

# Release Note

Release Date : Dec, 2022

Product Ver. : nGen 2023 (v1.1)

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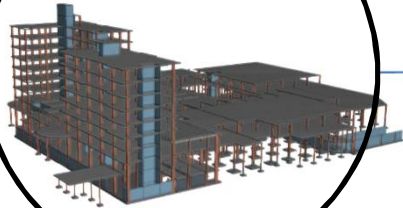
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# 1. New Environment for Drawing Mode

## Provide Drawing Mode with 3D model for Generation Drawings

nGen 2022 (v2.1)

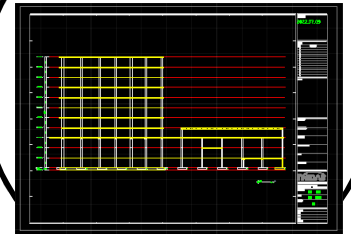
*Model for Analysis*



- Could not confirm the 3D shape for drawing
- Does not support update of drawings according to changes in model and reinforcing bar information

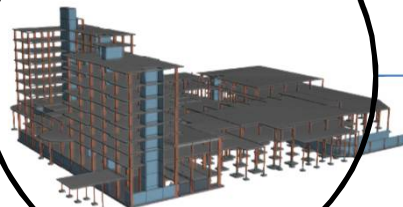
(drawings must be regenerated)

*Drawing*

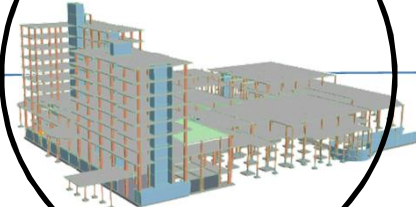


nGen 2023 (v1.1)

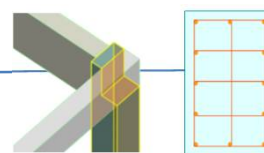
*Model for Analysis*



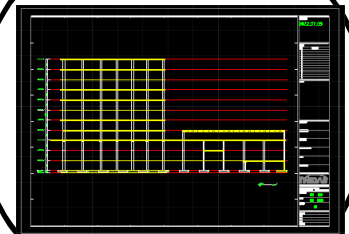
*Model for Drawing*



*Edit Model*



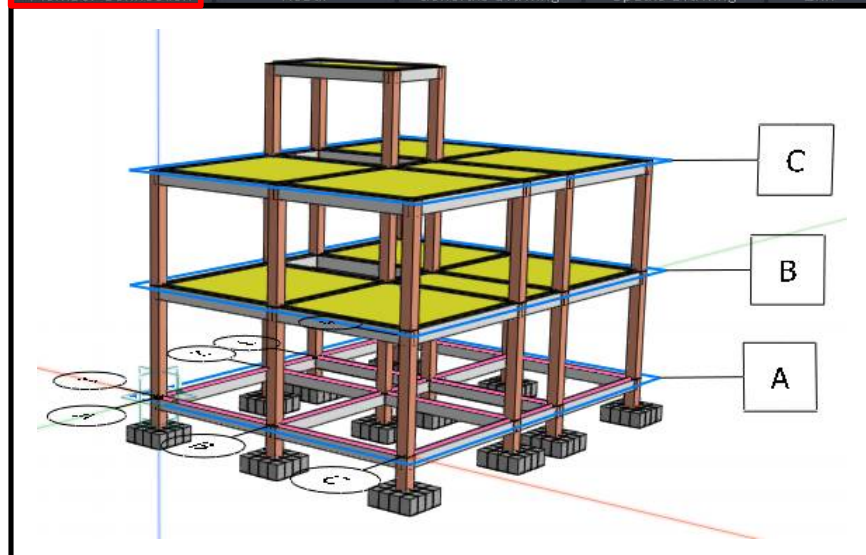
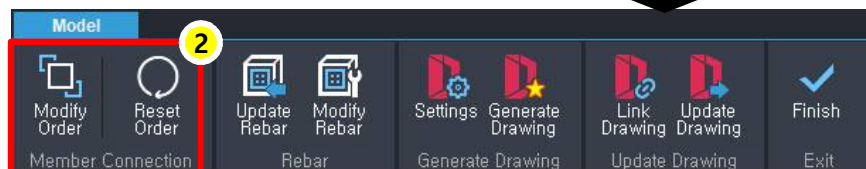
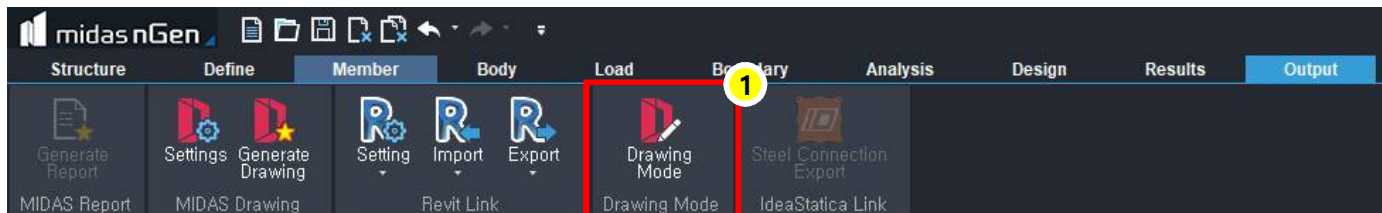
*Drawing*



