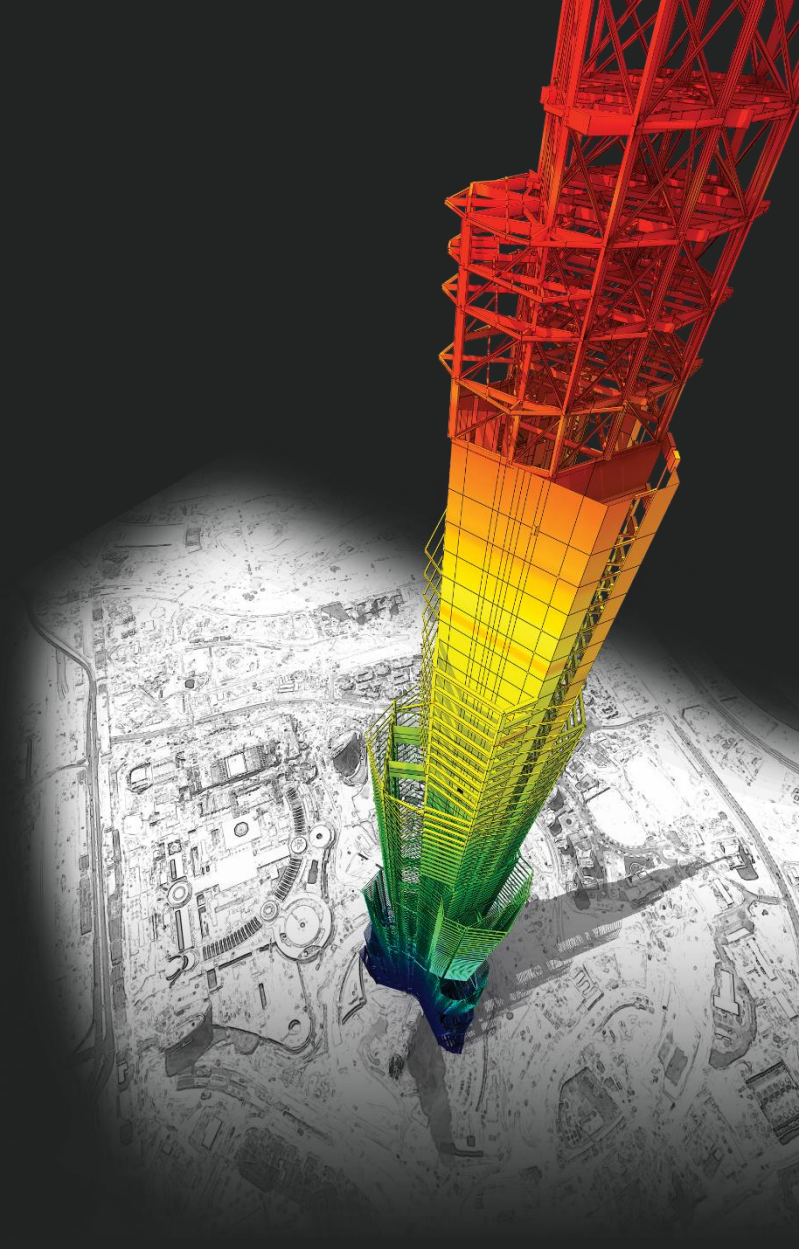
Release Note

Release Date : July. 2023

Product Ver. : midas Gen 2023 (v2.1)



DESIGN OF General Structures

Integrated Design System for Building and General Structures

Enhancements

- ***midas Gen***

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3) Import Pushover Hinge Properties 6

