ARCHLine.XP® 2023

Windows

ADVANCED COURSE

Interior Design Tutorial

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Advanced Course Training Tutorial

We highly recommend the Advanced Course Training Tutorial to our potential and current ARCHLine.XP® users who successfully completed the ARCHLine.XP Preliminary and Intermediate Courses.

The course contains 8 workshops: Layer Management, Design Phases, Doors and Windows, Lighting Plans, Suspended Ceiling, Curtain walls, Farmed walls. Teamwork.

After accomplishing these workshops, you will be able to execute more challenging and advanced design tasks.

Enjoy the successful design! CadLine

Start your design and work with ARCHLine.XP®

This training material is a guidance to help you to become familiar with the typical interior design examples, and enables you to create more complex designs. To get the most out of the tutorial, run the ARCHLine.XP® program and the appropriate YouTube video to try those features and tools which can be found in this training material.

To complete tasks please download <u>WORKSHOP PROJECT – ADVANCED</u> from our website and install to your computer. This contains all projects for Advanced workshops.

1. Workshop: Layer Management

1. Workshop: Layer Management

It is an often-occurring task to display a floorplan in many various ways, according to the multiple plans such as Architectural floorplan, Furnishing plan, MEP plan, Electrical accessories plan, Tiling plan, ...

CAD software offers the Layer Management as a solution. Layers are the primary method for organizing objects in a drawing, so objects of the current project can be grouped or separated according to various aspects.

In this workshop, we will demonstrate how to create layers to print different plot layouts based on the same floorplan.

- Open your browser and watch the following video tutorial: <u>https://www.archlinexp.com/enrollments/courses/advanced-course/layer-management/1</u>
- Open ...\Documents\ARCHlineXP Draw\2023\Workshop_Advanced\1_Layer_management\
 1_Family_Business_Office_START.pro file. Save it under a different name.

Before you start drawing, let's look through how layer tools are functioning. First, we check the layer properties.

1.1. Layer properties

Important, the layer structure of the floorplan and the 3D view is not the same. Therefore, operations with layers are ALWAYS started from the floor plan.

- Activate the floorplan window.
- Click on the Layer button on the Statusbar. This way, you open the Layer Properties Management.
- Click on Used layers group under All layers.

Layers have the following main properties:

Layer Properties Management									×
The name of curren	nt layer: V	Vall - Load-t	bearing wall						Show visible layers only
Name	On	Lock	Printable	Elements	C	Line-type	Line	Description	
Dimension - Architectural	9		9	65		Simple	0 mm		× + ×
Dimension - Electrical	?	<u> </u>	4	54		Simple	0 mm		- All layers
Dimension - Interior	?	<u> </u>	e	32		Simple	0 mm		
Dimension - MAP	?	<u> </u>	a	7		Simple	0 mm		
Dimension - Opening dimension	9	<u> </u>	a	9		Simple	0 mm		
Dimension - Tiling	?	<u> </u>	a	132		Simple	0 mm		
 Electrical accessory 	9	<u> </u>	a	308		Simple	0 mm		
 False ceiling 	9	<u> </u>	9	40		Simple	0 mm		
Interior - Hall - Decoration	Ŷ	<u> </u>	a	1660		Simple	0 mm		
Interior - Hall - Furniture	9	<u> </u>	9	102		Simple	0 mm		
Interior - Kitchen - Decoration	9	_	9	163		Simple	0 mm		
Interior - Kitchen - Furnishing	9	<u> </u>	a	265		Simple	0 mm		
Interior - Living room - Furnishing	9	_	a	94		Simple	0 mm		Layer filter restricts the layers displayed in the Layer list to the selected layers. Drag and drop
Interior - Office - Decoration	?	<u> </u>	a	3220		Simple	0 mm		the selected layers onto the layer filter
Interior - Office - Furniture	9	_	9	2572		Simple	0 mm		
Iighting	9	<u> </u>	a	402		Simple	0 mm		Variations
I MEP	9	_	a	92		Simple	0 mm		O + ×
I Moulding	?	<u> </u>	a	24		Simple	0 mm		
I Polygon	9	_	a	6		Simple	0 mm		- Available variations
🧼 Raster image	?	<u> </u>	8	1		Simple	0 mm		All layers
I Room area	?	_	a	10		Simple	0 mm		Build 3D model
Slab 1	?	<u> </u>	8	14		Simple	0 mm		MEP plan
✓Wall - Load-bearing wall	9	_	8	389		Simple L 🔻	0 mm 💌	·	Tiling plan
Wall - Plasterboard	?	<u> </u>	9	12		Simple	0 mm		
<								>	A layer variation saves all the layers with the current states. It helps switching between possible layer variations in one step.
Do not delete used layers	\sim		Сору	to clipboard	🗆 P	Protocol for L	ayer Nami	ing	OK Cancel



Visibility: Turning on and off layers

By turning layers on and off, you can select layers to display in the drawing window. The objects of turned-on layers (yellow bulb) are visible, and you can refer to them. You can turn the layers on which previously had turned off (grey bulb) any time, and then these become visible again.

Background: Locking and unlocking layers

By locking and unlocking layers, you can define which layers you can edit and select. Locked layers become background layers. Objects of these layers are visible, can be referred to them, but you cannot select or edit them.

Printable: On or Off

By turning the layers on or off, you can select the layers whose elements you want to print. Non-printable layers appear with a printer with a cross icon on the list.

They will not be printed. When printing, the message will also warn you:

" Some layer has non-printable status. These layers will not be printed."

It is worth checking the printability of the item's layer in the layer manager.

Color, Line type, Line width:

These features are active in Layer control mode.

The layer properties such as visibility, background, printable can be turned on/off one by one; or in groups.

Let's look through these properties in more details:

 $^{\circ}$ \Box When the layer is turned on and unlocked:

- its objects are visible
- you can refer to its objects
- its objects are editable and selectable
- 💡 🖰 When the layer is turned on and locked:
 - its objects are visible
 - you can refer to its objects, but
 - its objects are not editable or selectable
- 🕈 🚊 When the layer is turned off:
 - its objects are not visible, therefore
 - consequently, you cannot refer to its objects, and
 - its objects are not editable or selectable
 - The active layer is always visible and unlocked.

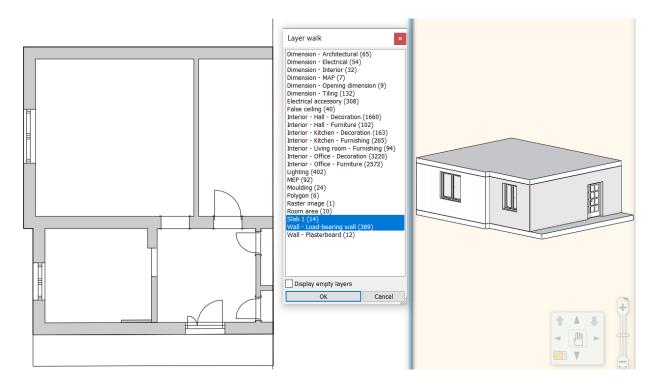
Turning on/ off More layers all at once

There are situations when it is necessary to turn on/off more layers. Select more layers by holding down the SHIFT or CTRL key, and now it is enough to change the visibility of one layer. Now all the rest of the selected layers inherit the property of the currently selected layer. All layers can be selected by pressing CTRL+A.

An example of how to turn on and off layers

Activate the floorplan.

- Select the Layer walk tool and click on "Wall Load-bearing wall" and "Slab 1" layers by holding down the CTRL-key.
- Now create the 3D model by using the Quick 3D model tool. The result is the following:



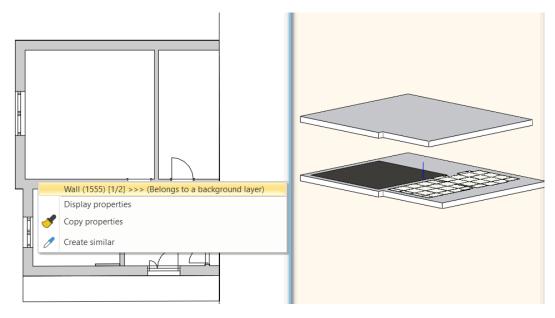
In the Layer Properties management window, we can check that both layers are turned on and unlocked. This way, these layers are visible, editable, selectable so, the 3D model is created.

🖌 Slab	?	<u> </u>
🧼 Wall - Load-bearing wall	9	<u> </u>
🧼 Wall - Plasterboard	9	<u></u>

• Lock the "Wall-Load-bearing wall" layer, now rebuild the 3D model.

🛹 Slab	?	<u>_</u>
🧼 Wall - Load-bearing wall	?	
🧼 Wall - Plasterboard		

The Wall-Load-bearing wall layer turned to the **background layer**. Walls are not visible, not editable, and cannot be selected on the floorplan. Only the slabs are displayed.





1.2. Layer Walk tool

Layer Walk tool helps to navigate through the existing layers. The Layer Walk makes it easy to turn on and off layers; or create a new combination of the visible layers. Next to the layer name is indicated the number of the elements on that given layer in brackets.

When the Layer Walk window is open, the visible layers are highlighted, and accordingly, the objects on these layers are displayed on the active floorplan.

More layers can be selected by holding down the CTRL button and clicking on the layer name. Layers between the first and last selected layers can be selected by holding down the SHIFT button on your keyboard. This also can be done by using the mouse.

In addition to Wall, Wall – Load-bearing wall layer select every *Interior layer* and rebuild the 3D model. The result is the following.

Layer walk × Dimension - Architectural (65) Dimension - Electrical (54) Dimension - MAP (7) Dimension - Opening dimension (9) Dimension - Tiling (132) Electrical accessory (308) False celling (40) Interior - Hall - Decoration (1660) Interior - Hall - Decoration (163) Interior - Kitchen - Decoration (163) Interior - Kitchen - Furnishing (265) Interior - Office - Decoration (3220) Interior - Office - Furniture (2572) Lighting (402) MEP (92) Moulding (24) Polygon (6) Raster image (1) Room area (10) Slab 1 (14) Wall - Plasterboard (12) Wall - Plasterboard (12)	
OK Cancel	

Now activate the 3D view. Let's use the Layer Walk tool.

The Layer List is not the same as it is on the floorplan; the locked layers are not displayed.

1.3. Layer: The general property of objects

How can happen that objects are automatically placed on different layers?

In ARCHLine.XP, each project is built up from different layers, even if you don't do anything to organize the content on layers. If you open a blank project, the program already contains default layers. When we create new architectural, interior, or drawing objects, these are automatically placed on that layer, which is defined by the given object type.

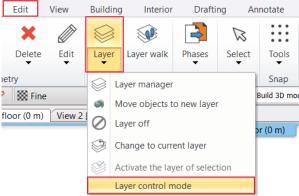
When we define the general properties of the object types, you have to specify the layer where the new elements of the given object type will be placed. The program has a pre-defined layer list. Each object type is assigned to a layer; the new element will be automatically assigned to it. The assignment can be modified.

For example, 1 layered 38 wide wall will be assigned to the Wall-Load bearing wall layer, while 1 layered 06 wide wall will be assigned to Wall- Partition wall layer, dimensions to Dimension-Length, furniture are assigned to Interior- Living room-Furnishing layer.

Wall	Wall
General properties General properties O.0003 m Wall - Load-beari Simple Line Simple Line Simple Line Simple Line Simple Line Simple Line Simple Line Simple Line Simple Line Simple Line Simple Lin	General properties
Simple Line	Simple Line 8 - Bottom-most V

1.4. Layer Control Mode

On Ribbon bar under Edit menu / Layer / Layer control mode option is turned off by default.



If you activate this mode, you can override the objects' general properties when you create a new object. In this case, that color, line type, line weight will be applied which corresponds to that layer which is assigned to the new object.

The Layer Control Mode secures the AutoCAD compatible drawing method. When this option is active, you can still create objects with different color, line type, line width, but these are only editable afterwards.

The display performance can improve in case of architectural and interior design plans if objects only, and not layers have own color, line type, line weight.

So, this way, on the same layer, you can place objects with different properties (different color, line type, line width, and even different types), and those can be managed together for various aspects.

1.5. Create a New Layer

 \mathbb{P}

A new layer can be created if All layers filter is active on the right side of the panel. By pressing the Add new layer button, the Layer:1 is made, by double-clicking on it, you can name it. (You can name any existing layer in the same way). The active layer indicated by a green tick.

• Click on All Layers filter.

Now all layers appear. We have already prepared layers for architectural elements and furnishing. These are automatically assigned to objects' types. In case there is another room on the floorplan which is not on this list, then it worth to create a new layer for it.

On this floorplan, there are three rooms, such as Kitchen, Office, and Hall.

First, we create layers for the Office and the Hall, then for the Furnishing. Automatically furniture already has been placed on the Interior – Living room – Furnishing layer. Next, we will move objects to the new layers.

 Click on the Add new layer icon. Now the Layer: 1 is created and name it to Interior – Hall – Furnishing and Interior – Office – Furnishing.

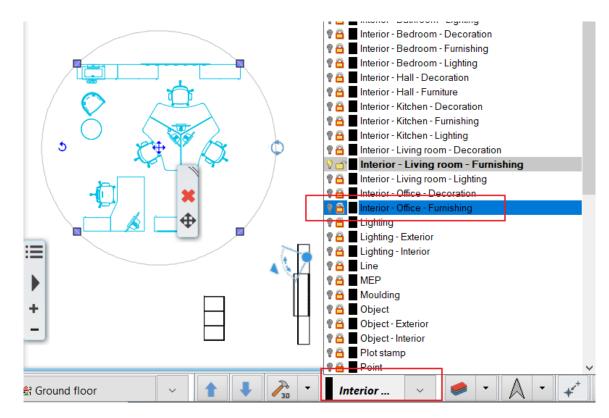


🗞 🐟 The name of current							1			Show visible layers only Layer filters
Name	On	L	P	Ele	C	Line-type	Line	Description	^	
Ellipse		<u> </u>	8	0		Simple	0 mm			
False ceiling	?	É	9	40		Simple	0 mm			- All layers
Group		<u> </u>	9	0		Simple	0 mm			
Hatch		<u> </u>	9	0		Simple	0 mm			
IFC element		<u> </u>	9	0		Simple	0 mm			
Interior - Bathroom - Decoration		<u> </u>	6	0		Simple	0 mm			
Interior - Bathroom - Furnishing		<u> </u>	9	0		Simple	0 mm			
Interior - Bathroom - Lighting	9	<u> </u>	9	0		Simple	0 mm			
Interior - Bedroom - Decoration		<u> </u>	9	0		Simple	0 mm			
Interior - Bedroom - Furnishing		<u> </u>	9	0		Simple	0 mm			
Interior - Bedroom - Lighting		<u> </u>	9	0		Simple	0 mm			
Interior - Hall - Decoration	9	Ē	9	1660		Simple	0 mm			
Interior - Hall - Furnishing	9	_	9	16		Simple	0 mm			Layer filter restricts the layers displayed in the Layer list to the selected layers. Drag and drop
Interior - Kitchen - Decoration	9	Ê	9	163		Simple	0 mm			the selected layers onto the layer filter
Interior - Kitchen - Furnishing	9	_	9	265		Simple	0 mm			
Interior - Kitchen - Lighting	9	<u> </u>	9	0		Simple	0 mm			Variations
Interior - Living room - Decoration		<u> </u>	9	0		Simple	0 mm			
Interior - Living room - Furnishing	9	<u> </u>	9	1369		Simple	0 mm			
Interior - Living room - Lighting	9	<u> </u>	8	0		Simple	0 mm			- Available variations
Interior - Office - Decoration		<u>-</u>	8	3220		Simple	0 mm			All layers Architectural floorplan
Interior - Office - Furnishing	9	_	9	1392		Simple	0 mm			Architectural hoorplan
Lighting	9	<u> </u>	9	401		Simple	0 mm			MEP plan
Lighting - Exterior	9	<u> </u>	9	0		Simple	0 mm			Tiling plan
Lighting - Interior	9	<u> </u>	9	0		Simple	0 mm			5.
Line 🕨		<u> </u>	9	0		Simple	0 mm			
MEP		<u> </u>	9	92		Simple	0 mm			
Moulding	9	Ē	8	24		Simple	0 mm			
Object		<u> </u>	9	0		Simple	0 mm			
Object - Exterior		<u> </u>	9	0		Simple	0 mm			A layer variation saves all the layers with the
Object - Interior		<u> </u>	9	0		Simple	0 mm			current states. It helps switching between
Plot stamp		8	4	0		Simple	0 mm	>	\sim	possible layer variations in one step.

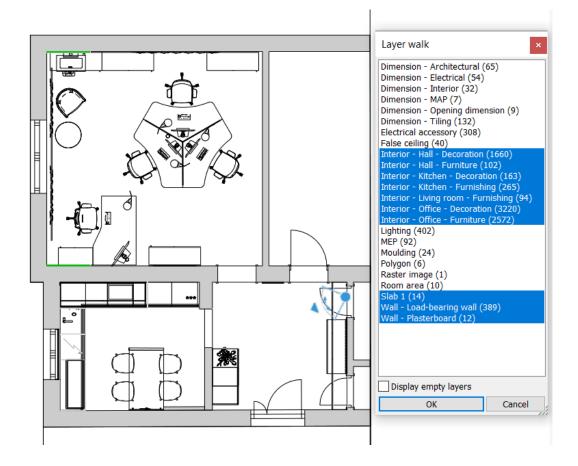
1.6. Move Objects to New Layer

Now we move the office and hall furniture from Interior - Living room - Furnishing layer to the newly created Interior – Hall – Furnishing and Interior – Office – Furnishing layers.

Display the content of the *Interior – Living room - Furnishing* layer by using the Layer Walk tool. Select objects in the office and move these items to *Interior – Office – Furnishing* layer by selecting it from the Layer list panel on the Statusbar.



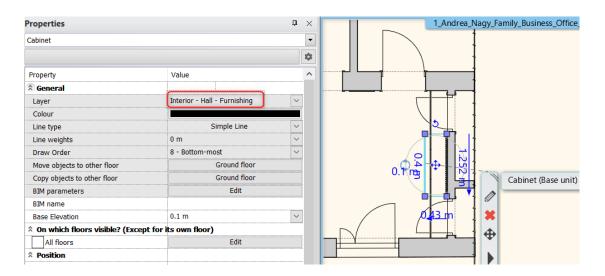
Now display the new layer content by using Layer Walk tool again:



How to check the layer properties of objects

After replacement we have to double-check that objects in the hall are assigned to the Interior - Hall - Furnishing layer:





1.7. How to delete layers

Note that we cannot delete the active layer (before that we have to activate another layer), also by default, it is not possible to delete layers with elements.

Delete empty layer

In Layer Properties Management window, click on "Elements" header, this way, we can sort the layers in descending or ascending order depending on their content. Empty layers (0) show zero elements, and these can be selected and deleted by using the Delete icon on the top left corner.

Delete layers with elements

In the left bottom corner of Layer Properties Management dialogue window, we can toggle on the "Also delete used layers and content" option; this way, it is now allowed to remove layers with content.

NOTE! When this happens, you will get a warning, and the layer removal cannot be withdrawn. Check if you don't need the layer before permanently delete it containing elements.

✓ Stair	9	<u> </u>	4	0
I Terrain	9	<u> </u>	9	0
🧼 Text	9	<u> </u>	7	0
Text - Annotation	9	<u> </u>	4	0
Text - Notes	9	<u> </u>	4	0
Itle box	9	<u> </u>	4	0
Wall - Load-bearing wall	9	<u> </u>	4	279
Wall - Partition wall	9	<u> </u>	9	0
🧼 Wall - Plasterboard	9	8	6	12
			_	
<				
Do not delete used layers	✓ Copy to	clipboard	Protoc	col for Layer Namir
Do not delete used layers	_			
Also delete used layers and content				t

1.8. Layer filters

In the case of more complex projects, there are tools for organizing it more effectively. The Layer Filter is an excellent tool for that; we can create different groups of layers. Starting the program "Used Layers" filter is created by default, and layers with elements can be filtered.

Clicking on the Blue cross icon, we can create a new filter group, and you can rename the group by double-clicking on it. Now select layers on the left side of the panel, drag and drop them on the new filter group. Now, for example, we can create a filter that contains all Interior layers. By using the new filter, we can easily and quickly find any layers in a shorter list.

Layer Properties Management							×
The name of current layer: Wall	- Plaste	rboard					Show visible layers only
Name Interior - Hall - Decoration Interior - Hall - Furnishing Interior - Kitchen - Decoration Interior - Kitchen - Furnishing Interior - Office - Decoration Interior - Office - Furnishing	On ଟ ଟ ଟ ଟ ଟ	Lock	Prin	Elements 1660 102 163 265 3234 2572	Colour	Line Sim Sim Sim Sim Sim	Filters
							the selected layers onto the layer filter

When importing a DWG file, the layers automatically placed on a separate filter for better categorization.

One layer can be used in different filter groups and can be removed at any time. For this, use the red cross icon on the top left corner of the filter panel. Now the selected layer will be removed from the filter group, but will not be deleted. The removed layer still can be found under All layers, Used layers, or any other filter groups. There is an option to remove a filer group. Layers of the filter group will not be deleted; only the filter group ceases to exist.

1.9. Show visible layers only

In the case of a large number of layers to increase the visibility, it can be useful to display only the visible layers. By activating the Show visible layers only, we can filter layers turned on.

Layer Properties Management

Name	On	Lock	Prin	Elements	Colour	Line	Filters
Dimension - Opening dimension	· 😯		9	7		Sim	
False ceiling	9	Ē	4	40		Sim	- All layers
Interior - Hall - Decoration	9	<u> </u>	4	1660		Sim	
🔎 Interior - Hall - Furnishing	9	<u> </u>	4	102		Sim	Interior (6)
Interior - Kitchen - Decoration	9	<u> </u>	e	163		Sim	
🔎 Interior - Kitchen - Furnishing	9	<u> </u>	5	265		Sim	
Interior - Office - Decoration	9	<u> </u>	a	3234		Sim	
Interior - Office- Furnishing	9	<u> </u>	5	2572		Sim	
🔎 Lighting	9	<u> </u>	5	402		Sim	
🔎 Moulding	9	<u> </u>	a	24		Sim	
🔎 Wall - Load-bearing wall	9	<u> </u>	a	279		Sim	
🖉 Wall - Plasterboard	9	<u> </u>	6	12		Sim	Layer filter restricts the layers displayed in the

1.10. Layer variations

Now let's go back to our project: Let's create the following plot layouts:

- 1. Architectural floorplan
- 2. Furnishing plan
- 3. MEP plan
- 4. Suspended ceiling and lighting plan
- 5. Electrical accessories plan
- 6. Tiling plan

We use Layer Variations to solve these tasks. The aim is to change all at once the status of layers, which are grouped in a certain aspect.

