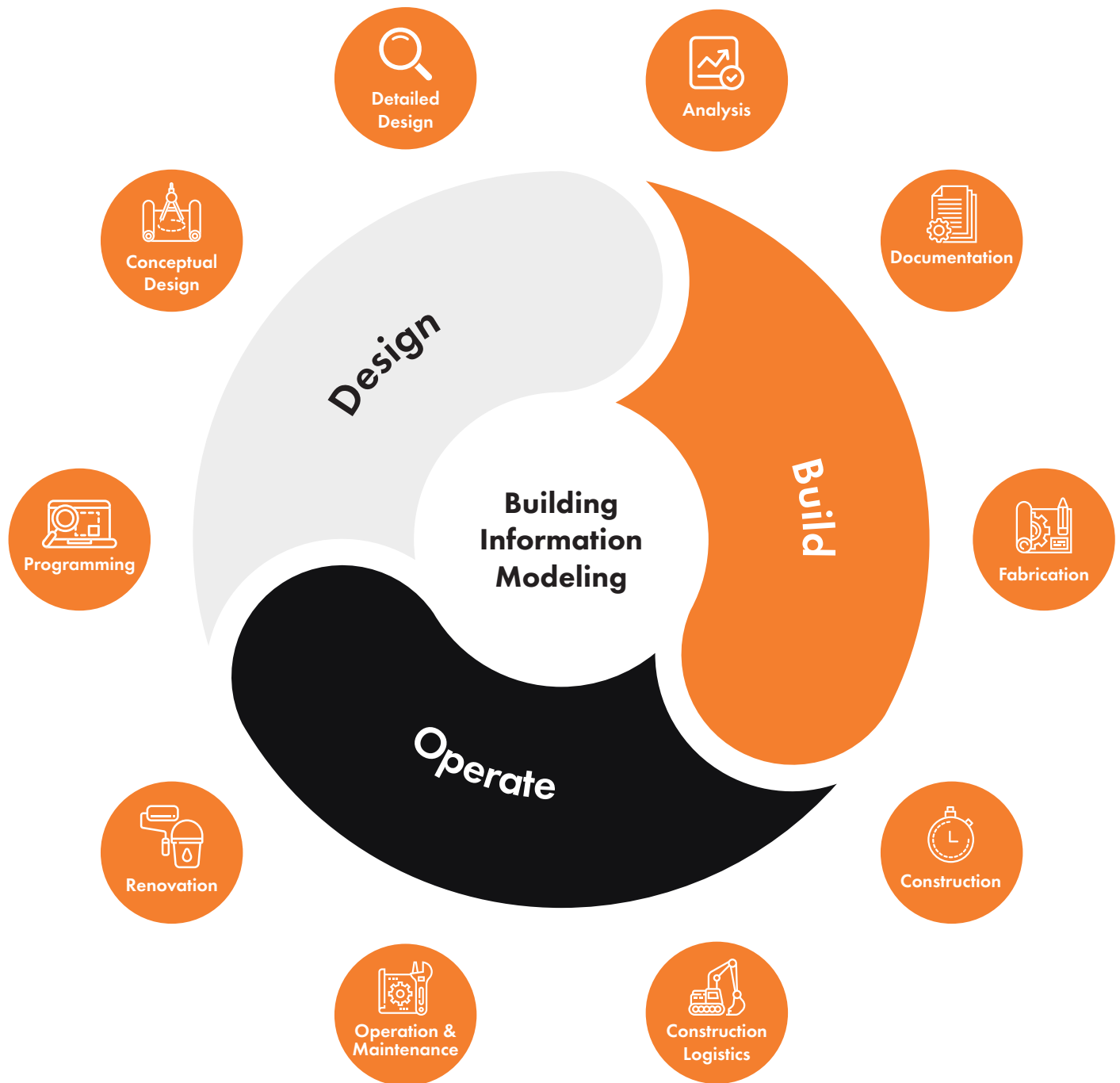
2
3
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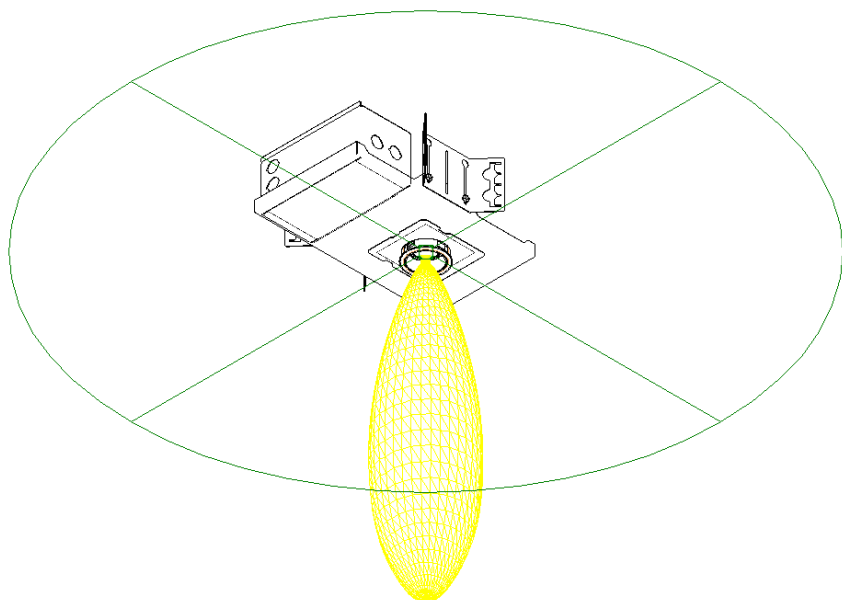
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Introduction to Building Information Modeling (BIM)