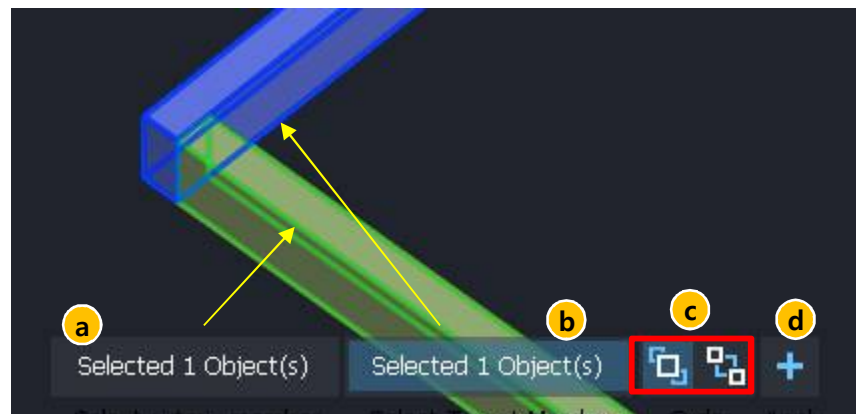
Update drawing for model revision

## 2. The Process of Generating Structural Drawings

### Drawing Mode



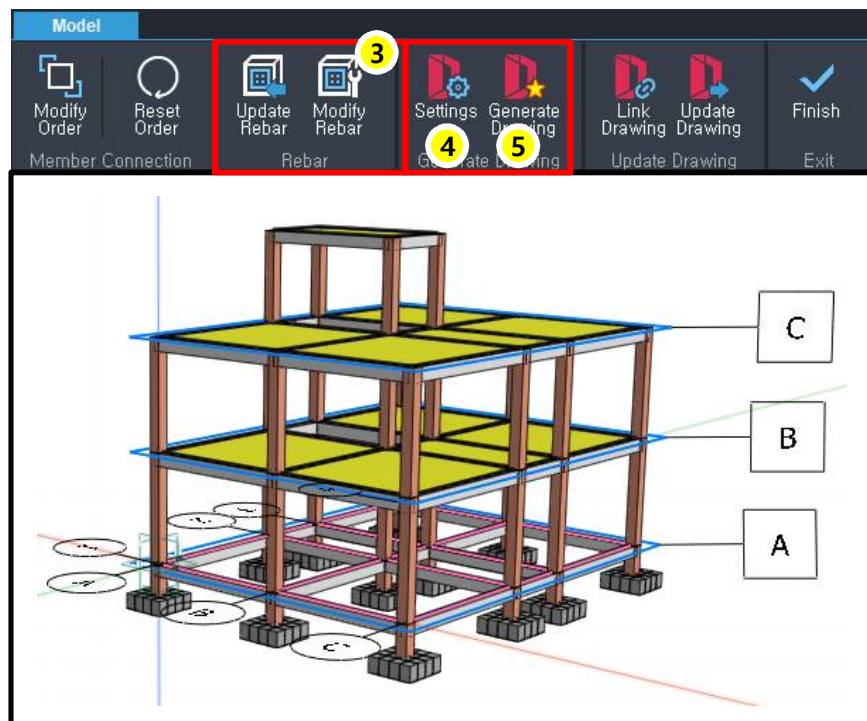
- ① Click 'Drawing mode' in Output tap. → Drawing mode is activated.
- ② Click 'Modify Order'. → Modify the shape of the connections
  - \* Reset Order : Initialize the edited joint shape in Drawing mode.