Turn off and lock layers and then all layer settings can be saved as a new variation, by clicking on the Blue cross icon. The new variation group can be renamed by double-clicking on it.



If you need another variation, click on the Blue cross icon again. Now the current variation is copied; name the new variation. Then modify layers which are different from the current settings, finally press the Refresh button, to accept changes.

If you want to modify an existing variation, the method is the same as above. Change layers settings and override changes by using the Refresh button.

Layer variations can be selected on View Control Bar, one single click to choose and activate any of them.

Now let's create Furnishing and Electrical accessories plan:

Furnishing plan - Layer variation

- Now create the new variation, as it is shown in the picture below.
- Change the visibility of the layers.
- Now refresh the Furnishing layer variation.

Layer Properties Management									×
The name of current layer	: Room area								Show visible layers only
Name	On	Lock	P	Ele	С	Line-type	Line	Description	Filters
Dimension - Architectural	9	8	4	65		Simple	0 mm		× + ×
Dimension - Electrical		8	-	54		Simple	0 mm		- All layers
Dimension - Interior			-	32		 Simple	0 mm		Used layers
Dimension - MAP	9	8	4	7		Simple	0 mm		
Dimension - Opening dimension	·		4	9		Simple	0 mm		
Dimension - Tiling	9	8	4	132		Simple	0 mm		
Electrical accessory	9	8	4	308		Simple	0 mm		
False ceiling	9	8	6	40		Simple	0 mm		
Interior - Hall - Decoration	9	8	-	1660		 Simple	0 mm		
Interior - Hall - Furniture	·		4	102		Simple	0 mm		
Interior - Kitchen - Decoration	9	8	6	163		Simple	0 mm		
Interior - Kitchen - Furnishing	?	<u> </u>	4	265		Simple	0 mm		
Interior - Living room - Furnishing	9	8	6	94		Simple	0 mm		Layer filter restricts the layers displayed in the
Interior - Office - Decoration	9	8	6	3220		Simple	0 mm		Layer list to the selected layers. Drag and drop the selected layers onto the layer filter
Interior - Office - Furniture	9	<u> </u>	4	2572		Simple	0 mm		the selected layers onto the layer linter
Lighting	9	<u></u>	9	402		Simple	0 mm		Variations
✓ MEP	8	<u>a</u>	4	92		Simple	0 mm		$rac{1}{2}$
Moulding	9	<u>a</u>	9	24		Simple	0 mm		
Polygon	9	<u></u>	6	6		Simple	0 mm		Available variations
Raster image	8	<u></u>	4	1		Simple	0 mm		All layers
I Room area	8	<u></u>	9	10		Simple	0 mm		Architectural floorplan Build 3D model
Ilab 1	9	_	9	14		Simple	0 mm		
🖋 Wall - Load-bearing wall	8	_	9	389		Simple	0 mm		- Furnishing plan
I Vall - Plasterboard	9	<u> </u>	9	12		Simple	0 mm		MEP plan
									Tiling plan
									A layer variation saves all the layers with the
									current states. It helps switching between
								-	possible layer variations in one step.
<								>	
Do not delete used lavers	/	Comute			Ductore		Manania a		OK Canad
Do not delete used layers		Copy to	o clipboa		Protoco	ol for Layer I	warning		OK Cancel

Electrical accessories plan - layer variation

- Now create the new variation, as it is shown in the picture below.
- Change the visibility of the layers.
- Now refresh the *Electrical accessories plan* layer variation.

Layer Properties Management									×
🐟 🤦 The name of current layer:	Room area								Show visible layers only
Name	On	Lock	P	Ele	с	Line-type	Line	Description	Filters + ×
Dimension - Architectural		<u></u>	9	65		Simple	0 mm		×
Dimension - Electrical	9	Ē	6	54		Simple	0 mm		- All layers
Dimension - Interior	9	<u></u>	8	32		Simple	0 mm		Used layers
Dimension - MAP	9	<u></u>	4	7		Simple	0 mm		
Dimension - Opening dimension	9	Ē	6	9		Simple	0 mm		
Iimension - Tiling	9	<u> </u>	6	132		Simple	0 mm		
Electrical accessory	?	Ē	6	308		Simple	0 mm		
False ceiling		<u> </u>	9	40		Simple	0 mm		
Interior - Hall - Decoration	9	<u> </u>	6	1660		Simple	0 mm		
Interior - Hall - Furniture	9	<u> </u>	6	102		Simple	0 mm		
Interior - Kitchen - Decoration	9	<u></u>	4	163		Simple	0 mm		
Interior - Kitchen - Furnishing	9	<u> </u>	6	265		Simple	0 mm		
Interior - Living room - Furnishing	9	<u> </u>	6	94		Simple	0 mm		Layer filter restricts the layers displayed in the Layer list to the selected layers. Drag and drop
Interior - Office - Decoration	9	<u> </u>	6	3220		Simple	0 mm		the selected layers onto the layer filter
Interior - Office - Furniture	Ψ	<u> </u>	6	2572		Simple	0 mm		the belocked have bonto the haven inter
Lighting	?	Ē	6	402		Simple	0 mm		Variations
MEP	Ψ	<u> </u>	6	92		Simple	0 mm		○ + ×
Moulding	9	<u> </u>	9	24		Simple	0 mm		
I Polygon	9	<u> </u>	6	6		Simple	0 mm		- Available variations
Image 🔷 Raster image	9	<u></u>	6	1		Simple	0 mm		- All layers
I Room area	9	<u> </u>	6	10		Simple	0 mm		- Architectural floorplan
Ilab 1	9	Ē	6	14		Simple	0 mm		Electrical accessories plan
🖋 Wall - Load-bearing wall	9	Ē	6	389		Simple	0 mm		- Furnishing plan
🧼 Wall - Plasterboard	9	<u> </u>	4	12		Simple	0 mm		MEP plan
									Tiling plan
									A layer variation saves all the layers with the
									current states. It helps switching between
							_		possible layer variations in one step.
<								>	
Do not delate used laware		Const	aliahan		Ductor	fordation	Manalia a		OK Cancel
Do not delete used layers		Copy to	o clipboa		Protocol	for Layer	warning		OK Cancel

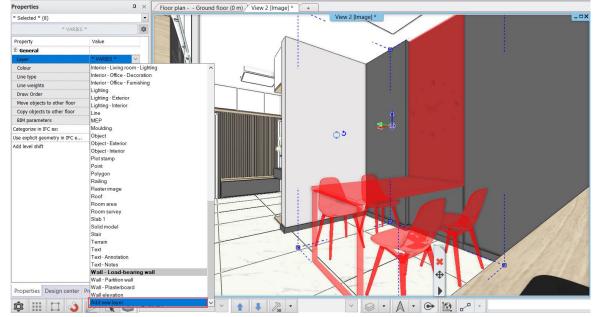
Now modify the 3D build layer variation because of 2 new layers: Interior-Hal-Furnishing and Interior – Office- Furnishing

1.11. Management of design variants in 3D views

It is possible to display different layer variations in several 3D windows, making it easy to compare different versions of the design.

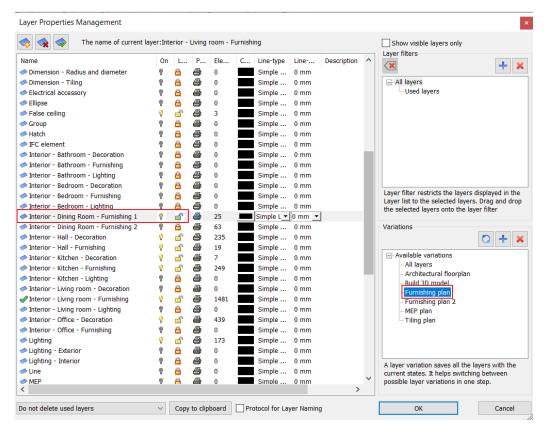
Make two versions for the dining area.

- Select the elements of the dining room, add a new layer called *Interior Dining Room Furnishing 1* and place the elements on it.
- Activate the floor plan, then use the Layer walk to turn this layer off.





- Place any new objects in the space. In the sample project we downloaded elements from 3D Warehouse (<u>Dining Set -</u> <u>Ninotzchka A.</u> and <u>54781 Framed Picture Fontana - KARE</u>).
- Add a new layer called Interior Dining Room Furnishing 2 and place the new elements on the layer.
- In the layer manager, select the Furnishing Plan layer variation, switch on the Interior Dining Room Furnishing 1 layer and update the layer variation.



By selecting the Furnishing plan variation, use the + sign to create the *Furnishing plan 2* layer variation. Turn off the *Interior - Dining - Furnishing 1* layer and turn on the *Interior - Dining - Furnishing 2* layer.

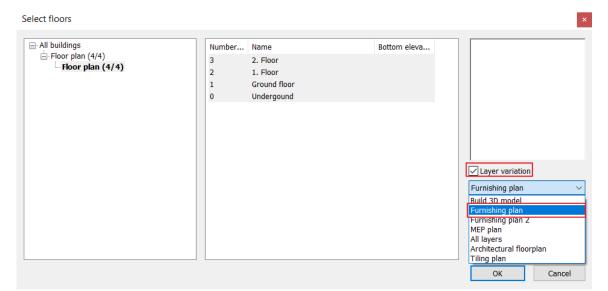
Layer Properties Management ×										
🐟 🐟 The name of current layer:Interior - Living room - Furnishing							Show visible layers only Layer filters			
Name	On	L	P	Ele	C	Line-type	Line	Description	^	× + ×
Dimension - Length	· 💡 -	<u> </u>	6	0		Simple	0 mm			
Dimension - MAP	9	<u>_</u>	8	0		Simple	0 mm			- All layers
Dimension - Opening dimension	9	<u> </u>	8	0		Simple	0 mm			
Dimension - Radius and diameter	9	<u> </u>	7	0		Simple	0 mm			
Dimension - Tiling	?	Ē	4	0		Simple	0 mm			
 Electrical accessory 	9	_	7	0		Simple	0 mm			
Ilipse 🗢 Ellipse	9	Ē	5	0		Simple	0 mm			
 False ceiling 	9	<u> </u>	8	3		Simple	0 mm			
I Group	9	<u> </u>	7	0		Simple	0 mm			
I Hatch	9	Ē	4	0		Simple	0 mm			
IFC element	9	<u> </u>	7	0		Simple	0 mm			
Interior - Bathroom - Decoration	9	Ē	8	0		Simple	0 mm			
nterior - Bathroom - Furnishing	9	Ē	8	0		Simple	0 mm			Layer filter restricts the layers displayed in the Layer list to the selected layers. Drag and drop
🧼 Interior - Bathroom - Lighting	9	Ē	8	0		Simple	0 mm			the selected layers onto the layer filter
Interior - Bedroom - Decoration	9	Ē	8	0		Simple	0 mm			, ,
Interior - Bedroom - Furnishing	9	_	8	0		Simple	0 mm			Variations
Interior - Bedroom - Lighting	9	Ē	8	0		Simple	0 mm			O + ×
Interior - Dining Room - Furnishing 1	9	a	8	25		Simple		_		
Interior - Dining Room - Furnishing 2	8	1	8	63		Simple L 🔻	0 mm 💌			Available variations
Interior - Hall - Decoration	9	Ē	8	235		Simple	0 mm			- All layers - Architectural floorplan
 Interior - Hall - Furnishing 	9	<u> </u>	4	19		Simple	0 mm			- Build 3D model
Interior - Kitchen - Decoration	9	<u> </u>	8	7		Simple	0 mm			- Furnishing plan
Interior - Kitchen - Furnishing	Ŷ	_	8	249		Simple	0 mm			- Furnishing plan 2
Interior - Kitchen - Lighting	9	<u> </u>	ð	0		Simple	0 mm			- MEP plan
Interior - Living room - Decoration	Ŷ	_	8	0		Simple				- Tiling plan
Interior - Living room - Furnishing	Ŷ	<u> </u>	4	1481		Simple	0 mm			
Interior - Living room - Lighting	Ŷ	_	4	0		Simple	0 mm			
Interior - Office - Decoration	Ŷ	_	8	439		Simple				
 Interior - Office - Furnishing 	9	_	8	0		Simple				A layer variation saves all the layers with the
lighting	Ŷ	_	8	173		Simple			~	current states. It helps switching between
Liahtina - Exterior	0	<mark>r</mark>	4	0		Simple	0 mm	>		possible layer variations in one step.
`								,		
Do not delete used layers	\sim	Сору	to clip	board	Pro	otocol for La	yer Naming	,		OK Cancel



- Select the Build 3D model command, then in the pop-up window, first select View 1, then select the Furnishing plan layer variation under Custom option.
- Then repeat the same for View 2 and the Furnishing plan 2 layer variation.

20	Quick 3D model							
R	Build 3D model							
	Create cut-away 3D view							
<	Space volume computation							
	3D Section Box							
R	- 0 · ;							

Level of Geometry settings		×
Views	Level of Geometry Symbolic Schematic Detailed Documentation Construction	Others
	Content of 3D model Selecting floor plans by storeys for 3D model construction Custom Element types	~
Surfaces 616631	АІІ	Cancel





This allows you to display different layer variations side by side in 3D, so you can easily compare different versions of the design.



1.12. How to use layers on plot layout

Based on the layer variations, let's create one by one the following plot layouts:

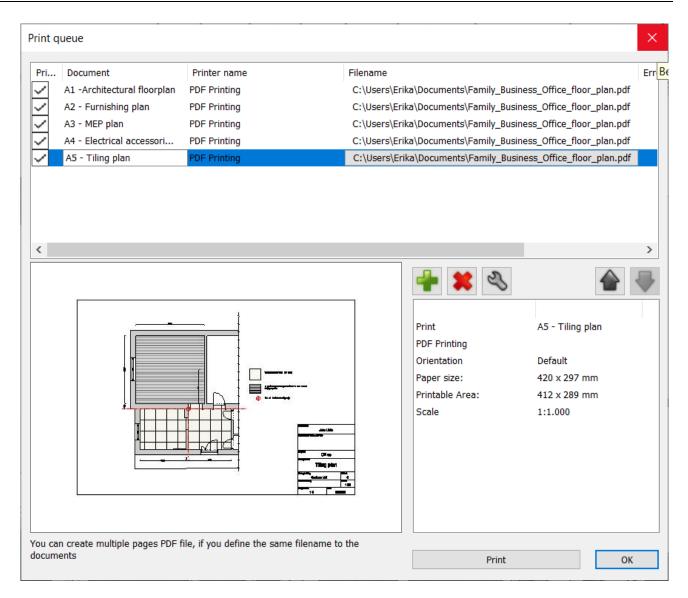
- 1. Architectural floorplan
- 2. Furnishing plan
- 3. MEP plan
- 4. Suspended ceiling and lighting plan
- 5. Electrical accessories plan
- 6. Tiling plan

For details on how to create a plot layout, see Preliminary Course - Tutorial - 5.7 Create plot layout.



Now using the Print Queue tool save these plot layouts under one PDF file. We can create one PDF file from multiple drawings by giving the same path and file name to each drawing.





You may see elements on the floor plan, but some of these elements may not appear when printed.

The reason for this is that the printability of the layer is turned off. When printing, the message warns you of this: "Some layer has non-printable status. These layers will not be printed." In this case, the printability of the layer of the element must be switched on in the layer manager on the floor plan, if necessary.

1.13. Changing default layer structure

A layer structure that has already been created in a project can be saved, made the default and used later in another, new project.

- Go to the floor plan view and open the Layer Manager. See what layers we have created; we want to create our own set of layers from this.
- Default the layers as follows: in the Settings Open and Save Manage styles menu, select Save current settings for new projects option.

🖵 Graphics		^								
P Open and Save	Open and Save									
	Project default path(requires restart)	C:\Users\renata.nagy\								
Units and angles	Image Path	C:\Users\renata.nagy\								
Snap and grid	Project template folder path	C:\Users\renata.nagy\								
' Cursor and marker	Google Drive, Microsoft OneDrive - Download folder	C:\Users\renata.nagy\								
* Cursor and marker	Enable project backup to your personal cloud account									
User interface	Google Drive									
Item settings	Microsoft OneDrive									
	Save 3D database (significant increase in size)									
	Transfer settings and files from one computer to another	Edit								
	Migrate custom settings and files from previous releases	Edit								
	Tag/Schedule template folder	C:\Users\renata.nagy\								
	☆ Manage styles									
	Network Sharing requires a folder to which all users' computers have a	Network Sharing requires a folder to which all users' computers have access with network permission.								
	Shared styles package name (create or select)	~								
	Specify the network location of the shared styles (requires restart)	C:\ProgramData\Cadli								
	Save current settings for new projects	Apply								
	Restore your defaults to factory settings	Apply								
	Export styles	Edit								
	Import styles	Edit								
	Backup Archive Section 2.1 Sec									
	* *Save auto recover information									
	Sharing Categories with other users									
	× Project specific object handling									
	☆ DXF/DWG									
	DWG/DWF/DXF Import path	C:\Users\renata.nagy\								
Close	DXF/DWG import assignments	Edit								
Cluse										
I III I III III III IIII IIII IIII IIIII	🖌 🗋 🎼 Ground floor 🗸 🛧 🖡	≫ - Wall - Load ∨								

In the pop-up window, select only the Layer structure, then close the Settings after pressing OK. The program will then
warn you that the settings will only take effect after you restart the program. Restart the program by pressing the Yes
button.

Save current settings
The new projects will start with the selected project settings. The items selected from the list will be saved in the My template: - Current graphic settings - Layer structure Building and floor structure - Default styles for all element types - Graphic Override - Active phase and phase filter Would you like to save current settings as new default?
Current graphic settings User Structure Building and floor structure Default styles for all element types Graphic override Active phase and phase filter
OK Cancel

 After opening the new project, opening the Layer Manager, you can see that the layers you saved before are there. So, from now on, every time you open a new project, these layers will be in the layer manager, so you can work with your own layers without having to recreate them. However, it is important to note that only one of these settings can be saved in the program.



2. Workshop: Design Phases

2. Workshop: Design Phases

Using the design phases, it is possible to present the existing status and the new construction plan simultaneously in a single project file on the same drawing. Using phase filters, all stages of the design process can be demonstrated. Renovating buildings or planning more complex projects is significantly simpler using the design phases.

A huge advantage is that when modifying elements that appear in all phases of design – for example, when we want to correct the inaccuracies of the survey – changes appear immediately in all phases, since we are talking about the representation of the same element at different times.

- Open your browser and watch the following video tutorial: <u>https://www.archlinexp.com/enrollments/courses/advanced-course/design-phases/1</u>
- Open ...\Documents\ARCHlineXP Draw\2023\Workshop_Advanced\2_Phases\Elata_nova_FINAL_Surrounding.pro file. Save it under a different name. You can also choose the Phases_START.pro file, on the basis of which the video tutorial was created

2.1. Design phases

The four main phases of the planning process:

- 1. Existing state (recording survey data)
- 2. Demolition plan (representation of the parts to be demolished)
- 3. Existing plan after demolition (elements have been demolished)
- 4. New construction plan (realized condition after renovation)

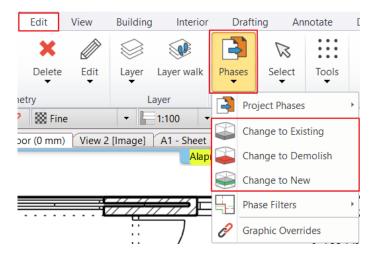
The phases that can be used during planning can be: Existing or New. Creating a new item is always assigned to the current phase (Existing or New) An item cannot be created in the Demolition phase. Items marked for demolition from New or Existing phases are added to the Demolition phase.

The phases can be followed throughout the documentation in the form of a 3D view, sections, elevations and a material overview.

Setting the phases

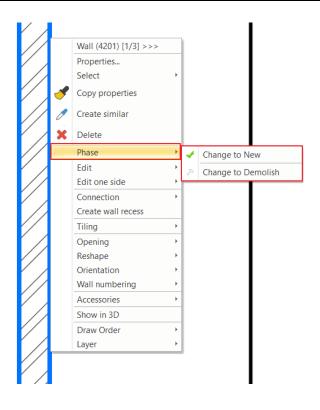
There are several ways to categorize each element:

Select the Ribbon bar / Edit / Phases option. After selecting a phase from this menu, you can select the objects on the floor plan or in the 3D view for which you want to validate the selected view.



You can move the selected item to the appropriate phase by right-clicking the item or selecting the item and selecting the additional options then clicking on the Phase.





Phase settings for drawing elements

During the designing process, we can not only work with basic objects, but also depict certain details with other additional elements. When setting phases, you can therefore set not only which phases to display on walls, doors, and roofs, but also other objects, 3D elements, and drawing 2D elements, as well as scaling. This makes it much easier to use this feature during the designing process.

Phases for scaling

Scaling is in a special situation compared to other drawing elements because they are almost always related to another element depicted in some phase. Here, therefore, we distinguish two main cases

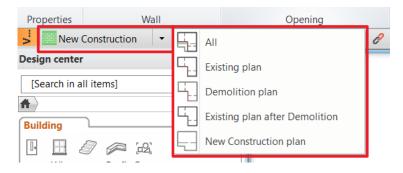
- If the scaling scales the element(s) that are entirely in the same phase, the scaling disappears or is displayed when the phase is turned on / off.
- If the scaling scales elements in two different phases, it does not belong to either, in which case it will still be visible when any phase is switched off.

2.2. Phase filters

Phase filters are representation rules for displaying elements by status (New, Existing, Demolition): ARCHLine.XP® has 5 phase filters:

- 1. All phases
- 2. Existing plan
- 3. Demolition plan
- 4. Existing plan after demolition
- 5. New construction plan

In the Drawing Status Manager, on the left are the various phase display settings. When you place Existing or New items, the program automatically places the objects in the appropriate phase.

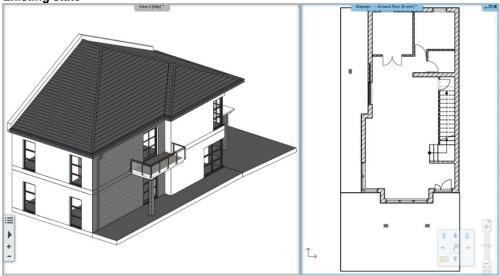


It is possible to categorize items not only before they are drawn, but you can change this setting at any stage of the workflow in one of the ways described earlier.

Appearance of phases

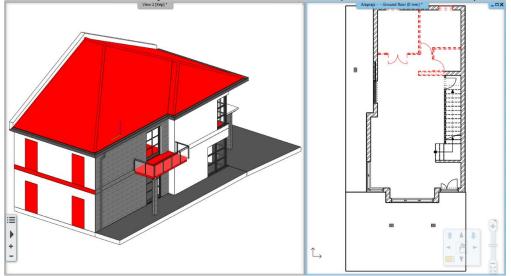
The images below show examples of Existing Plan, Demolition Plan, Post-Demolition and New Construction Phases.