Building Information Modeling, commonly known as BIM, is a dynamic workflow through software that allows multiple members of the project team (architects, structural engineers, lighting designers, etc.) to collaborate on the project's design plan. The building is constructed in a virtual 3D space and embedded with relevant data for the equipment used in the project, and in a shared space this model can be used to coordinate among trades and facilitate the building's construction. From that point on, the model can also be used to manage and maintain the project's data throughout the life cycle of the building. BIM is a tool that is changing the construction industry by enabling more efficient communication and project coordination.





Introduction to Revit

Autodesk[®] Revit[®] is a specific software developed by Autodesk within the building information modeling (BIM) workflow umbrella. It is made for architects, architectural designers and engineers to design, collaborate and manage building information with 3D models of construction projects. Once a building model is completed, Revit software can generate plans, reflected ceiling plans, elevations, schedules, section details and renderings for use by the project team.

Revit Versions Available

Autodesk periodically releases new versions, each with enhancements and new features. Autodesk only officially supports the last four versions of Revit: currently, Revit versions 2022, 2023, 2024, and 2025 are available, and it is not possible to save newer RVT file formats into the older RVT data file formats. However, new versions of Revit can open and work with data from older version files. When opening a file, Revit will automatically upgrade older data format to the current version.

Some of USAI's Revit family models are from older versions of Revit. When opening the Revit family model, there will be an option to update the version you are using. USAI continues to update our older Revit files to the 2021 version to accommodate specifiers using older software. We are also updating all of our Revit files to a workplane-based format; please reach out to us if you need face-based or another specific file type or format.

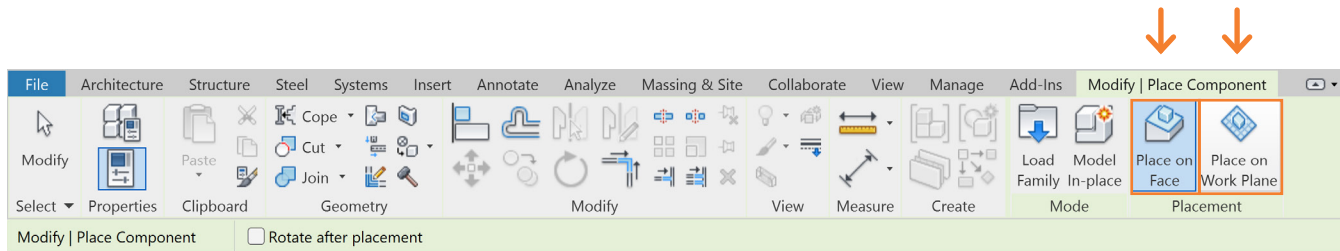


Need Revit Assistance?