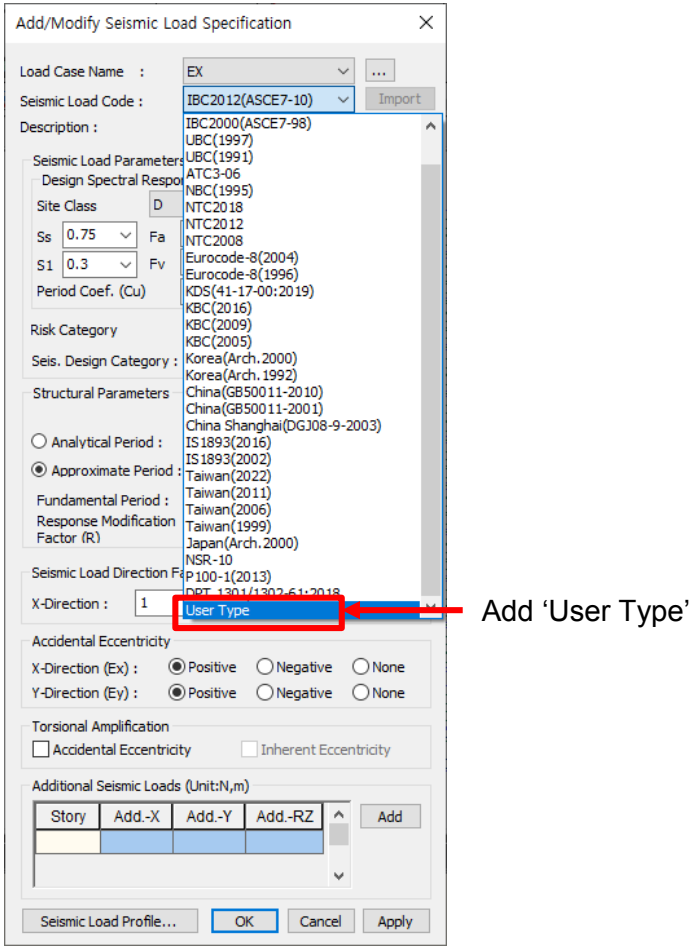
*) Appendix Guide to Input User Type Seismic Load

*) Appendix Guide to Export Pushover Hinge for Inelastic Hinge Properties

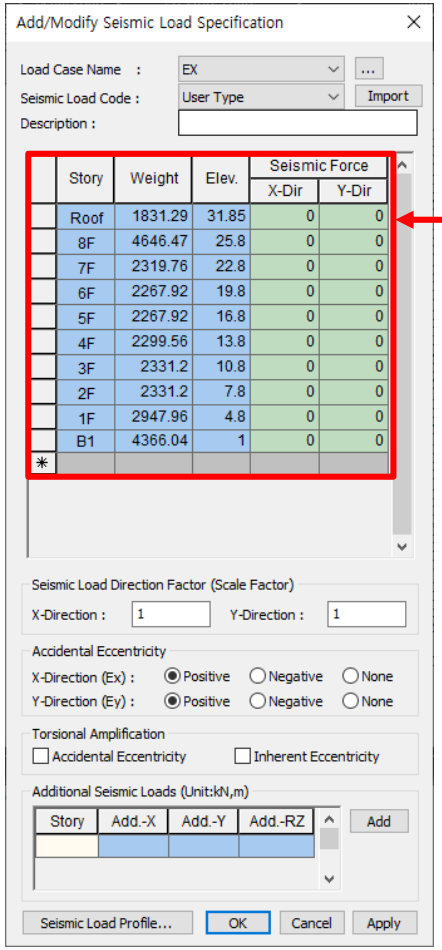
midas Gen

1. User Type Seismic Load

Added New Function Static Seismic Load: "User Type"



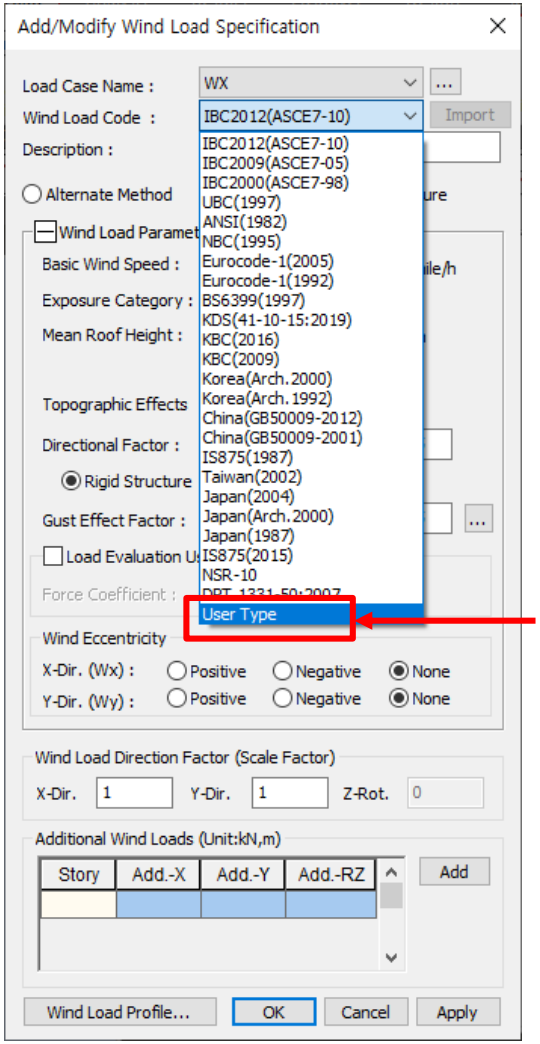
Add 'User Type'