Existing state

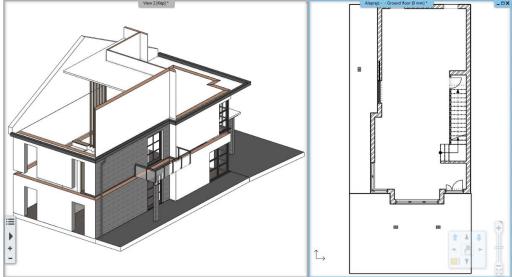


Demolition plan

ARCHLine.XP® automatically marks the elements to be decomposed in red on the floor plan and in 3D.

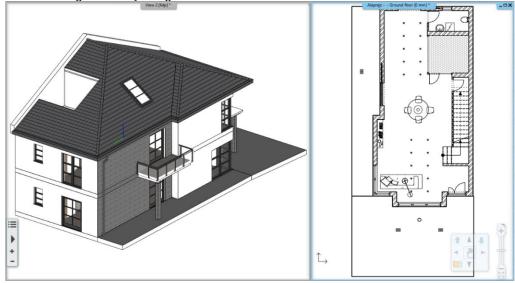


Existing plan after demolition ARCHLine.XP® in 3D depicts empty spaces created in place of removed elements along with the remaining structures.



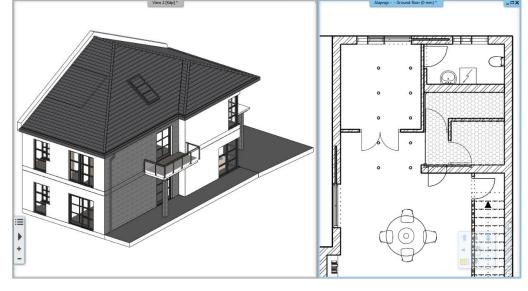
New construction plan

The remaining and newly designed items are visible at the same time.



All phases

ARCHLine.XP® displays the elements of all phases at once. Useful representation for alignments and checks.



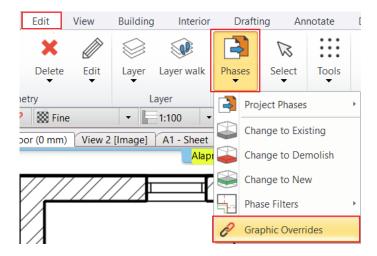
Wall parts in different phases

In the case of walls, it is also possible to mark only a certain part of the wall for demolition.

In this case, you can use the *Edit / Cut with wall* or *Cut with line option* in the wall context menu to cut the wall in half at the desired point, to have a remaining and a demolished part. After the successful cutting of the wall, a line in the wall indicates the boundary line of the two newly created wall parts. To remove the line, you can use the T connection command to connect the two new parts of the wall you just cut. One of the sections can then be moved to the appropriate phase.

2.3. Graphic overrides

Thanks to the graphic overrides, the representation of the different phases can be customized according to the needs of different disciplines. A graphic override is nothing more than specifying that an item with a given color, lineweight, and fill appears with the color, lineweight, and fill specified in the override, despite its original properties. This allows, for example, all elements of the demolition plan marked for demolition to appear automatically in red at the same time, without the need to change their appearance by any other manual method.



Graphic overrides can be determined in the phase filter for each phase separately. In the case of the "All" phase, which is used to display the phases on top of each other, it can be used as a clear, color-separated technical or even documentation drawing with the appropriate settings.

The appearance of each element in the phases can be fully customized: the colors, linetypes, lineweights, fills and the way they are displayed can also be customized.

Graphic override						
Phase Filters	New		Existing		Demolished	
All	No override	\sim	No override	\sim	No override	\sim
Existing plan	No override	\sim	No override	\sim	No override	\sim
Demolition plan	No override	\sim	No override	\sim	Overridden	\sim
Existing plan after Demolition	No override	\sim	No override	\sim	Overridden	\sim
New Construction plan	No override	\sim	No override	\sim	Overridden	\sim
Reset	Update each row with current one		Update each row with current o	ne	Update each row with current	one
You can define how you want to	splay for new, demolished, and exis o display the elements' phase status e display of elements or lt;brgt;By co	i (Ne	ew, Existing, Demolished) for eac	ch pl	hase filters.	
			ОК		Cancel	

This feature allows you to deviate from the default settings, which may be required for either regional or industry reasons.

The feature can also be useful if you want to compare new elements, existing elements, and elements to be demolished in the plan. By specifying custom settings for the different phases, you can view the entire plan in both floor plan and 3D views by clicking All Phases.



2.4. Design phases on the sheets

The drawings placed on the layout sheet are displayed according to the current design phase. There is also a way to modify the design phase, so that regardless of the current drawing state, you can quickly compile a design sheet that shows different phases of the same drawing even side by side.

There are two ways to display the different phases on a design sheet:

- On the floor plan, set the appropriate phase, and after the program has loaded it, place the drawing on the sheet.
- Place the drawing on the sheet, and then in the drawing properties change the phase filter drop-down menu to the desired phase.

Plot layout							
	Layer						
	Classes						
	Floors: place floors as displayed in floor plan						
	Floor						
	Drawing scale						
	0.01 1:100 ~						
	Architectural scale						
	1:100 ~						
	Phase Filters						
	New Construction plan ~						
	All Existing plan						
a	Demolition plan						
	Existing plan after Demolition New Construction plan						
144 x 214.6 mm							
	OK Cancel						

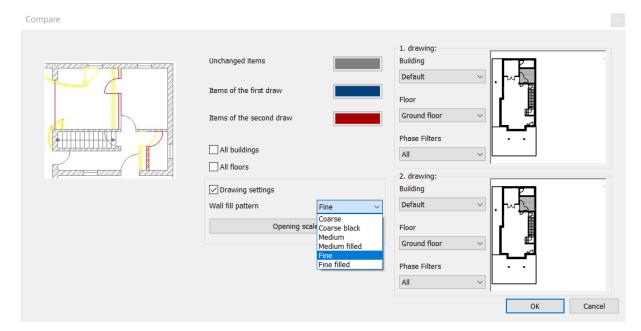
Changing the phase of the floor plan view does not affect the phases set in the print view, so you can change the phases in the drawings without interruption.

Drawing comparison

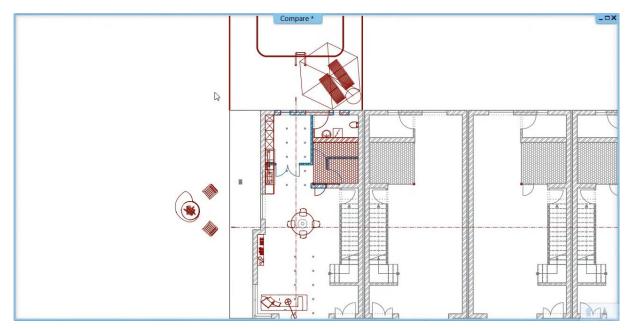
With this function it is possible for the program to compare different phases automatically.

This requires the "Comparison between 2 design phases" option of the Ribbon bar / Documentation / Drawing Comparison / Drawing Comparison command, which you can select from the list after starting the command.

Based on the parameters that can be set in the comparison window, displays the program the corresponding buildings, levels, phases, colors and display modes.



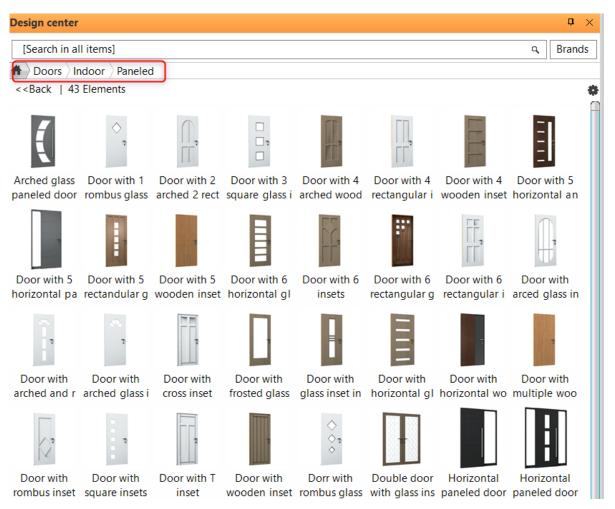
The resulting drawing is treated as a closed, non-editable, dynamically updatable group that you can place in the print view. If you change the plan, you can also update the comparison drawing with the "Update Comparison" command.



3. Workshop: Creating doors and windows

3. Workshop: Creating doors and windows

A wide variety of openings can be found in the Design Center under the Door and Window category, and these can be used in projects.



It might happen that the library does not contain a door/window type you need for the project. In this case, you have to design a new one.

There are several ways to create a new door or window:

- 1. Use an image to set the material of the door panel.
- 2. Convert a downloaded object to an opening
- 3. Using Door/Window Wizard

The disadvantage of using the 2nd method is that doors and windows cannot be opened in 3D.

- Open your browser and watch the following video tutorial: <u>https://www.archlinexp.com/enrollments/courses/advanced-course/creating-doors-and-windows/1</u>
- Open ...\Documents\ARCHlineXP Draw\2023\Workshop_Advanced\3_Create_Openings\ 1_Reception_room_doors_start.pro file.

3.1. Use an image to set the material of the door panel

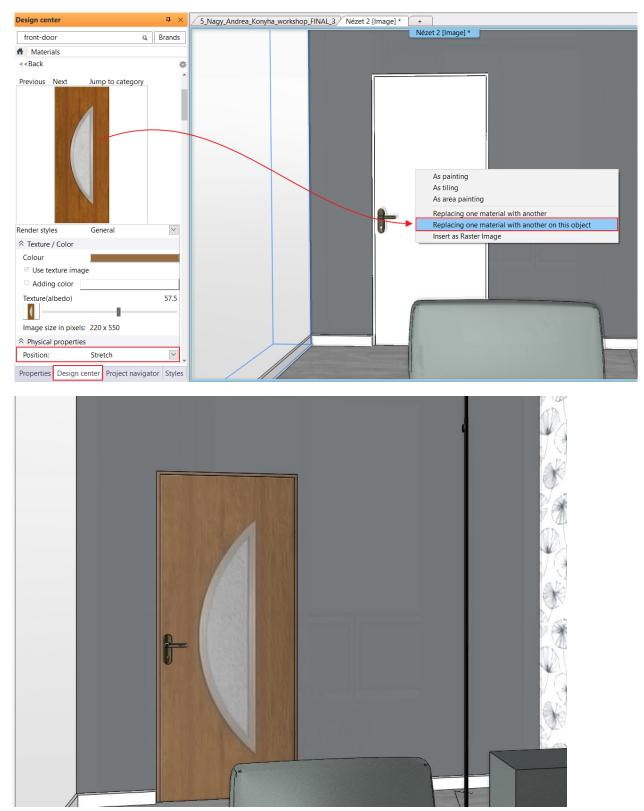
In the following example, we will use an image of a door panel.

Import the image of "Front_door_panel_2.png" from ...\Documents\ARCHlineXP Draw\2023\Workshop_Advanced \3_Create_Openings\Image folder.

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- Now save it as a material by using the Local menu Save- Save as material command. Under properties, set the position to Stretch.
- Now drag and drop the new material on the door panel.



To ensure that the material is correctly represented on both sides of the door (internal/external frame), it is recommended to make a mirror image of the texture and the material.

The internal and external leaf frame material can be accessed by clicking on the door in the Properties local menu, or the body (i.e., case) material can be set here, e.g., to Beech-tree.

External frame material Default material
Internal frame material Default material
External leaf frame material front-door-panel_1
Internal leaf frame material front-door-panel_2

The final result:



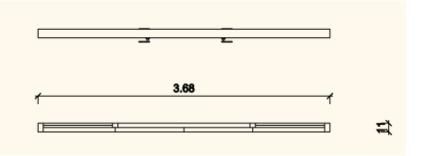
3.2. Convert a downloaded object to door/window

Now we are going to download a Sliding door from the Warehouse and convert it to a door.

3D Warehouse									
🗲 📑 <u> </u> Többszörös letöltés									
3D Warehouse	All Categories 🗸	sliding door		Q	Try S	iketchUp		Ţ	®
CATEGORY	-	Sliding D		Sliding D	$\underline{\vee}$			Sliding D	$\underline{\vee}$
Category		Gacek D.		Nala		Hulio C.		Speegrapher	
All Categories	~		_				_		
Subcategory			5						7
	~								
		sliding D	1	Sliding D	\checkmark	Sliding D	\checkmark	Slide doors	1
PROPERTIES	-	Lucy B.		Shawn		maykspin2	28K	Niksa	1K
File Size									

- You can also import the Double_Sliding_Door.skp file from *Documents\ARCHlineXP Draw\2023\Workshop_Advanced* \3_*Create_Openeings\SKP* folder.
- Place it on the floorplan as an object.
- First, you have to create the related 2D symbol and then save it as a group. Since the top view of the door is now the floor plan symbol, you should create a corresponding 2D symbol and save it as a group using Drafting menu - 2D Group -Create group in library.





Now convert the object to door:

• Click on the Local menu / Edit object / Convert object to door/window command.

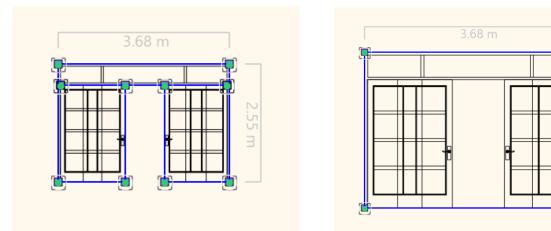
	Р. Р.	Find material Locate item in Design Center Modify material Lighting → Move vertically		
		Edit	[0]	Define 2D contour for fills
		Sketch Mode MEP Connectors	5	Replace the object with another one
		Save, save as		Convert object to door/window
		Rescale >		Re-align texture
	Þ	Workplane Hide this object		
ę	Q	Show on floor plan		
Object		Group parameters		

- Set the Opening type to Door.
- Now select from the library the previously created and saved 2D symbol.

Door / window definition	
	Front of door Sides of door Units of the second sec
Insert from Load from library	OK Cancel

Make sure that the blue and red reference points are placed precisely on 2D symbol's the endpoints. Activate "Add profile on frontal view for making the hole on the roof or wall" option.

Click on OK, and now place the frontal profile of the door on the floorplan. Delete the unnecessary nodes to get a rectangle profile.

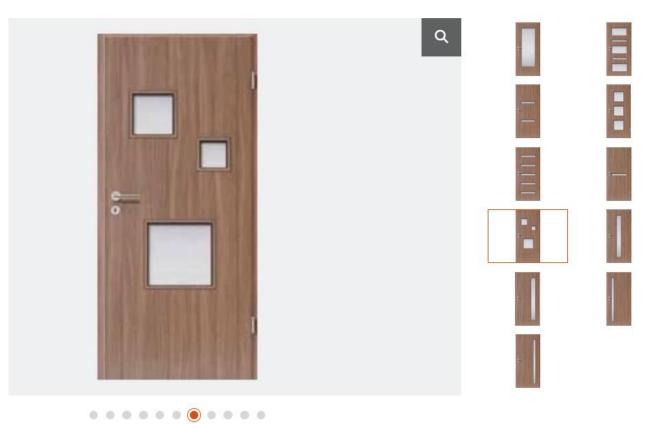


• Now place the new sliding on the wall and change its material:



3.3. Door/Window wizard

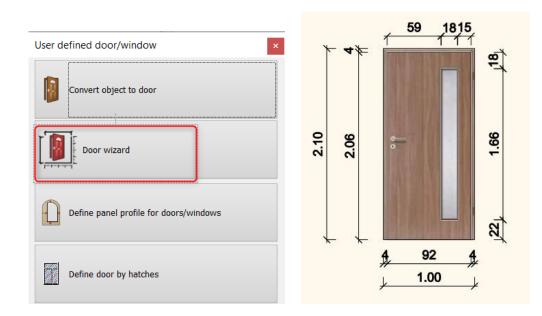
The following door samples were chosen from the doors on https://www.jafholz.hu/kinalat/ajtok:



3.3.1. Door with insert on the right side

We will create the door is shown below; this will be the basic type we modify further.

• On the Ribbon menu, select *Building - Door - New Door - Door Wizard* command. Now Door Wizard dialog window appears, here modify the following parameters:



Main Parameters

Door Wizard		
Scheme	Full width	1 m
Main parameters	Full height	2.1 m

Representation

Door Wizard

Scheme Main parameters Representation Frame	2D representation ✓ Show threshold in 2D ✓ Show frame profile bounding boxes on 2D symbol Opening direction symbol Arc ✓
Threshold	3D representation
Panel	Show opening direction in 3D
Geometry	Open panels in 3D

Frame

Door Wizard

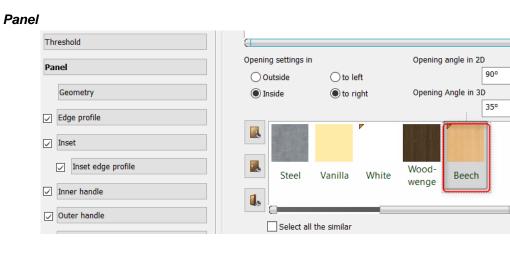
Scheme	Side frame		~ 💼 🛅
Main parameters	✓ Enable frame		
Representation			
Frame			
Threshold		7 Frame 8 Frame	e Simple
Panel	~		
Geometry			
✓ Edge profile	Profile width	0.05 m	
	Profile height	0.1 m	
Inset	X offset	0 m	Ľ×,
✓ Inset edge profile	Y offset	0 m	

Threshold

Door Wizard

Scheme	Enable threshold
Main parameters Representation	
Frame Threshold	Threshol Threshol Threshol Threshol Rectangl d 1 d 2 d 3 d 4 Simple
Panel Geometry	Profile width 0.05 m Profile height 0.02 m

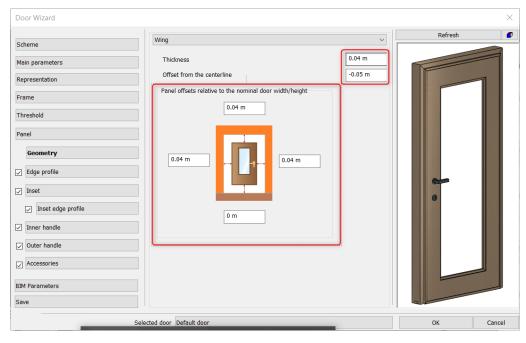




÷

0

Panel - Geometry



Panel - Edge profile

Door Wizard			×
	/ing ~	Refresh	1
Scheme W Main parameters Representation Frame Threshold Panel Geometry Edge profile Inset Inset edge profile Inset edge profile Outer handle Outer handle Accessories BIM Parameters Save	ing		
Selected	door Default door	ОК	Cancel

46

ОК

Cancel

×

Door Wizard				i 🗖
Scheme	Wing	~		3
Main parameters	1 - [rect]	~	💠 🗙	۲
Representation	Use offsets for all 4 sides			
Frame	Offset from left/right side	0.59 m	0.15 m	
	Offset from top/bottom side	0.18 m	0.22 m	
Threshold				_
Panel	Inset thickness	0.005 m		
Geometry		\cap		
✓ Edge profile				•
✓ Inset	Automat Door Door	Door Door		0
Inset edge profile	ic profile alhambr panel pr p	oanel pr panel p		2
☑ Inner handle			(9
✓ Outer handle				

Selected door Default door

RAL 8007 Fa sanitary white Steel Vanilla Woodwenge

Panel- Inset edge profile

Save

Scheme Main parameters Representation Frame Outline Panel Representation Panel Ceometry Edge profile Outline Panel Geometry Panel Inset Inset Outer handle Outer handle Accessories Bill Parameters Save		Wing	Refresh	7
	Representation Frame Threshold Panel Geometry Edge profile Inset Inset Inset Inset Outer handle Outer handle Accessories BIM Parameters	1 - [] ✓		

♣ ARCH INE. 🕏

Inner handle

Door Wizard						\times
Scheme	Win	9		~ 🛅 🛅	Refresh	0
Main parameters						
Representation		nable handles				
Frame		Handle type Standard		×		
Threshold		Rotation + Up / - Down	Around	+ Right / - Left		
Panel		0				
Geometry		Offset from Turn right (blue) 0 m	Turn up (red)	Turn forward	0	
Edge profile		Manual move	Manual move	Manual move		
Inset	Пн	andle and lock together	Mirror Handle			
Inset edge profile				•		
Inner handle			DRONZE BRON	ZE		
Outer handle	A	Ider ALUBRIG Bright_w HT-02 hite	_DARK00 _LIGHT			
Accessories						
BIM Parameters						2
Save						
	Selected door	efault door			ОК	Cancel

Outer handle

Door Wizard		×
Scheme	Wing 🗸 📔 📔	Refresh 🖉
Main parameters		
Representation	Enable handles	
Threshold	Handle type Sphere shaped V	
Panel	Rotation + Up / - Down Around + Right / - Left 0 0 0 0 9	
Geometry	Offset from Turn right (blue) Turn up (red) Turn forward 0 m 0 m	
Edge profile	Manual move Manual move Manual move	
Inset	Handle and lock together	
Inset edge profile Inner handle	Aluz ALUBRIG Bright_w BRONZE BRONZE	
✓ Outer handle	Alder HT-02 hite _DARK00 _LIGHT0	
Accessories		
BIM Parameters		
Save		
Selected (door Default door	OK Cancel

Save				
	Frame	Create new item in the library		
	Threshold	Name of the new item in the library:		
	Panel	Jafholz_door_11		~
	Geometry	Category: INDOOR		~
	✓ Edge profile	Sub category:		
	☑ Inset	Single		\sim
	Inset edge profile	Producer; jafholz		\times
	☑ Inner handle	BIM parameters	ОК	Cancel
	✓ Outer handle		·]	
	Accessories			
	BIM Parameters			
	Save			

- Save the door as Jafholz_door_11. Finally, place it on the wall. ٠
- ٠





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3.3.2. Door with an inset on the middle

Now we are going to modify the previously created door.

Open Door Wizard. Select *Jafholz_door_11* from the library.



Inset

Modify the position of the inset.

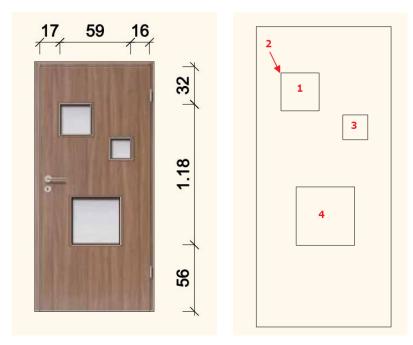
Door Wizard				×
Scheme Main parameters Representation Frame Threshold Panel Geometry Edge profile Inset edge profile Inner handle Outer handle Accessories BIM Parameters Save	Reference in the second	O.07 m O.37 m O.22 m O.18 m O.005 m O.005 m	Refresh	
Sele	cted door Jafholz_door_11		OK Car	icel

• Finally, save the door under a new name: Jafholz_door_12.