Send an email with your request and/or questions to applications@usailighting.com

Revit Hosting: Face-Based vs. Workplane-Based

There are two methods to host a component: Face-Based and Workplane-Based.



1

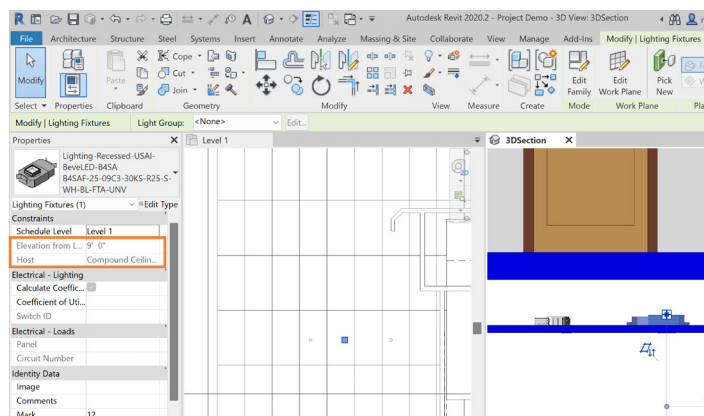
Face-Based Hosting

The face-based hosting option offers very limited control over the Revit family during the design process. A ceiling will be necessary to allow end users to place fixtures in the model. Additionally, it is not possible to allow end users to modify mounting heights or manipulate the family for different design situations.

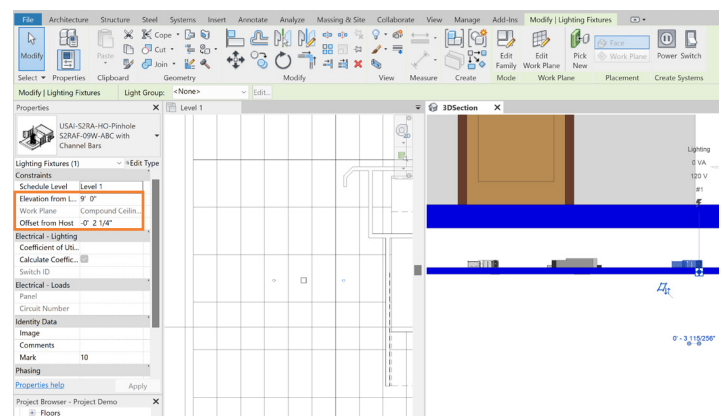
2

Workplane-Based Hosting

Workplane-based hosting allows you to place elements relative to a specific workplane (a flat reference plane). You define the workplane (e.g., a level, reference plane, or sketch plane), and elements are positioned based on that plane. For lighting families, workplane-based hosting provides more control over element placement in height and alignment. For instance, use workplane-based hosting to position a pendant light fixture at a specific height above the floor.



* In Face-Based files, the properties window does not allow ability to edit mounting height