- a. Select a criteria member
- b. Select a target member
- c. Select a order type.
- d. Click "+".

## 2. The Process of Generating Structural Drawings

### Drawing Mode



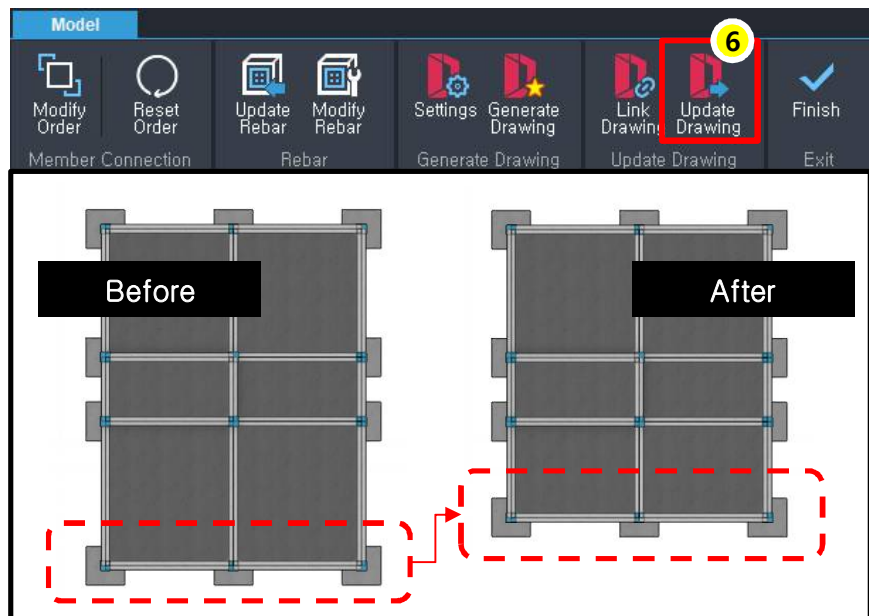
③ Click 'Modify Rebar' → Edit a rebar information.

- It does not affect the design result.
- It will be reflected in the drawings for the member lists and rebar arrangement.
- “Update Rebar”: After modifying the reinforcing bar information in 'Modify Rebar', the rebar information will be updated again by redesign.

④ Click Settings → Set the level for generation drawings

⑤ Click 'Generate Drawing' → Execute midas Drawing and deliver the information.

### 3. Main Function for Update Drawing (Without re-generation)



⑥ Click 'Update Drawing' → If the model shape or design data (reinforcement information) will be changed in the model, the drawing can be updated.