3.3.3. Door with three different insets

There are insets on the next door in different sizes. These are defined by multiple profiles that we first we create and save.



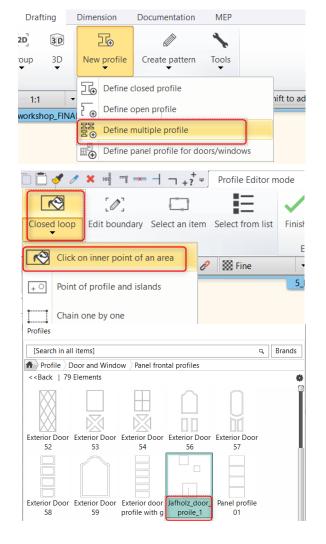
- On the Ribbon menu, select *Drafting New profile Define multiple profile* command.
- Define the first square by using the "Clicking on inner point of area" command. (1)
- Then, set its reference point. (2)
- Define the profiles of the remaining squares. Finally, press Enter.
- Now save the profile under a new name.

Open the first door we created and modify the inset.

- Open Door Wizard.
- Select Jafholz_door_11.

Inset

- Select the new inset profile from the library.
- The modify the position of the profile: Offset from left: 0,17m, offset from right: 0,16m, offset from top 0,32m, and offset from bottom side: 0,56m.

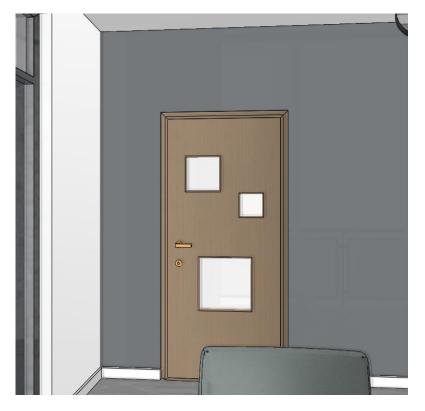




3. Workshop: Creating doors and windows

Representation	Use offsets for all 4 sides	
Frame	Offset from left/right side	0.17 m 0.16 m
Threshold	Offset from top/bottom side	0.32 m 0.56 m
Panel	Inset thickness	0.005 m
Geometry		
Edge profile		
✓ Inset	Panel Panel Panel Prof	file Jafholz_d
✓ Inset edge profile		
☑ Inner handle		
Outer handle		
Accessories		
BIM Parameters		
Save		

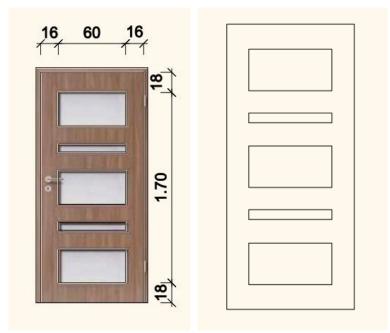
Finally, save the door under a new name: Jafholz_door_13.



3.3.4. Door with five different insets

This door has five rectangle insets. We create the door inset profile by defining the multiple profile. Let's create a new profile and save it.

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Open the previously created door and modify the inset.

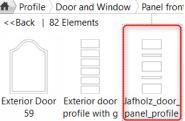
• Open Door Wizard.

Inset

- Select the new profile from the library.
- Change the position. The offset from left side: 0,16m, offset from right: 0,16m, offset from top: 0,18m and offset from bottom: 0,18m.

[Search in	all items
A Profile	Door ar

Profiles



Representation	Use offsets for all 4 sides					
Frame	Offset from left/right side Offset from top/bottom side	0.18 m 0.18 m 0.18 m				
Panel	Inset thickness	0.005 m				
Geometry	Double Double Entrance Exter	rior Jafholz d				
Inset Inset edge profile	front do front do door ON door	pro oor_pan				
Inner handle Outer handle						
Accessories BIM Parameters						
Save						

• Finally save the door under new name: Jafholz_door_14





3.3.5. Door with decorative strips

This door has two decorative strips. We use the previous method here as well. We create the door inset profile by defining the multiple profile. Let's create a profile and save it.



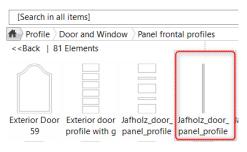
Use the previously created door and modify the inset properties.

• Open Door Wizard.

Inset

- Select the new profile from the library.
- Set the new position: Offset from left: 0,7 m; Offset from right: 0,14 m; Offset from top 0,001 m and Offset from bottom side: 0,001 m.
- The inset thickness is 0,03 m.
- Set the material to Bronze.
- Switch off the Edge profile and Inset edge profile.

Profiles



Representation	Use offsets for all 4 sides		
Frame	Offset from left/right side Offset from top/bottom side	0.7 m 0.14 m 0.001 m 0.001 m	
Panel	Inset thickness	0.03 m	
Geometry Edge profile Inset Inset edge profile Inner handle	Double Entrance Exterior Jafhol front do door ON door pro oor_p	z_d Jafholz_d	Ø
Outer handle Accessories BIM Parameters Save			

• Finally, save the door under a new name: Jafholz_door_15

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3.3.6. Define panel profile for doors/windows

Draw the inset you want to create. In the example, we will create a glass insert with thin separating strips between them.

The door or window inset profile command is reached in two places:

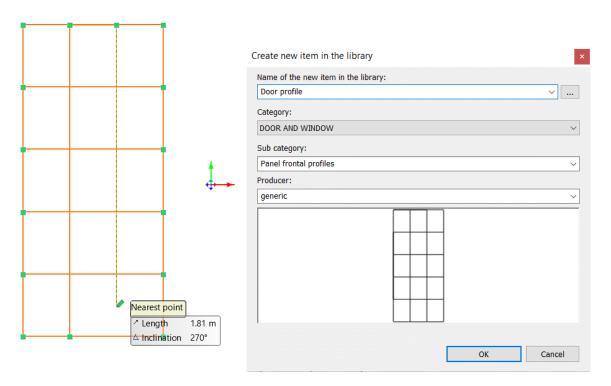
- Drafting menu New profile Define panel profile for doors/windows
- Building menu Door New door Define panel profile for doors/windows

After selecting the command, the program will pop up a window with the sequence of steps. In the previous examples we have created both closed and open profiles, but not yet one that contains one closed and several open profiles.



Additional information	×
	Here you can define a panel profile for doors/windows. (1) First draw a closed chain (e.g. a rectangle), this will be the outline of the hole in the door panel. (2) Once you have the hole outline, you can draw open chains into it, these chains will appear as splitters on the 3D model of the door/window. (3) Save the profile and use it as an inset profile to create a new opening
	OK Cancel

- Use the rectangle command to draw around the contour. This will be the closed profile and into it we will create open profiles using the lines. As soon as you have finished drawing a line, press Enter and continue drawing.
- When finished, press Enter again and save it as a library item.



As with the previous ones, we start from the existing door and modify the insert. Open the Door Wizard and set the following:

Inset

- Select the panel profile from the profile directory.
- Enter the values for the profile location: 0.18, 0.18, and 0.22, 0.18 m
- Inset thickness: 0.005 m
- Switch the panel edge profile off and the inset edge profile on

Door Wizard				×
Schomo	Wing	~ 🗎 🗳	Refresh	Ø
Scheme Main parameters	1 - [Ajtó betétprofil]	~ + X	and the second se	-1
Representation	✓ Use offsets for all 4 sides			
Frame	Offset from left/right side	0.18 m 0.18 m		
Threshold	Offset from top/bottom side	0.22 m 0.18 m		
Panel	Inset thickness	0.005 m		
Geometry				
✓ Edge profile		Door Door	æ	
☑ Inset	Automat Ajtó Door ic profile betétpro alhambr	Door Door panel pr panel pr	0	
Inset edge profile		, 0		
✓ Inner handle				
✓ Outer handle				
Accessories				
BIM Parameters				
Save				
Door Wizard				×
Door Wizard Scheme	Wing	~	Refresh	×
Scheme	Wing 1 - [A	~ ~	Refresh	
	1 - [A Same edge profiles for all sides		Refresh	
Scheme Main parameters	1 - [A		Refresh	
Scheme Main parameters Representation	1 - [A Same edge profiles for all sides Different edge profiles		Refresh	
Scheme Main parameters Representation Frame	1 - [A Same edge profiles for all sides Different edge profiles Outline		Refresh	
Scheme Main parameters Representation Frame Threshold	1 - [A Same edge profiles for all sides Different edge profiles Outline Enabled		Refresh	
Scheme Main parameters Representation Frame Threshold Panel Geometry	1 - [A Same edge profiles for all sides Different edge profiles Outline Enabled	el Panel Panel inset edg	Refresh	
Scheme Main parameters Representation Frame Threshold Panel Geometry	1 - [A	el Panel Panel	Refresh	
Scheme Main parameters Representation Frame Threshold Panel Geometry Edge profile	1 - [A ● Same edge profiles for all sides ○ Different edge profiles Outline ✓ Enabled ■	el Panel Panel inset edg	Refresh	
Scheme Main parameters Representation Frame Threshold Panel Geometry Edge profile Inset	1 - [A	el Panel Panel inset edg	Refresh	
Scheme Main parameters Representation Frame Threshold Panel Geometry Edge profile Inset Inset	1 - [A ● Same edge profiles for all sides Different edge profiles Outline ✓ Enabled Panel Panel Panel Profile width 0.01 m	el Panel Panel inset edg	Refresh	
Scheme Main parameters Representation Frame Threshold Panel Geometry Edge profile Inset Inset Inset	1 - [A ● Same edge profiles for all sides ○ Different edge profiles Outline ✓ Enabled Panel Panel Panel Panel Panel Profile width 0.01 m Y offset 0 m	el Panel Panel inset edg	Refresh	
Scheme Main parameters Representation Frame Threshold Panel Geometry Edge profile Inset Inset Inset Inset Accessories	1 - [A ● Same edge profiles for all sides Different edge profiles Outline ✓ Enabled Panel Panel Panel Panel Profile width 0.01 m X offset 0 m Y offset 0 m	el Panel edg inset edg inset edg	Refresh	
Scheme Main parameters Representation Frame Threshold Panel Geometry Edge profile Inset Inset Inset Inset Inset Inset	1 - [A ● Same edge profiles for all sides ○ Different edge profiles Outline ✓ Enabled Panel Panel Panel Panel Panel Profile width 0.01 m X offset 0 m Y offset 0 m Align profile to middle	el Panel edg inset edg inset edg	Refresh	

• Finally, save the new door: Jafholz door 16



3.3.1. Making a sliding door

Here again, we start from the previous door. Open the Door Wizard in the usual way, then choose the *Sliding out 1* door from the Schemes.

Scheme

Door Wizard									×
Scheme								Refresh	
[
Main parameters	Single 1	Side 2	Side 3	Side 4	Side 5	Side 6	Side 7		
Representation	Single I	Side 2	Side 5	Side 4	Side 5	Side 0	Side /		
Frame									
Threshold									
Panel	Side 8	Side 9	Side 10	Side 11	Side 12	Side 13	Side 14		
Geometry									
Edge profile	Side 15	Side 16	Side 1	Side 2	Side 3	Side 4	Tilted 1		
Inset				-					
Inset edge profile									
✓ Inner handle	Tilted 2	Tilted 3	Tilted 4	Tilted 5	Tilted 6	Tilted 7	Tilted 8		
	Three 2	finted 5	filleu 4	filled 5	Tinted 0	filled 7	Three o		
✓ Outer handle									
Accessories									
BIM Parameters	Sliding out 1	Sliding out 2	Sliding in 1	Sliding in 2					
Save									
	Selected door Jaf	holz4						ОК	Cancel

Main parameters

Door Wizard		
Scheme	Full width	1 m
Main parameters	Full height	2.1 m

Representation

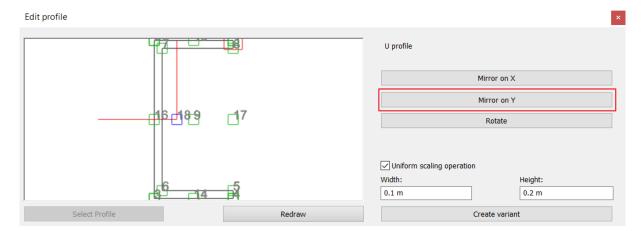
Door Wizard

Scheme Main parameters Representation Frame	2D representation ✓ Show threshold in 2D ✓ Show frame profile bounding boxes on 2D symbol Opening direction symbol Arc ✓
Threshold	-3D representation
Panel	Show opening direction in 3D
Geometry	Open panels in 3D

Frame

Door Wizard					×
Scheme	Top frame		 	Refresh	
Scheme					
Main parameters	Enable frame				
Representation				ה	
Frame					
Threshold	Frame 7 Frame		angl U profile		
Panel	10				
Geometry	· · · · ·		, <u>c</u>	1	
Edge profile	Profile width	0.1 m			
Inset	Profile height	0.05 m			
Inset edge profile		< -0.1 m ; < 0 m ;			
☑ Inner handle	Overhang (O):	1.01 m			
☑ Outer handle	Adjust frame to wall thickne	ss			
Accessories	Nominal wall thickness				
BIM Parameters					
Save					
Sele	cted door Jafholz4			ОК	Cancel

• Click on the edit button to mirror the U profile along the Y axis and specify Bright Aluminum as the material:



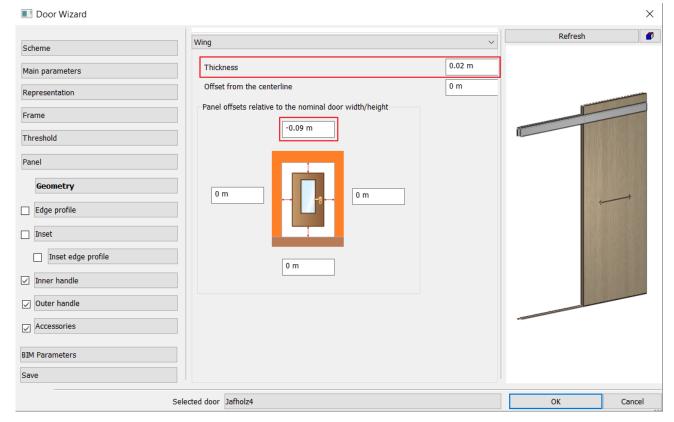
Threshold

Door Wizard				×
Scheme	Enable threshold		Refresh	
Main parameters				
Representation		hreshol Threshol Rectangl 🥏		
Frame	Threshol Threshol Threshol T d 1 d 2 d 3	at A statistics of County		
Threshold		a 4 a silaing e simple		
Panel				
Geometry	Profile width Profile height	0.05 m		
Edge profile				
Inset	X offset	0 m		
Inset edge profile	Y offset Additional length	0 m		t
☑ Inner handle				
✓ Outer handle	You can enable 2D threshold on the I	Representation page separately.		
Accessories				
BIM Parameters				
Save				
Se	ected door Jafholz4		ок	Cancel

Panel

Door Wizard			×
	Wing	Refresh	
Scheme			
Main parameters			
Representation			
Frame			
Threshold	٢		
Panel	Opening settings in Opening in 2D (%)		
	() to left		
Geometry	O to right Opening in 3D (%)		
Edge profile	90 %		
Inset			
Inset edge profile	Brown Coffee_c Cognac- Copper_r Equation 2		E.
Inner handle	pastel ream Cherry ed		
✓ Outer handle			
Accessories	Select all the similar		
	To open the panels see also the related settings on the Representation page.		
BIM Parameters			
Save			
Sele	cted door Jafholz4	ОК	Cancel

Panel - Geometry

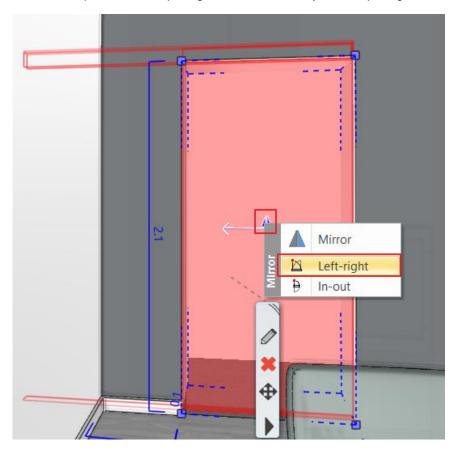


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Create new item in the library	×
Name of the new item in the library:	
Sliding out door	×
Category:	
INDOOR	\sim
Sub category:	
Sliding	\sim
Producer:	
generic	\sim
BIM parameters OK	Cancel

• In the last step, reverse the opening direction and then try the 3D opening animation.



62 Save



If you want to know more about sliding doors, watch the Creating custom sliding doors video.





4. Workshop: Lighting plan

4. Workshop: Lighting plan

Lighting plan shows how electrical items and wires are connected, where lights, light switches, socket outlets and appliances locate. Therefore, it means to create several types of plans. These mostly depend on the project, designer, and expectations.

In this workshop, we demonstrate through an example of how you can create the following type of electrical plans:

- 1. Wiring layout
- 2. Socket layout
- 3. Switches layout
- 4. Lamp layout
- Open your browser and watch the following video tutorial: <u>https://www.archlinexp.com/enrollments/courses/advanced-course/lighting-plans/1</u>
- Open ...\Documents\ARCHlineXP Draw\2023\Workshop_Advanced\5_Lighting_plan\Lighting_Plan_Start.pro file. Save it under a new name.

4.1. Electrical accessory

You can install electrical accessories from the library, download them from the showroom or make your own version.

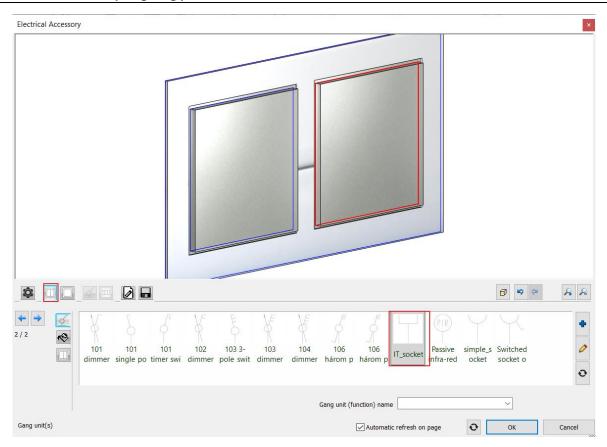
• Select Interior / Electrical accessory / Customized items.

In the example, we create an outlet and an IT socket in horizontal alignment.

• Select the Dressable mounting: Plate + Gang unit(s) option, set the Gang solutions to 2 and turn off the Equal Gang units (functions) option.

			6 % % &
Complete solution Complete solu	1-5 Gang solutions	Equal Gang units (Functions)	
Number of ways		Direction Horizontal ~	
Direction of inclination Angle of inclination 0° 0°	\sim	Offset 0.1 m v	
Electrical Accessory		Automatic refresh on page	OK Cancel

In the Gang unit(s) tab, select the outlet function for the left mechanism and the IT socket function for the right mechanism.



 On the second tab of the Gang unit(s) tab, uncheck the Same image for all units option and select SE_socket outlet and SE_data socket material for the corresponding mechanism.

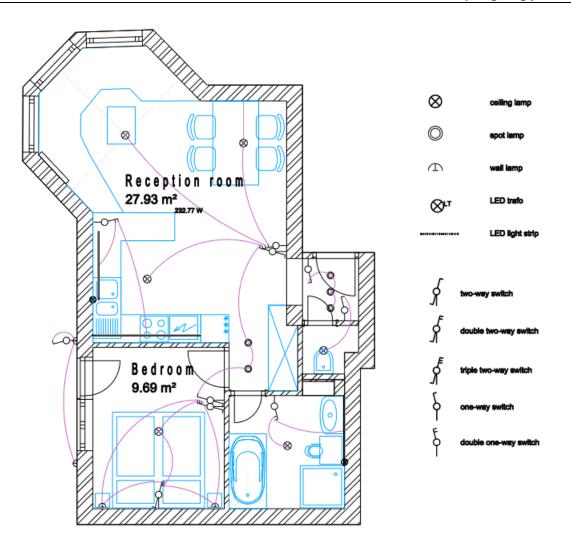
|--|

- On the Plate tab, set the frame color to Legrand Valena material, then on the General settings tab, change the layer to sockets layer. Save it under a new name in the Switches and sockets, socket outlets category.
- Place it on the floor plan on the wall opposite the bed in the bedroom.

4.2. Wiring layout

The task is to bind switches with luminaires as the sample illustrates below.

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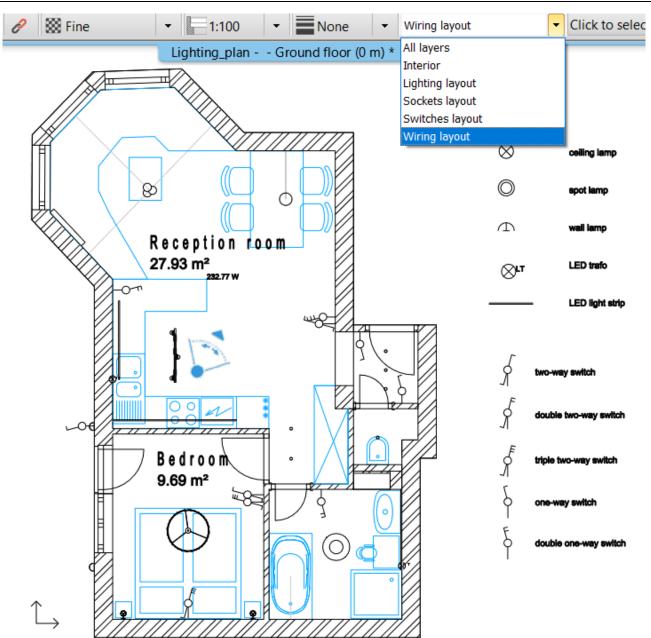


On the layout, we use symbols for representing the electrical items, which makes possible the unified appearance on the floorplan.

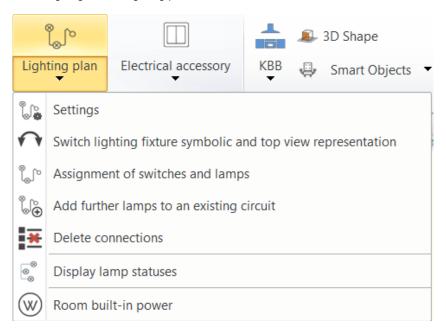
The method is the following to create a wiring layout:

- Define the type of lighting fixture: ceiling, wall, desk, pendant or spot lamp
- Define settings
- Switching to a lighting fixture symbolic representation
- Assigning switches to luminaires
- Check the switches and lamp statuses: free or fully connected switches; free or connected lamps.
- Finally, the program provides information about the power consumption to be built in a room.
- In the project, select the Wiring layout from layer variations. We start from here:





We are going to use Lighting plan commands these can be found under the Ribbon menu / Interior tool groups.