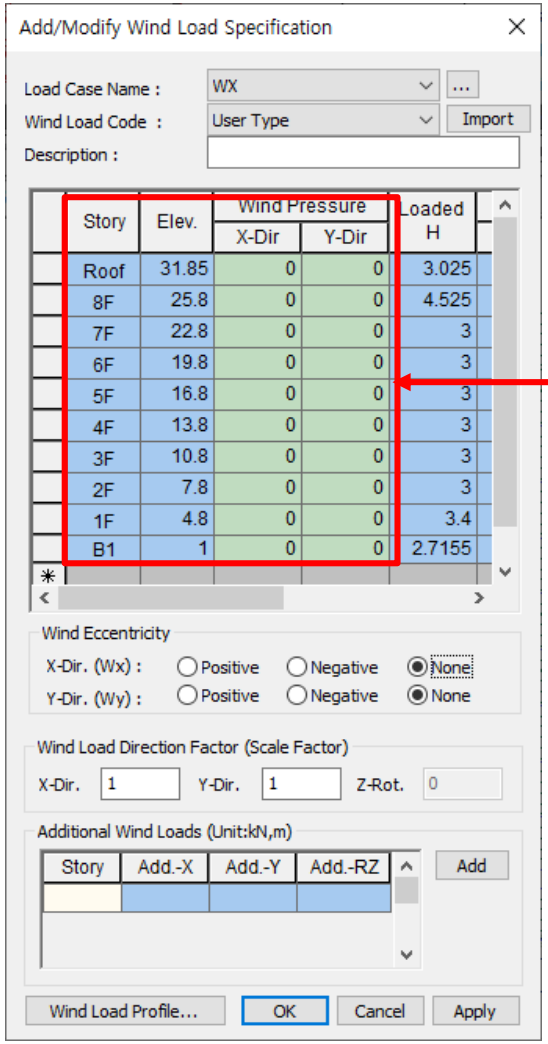
[User Type]

- We can generate these datas automatically (Story Name/Elev./Loaded H/ Loaded B)

2. User Type Wind Load



Add 'User Type'