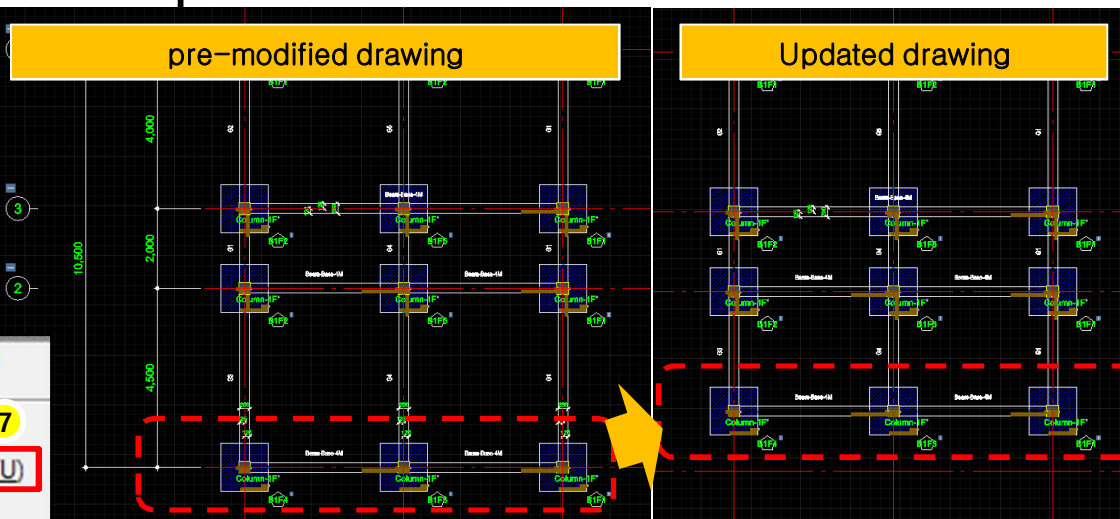
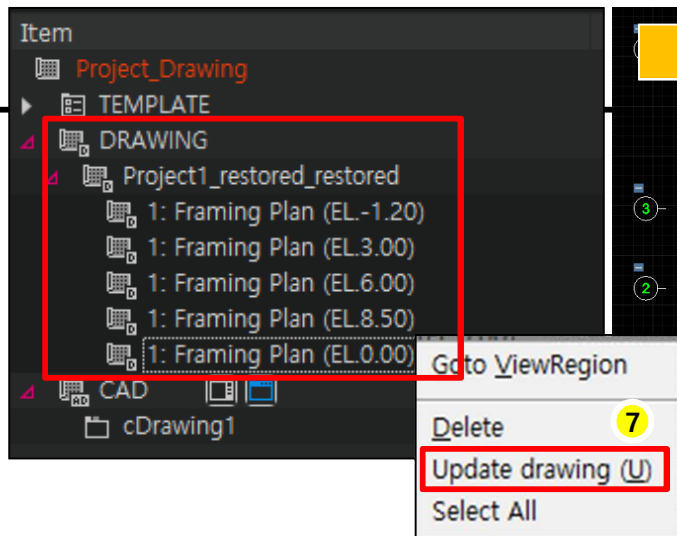
- ❖ No need to regenerate previous generated drawing if you use 'update drawing' function.

⑦ After selecting Drawing lists that need to be updated in the tree menu of midas Drawing, right-click the mouse and update drawing.

- ❖ Link Drawing : Only mdwg files that match the model running in nGen can be opened.