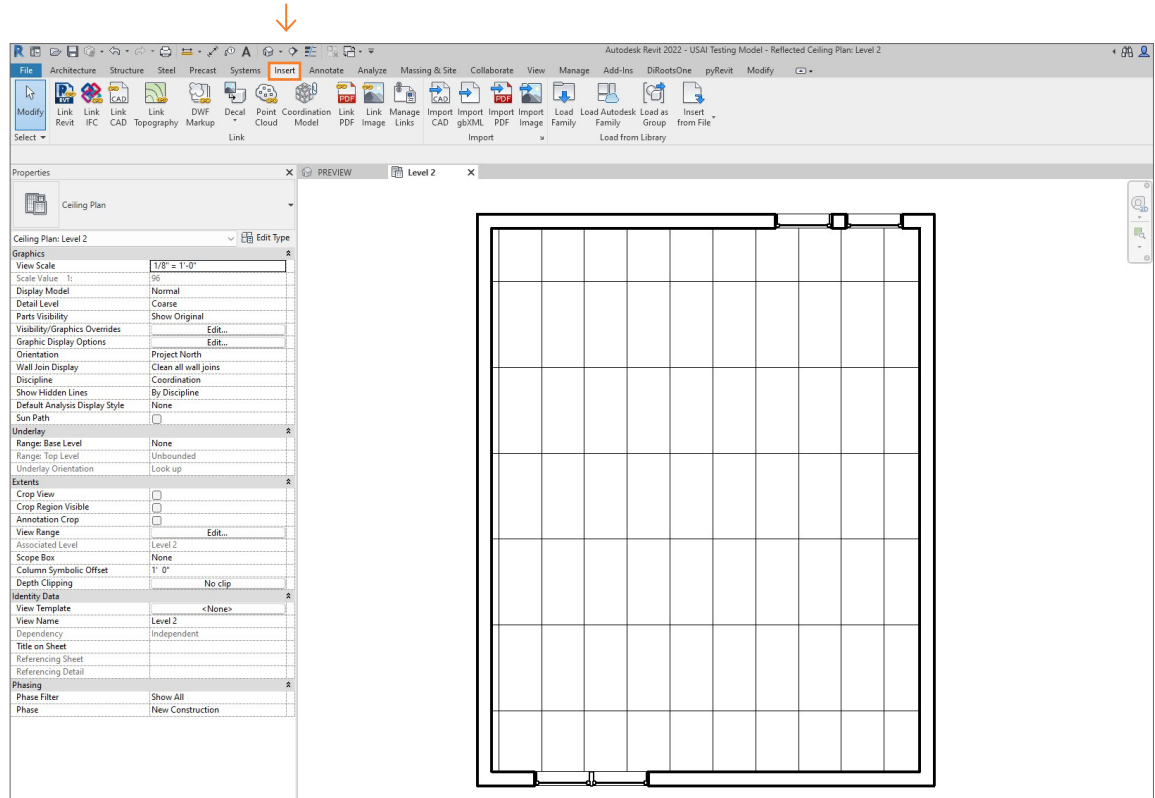


* Workplane-Based files show elevation from level field in properties window, which gives the ability to edit mounting height