Advanced Course - Tutorial

4.2.1. Lighting fixtures

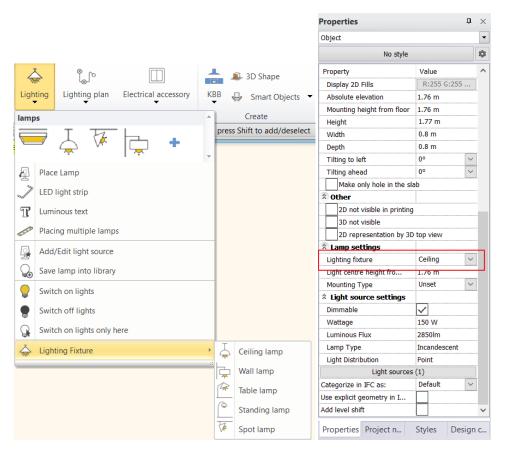
To create a lighting plan, we recommend assigning the lighting fixture type to the lamps on the floor plan. By turning on the symbolic mode, we can create a consistent floor plan in accordance with the lighting fixtures types.

There are five types of lighting fixtures such as ceiling, wall, table, standing, spot. We have to assign these to the lamp to create an accurate lighting plan.

The assignment can be executed using the local menu of the lamp, or in Properties dialogue under Lamp settings; or using the Lighting fixture tool under Ribbon menu / Interior / Lighting group.

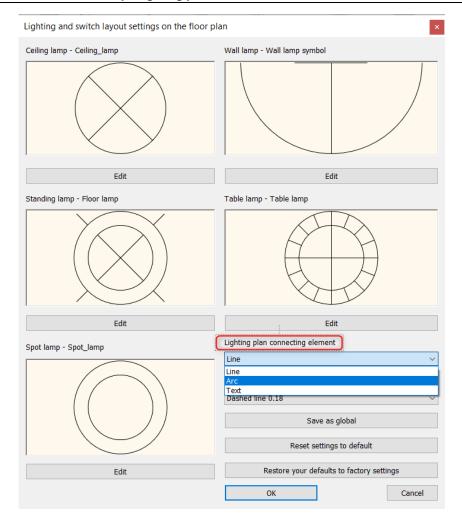
Set the type of lights. Select the command for one of the types, then select the lights.

You can also change the type in the side menu after selecting the luminaire.



4.2.2. Settings

The Settings dialogue can be opened from the Interior / Lighting plan tool group. Here you can replace the lamps representation on the floor plan with a symbol. For replacement, it is essential to define the types of lighting fixture such as ceiling, wall, table, standing, spot lamp: we have to assign these types to the lamps.



Lighting plan connecting element

We can choose from line, arc and text.

Here you can also set the style of the connecting element. We can create new styles for representation in the Line, Arc, Text properties dialogue window.

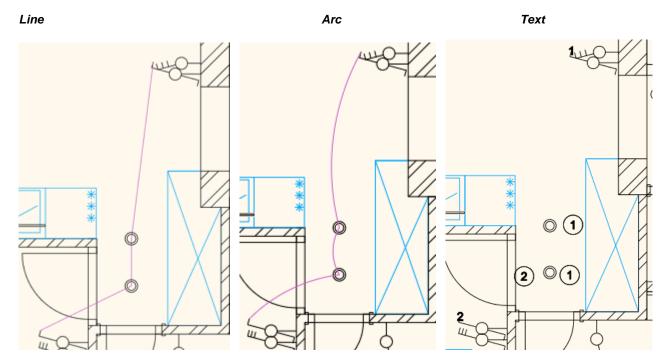
Lighting plan connecting element			
Arc		\sim	
Arc style			
Wiring		\sim	
Normal circle			
Wiring			
	Reset settings to default		

• Create your own arc style in the Circle properties, which is purple in color and the line weight is 0,05 mm. Set the layer to wiring layout and select this under Lighting plan, Settings.

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Mining			New shile
Wiring			New style
Property	Value		Redefine style
A General			
Layer	- Wiring layout	\sim	
Colour			
Line type	Simple Line	\sim	
Line weights	0.05 mm	\sim	
Draw Order	8- Bottom-most 🖂		
BIM parameters	Edit		
Classification	Edit		
🕅 Hatch			
Hatch	Solid	\sim	
Background fill colour	[
Categorize in IFC as:	Default	\sim	
Use explicit geometry in IFC			
Add level shift			

Examples:



4.2.3. Switching between lighting fixtures symbolic and top view representation

This command switches between the symbolic representation and the top view representation.

• Switch to the symbolic representation.

4.2.4. Multi-pole switches

In case of multi-pole switches, we can designate the number of the ways in Properties dialogue. This way we know the number of the closed path for electrical circuits.

73



74

All floors	Edit		
Position			
Absolute elevation	1.2 m		
Description	* VARIES *		
Electrical Accessory			
Use Plate + Gang unit(s)	\checkmark		
1-5 Gang solutions	1	\sim	·····
Number of ways	3	~	
Direction of inclination	0°	\sim	
Angle of inclination	0°	\sim	
🔊 Gang unit(s)			•
Material	Corpus_white		•
Thickness	0.005 m	\sim	•
Pordor Can	0 007 m		

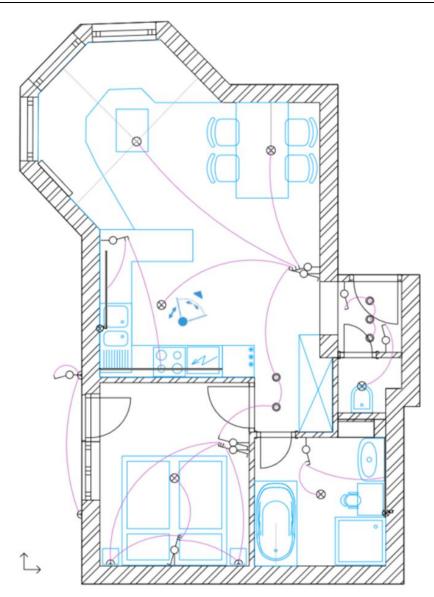
4.2.5. Assignment of switches and lamps

The lighting plan represents the connection between the switches and lamps as a 2D element. The lighting plan is not displayed in 3D. In the example below, we chose the arc connection type, and we created an arc style with purple line color. Assign switches to the lamps room by room.

You can reach the "Assignment of switches and lamps" command from Ribbon menu / Interior / Lighting plan or by clicking on the free pole of switch the command automatically comes up.

- Select the switch, then the lamp.
- Connect them by using the arc starting from the lamp's midpoint to the switch.
- In case of more lamps, continue the selection.
- Make the assignment by room as shown in the diagram.

The program automatically creates the connecting arcs.

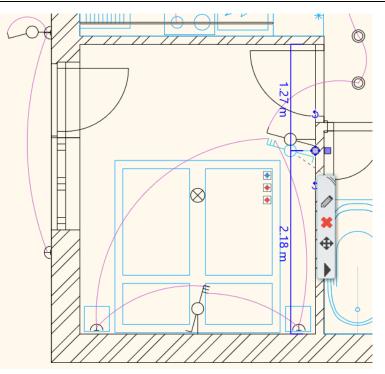


4.2.6. Lighting plan- delete connection

When selecting a switch, the connected poles are displayed in red. The command depending on the selected item, disconnects the following assignments:

- Selecting a lamp: all connections of the selected lamp cease.
- Selecting a connection line: the link between lamps and connecting ways are deleted.
- Selecting a switch: all connections of the switch cease.

In the example below, we deleted the ceiling lamp connections.

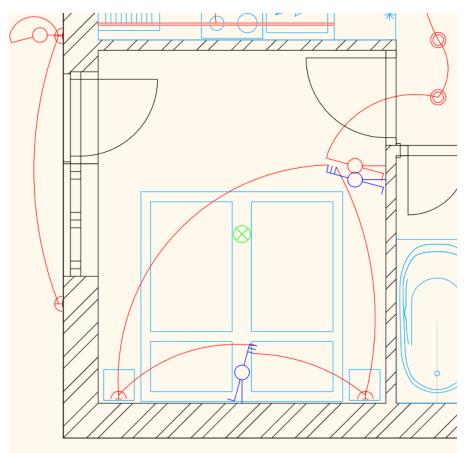


4.2.7. Lamps - Switches statuses

After the assignment of lamps and switches, we recommend checking the wiring status. This way we can get information about the connected or non-connected switches and lamps.

The command displays statuses in different colors:

- Red: connected switches and lamps
- Blue: lamps and switches with free poles
- Green: free lamps and switches

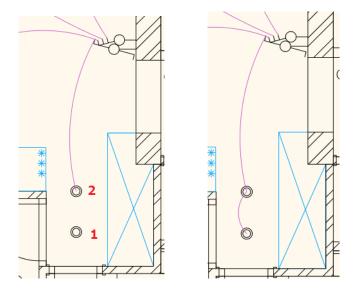


Advanced Course - Tutorial

4.2.8. Add further lamps to an existing circuit

If we want to add more lamps to a current electrical path, we can do as follows:

- Select a non-connected lamp (1)
- Select a connected lamp on an electrical circuit to assign the non-connected item. (2)



4.2.9. Room built-in power

This command helps to calculate the indicative value for the electric power consumption. For this we need the room plot stamp.

The basic data:

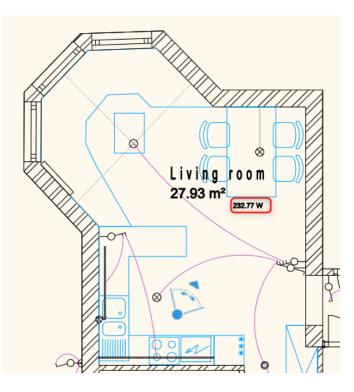
- Gross area,
- Lighting efficiency,
- Illumination (lx),
- Average luminous efficiency index of the light source (lm/W).

The built-in power (W) is an indicative value for providing the planned luminous flux (lumen) in the room.

- Click on the plot stamp.
- Set the parameters as shown in the diagram.
- Place the built-in power.

Determine the lighting needs in a room	×							
Gross area	27.93 m²							
Environmental factor	1.25 - Clean interior space $\qquad \lor$							
Illumination (100 k < E < 500 k)	300 - Community spaces 🗸							
Lighting Efficiency (Direct - Indirect)	0.5 - Direct lighting							
Luminous flux to be integrated [Im]	20948.91 lm							
Average luminous efficiency index of light sources	LED light source 90 lm/W $\scriptstyle \sim$							
P - Built-in power [W]	232.77 W							
Source: experience based data. Software vendor is not responsible for the data, it's accuracy and correctness.								
* PRODUCER SHALL NOT BE LIABLE IN ANY MANNER WHATSOEVER FOR THE RESULTS OBTAINED THROUGH THE USE OF ANY PROGRAM OUTPUT								
	OK Cancel							

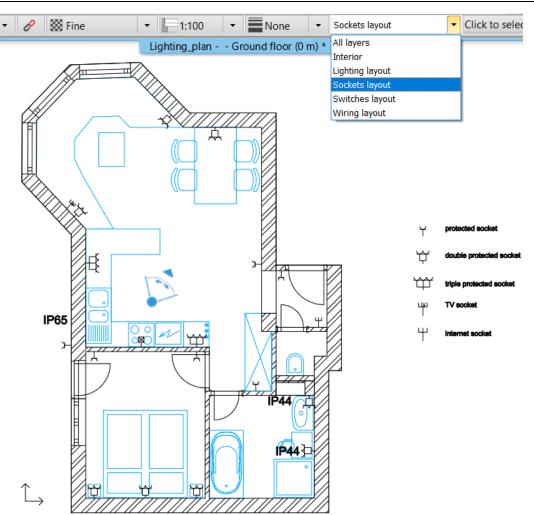




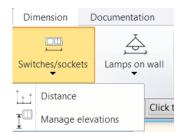
4.3. Socket layout

The task is to measure the distance and mounting height of the sockets.

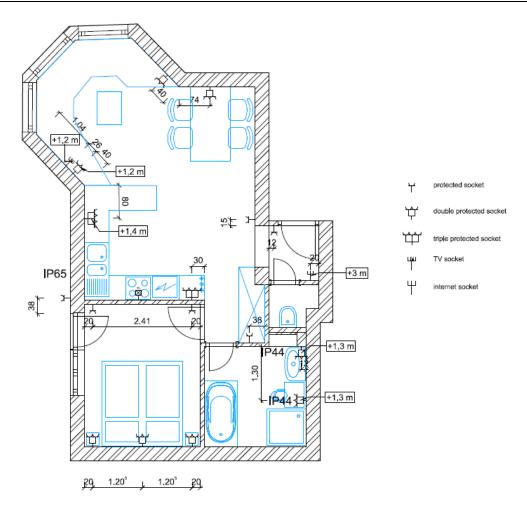
• In the project, select "Socket layout" layer variation. We start from this position.



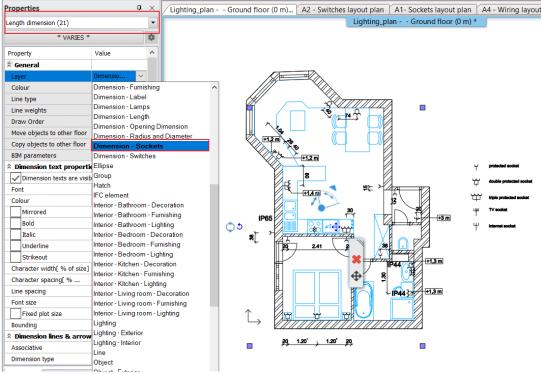
- Turn on the Dimension Sockets layer to display the already created dimensions.
- Under the **Ribbon menu / Dimension / Switches/Sockets** command group, select commands to get the dimensions relative to walls and openings; and show the relative height on the floor plan.





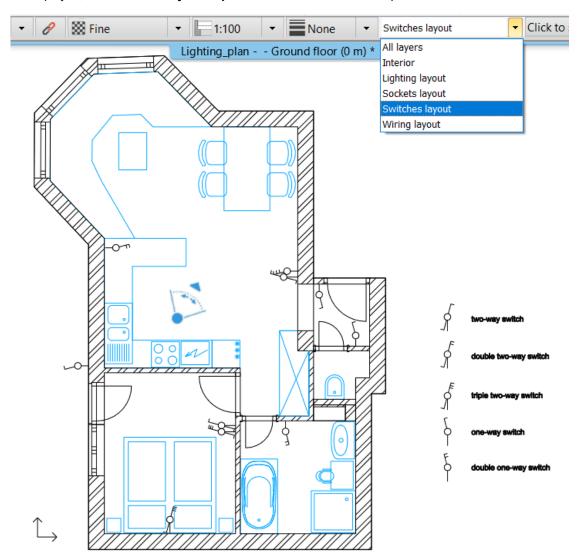


Select the floor plan, choose Length dimension under Properties, then move the created dimensions to the Dimension – Sockets layer.



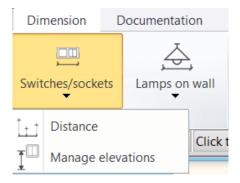
4.4. Switch layout

The task is to measure the distance and mounting height of the switches.

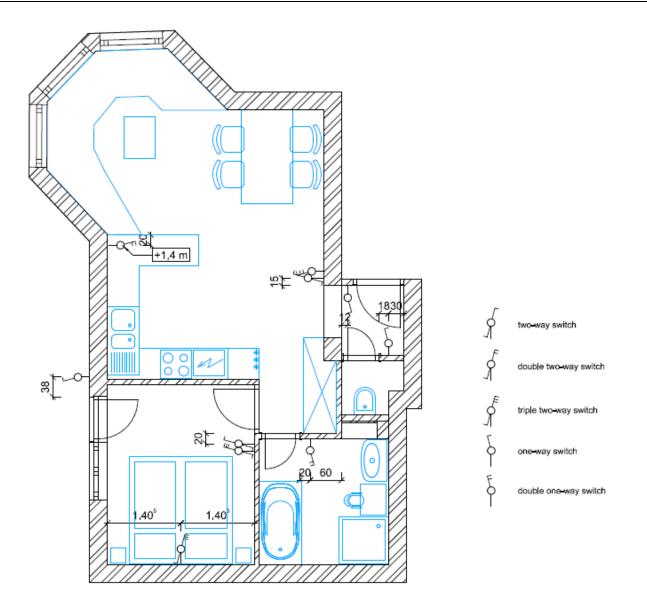


• In the project, select "Switch layout" layer variation. We start from this position.

- Switch on the Dimension Switches layer to display the already created dimensions.
- Use the commands in the Annotate Switches and Sockets menu to create the missing length and height dimensions.





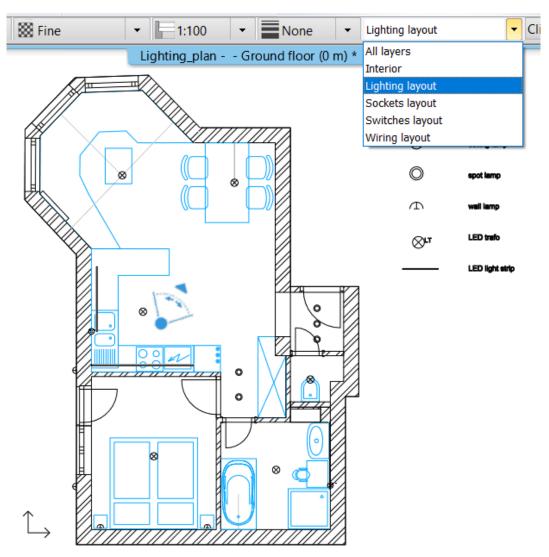


• Transfer the dimensions you have created to the Dimension, Switches layer.

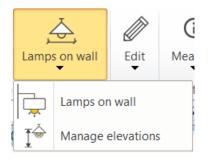
4.5. Lighting layout

The task is to measure the distance and mounting height of the lamps.

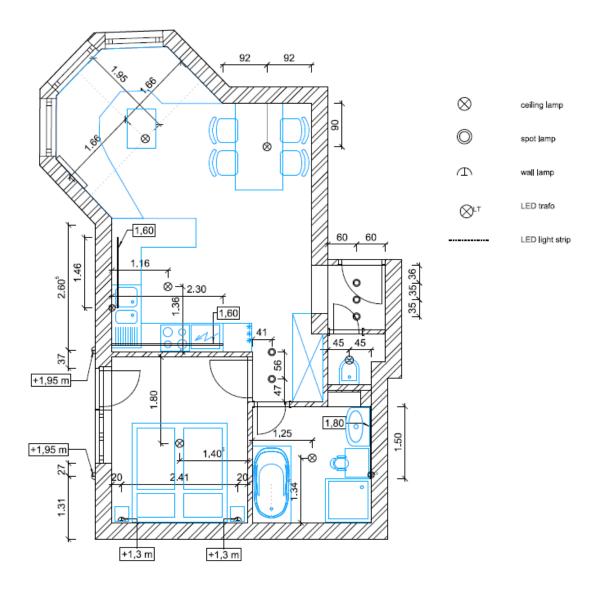
• In the project, select "Lighting layout" layer variation. We start from this position.



- Switch on the Dimension, Lamps layer.
- Under the Ribbon menu / Dimension / Lamps on wall command group, select commands to get the dimensions relative to
 walls and openings; and show the relative height on the floor plan. This command is only for wall lamps. To dimension
 ceiling lamps use Length dimension command.



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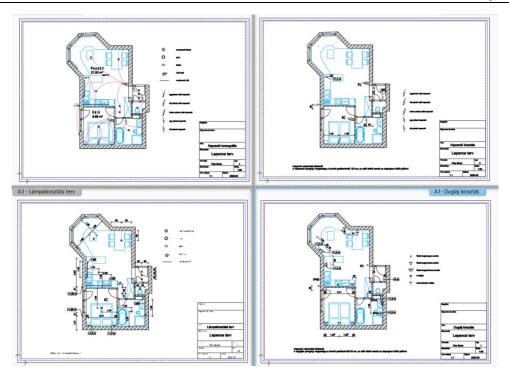
• Transfer the dimensions you have created to the Dimension, Lamps layer.

Update foil variations

• Open the layer manager and update the layer variations so that the corresponding dimension layers are also switched on in the given variation.

4.6. Creating documentation

- Display the pre-made plan layouts in the project navigator.
- On the floor plan, select the corresponding layer variation, then drag the floor plan at a scale of 1:50 from the project navigator.
- Repeat the steps to place each plan.



• Print in A3, landscape format.

4.6.1. Create RTF text

ARCHLine.XP 2023 allows you to import text in Rich Text Format (RTF). RTF documents can be imported from Microsoft Word and many other word processing programs. Most of the formatting of the imported RTF text is preserved in ARCHLine.XP.

• Activate the floor plan and select Drafting / Text / Place it (RTF). In the text editor that pops up, edit the text you want to place.

Ш, 2 × 5 C 🖯 = Home Insert View 러 Search 👗 Cut €≣ →≣ Seace UI 12 🖹 Copy ab ac Replace read Paste U only E. Edit Clipboard Font Ę, Paragraph Taking measurement on-site is mandatory! The height of the sockets is 30 cm from the covered floor level, other cases are marked separately on the floor plan! 100 % OK Cancel

In the sample example, this text was edited and placed on the plan sheet:



5. Workshop: Suspended ceilings

5. Workshop: Suspended ceilings

Designers mostly create a suspended ceiling as a decorative element, but it is also useful in terms of insulation and acoustics. In ARCHLine.XP we can create a suspended ceiling such as:

1. Grid ceilings (such as a suspended grid system)

2. Plain ceilings (such as plasterboard)

These types of suspended ceilings differ from each other in structure and appearance. Through the following project, we will explain these differences.

- Open your browser and watch the following video tutorial: <u>https://www.archlinexp.com/enrollments/courses/advanced-course/suspended-ceilings/1</u>
- Open ...\Documents\ARCHlineXP Draw\2023\Workshop_Advanced\6_Suspended_ceiling\Office_suspended_ceiling_plan.pro file. Save the project under a new name.

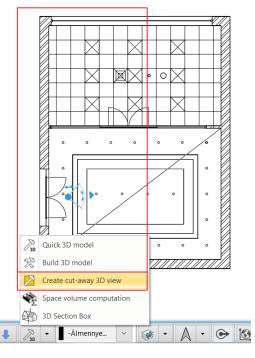
5.1. Grid ceiling

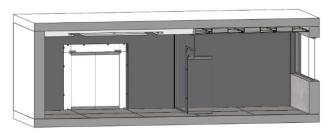
The components of the grid ceiling are the main and cross runners; and panels. Ceiling is a host element. It means the ceiling can host components into its structure. It can include light fittings, ceiling fans, CCTV cameras, etc.