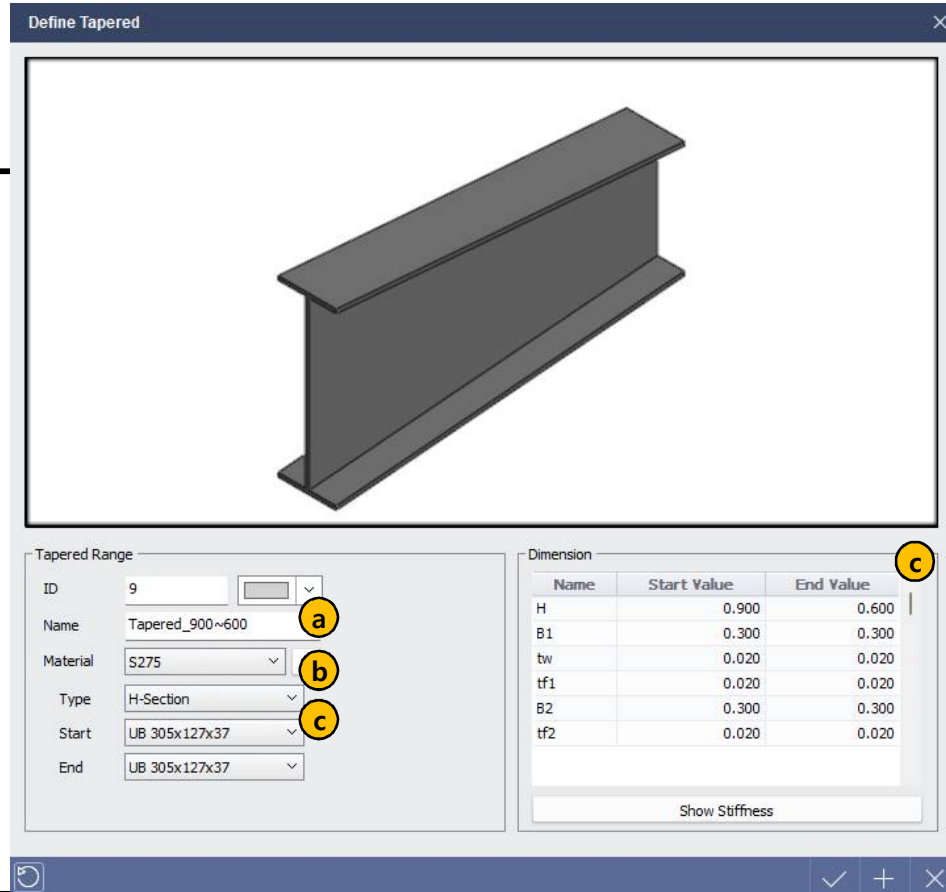
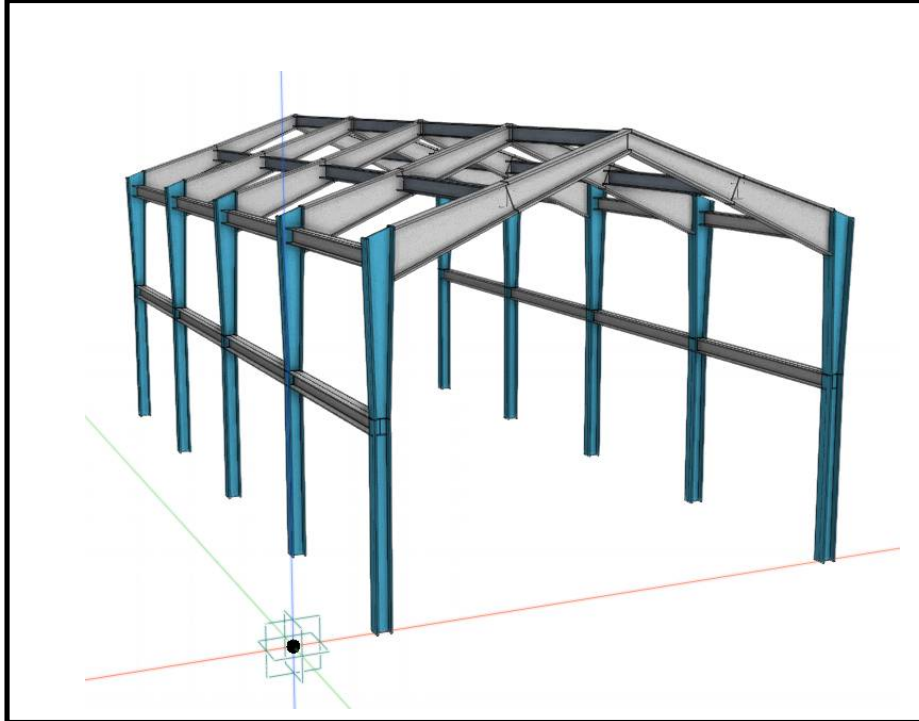
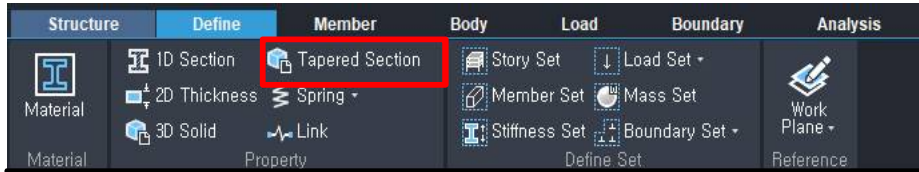
- ❖ Older versions of mdwg files cannot be opened.