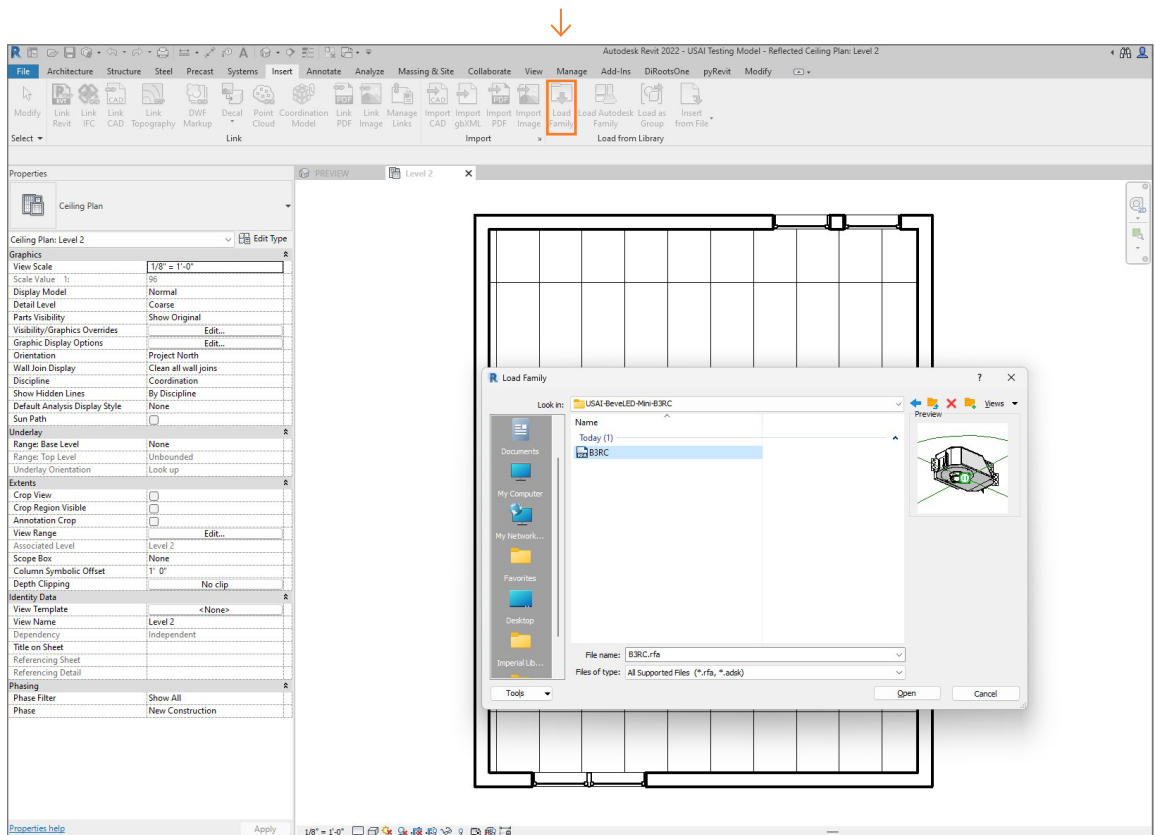
How To Use USAI Revit Files

Follow these steps to implement USAI's products in your project.

Step 01 Go to "Insert"



Step 02 Go to "Load Family"