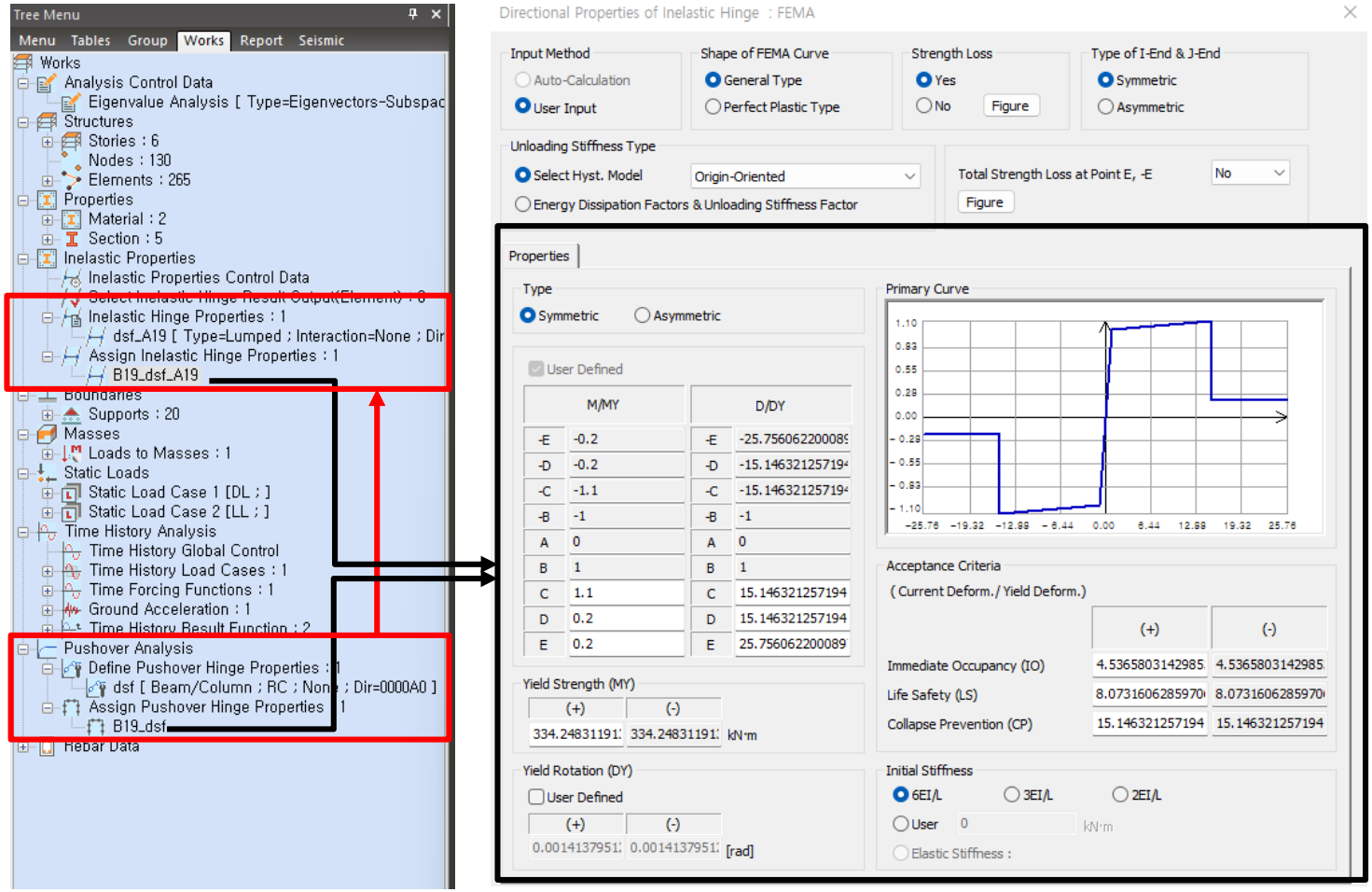


[User Type]

- We can generate these datas automatically (Story Name/Elev./ Width for each story)

3. Import Pushover Hinge Properties

Properties > Inelastic Properties > Inelastic Hinge > Import Pushover Hinge Properties



Hinge properties set in Pushover analysis can be imported to Inelastic Hinge Properties for the time history analysis.

Since Inelastic hinge properties are set before analysis, auto-calculation is not supported.