- ❖ By installing another midas Drawing file, which is provided separately global technical support center website.



## 4. Tapered Section

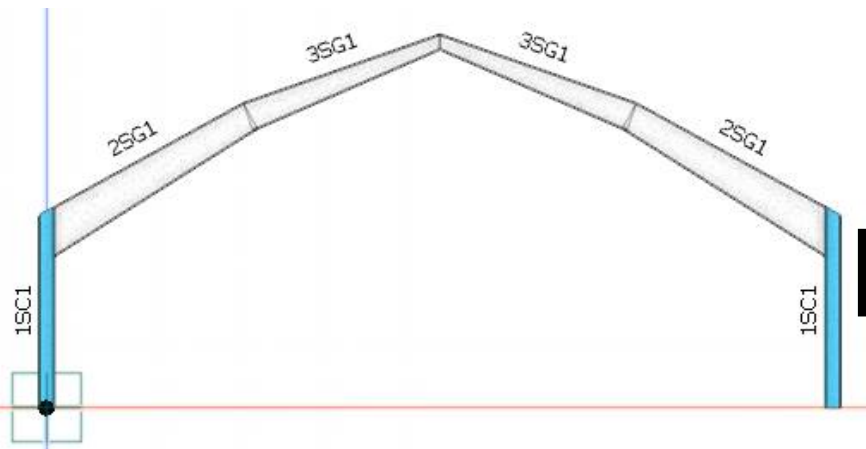
### Define the Tapered Section



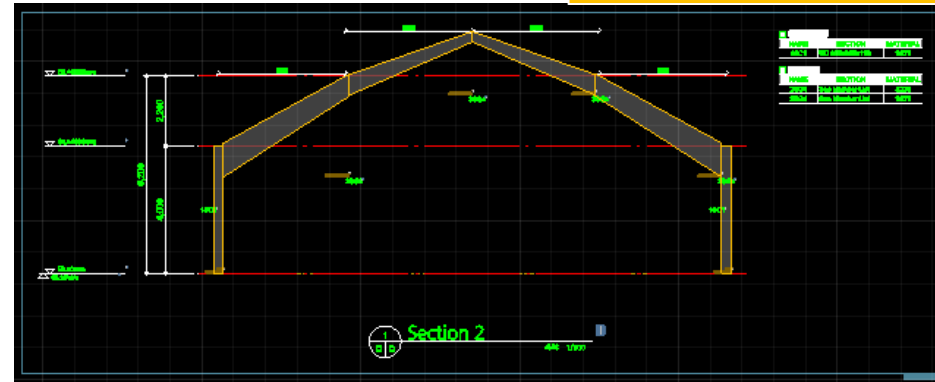
- Input the name for tapered section
- Select the material
- Input the value for tapered section (Type : Support Only H-section, and other section shapes will be added later.)