5.1.1. Creating grid ceilings

The grid ceiling has a specific pattern, in which the elements are interchangeable, geometric shapes are forming the ceiling (typically square or rectangular shaped ones).

- Grid Auto Ceiling: the program automatically recognizes the closed boundary of the room inside the building, clicking inside the room the program automatically creates the grid ceiling.
- Grid Ceiling by polygon: by drawing a closed polygon, the program creates the grid ceiling in the defined shape.
- Grid Auto ceiling in all rooms: the program automatically recognizes the closed boundary of each room inside the building, and the program automatically generates the grid ceiling throughout the building.
- Turn off the Furniture and Decoration layers and create a cut-away view to see the structural design of the suspended ceilings you want to create.





- Activate the 3D view and select 3_Meeting_room view. Delete the existing suspended ceiling.
- Place a grid suspended ceiling in the office using the Building / Ceiling / Grid auto ceiling command.





5.1.2. Grid Ceiling Properties

By opening the Grid Ceiling properties window, we can specify its parameters to the most optimal arrangement.

Select the suspended ceiling and change its relative height to 3 m, then enter its properties.

Type and distribution

The basic structure can be set here: by choosing the strip structure, the grid ceiling is created by rectangular elements all along the entire width of the room, while the suspended grid ceiling consists of units with a given width and height. On this tab, we can define the size of the units, the offset, the direction of the rotation relative to North and the reference point.

					d 🔊 🗞	A R
) Strip Suspended grid	لم الد	Grid width 600 mm Grid height 600 mm Grid height 00 mm Grid height	Reference point Image: Constraint of the second	 Align to unit corner Align to unit center point Main runner offset 0 mm ~ Cross runner offset 0 mm ~ 		
Type and distribution			🗸 Automatic r	efresh on page 📀	ОК	Cancel

Default units

On this tab, you can customize the default units, for each component that will be applied on the entire ceiling. Here you can select the unit types, lamp units, fire protection units, air distribution units as well.

• In the lamp unit tab, choose the LED Luminar type.

III 💊 💊 😻 👄 🖉 .					6 4	A R
Default units of the ceiling. You can also add custom units, lamps etc.	Pine Trim ceiling p Edge Pa	White ceiling p		 	0 mm Offset fror	/right (red)
Hide panel units	Rotate X 0° ~	Rotate Y	Rotate Z		Offset dov	vn/up (blue)
Default unit for each component that will apply in t	he entire ceiling		Automatic refresh on page	Ð	ОК	Cancel

Lamp, Fire Protection, Air Distribution and Other Units

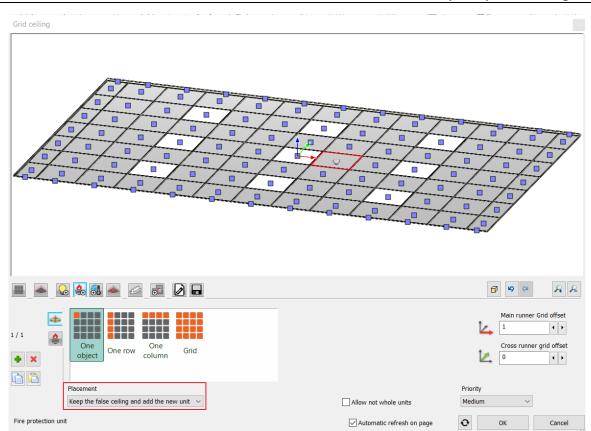
Under these tabs, you can define the lamp unit, fire protection unit, air distribution unit, and other units to be built-in. Also, you can set the type of the predefined placement on the ceiling, furthermore here you can change the unit type individually in case that is not the same as the default unit setting.

When selecting different units the size is an essential factor, except the fire protection unit, all others should fit in the grids.

For lamps, select the Grid layout and rewrite the longitudinal step spacing to 3.

	Ø ♥ ♥	RR
1/1 One One row One object One row Column Grid	Main runner grid step 3 • • • 0 Cross runner grid step 2 • • • 0 Cross runner grid step 0 0	• •
Placement Remove the false ceiling and replace it with v	Priority Allow not whole units Medium	
Ceiling lights	Automatic refresh on page OK OK	Cancel

• In the Fire protection unit tab, select the panel shown in the figure and place the fire alarm. At the placement segment, select the option Keep the false ceiling and add the new unit.



- Place a vent on the left side of the light next to the fire alarm, select remove the false ceiling and replace it with for placement.
- In the Other units tab, add a CCTV camera, then position it as desired on the suspended ceiling. For the placement, keep
 the false ceiling and add the new unit onto it.

Grid ceiling – grid system

The grid system is based on default profiles in case of the grid ceiling. Also, you can create a customized profile by drawing a cross-section profile. You can set different profiles for the Main runner, the Cross runner and the Perimeter Wall Angle.

	🔺 💊 急 🕄 🝝 🛃					6 4	RR
	Here you can define the ceiling Main runner, Cross runner and Perimeter wall angle. Main runner extension 0 m	Ceiling Main Ru			 	Offset left/rigit Offset front/bi Offset front/bi Offset down/u Offset down/u Offset down/u Offset down/u Offset down/u	ack (green)
	Hide object	Rotate X	Rotate Y 0° ~	Rotate Z		<u> </u>	
Main	runner, Cross runner and Perimeter wall ang	le		Automatic refresh on page	Ð	ОК	Cancel

Holes and insets

An area can be created in the suspended ceiling with a different shape, where a suspended ceiling can be placed with customized settings.





General settings

Here you can set the presentation of the grid ceiling on the floor plan.

		A R	
Relative elevation 0 mm 3 m Beam 0 mm 3 m Simple Line	Representation in 2D Symbolic view	~	
General settings	Automatic refresh on page	Ð	OK Cancel

Save

You can save the newly created or modified ceiling into the Design Centre by using the Save or the Save as option. You can use the saved assets any time later on.

Save the suspended ceiling as Meeting_room_grid_ceiling in the My category, Suspended ceiling subcategory. ٠

		. 🕄 🔌						Ø	N) (N)	RR
Save the curr	ent item into	the library,	or select a new	w one to edit						
Grid 600x600	Grid 600x600	Grid 600x600	Grid 600x600					•	F Save a	15
				Description				~	Restore de	efault from:
Save						Automatic refresh on page	• •	ОК	[Cancel

5.1.3. Rotate the grid layout on the floor plan

If it is necessary, you can rotate the grid layout directly on the floor plan by using the "Define reference point and direction" commands from the local menu of the grid ceiling.

//	_	
	Grid ceiling (1060) [1/1] >>>	
	Properties	
	Select >	
/	Copy properties	
	Create similar	
	Delete	
	Phase O	
	Locate item in Design Center	
	Edit components	
	Define reference point	
	Define reference point and direction	fine unit center point
	Add units Det	fine unit corner
	Add hole	
	Detach	
	Save into library	
	Save into library as	
	Save into Design Center as object	
0 g	Show in 3D	o o o
Grid celling	Draw Order	
	Group parameters	
5	Layer +	

5.1.4. Modifying units on the floor plan

On the selected grid ceiling, the different units appear with different markers. Using these markers, you can copy, move and delete individual units.



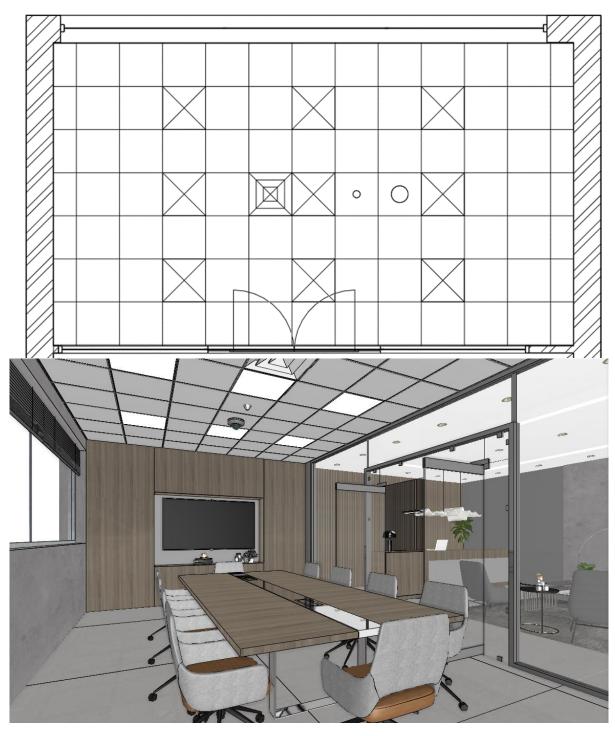
5.1.5. Add units on the floor plan

Right-click on the 2D symbol of the grid ceiling on the floor plan, and from the local menu choose "Add units" tool. Select the unit type and place the desired item on any empty grid points.

		-		
0 m) View 2 [Image	Grid ceiling (1060) [1/1] >>>			
	Properties			
	Select	Select •		
	Copy properties			
0	Create similar			
×	Delete			
	Phase	+		
//p %	Locate item in Design Center		C	
	Edit components			
	Define reference point	×		
	Define reference point and direction	•		
	Add units	•	Add lamps	
	Add hole		Add sprinklers	
	Detach	•	Add anemostats	
	Save into library		Add other units	
	Save into library as			
	Save into Design Center as object			
	Show in 3D			
	Draw Order	+		
d cel	Group parameters	►		
Brid o	Layer	+		

After placing grid ceilings, the floor plan should look as below:





5.2. Plain ceiling

The plain ceiling aims to create a suspended ceiling which has a smooth, even surface, and its shape can be fully customized.

5.2.1. Creating plain ceilings

You can create plain ceilings automatically or manually by drawing the contour of the ceiling.

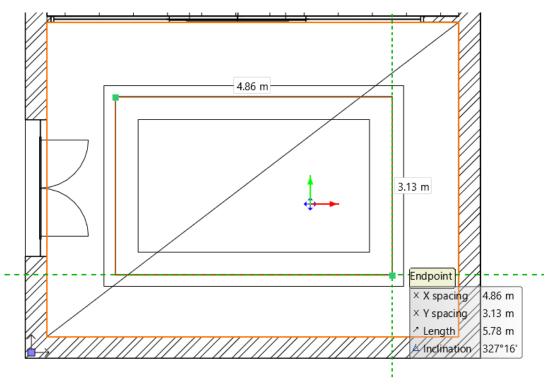
- Plain Auto ceiling: the program automatically recognizes the closed boundary of the room inside the building, clicking inside the room the program automatically creates the plain ceiling.
- Plain Ceiling by polygon: by drawing a closed polygon, the program creates the plain ceiling inside the defined shape.
- Plain Auto Ceiling in all rooms: the program automatically recognizes the closed boundary of each room inside the building and automatically generates the plain ceilings throughout the building.
- We place plain ceilings in the reception room on the floor plan. Delete the existing false ceiling and use the **Plain Auto Ceiling** command to install the false ceiling. Switch to 1_Reception 3D view.

- Change the relative height to 3000 mm and then enter its properties.
- In the Materials and Thickness tab, set the thickness of the suspended ceiling to 200 mm and click OK.

in	[∞] & _						A R
Thickness 0.2 m Angle of inclination 0° Direction of inclination 0°	Alapértel mezett	Beech Glass	26 Steel	Bright_w hite			+ 2 2
				Material direction	0° ~		
Materials and thickness					Automatic refresh on page	ОК	Cancel

5.2.2. Creating recesses and attachments

- Activate the floor plan view and select Ceiling, Recess/Attachment, Create recess.
- Select the suspended ceiling, then use the rectangle tool to draw the center contour line.



- Select the Ceiling, Recess/Attachment, Edit Recess/Attachment option and select the suspended ceiling.
- In the dialog, rewrite the depth of the recess to 100 mm, then click OK to accept the setting.

Creating recess for LED strip

- Create another recess along the outer contour. Select Ceiling, Recess/Attachment, Edit Recess/Attachment again and select the 2nd recess.
- Set its depth to 50 mm and its distance from the reference plane to minus 50 mm.

The goal is to have the reference plane of the recess 50 mm above the bottom plane of the original suspended ceiling.



Cutout -	Recess - Atta	achment				
Index	Туре	Reference plane		Width	Height	Visibility
1	Recess	Bottom plane	Individu	4.86 m	3.13 m	D
2	Recess	V Bottom V	Individ	5.27 m	3.53 m	D
M	love up	Move down	I	nsert new		Delete
	Rotate	Mirror on X	N	lirror on Y		Edit profile
	totate	Minor on X				Earc prome
Distance	from the refer	ence plane (>0: outwar	ds fr	50 mm		
Depth			5	50 mm		
Surface	material			Bright_whi	te	
Solid ma	nterial			Bright_whi	te	
Placeme	nt of profile ref	erence point:				
Position	in horizontal di	rection, measured from	: 1	4iddle		\sim
Distance	from middle p	oint (>0: rightwards)	C	0 m		
Position	in vertical direc	tion, measured from:	I	Middle		\sim
Distance	from middle p	oint (>0: upwards)	C) m		
Angle of	inclination			90°		
Direction	of inclination		0)0		
🗸 Repr	resentation in 2	D				
Colour						

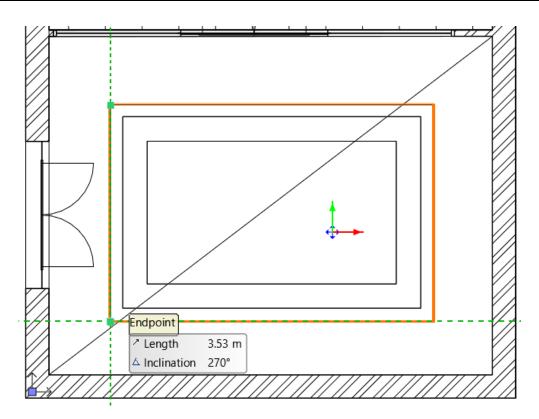
Creating an island

- Select Ceiling, Recess/Attachment, Add Attachment and select the false ceiling.
- Draw a rectangle around the inner contour, then press Enter to close the command.
- Edit the attachment using the Ceiling, Recess/Attachment, Edit Recess/Attachment command.
- Select the 3. Attachment and rewrite the distance from the reference plane to minus 50 mm.

Cutout -	Recess - Attach	iment					
Index	Туре	Reference plane	Profile	Width	Height	Visibility	
1	Recess	Bottom plane	Individu	4.86 m	3.13 m	D	
2	Recess	Bottom plane	Individu	5.27 m	3.53 m	D	
3	Attachment	✓ Bottom … ✓	Individ	4.07 m	2.33 m	D	
M	love up	Move down	I	insert new		Delete	
1	Rotate	Mirror on X	N	lirror on Y	E	Edit profile	
							_
							Ŷ
		ce plane (>0: outwar		50 mm			
Thicknes			5	50 mm			
	material			Bright_wh	ite		
Solid ma				Bright_wh	ite		
	nt of profile refere		······				
		tion, measured from	I: N	Middle		~	
Distance	from middle poin	t (>0: rightwards)	C) m			
Position	in vertical directio	n, measured from:	N	Middle		\sim	
Distance	from middle poin	t (>0: upwards)	C) m			
Angle of	inclination		9	90°			
Direction	n of inclination		()°			
✓ Repr	resentation in 2D						

Placing the LED strip

• Select Interior / Lighting / LED light strip command and draw along the outer contour.



In the LED lighting dialog, set the following:

- In the Size and lighting parameters tab, set the dimming level to 50%,
- In the Section profile tab, change the width to 10 mm and the height to 20 mm.
- In the General Settings tab, set the relative elevation to 3050 mm, since the channel for the LED is 50 mm above the lower plane of the suspended ceiling.
- Click OK to accept the settings.

You can check the position of the LED strip by using the 3D cut-away view.

20	Quick 3D model
R	Build 3D model
	Create cut-away 3D view
<	Space volume computation
命	3D Section Box
30	Lighting - I

5.2.3. Plain Ceiling Properties

Within the plain ceiling properties, there are the same options as we described in case of the grid ceiling apart from the grid structure settings.

Units



5. Workshop: Suspended ceilings

• On the second tab of the Units tab, select Spotlamp 1000.

in the second se					A 2 00 00
Default units of the ceiling. You can also add custom units, lamps etc.	Spotlam p 1000			 	Offset left/right (red) 0 m Image: Second secon
	Rotate X 0° ~	Rotate Y 0° ~	Rotate Z		
Default unit for each component that will apply in	the entire ceiling		✓ Automatic refresh on page	Ð	OK Cancel



Lighting	×
✓ Lamps enabled on path ○ Full path ⓒ Each path one by one	Number of items 0 2 ¹ Distance 1 m 2 ¹ Way of distribution By minimum distance Exact value: 1200
 ✓ Lamps enabled on nodes ✓ Lamps enabled on endpoints ✓ Enable light 	
Distribution Mode	Automatic refresh on page OK Cancel

Lighting

• In the Lighting tab, create spot lights along the Auto profile.

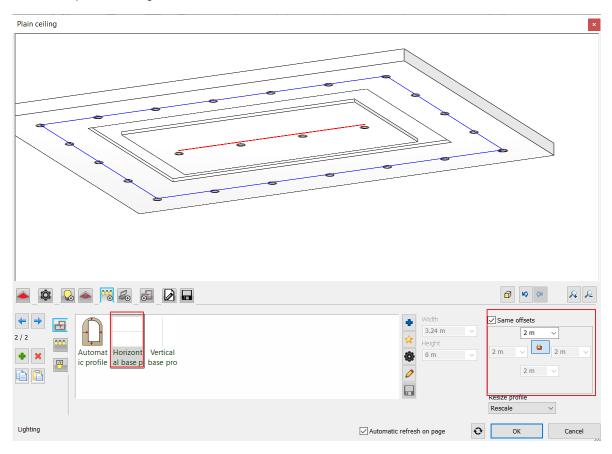
<u> </u>				RR
<u>ı</u>	Automat Horizont Vertical ic profile al base p base pro	Width 6.04 m Height 4:33 m	Same offsets 0.6 m 0.6 m 0.6 m	✓ 0.6 m ✓ ✓
Lighting	└────────────────────────────────────	sh on page	ОК	Cancel

• Move the lamps up 40 mm to be flush with the bottom of the suspended ceiling, then cut the area of the lamps out of the suspended ceiling.

▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲	<u>A</u> A Ø Ø 6
Apply the default Hide object Use original item size Dimming level 100 %	Horizontal offset 0 m ~ Vertical offset 0 m ~ Vertical offset 0 m ~ Vertical offset 0 m ~
Lighting	
Lighting	Automatic refresh on page OK Cancel
▲_Q	
1/1	
Lighting	Automatic refresh on page OK Cancel

We place another row of spot lights on the center line of the island.

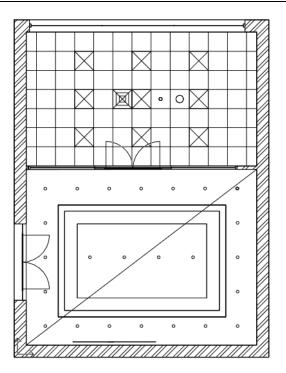
- Click the plus button to add a new distribution. Select the Horizontal base profile on the first tab of Lighting. Keeping the Same offsets, rewrite the size to 2000 mm and create the spots with the green check mark.



Save the plain ceiling as Reception_plain_ceiling into the My category, Suspended ceiling subcategory.

The picture below shows the result on the floor plan:





• Turn back the Furniture and decoration layers, then rebuild the model.

After editing the suspended ceilings, the 3D view:



And the rendered image:



6. Workshop: Curtain walls

6. Workshop: Curtain walls

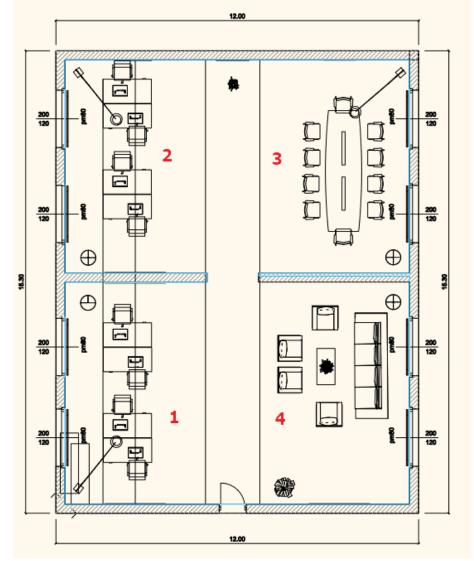
We frequently use curtain walls as room divider or as a building's exterior such as a shop front. Because they can be installed in any size and design, you can create unique and visually stunning exteriors.

The curtain wall is a special wall and consists of the frame, panels and mullions. Doors and windows can be inserted in the curtain wall. Since the curtain wall is based on the wall tool, you can apply wall tools such as resizing, editing, joining. Curtain wall behavior is the same as standard walls in connection to slabs, roofs and spaces. We can solve many tasks with the curtain wall tool:

- create new curtain walls as room divider or shop front
- convert existing walls to curtain walls
- join more curtain walls
- create unique and customized glass insets in the wall

In the next example, we will alter an open-plan office in a way that we divide the space by functions, at the same time keeping the space open, airy and light.

- Open your browser and watch the following video tutorial: <u>https://www.archlinexp.com/enrollments/courses/advanced-course/curtain-wall-design/1</u>
- Open ...\Documents\ARCHlineXP Draw\2023\Workshop_Advanced\7_Curtain_wall\ Office_with_curtainwall_Start.pro file. Save it under a new name.



- 1. Office
- 2. Office
- 3. Meeting room
- 4. Lounge



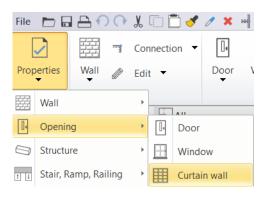
6.1. Converting the 1st office to closed-space

Now we create a curtain wall to separate the first office space.

6.1.1. Set properties

First set the curtain wall's properties and save it under a new style.