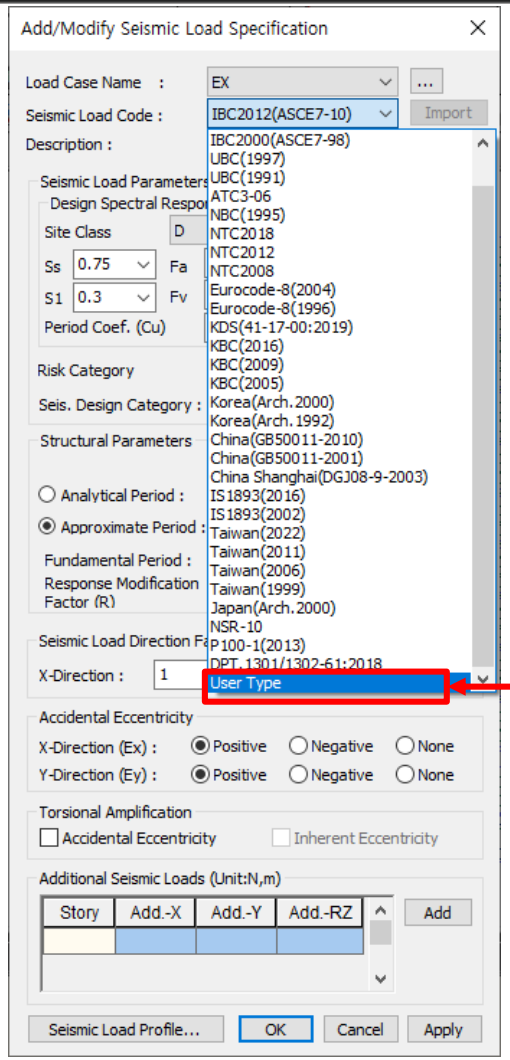
If the inelastic hinge properties are the same as the pushover's hinge properties, time history analysis can be performed quickly by bringing the automatically generated hinge properties.

Appendix.

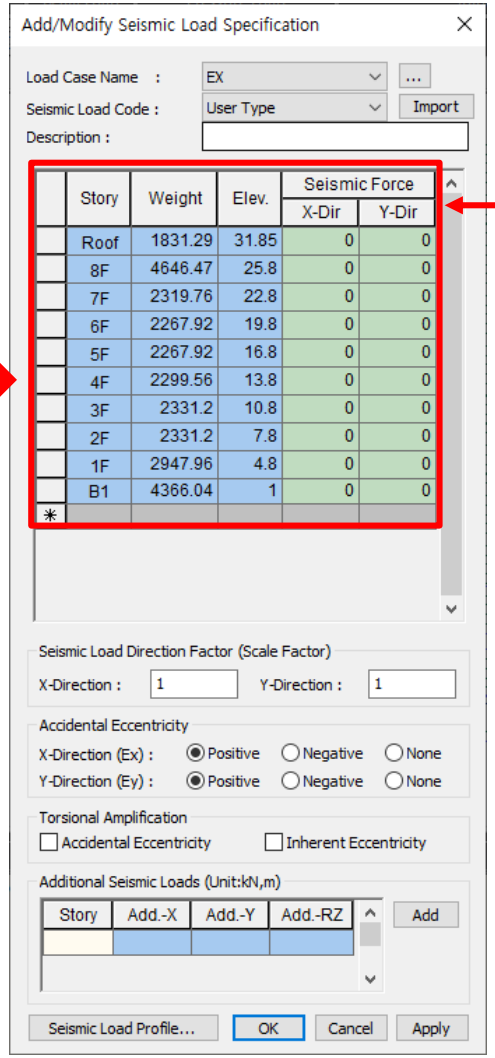
Guide to input User Type Seismic Load

Seismic Static Load

Added 'User Type' in the Seismic Load code.



Add 'User Type'



1. "Story Name/Weight/Elev." information is automatically filled (Read Only)