## 4. Tapered Section

### Generate Drawing for Tapered Section



Elevation Drawing



Generate Member List

RC Steel

Drawing type	View Sc...	Member list style
<input checked="" type="checkbox"/> Member List Steel column	1:60	STEEL COLUMN LIST STYLE02
<input type="checkbox"/> Member List Sub column of St...	1:60	STEEL SUB COLUMN LIST STY...
<input checked="" type="checkbox"/> Member List Steel beam	1:60	STEEL BEAM LIST STYLE02
<input type="checkbox"/> Member List Steel sub beam	1:60	STEEL SUB BEAM LIST STYLE0...
<input type="checkbox"/> Member List Steel bracing	1:60	STEEL BRACE LIST STYLE01
<input type="checkbox"/> Member List Crane	1:60	STEEL CRANE GIRDER LIST STY...
<input type="checkbox"/> Member List Truss	1:60	STEEL TRUSS LIST STYLE01
<input type="checkbox"/> Member List Lattice	1:60	STEEL LATTICE COLUMN LIST :



Member Lists

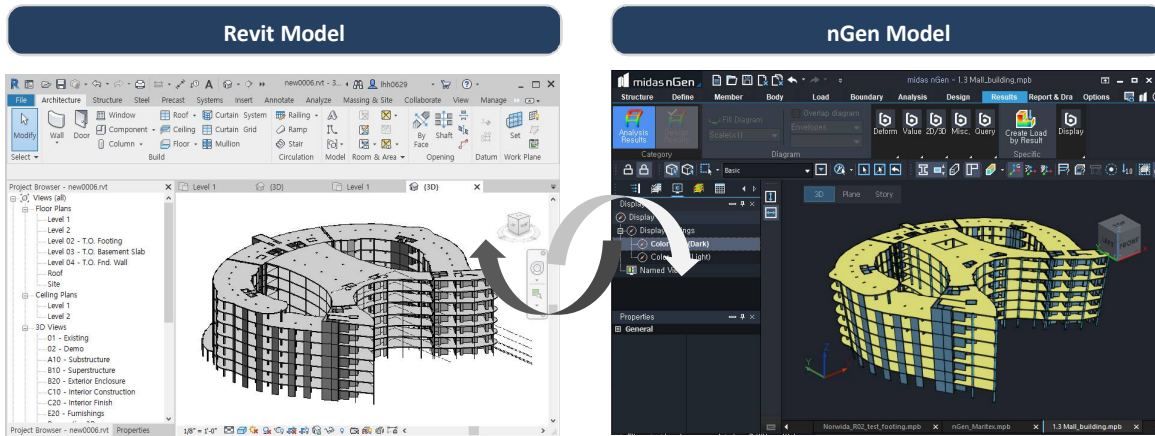
STEEL BEAM LIST

NAME	MEMBER SIZE	MATERIAL	REMARKS
2SG1	Start: H 900x300(300)x20(20)x20 End: H 600x300(300)x20(20)x20	S275	H-section : h x bf_top(bf_bot) x lf_top(lf_bot) / tw
3SG1	Start: H 600x300(300)x20(20)x20 End: H 300x300(300)x20(20)x20	S275	H-section : h x bf_top(bf_bot) x lf_top(lf_bot) / tw

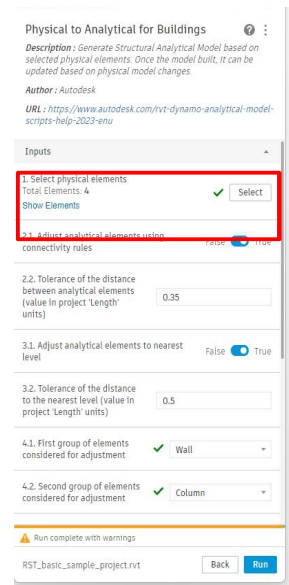
If there is a tapered beam, select Style02.



# 5. nGen-Revit Interface



In the case of Revit 2023, you can export to nGen after setting structural elements through the Analytical Automation function.