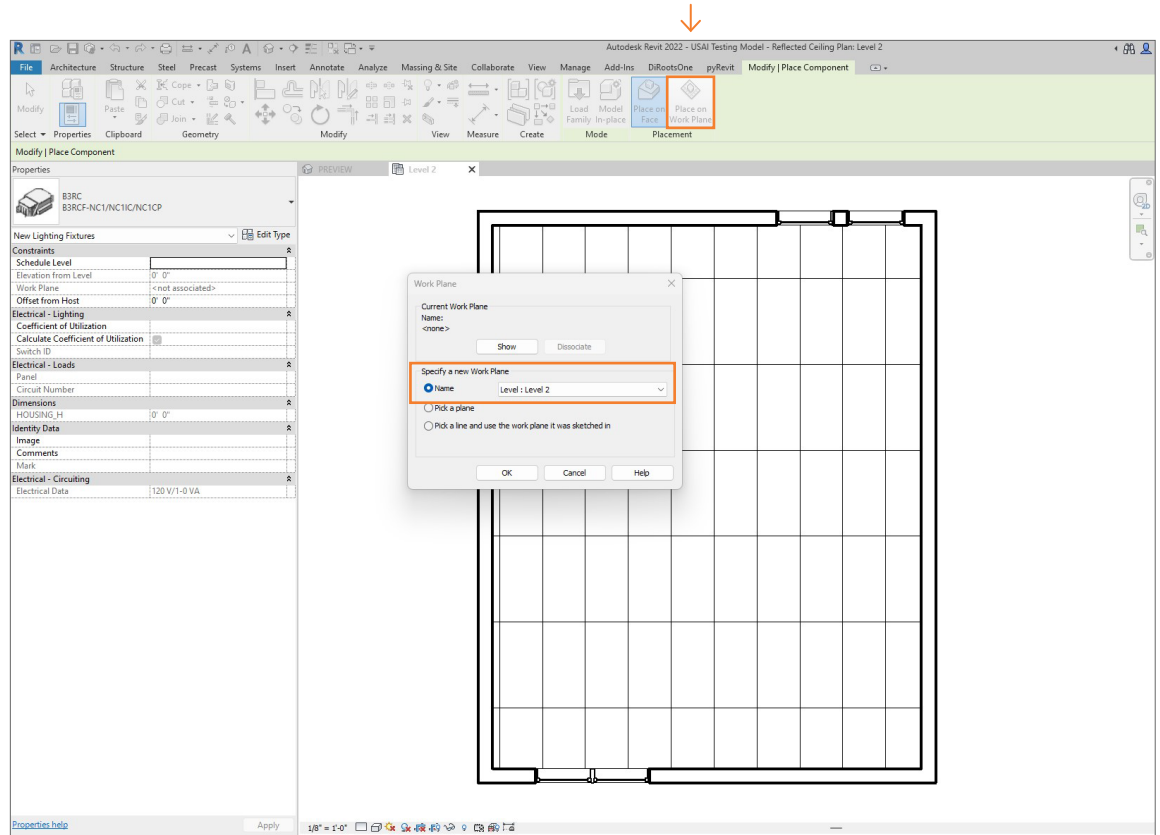


How To Use USAI Revit Files (continued)

Step 03

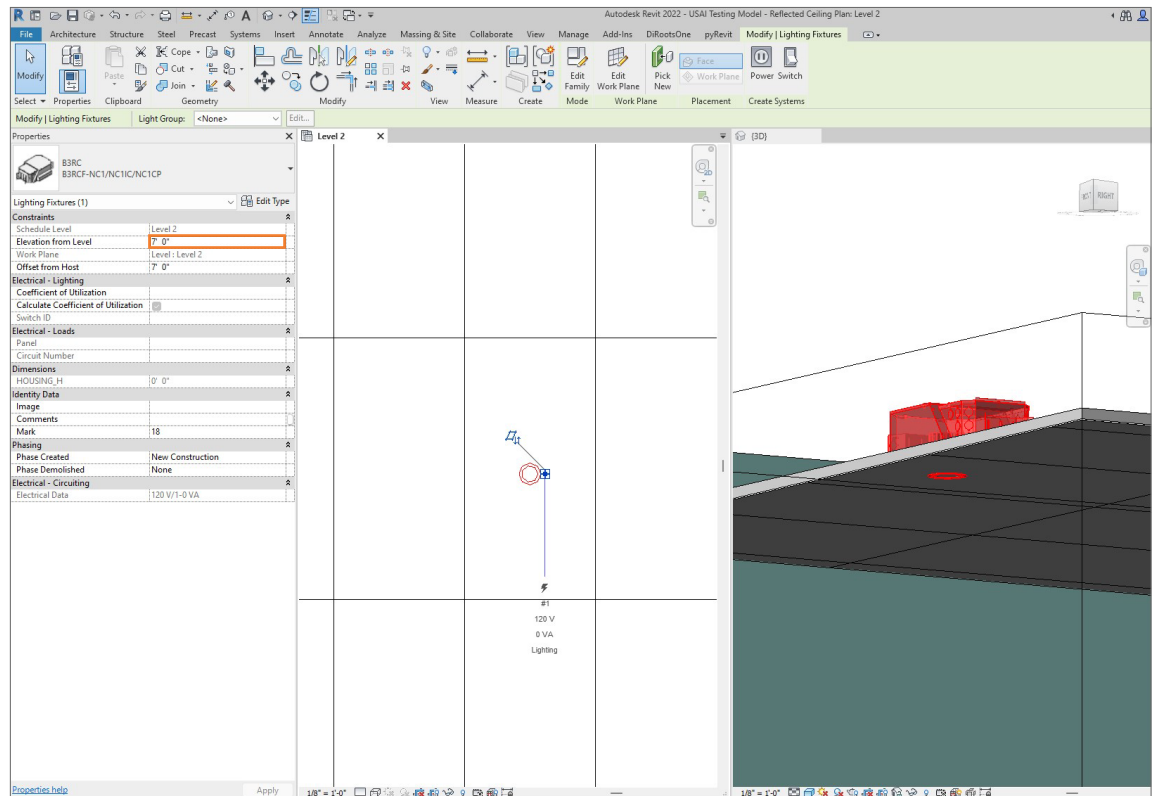
Select "Place on Work Plane"