2. Seismic Force (x,y direction) is initial state (filled with 0.0). Real numbers can be entered (not read only)

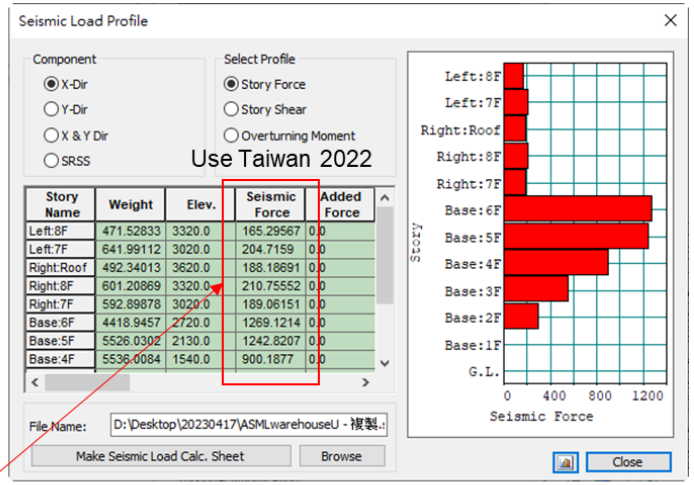
Seismic Static Load

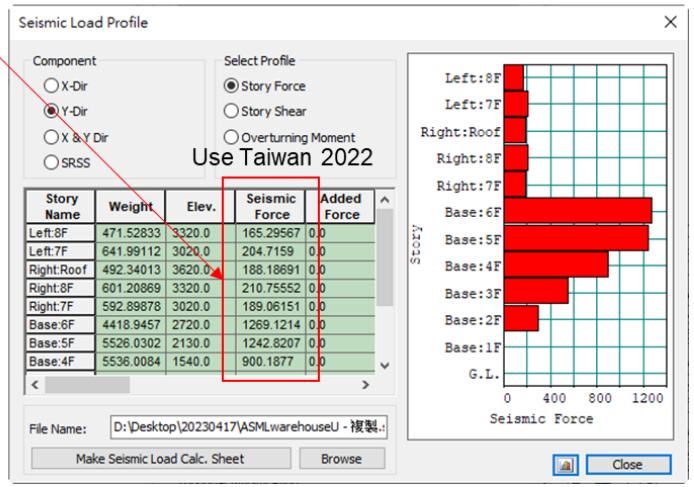
Added 'User Type' in the Seismic Load code.

This additional function can be use to input the seismic load for multi – module story building, such as multi – tower building. Because when using the Taiwan seismic code, can't accurately calculate the story force for that kind of building.

Hand Calculation

Module	Story Name	Weight	Elev.	Seismic Force	
				X-Direction	Y-Direction
Left	8F	471.528	3320	208.472	208.472
Left	7F	641.991	3020	141.919	141.919
Right	Roof	492.34	3620	239.528	239.528
Right	8F	601.209	3320	194.996	194.996
Right	7F	592.899	3020	96.150	96.150
Base	6F	4418.95	2720	1390.540	1390.540
Base	5F	5526.03	2130	1361.692	1361.692
Base	4F	5536.01	1540	986.288	986.288
Base	3F	5507.61	950	605.303	605.303
Base	2F	4645.75	600	322.473	322.473
Base	1F	308.384	10	0.000	0.000





Seismic Static Load

Added 'User Type' in the Seismic Load code.

After you calculate all seismic force at X-Direction and Y-Direction, at midas Gen you can immediately copy and paste the seismic force at X-Direction and Y-Direction.

Hand Calculation

Module	Story Name	Weight	Elev.	Seismic Force	
				X-Direction	Y-Direction
Left	8F	471.528	3320	208.472	208.472
Left	7F	641.991	3020	141.919	141.919
Right	Roof	492.34	3620	239.528	239.528
Right	8F	601.209	3320	194.996	194.996
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Base	6F	4418.95	2720	1390.540	1390.540
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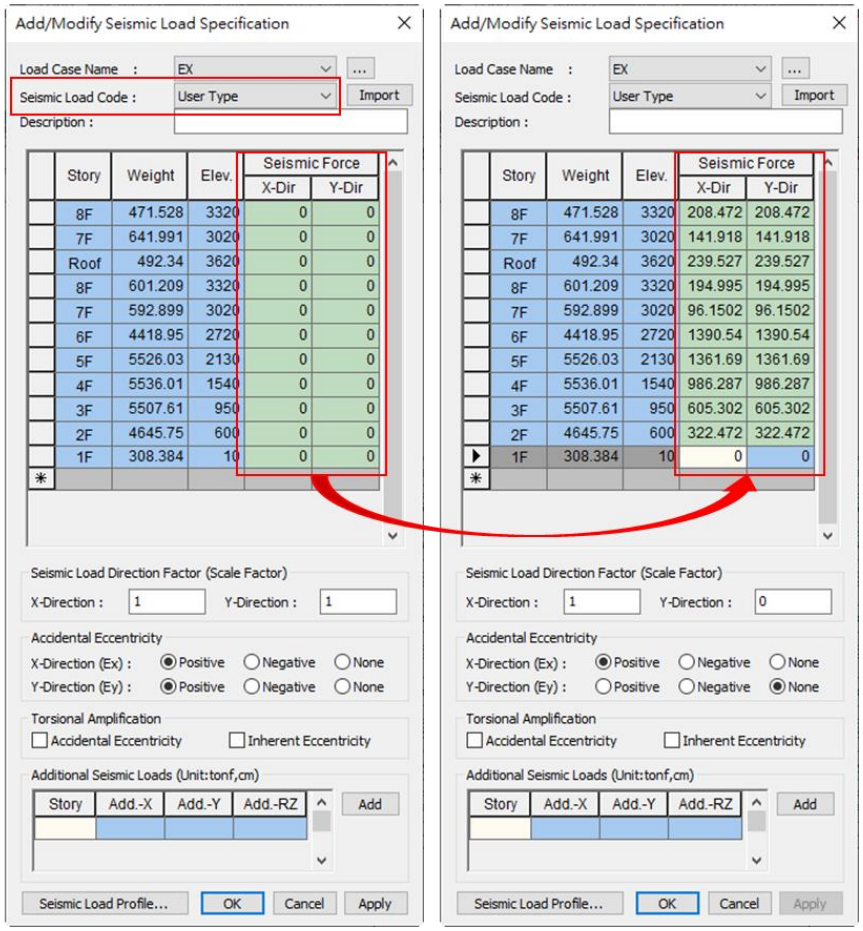
Base	3F	5507.61	950	605.303	605.303
Base	2F	4645.75	600	322.473	322.473
Base	1F	308.384	10	0.000	0.000