• Use the following parameters as the diagram shows below:



Main parameters

Curtain wall						I
Main parameters	Enclosing box width		7.15 m	~	Redraw	
Representation	Enclosing box height		2.6 m	~		
Reveal, void, niche, cavity						
Curtain wall properties						
Outer handle	Hide opening and make a void			^		
nner handle	Distance from frame	0 m		~		
	Seneral					
ccessories	Layer	Fal - Válaszfal		\sim		
terior and exterior sills	Colour					100000000000000000000000000000000000000
	Line type	Sim	ple Line	~		T
uilt-in details	Line weights	0.3 mm		~		
formation	Draw Order	8- Bottom-most		~		
	Distance from wall corner	0 m			and a second sec	
		Lining and architrave				
		Dimension, consignment			and the second s	
	Thermal parameters				200000000000000000000000000000000000000	
	Ratio (Illumination area)	100%				
	Ratio (Ventillation area)	100%				
	Wall properties					
	Thickness	0.1 m				
	Slant angle	90°		~		

Curtain wall properties

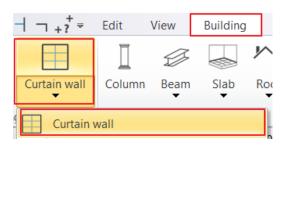
Curtain wall				×
Main parameters]		Redraw	
Representation	Mullion ■			
	Rectangular cross-section	Edit		
Reveal, void, niche, cavity	Mullion thickness	0.03 m		
Curtain wall properties	Mullion width	0.03 m		
curtain wai propercies	Mullion material	Bright_Aluminium		
Outer handle	Offset of mullion (>0: away fro	0.035 m		
	Mullion placement relative to the glass	Middle		
Inner handle	Panels			
A	Glass width	0.006 m		
Accessories	Glass material	Turquoise glass		
Interior and exterior sills	Glass offset (>0: from reference side)	0.047 m		The second se
	Fixed Distance			
Built-in details		Horizontal Spacing		
Information		Vertical Spacing		
	Equally divided glasses in horizontal:	3		1
	Equally divided glasses in vertical:	3		
	* Frame		and an other states	
	Rectangular cross-section	Edit		
	Frame width	0.05 m	300000000000000000000000000000000000000	
	Frame Thickness	0.1 m		
	Frame material	Bright_Aluminium		
	✓ Top frame			
	Bottom frame			
	Left frame			
	Place mullion on left side when fram			
	✓ Right frame			
	Place mullion on right side when fram			
	Corner mullion			
	Corner mullion			
			1	
BIM Parameters	Saját függönyfal		ОК	Cancel

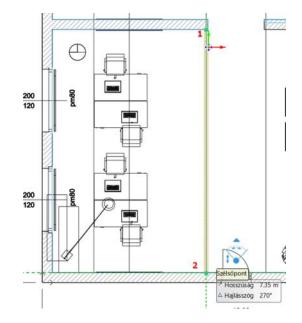
• Save the new the setting under a new style.

6.1.2. Create and edit the curtain wall

Draw the curtain wall

• Draw the curtain wall by using the Building – Curtain wall command as it is shown below. You can use the wall midline as a reference (1, 2).

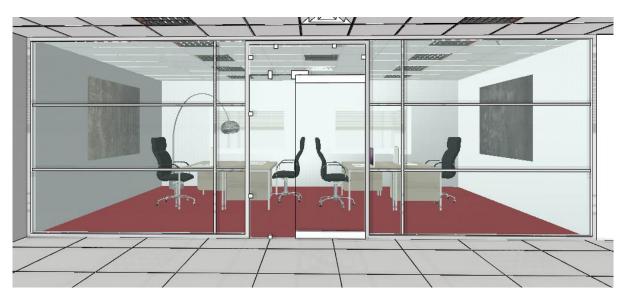




Insert a door

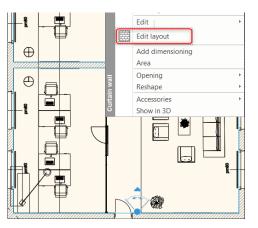
- Choose the "Single leaf glass door" from the Design Center- Building -Door- Outdoor Glass folder and place it to the middle of the curtain wall.
- Modify the door height to 2490 mm. Set the "Distance from wall line" to 5 mm. The glass material is Turquoise glass.





Edit layout

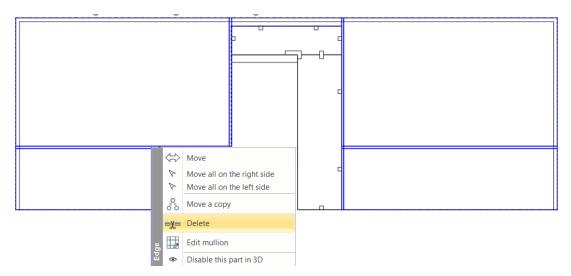
We can modify the divisions on the layout. Click on the side of the curtain wall which facing to the corridor; and then select the Edit layout command from the local menu.



• Move the vertical dividers so that they are directly next to the door.

		0.47 m	2.38 m
Szélsőpont	1.97 m		< <u>−2.38 m</u>

• Delete the vertical dividers.



We get the following result:



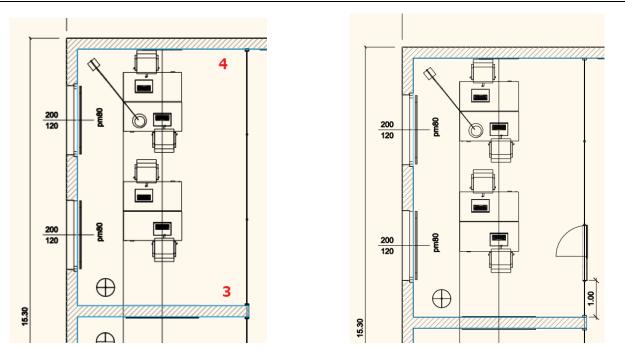
6.2. Converting the 2nd office to closed-space

We separate the other office by a curtain wall with the same method, but we use different divisions in this example.

Create the curtain wall

• Draw the curtain wall by using the Building – Curtain wall command as it is shown below. You can use the wall midline as a reference (3, 4).





Insert a door

- Choose the "Single leaf glass door" from the Design Center- Building -Door- Outdoor Glass folder and place it 1000 mm from the 3rd point.
- Modify the door height to 2490 mm. Set the "Distance from wall line" to 5 mm. The glass material is Turquoise glass.



Modify properties

!

In the Curtain wall dialogue window change the width and height of the divider bar to 4 cm, and the "Number of the glasses in vertical" to 1 and switch off "Bottom frame" option.

Please note that any changes in the properties dialogue window overrides the editing on the layout. Therefore, follow this order of instructions:

- 1. Modify properties
- 2. Edit layout

Main parameters				Redraw
Representation	Mullion properties			
	Rectangular cross V	Edit		
Reveal, void, niche	Mullion thickness	30 mm		
	Mullion width	30 mm		
lasic geometry	Mullion material	Bright_Aluminium		
)uter handle	Offset of mullion (35 mm	*****	
	Mullion placement rel	Middle	~	
nner handle	☆ Grid spacing			
	Glass width	6 mm		
ccessories	Glass material	Turquoise glass		
nterior and exterior sills	Offset of glass (>0: a	47 mm		
iterior and exterior sins	Fixed Distance			
luilt-in details	He	prizontal Spacing		
		/ertical Spacing		
	No. of glasses in horiz	3		
	No. of glasses in vertical:	1		
	Glass Transparency		www.	
	* Frame properties			
	Rectangular cross V	Edit		
	Frame width	50 mm	mn.	
	Frame Thickness	100 mm		
	Frame material	Bright_Aluminium		
	✓ Top frame			
	Bottom frame			
	Left frame			
	Mullion on left side when	n frame is OFF		
	Right frame			
	Mullion on right side who	en frame is OFF		
	Corner column exists			

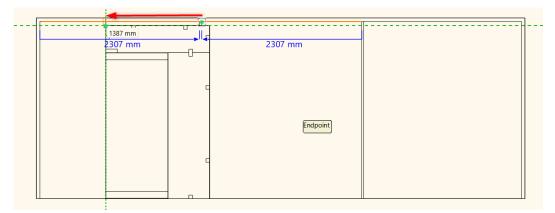


Edit divisions on the layout

•

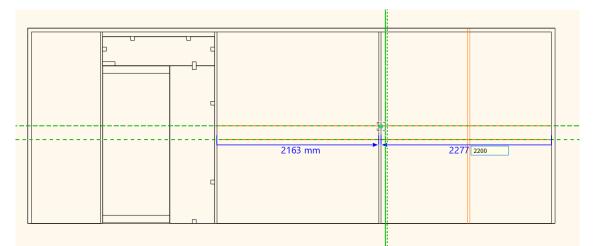
We modify the vertical mullions on the layout:

Move the first mullion to the left side of the door.



- Move a copy of the second mullion to the right side of the door.
- Move 2200 mm, the third mullion from the door frame.

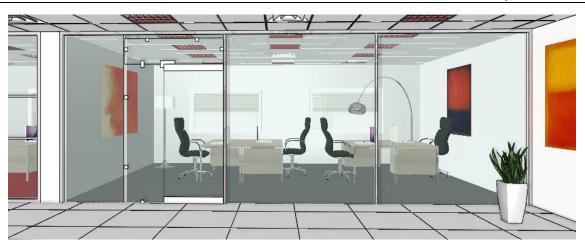




- Change the width and thickness of mullions to 40 mm. Copy these values on the mullion clipboard.
- Modify the 1st and 2nd mullion to the same values by using the Paste from mullion clipboard command.

							edie ● 🖽 🐈 🐎 ஏ ダ (j)	Move Move all on the right side Move all on the left side Move a copy Delete Edit mullion Disable this part in 3D	
М	ullion properties					×			
	l			>)	Edit 40 40 35 mm Middle Bright_Aluminium				
	Copy to mul	llion clipboard)	P	Paste from mullion clipbo	pard			

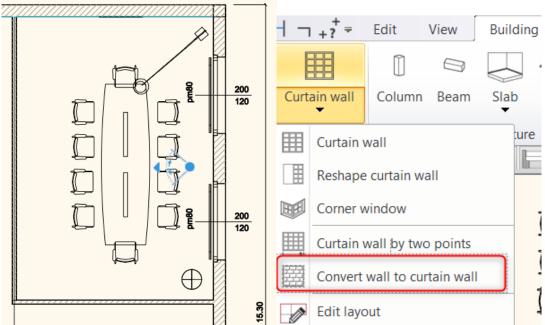
The result is the following:



6.3. Creating the meeting room

We partition the meeting room with curtain walls on two sides. This way, we form a corner room.

- At the moment, the meeting room is separated from the lounge with a wall, which is not structural. We can modify this wall.
- Modify the wall thickness to 100 mm and draw the same type of wall to separate the meeting room from the corridor.



Convert wall to curtain wall

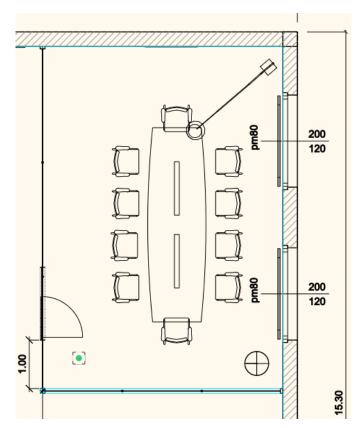
We convert two walls to curtain walls in the meeting room.

• Choose the "Convert to wall to curtain wall" command, and then click on the two walls.



Insert a door

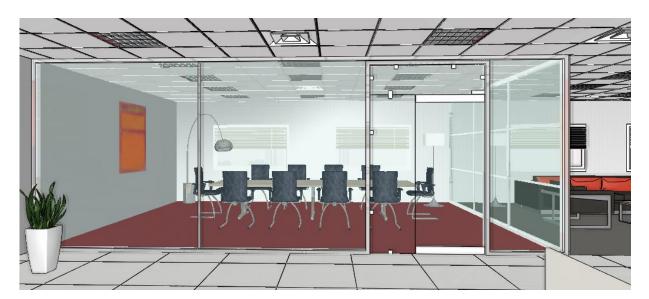
- Now we insert a door on the wall facing the corridor. Choose the "Single leaf glass door" from the Design Center- Building -Door- Outdoor Glass folder and place it 1000 mm from the corner.
- Modify the door height to 2490 mm. Set the "Distance from wall line" to 5 mm. The glass material is Turquoise glass.



Edit divisions on the layout

- Now modify the mullions on the curtain wall on the corridor. First, delete the vertical mullions.
- Delete the mullion on the right side.
- Move 2210 mm the mullion from the left side of the wall.

115



• Delete horizontal mullions on the 2nd curtain wall.



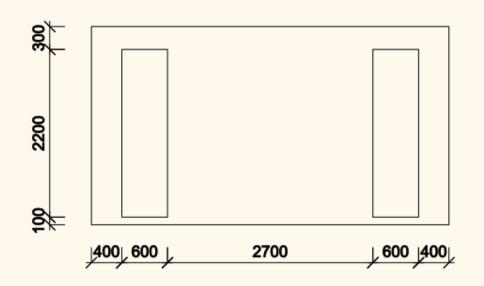
In this example, we demonstrated three different versions of curtain walls with different divisions. On the final plan, we used the most suitable version, so we applied those settings on each of the walls.



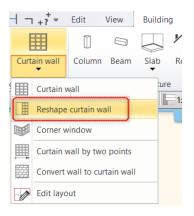
6.4. Reshape the curtain wall

On the wall between the office spaces, we place glass blocks.

- Choose Building Curtain wall Reshape curtain wall command
- Click on the wall, and put the layout on the drawing on the floor plan.
- Define the first rectangle as a profile.

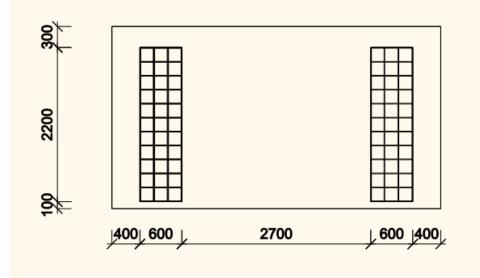


• Now set the curtain wall properties as it is shown below:



Main parameters				
Representation	* Mullion properties			
	Profile cross-section	 Rounded rectangle 		
Reveal, void, niche	Mullion thickness	10 mm		
	Mullion width	80 mm		
asic geometry	Mullion material	g110		
uter handle	Offset of mullion (0 mm		
acor manare	Mullion placement rel	Middle	\sim	
ner handle	☆ Grid spacing			
	Glass width	60 mm		
ccessories	Glass material	Glass-20		
terior and exterior sills	Offset of glass (>0: a	10 mm		
terior and exterior sills	Fixed Distance			
uilt-in details		Horizontal Spacing		
		Vertical Spacing		
	No. of glasses in horiz	3		
	No. of glasses in vertical:	11		
	Glass Transparency			
	* Frame properties			
		 Edit 		
	Frame width	10 mm		
	Frame Thickness	80 mm		
	Frame material	g110		
	Top frame	giio		
	Bottom frame			
	✓ Left frame			
	Mullion on left side wh	en forme in OFF		
		ien frame is OFF		
	✓ Right frame			
	Mullion on right side w	Inen frame is OFF		
	Corner column exists			

• Apply the same parameters on the second rectangle as well.





7. Workshop: Framed walls

7. Workshop: Framed walls

When adjusting the framed structure of the walls, you can create column positions, double top plates, and other similar structures that can be created by copying the original structural elements. With the help of this, a complex, parametric frame structure can be designed according to the current structural goals.

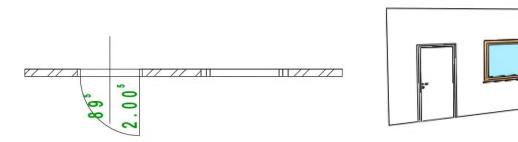
- Open your browser and watch the following video tutorial: <u>https://www.archlinexp.com/enrollments/courses/advanced-course/framed-walls/1</u>
- Open the file named... \Documents\ARCHlineXP Draw\2023\Workshop_Advanced\8_Framed_Walls\01_Framed_Walls_Linz_Start.pro. Save the project as another.

The building in the project is made with a framed wall structure, which provides a sample of what a completed frame structure is like. All parameters of the frame structure can be freely changed and adapted to individual needs.

7.1. Creating framed walls

There are two ways to create a structure:

Modifying an existing wall's properties



Defining the default wall structure in the Building / Properties / Wall / Wall option.

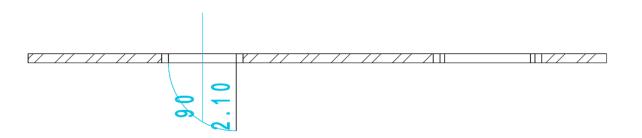
File 🛅 🗖		0,	¥ 🗋 📩	9 /	× =			+?	Ŧ	Edit	View	Buildin	g
		-1	Connection	- [•								ト
Properties •	Wall		Edit 🔻	D	oor ▼	Window T	Curta	ain w	all	Column	Beam	Slab	Roo
Wall			→ m w	all		Openir	ng			10		Structure	9
kend and and			Industant		_			-	D	E Fine		-	1.10

You can select the already created and saved frame structures from the side menu before drawing the wall.

7.1.1. Setting framed wall properties

The aim of the Workshop is to build your own framed wall structure based on the existing house, which can also accommodate windows and doors.

According to the first option, draw a 1 layered 10 wide wall section next to the house, and place a door and a 1200 x 1200
mm window on it.





- Edit the wall layers in the properties as follows:
- Add two 18 mm thick layers and adjust the parameters shown in the image below. Set the Core layer as displayed layer using the blue arrow.

Finish Face: Exterior Layer Function Material Thickness Base offset Height Fill pattern Name Layer endings Visibl 1 Substrate: plyw Wallpaint 0.018 m TS 0 m (1) BS 0 m Sand Previous I Image: Colspan="2">Previous I 2<	Total thi	npound Walls ckness: 0.41 W/(m2*K)	0.136 m							
1 Substrate: plyw Wallpaint 0.018 m TS 0 m (1) BS 0 m Sand Previous I Image: Constraint of the same priority, too 2< Core layer Image: Constraint of the same priority, too 0.018 m TS 0 m (1) BS 0 m Sand Previous I Image: Constraint of the same priority, too 3 Substrate: plyw Wallpaint 0.018 m TS 0 m (1) BS 0 m Sand Previous I Image: Constraint of the same priority, too Image: Collision of layers with the same priority, too Image: Collision of layers upon difference of materials or heights Image: Collision of layers upon difference of materials or heights Image: Collision of layers upon difference of materials or heights Image: Collision of layers upon difference of materials or heights Image: Collision of layers upon difference of materials or heights Image: Collision of layers upon difference of materials or heights Image: Collision of layers upon difference of materials or heights Image: Collision of layers upon difference of materials or heights				Finish Fi	ace: Exterior					
Fill pattern orientation: Default orientation is Orient to View. You can change to Align with Element, it stays aligned to the w Collision of layers with the same priority, too Collision of layers upon difference of materials or heights	1 2<	Substrate: plyw Core layer V	Wallpaint	0.018 m 0.1 m	TS 0 m TS 0 m	(1) BS 0 m	Sand	~	Name	Previous I V
Fill pattern orientation: Default orientation is Orient to View. You can change to Align with Element, it stays aligned to the w Collision of layers with the same priority, too Collision of layers upon difference of materials or heights										
				Finish F	ace: Interior		La	yer line	e properties	

7.1.2. Setting the framed structures' properties

• When you finished setting the wall's layer structure, click on the Wall Framing option in the properties of the wall.

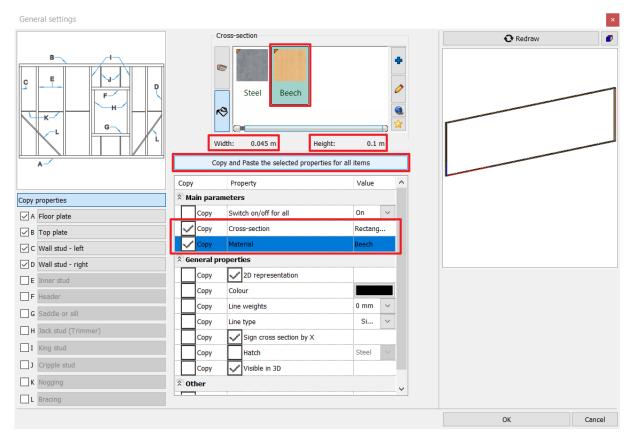
In the wall framing settings, each element can be turned on and off separately, each element is labelled with a letter, and the explanatory figure above indicates exactly where the elements are located in the structure. In the 3D preview window, the item you select in the list is marked in red on the left. The cross-section and material of the elements can also be modified individually, the special properties of some can also be edited, these settings can be accessed by clicking on the button of the corresponding element. Some parts only appear in the structure on the right side of the dialog box when a door or window is installed.

General settings							×
		ross-section Rectangl e Simple	ght: 0.09 les for all items	• •		Redraw	
	Сору	Property	Value	^			
Copy properties	🎗 Main para	meters					
A Floor plate	Сору	Switch on/off for all	On	~			
B Top plate	Сору	Cross-section					
C Wall stud - left	Сору	Material	Beech				
D Wall stud - right	🎗 General p	roperties					
E Inner stud	Сору	2D representation					
F Header	Сору	Colour					
G Saddle or sill	Сору	Line weights	0 mm	~			
	Сору	Line type	Si	~			
H Jack stud (Trimmer)	Сору	Sign cross section by X					
I King stud	Сору	Hatch	Steel				
] Cripple stud	Сору	Visible in 3D					
K Nogging	Other			, ,	,		
L Bracing		1	Y	×			
						ОК	Cancel

Copy properties

On this tab, you can set the general properties that will apply to each item.

• After changing the shape and size of the cross section and its material, under the main parameters, select the properties of the elements that you want to copy to the properties of all elements, and then use the *Copy and paste the selected properties for all items* command to make changes.





Floor plate

The floor plate is a horizontal beam at the bottom of the frame structure to which the studs are attached. It can be

assigned to a structure on several base elements by pressing the symbol. Different parameters can be specified for each base element.

Top plate

The top plate is a horizontal beam at the top of the framed structure, the same settings are available as for the floor plate.

Wall stud - left

In addition to the size and material of the left-hand corner column, you can also change its floor plan display, and you can

turn the X on the intersecting surface on and off. The mark can be used to add additional corner posts to the structure if needed.

Wall stud – right

The right-hand corner column has the same settings as the left-hand one.

Inner stud

In addition to the size and material and floor plan settings, there are several ways to adjust the distance between the columns in the internal column settings. You can choose to measure the distance from the axis or edge of the column and how far apart the columns should be.

Header

A bridging beam over doors and windows is required for their attachment. The number of beams can be specified, they are placed next to each other to achieve adequate stability and thickness.

Rewrite the number of headers to 2 and rotate the profile so that they are joined at their widest side.

Saddle or sill

The saddle is the piece that appears at the parapet line to hold and secure the windows.

The Saddle has inherited the number of beams, but here 2 beams are not needed.

• Change the number of beams to 1.

Jack stud (Trimmer)

The jack stud is the column from the saddle to the header that connects to and secures the sides of the doors and windows.

King stud

The king stud is a column running along the entire height of the structure in addition to the jack stud on either side of the doors and windows.