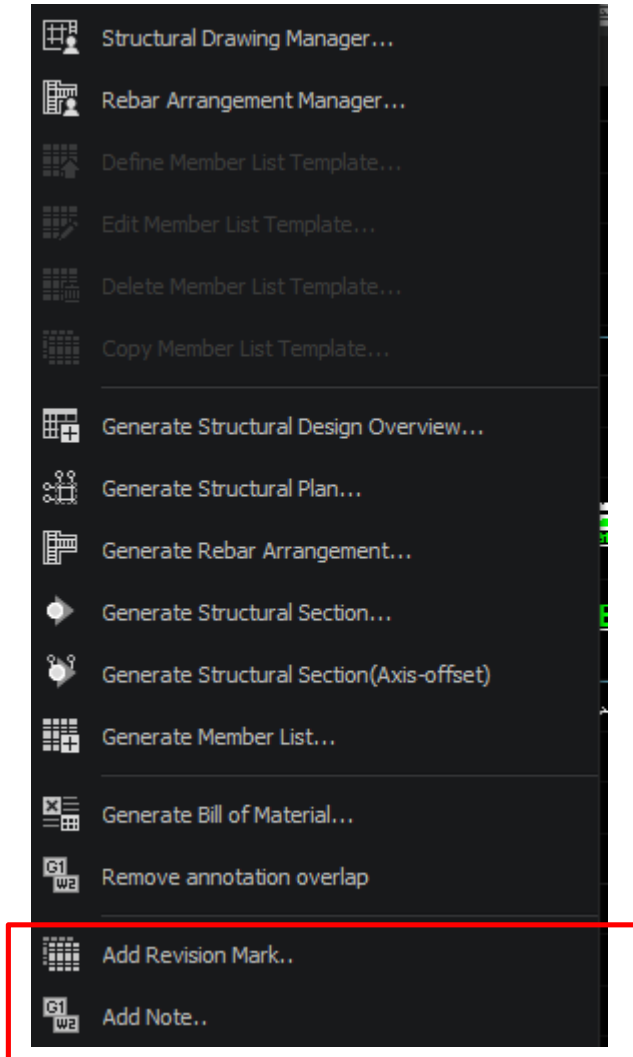


The following table shows the Revit components that are sent to midas nGen.

Components		Revit	Interface	nGen	Check	
<b>Properties</b>	<b>Grid</b>	Revit	↔	nGen	Inclined and curved grids are not supported.	
	<b>Material</b>	Revit	↔	nGen		
	<b>Section</b>	Revit	↔	nGen		
<b>Member</b>	<b>Beam</b>	Revit	↔	nGen	Import as mat footing member in midas nGen. Import as mat footing member in midas nGen. Import as brace member in midas nGen.	
	<b>Column</b>	Revit	↔	nGen		
	<b>Wall</b>	Revit	↔	nGen		
	<b>Slab</b>	<b>Horizontal Slab</b>	Revit	↔		nGen
		<b>Slope Slab</b>	Revit	→		nGen
		<b>Drop Panel</b>	Revit	→		nGen
	<b>Foundation</b>	<b>Mat footing</b>	Revit	↔		nGen
		<b>Isolation footing</b>	Revit	→		nGen
		<b>Strip footing</b>	Revit	→		nGen
	<b>Brace</b>	Revit	↔	nGen		Import as brace member in midas nGen.
	<b>Truss (Family)</b>	Revit	→	nGen		Import as brace member in midas nGen.
	<b>Opening</b>	Revit	↔	nGen		
<b>Offset Information</b>	Revit	↔	nGen			
<b>Load</b>			-		Not support	
<b>Boundary condition</b>			-		Not support	
<b>Rebar Data</b>			-		(nGen 2021 (v2.1))	

\* Rebar Data is supported to export only nGen to Revit.

## 6. Revision Mark & Note



**BEAM LIST**

NAME	SECTION	MATERIAL
2SG1	See Member List	S275
3SG1	See Member List	S275

10th. Nov.. 2022 : Changed the material Info.

Note)  
1. Soil Bearing must have the value more than 200kN/m2.

Simple revision information and notes can be added in Drawing mode. if the drawing is updated, this information will be maintained.

## 7. Steel Section DB

**Add Box & Pipe Section as per UNI code**