THEN
Specify a new
Work Plane >
"Pick a Level"



Step 04

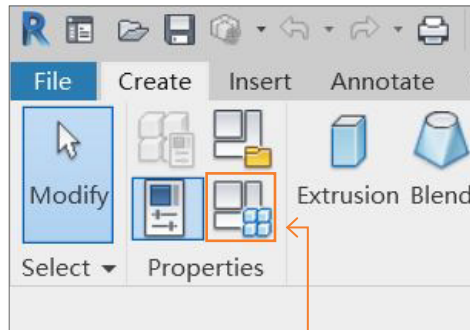
Specify "Elevation from Level"



How To Edit USAI Revit File Properties

Step 01

Go to "Create >
Family Types"



Step 02

Go to "Family Type" >
"Family Name"
to review various family
types with different
trims and housings

Family Types

Type name: B4RAM-25-09C3-30KS-R25-S-WH-BL-FTA-UNV

Search parameters

Parameter	Value	Formula	Lock
Default Elevation	48"	=	☒
Construction			
Trim Style F Trim Choice 25	☐	=	
Trim Style L Trim Choice 25	☐	=	
Trim Style M Trim Choice 25	☐	=	
Trim Style F Trim Choice 40	☐	=	
Trim Style L Trim Choice 40	☐	=	
Trim Style M Trim Choice 40	☒	=not(or(Trim Style F Trim Choice 25, Trim S	
Housing FTA	☒	=	
Housing NC or NCIC or NCCP	☒	=	
Housing NCIC or NCCP	☐	=not(or(Housing FTA, Housing NC or NCIC	
Materials and Finishes			
Bevel Trim Finish	Metal - USAI - White	=	
Flange Finish	Metal - USAI - Black	=	
Lens Finish	Acrylic - USAI - Frosted	=	
Millwork Collar Finish	Wood - USAI - Black	=	
Mounting Finish	Metal - USAI - Grey	=	
Housing Finish	Metal - USAI - Grey	=	
Electrical			
Lamp Wattage	9.00 VA	=	
Lamp	LED	= "LED"	
Wattage Comments		=	

Step 03

Replace the IES
file if needed.

Family Types

Type name: M1RA-F-HC-09X1M-30KS-WH

Search parameters

Parameter	Value	Formula	Lock
Coefficient of Utilization (default)		=	
Electrical - Loads			
Apparent Load	18.00 VA	=Input Wattage	
Input Wattage	18.00 W	=	
Voltage	120.00 V	=	
Dimensions			
Ceiling Thickness	0' 1"	=	☐
Downlight High	0' 1"	=Ceiling Thickness	☐
center spacing	0' 5"	=	☐
center spacing/2	0' 2 1/2"	=center spacing / 2	☐
Photometrics			
Color Filter	White	=	
Dimming Lamp Color Temperatur	<None>	=	
Initial Color	3000 K	=	
Initial Intensity	9.29 W @ 148.54 lm/W	=	
Light Loss Factor	1	=	
Photometric Web File	M1RA-09X1M-30KS-25-M0-WH.	=	
Tilt Angle	120.00°	=	☐
Identity Data			

Manage Lookup Tables

How do I manage family types?

OK Cancel Apply



Need Revit Assistance?

Send an email with your request or questions to applications@usailighting.com



SNAP TO VIEW
How to Use Revit
Instructional Video

CALL, EMAIL, OR VISIT USAILIGHTING.COM TO LEARN MORE

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