Cripple stud

In the case of doors and windows, vertical columns appearing under the saddle and above the header, which can be given the same settings as the inner columns.

Nogging

The nogging is a horizontal beam that increases the stability of a structure and can be incorporated into the structure in a number of ways. Either with alternating heights or with the same heights, the relative heights always denote the heights of the lowest point. These settings can also be changed freely.

Bracing

Among the properties of the bracing appearing at the edge of the structure, the location of the endpoints can be adjusted and they typically have a different size than the other elements of the structure.

• Set the properties of the frame structure listed above to the appropriate values and then accept the changes by pressing the OK button, and save it as a new style.

Like other wall properties, framed wall structure settings can be saved by creating a wall style, so you can create readymade structures with different layer orders and framed structures that you can use in new projects by selecting the appropriate style.

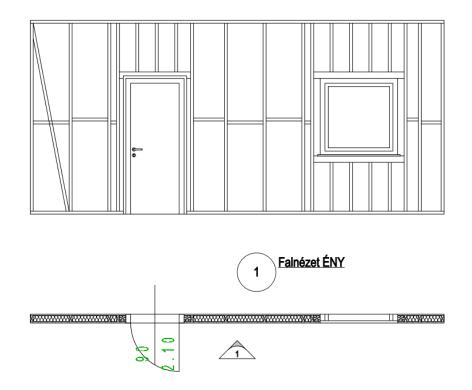
7.1.3. Show only the framed structure in 3D view

The changes appear immediately in the floor plan view, and by selecting the wall in the 3D window, you can see that there is a framed structure in the wall. When displaying walls in 3D, it is possible to display only the frame structure with doors and windows, but not the wall layers and cladding. To do this, click the Build 3D model and activate the *Wall framing visible only* option.

Build 3D model			Quick 3D model
	Settings Visible detail layers for slab,	roof	Build 3D model
I Door/window I Slab	Framing in wall, slab, roof		Create cut-away 3D view
Stair Roof	✓ Wall framing visible only ✓ Create tiles		Space volume computation
 ✓ Terrain ✓ Object ✓ Column 	Draw opening direction		3D Section Box
 ✓ Rooms ✓ Raster image 			VI2000-589 V 🥩 🔹
Freeform Surface Lamps Electrical Accessory Rice splail	Roof tiles in 3D Display simplified roof tiles (fas	ter) ~	
< > Floor	Resolution	,	
O Current 1 floor	High	\sim	
 All floors Select floors 	Minimal resolution of a circle	32 ~	
All buildings	Maximal chord height	0.003 m	
	Surfaces	50054	
Create 3D model in just one material - Paper model			
	ОК	Cancel	

7.1.4. Dimensioning of frame wall

It is possible to dimension the frame wall structure. From the local menu of the wall, select Accessories and then place wall framing frontal view to get an expanded view of the wall structure.





7.1.5. Shifting the framing

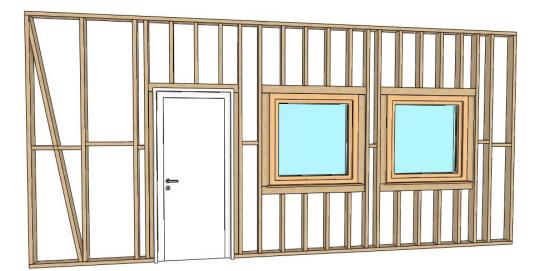
The default setting for the framed structure is that the center of the framed structure is always aligned with the center of the selected wall layer, which in some cases (for example, in the case of a two-layer overlay frame structure) is not appropriate for the design. This can be solved by the frame structure offset function, which can be set in the frame structure settings on the Properties tab for the entire structure. In the "Other" field of the property list, enter the amount of offset, then check the box and click on *Copy and Paste the selected properties for all items* option.

General settings					
	K W	Rectangl e Simple		• •	Redraw
	Сору	Property	Value	^	
Copy properties	Сору	Switch on/off for all	On	~	
A Floor plate	Сору	Cross-section	Rectang	•••	
✓ B Top plate	Сору	Material	Beech		
C Wall stud - left	8 General pr	-			
✓ D Wall stud - right	Сору	2D representation			
E Inner stud	Сору	Colour			
F Header	Сору	Line weights	0 mm	\sim	
	Сору	Line type	Si	~	
G Saddle or sill	Сору	Sign cross section by X			
H Jack stud (Trimmer)	Сору	Hatch	Steel	\sim	
I King stud	Сору	Visible in 3D			
Cripple stud	☆ Other				
K Nogging	🗸 Сору	Offset: if >0 away from reference	I 0 m		
L Bracing	لنصنا			Ť	
					OK Canc

7.1.6. Placing new opening

When a new opening is installed, the program automatically creates the necessary frame elements around the new opening.

Copy the placed window and place it next to it.



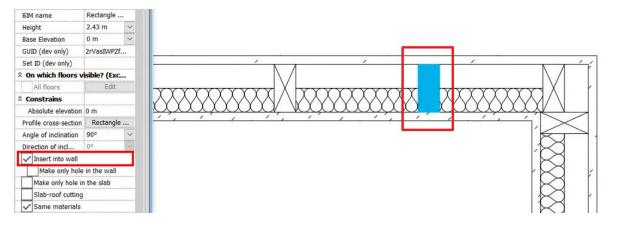
7.1.7. Placing studs in the structure manually

You can use the Building / Column command to place a column of any property individually in the frame structure.

• Set the properties of the column, and place it in the structure.

4					
			× Visualization		
			Colour		
			Layer	Fal - Beltér	~
			Line weights	0 mm	~
			Line type	Szaggatott:	1 ~
			Draw Order	8- Bottom-most	~
			On which floors visible? (Ex	cept for its own floor)	
			All floors	Edit	
12	۲۹		2D representation by 3D) top view	
Ψ-		Ψ	Hatch	R:204 G:204 B:204	
			2D not visible in printing	1	
			Same materials		
			Solid material	Aluminium	
			Surface material	Aluminium	
			Constrains		
			Base offset from the floor	0.045 m	~
			Height	2.91 m	~
			Angle of inclination	90°	
r4	r10		Direction of inclination	0°	
rofile	Rectangle	Simple	✓ Insert into wall		
	-	: Simple	Make only hole in the		
F	Profile from Library		Make only hole in the sl	ab	
	Edit profile		Slab-roof cutting		
			Apply Insulation	Thermal Isolation	
/idth:	Height:		Insulation thickness	0.1 m	~
).045 m	0.1 m		Structural properties	Column	~
			Other		
			Cut	out - Recess - Attachment	

To enable this column to engage the frame structure, enable the Insert into wall option in the properties. The columns
attached in this way move along with the wall as you move the wall.



7.1.8. Wall connections

When connecting walls, the program automatically creates the structural elements required for the connection. Wall connections can be modified in the same way as for any wall style.

7.2. Planning with grid lines

With the help of the grid lines, it is possible to easily and quickly design framed hall buildings or any building / structure, which consists of columns and beams fitting to the mesh.

After placing the grid lines, the columns and beams placed above the intersection points and lines automatically establish a connection with the mesh, so that the position change of the mesh lines is followed by the objects placed onto them. As a result, the workflow is significantly faster.



7.2.1. Setting the default parameters of the grid lines

You can set the properties of the grid lines in the Ribbon menu / Drafting / Properties / Grid lines option.

Allocation of the lines

In the properties you can set the distance between the horizontal and the vertical lines and how many lines to place in each direction.

General properties		
Layer	Walls	~
Colour		
Line type	Simple Line	~
Туре	Rectangular grid	\sim
Text style	No style	~
All floors		
🌣 Drafting grid		
Prefix in horizontal / circular direction		
Prefix in vertical / radial direction		
Sign in horizontal / circular direction	Number	~
Sign in vertical / radial direction	Letter	\sim
From top to bottom	<u>~</u>	
From left to riaht		
Gap between lines in horizontal direction	3 m	
Gap between lines in vertical direction	3 m	
Number of lines in horizontal direction	10	
Number of lines in vertical direction	10	
✓ Uniform step		
	orizontal direction	
Steps in v	ertical direction	

Setting the symbols of the lines

Not only can you specify the placement of the lines, but also what symbols are associated with those lines, which helps you define parts of the grid. For both vertical and horizontal lines, you can specify a letter or number, and you can specify a unique prefix for the characters you set.

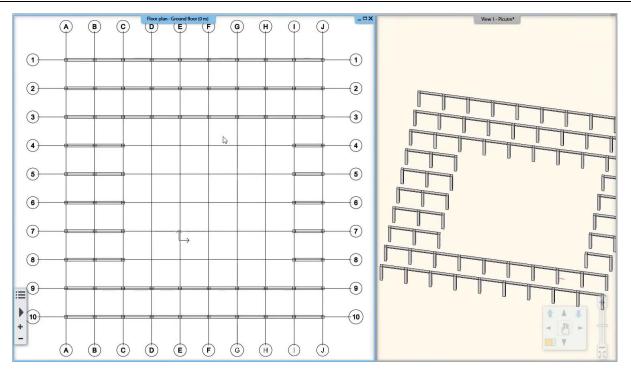
🎗 General properties		
Layer	Walls	\sim
Colour		
Line type	Simple Line	~
Туре	Rectangular grid	~
Text style	No style	~
All floors		
🎗 Drafting grid		
Prefix in horizontal / circular direction		
Prefix in vertical / radial direction		
Sign in horizontal / circular direction	Number	\sim
Sign in vertical / radial direction	Letter	\sim
From top to bottom		
From left to right	\checkmark	
Gap between lines in horizontal direction	3 m	
Gap between lines in vertical direction	3 m	
Number of lines in horizontal direction	10	
Number of lines in vertical direction	10	
✓ Uniform step		
	prizontal direction	
Steps in ho		

7.2.2. Placing the grid lines

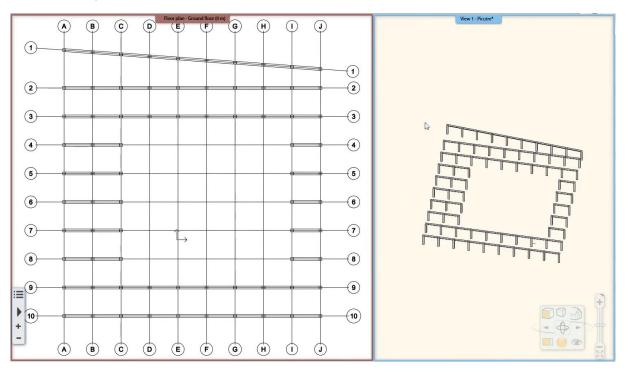
Use the Drafting / Grid / Place function to create the mesh.

• Place a mesh of 10 horizontal and 10 vertical lines spaced 3 meters apart, then place columns at the intersections. Also draw beams between the columns. Use duplicate commands to efficiently create large amounts of items. Remove some elements from the center of the mesh to create a hall-like layout.

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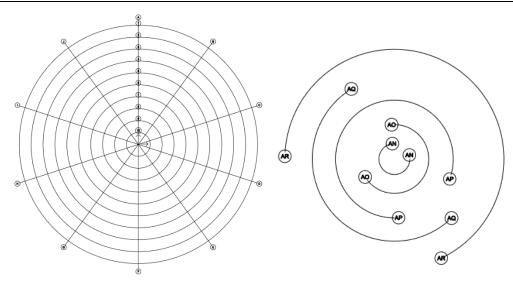
Move any line in any direction — you can even rotate it — and observe how the elements on it follow the movement without selecting them too.



Placing circle grid

•

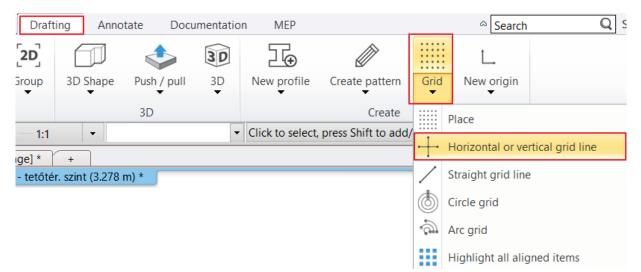
It is also possible to place a circular mesh, and the lines of the mesh can be defined with arcs. To do this, set the Type to "Radial Grid" in the properties window.



7.2.3. Expanding the grid lines

The placed grid lines appear on the floor plan according to the parameters set in its properties, but it can also be modified in all directions afterwards. The program will then automatically continue the line with the set symbols.

With Drafting / Grid / Horizontal or vertical grid line, you can expand the mesh with both vertical and horizontal lines.

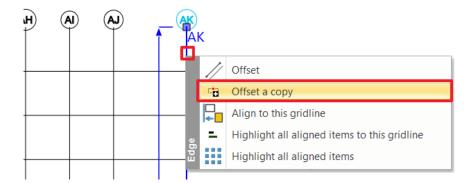


With the Straight grid line option, you can place a line that complements the placed grid lines or is located in a different direction from the existing lines.

Drafting Annotate Documentation MEP							Search	QS
2D		٩	3D	₽⊕			L	
iroup T	3D Shape	Push / pull	3D ▼	New profile	Create pattern	Grid	New origin ▼	
		3D			Create		Place	
− 1:1								
ge] * +						+	Horizontal or ve	rtical grid line
- tetőtér. szint (3.278 m) *						1	Straight grid line	2
						٦	Circle grid	
						÷	Arc grid	
							Highlight all alig	ned items

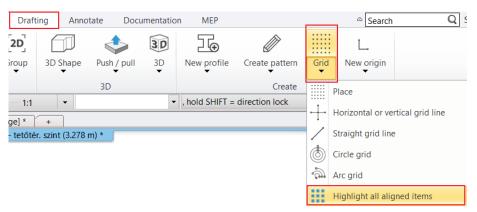


You can also expand the grid lines with the "Offset a Copy" function in the menu of the line.

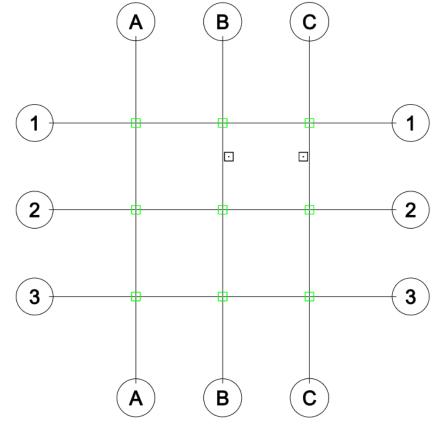


7.2.4. Checking the connected objects to the grid lines

Use Drafting / Grid / Highlight all aligned items to see which elements in the drawing are connected to the grid lines and which are not.



In the example below you can see that the program indicates the connected elements with green color.



8. Workshop: Teamwork

8. Workshop: Teamwork

The Teamwork tools allow working on the same project with your colleagues together simultaneously. Every part of your project updates automatically, so that the plan and the documentation are one coherent unit through the lifecycle of it.

Teamwork works over a local area network or using a file server when all connecting users have access to the same physical teamwork file over the network.

Cloud-based file sharing services are NOT recommended as those services do not grant access to the same physical file but only a local copy of it. This way it is not guaranteed that all users work on the same state of the teamwork which may lead to synchronization / permission issues and information loss.

8.1. Basic concepts

Working area

Working area organizes all items that a team member may make changes to under a logical unit. New items are automatically placed on the active layout owned by the team member.

Master working area

The master working area collects all the common part of the team work such as drawings, building parts, floors, layers, views and geolocation. Because of its special role during the team workflow, it is password protected. A team member who enters the mater working area also has administrative rights for the time being.

Team member

A user identity consisting of a name and a (n optional) password, granting access to the teamwork project to make modifications on the works space that is owned by the team member.

Administrator

A team member who owns the master working area. The administrator can modify the common parts of the team project and also has the right to create new working areas and add / remove team members.

Central model / Central project

The central model is the result of the work of the team members, automatically merged into a central project file. It continuously evolves as team members publish changes. All team members working online can see and work on the latest status when they open the project file or when they refresh the project.

Local version

All local changes created on the base of the central model. When saving the project all local changes are automatically published to the central model.

Main principles

- Teamwork allows simultaneous access to a shared work through the use of a central model.
- The central model has to be saved on a network drive to which all team members have access.
- Master working area is privileged to define team project fundamentals (Story structure, layers, geo-location and initial state of the project).
- Team members may create or own many working areas. One team member can edit only one active working area and may have multiple other available as editable. An ownership over a working area automatically terminates when the team project is closed by the team member.
- All users work locally on different working areas. Every user can manage one working area in active state to which new elements are added. All other working areas are there for reference purposes.
- An ownership of a working area can be terminated by the team member at any time. If an item belonging to another working are must be edited, the user needs to ask from the owner to grant access to the working area by releasing it. After released the working area may be owned by any other team member.
- Only a team member with administrative privileges can take working areas from other team members and erase or merge working areas.
- Graphic Override enabled to provide different output of the view (color, line types, line weight, half-tone, and hatch pattern).
- Saving the project also means synchronization with the central model, publishing changes and making it available to all other team members.
- If a team member would like to go on-site or by any other means wishes to leave and take the current status of the changes the team member may turn the project to offline mode on that computer. When going back to online mode all changes are automatically published.



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Reaching specific mile-stones or wanting to create an archive copy the team project can be converted into a single user (regular) project. The conversion creates a copy of the content and the single user copy of the project is no longer connected to the teamwork.

8.2. Setting up a team project

You can convert any regular project into a team project by following these steps:

- Open an existing project.
- Convert the project into a team project using the "File / Teamwork / New project" command. Specify a file name and location for the central model on a network drive to which all team members (users) have access.
- Add new team members by defining the name and an optional password for login. The following image shows the User administration dialog, adding users.

User administration ×			User administration	
Name Project role			Name John Smith	Project role TEAM member
Add new user	User:	John Smith	Add n	ew user
	Name			Edit
Edit	Simple login (no passw	ord needed)		cuit
Remove	Password again		Re	move
OK Cancel		OK Cancel		OK Cancel

Login by choosing one of the identities previously defined.

Login as user	×						
Choose from the list	Jack Anderson V						
Password	John Smith						
	e choose your identity from the list above to log into the team project. Please consult the team t administrator to get the necessary password if needed.						

Create the Master working area. Master working area is the only working area where password is required to enter. This is the common part of the team project which can only be modified later by a team member who knows the password to it.
Working area

Name	Master working area					
Password	••••					
Password again	••••					
Now you need to set up a name and password for the so called "Master" working area. A Master working area is a special, protected working area which contains fundamentals of your team project that can be later modified only with administrator rights (storeys, layers, initial state of the project,).						
		ОК	Cancel			

Create additional working areas. These provide simultaneous access to the shared model for the other users. Work spaces can be named after work types, identities or other ideas. One working area can be owned later only by one team member this protects the integrity of the team member's work.

137

ive Working area	Current owner	Visible	Editable	Graphic override
Master working area	Jack Anderson	Ŷ	Ē	No override
Wetter				
Working area	i		×	
Name:	Interior design			
		ОК	Cancel	
	and ownership of the team project working areas; ide] settings for their own taste. Certain functions			sting areas. All team
/				

- Save the project.
- Close the project. Closing the project releases all working areas for other users. Team members can login choosing one of the identities previously defined and begin to work on Team projects.

8.3. Working in a team

You can work in a team following these steps:

- Open the central team project file.
- Login with a name (and optional password).
- Choose one or more working areas and designate the active one.
- Create new items and/or modify and remove existing ones on the working areas currently owned.
- Save the project to publish all local changes to the team.
- Exit teamwork by closing the team project.

8.4. Refreshing the team project

The team project is automatically refreshed when the central project is opened or on-demand using the "Refresh project" command.

Turning the local project to offline mode the team project cannot be refreshed until the project is set back to online mode again.

8.5. Working area administration – managing working areas

The working area is a collection of elements handled by a team member, e.g., walls, windows, doors, stairs, etc. Only one user can edit one working area at a given time. All users can view the working areas owned by other users, but they cannot make changes on it.

The Working area manager provides functionality to create or change working areas.

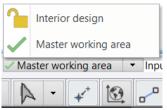
orking	area manager					
ctive	Working area	Current owner	Visible	Editable	Graphic overrid	le
0	Master working area	Jack Anderson	?	<u> </u>	No override	
C) Interior design	Jack Anderson	Ŷ	e r	No override	`
list ab	ove represents the current stat	us and ownership of the team project working areas; yo rerride] settings for their own taste. Certain functions ma	u may even add new or	nes or rename ex	isting areas. All tea	m
				innoù atoro oniji		
	dd	Character and the second				
A	dd new working area	Change password				
				ОК	(Cancel

The Working area manager dialog provides the following information:

Active	Designates the working area to which new elements are added. You can relocate the indicator when multiple working areas are owned.		
Working Area	Indicates the name of the working area. Click inside the name field to rename it.		
Current owner	Indicates the current owner of the working area.		
Visible	You can enable or disable the visibility of a working area. You can hide unwanted working areas to increase efficiency for your work.		
Editable	By default, all working areas are locked for editing. Choose one or more working areas you want to edit. When you take over more than one working area you can activate one working area to which new elements are added. Working areas currently owned by other team members cannot be taken over for editing but they are still visible as reference drawings by default. Should all the working areas be occupied by other team members already you can still login as a passive visitor in READ-ONLY mode.		
Graphic Override	Use the Graphic override option when you would like to color-code representation of different working areas for better understanding. You can define color, half-tone, line type, line weight and hatch pattern for override.		

8.6. Change active working area on the View Control Bar

The View Control Bar always displays the active working area. To change the active working area, click on the drop-down list and select another one. You can only choose working areas currently owned and editable.



The active working area drop-down provides the same functionality as the "File / Teamwork / Working Area Administration" dialog.

Advanced Course - Tutorial

8.7. Reassign elements to a different working area

A team member can reassign elements on one working area to another working area by using the "Reassign elements to a different working area" command and selecting the items.

At specific administrative steps (such as deleting a working area) it is also possible to reassign items belonging to a working area.

8.8. Work offsite or offline

Changing to OFFLINE mode is useful when you are not connected to the network to save your changes.

Working in OFFLINE mode you can work on the project and make changes on your editable working areas far from the team, with no network connection.

Project changes are saved on your hard drive each time you modify and resave the project.

To share changes with the team members, switch back to ONLINE mode when you can do that and save the project file.

Use the "File / Teamwork / Creating a Local Copy for OFFLINE mode" command to go offline.

Note: all changes made on this project are not available for other team members until you switch back to ONLINE mode and save the project again.

8.9. Convert Team project into single-user project

Reaching specific mile-stones or wanting to create an archive copy the team project can be converted into a single user (regular) project. The conversion creates a copy of the content and the single user copy of the project is no longer connected to the teamwork.

- Use the "File / Teamwork / Administrative tools / Convert Team project to single-user project" command.
- Save the project.
- Close the project.
- Open the project again. From now on you can work in single user mode.