User Type Seismic Load



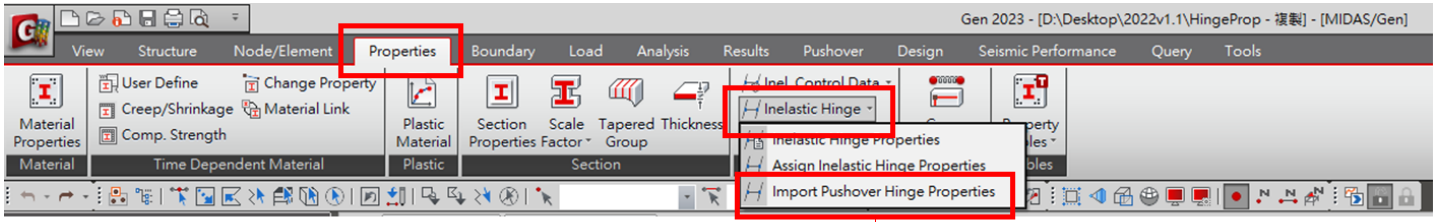
Appendix.

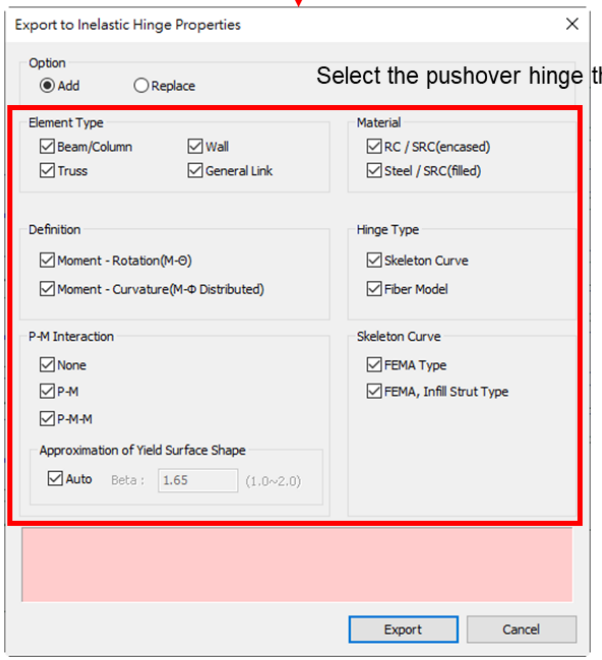
Guide to Export Pushover Hinge for Inelastic Hinge Properties

Export Pushover Hinge to Inelastic Hinge Property

This additional function help the user to immediately use the pushover hinge in the inelastic hinge property.

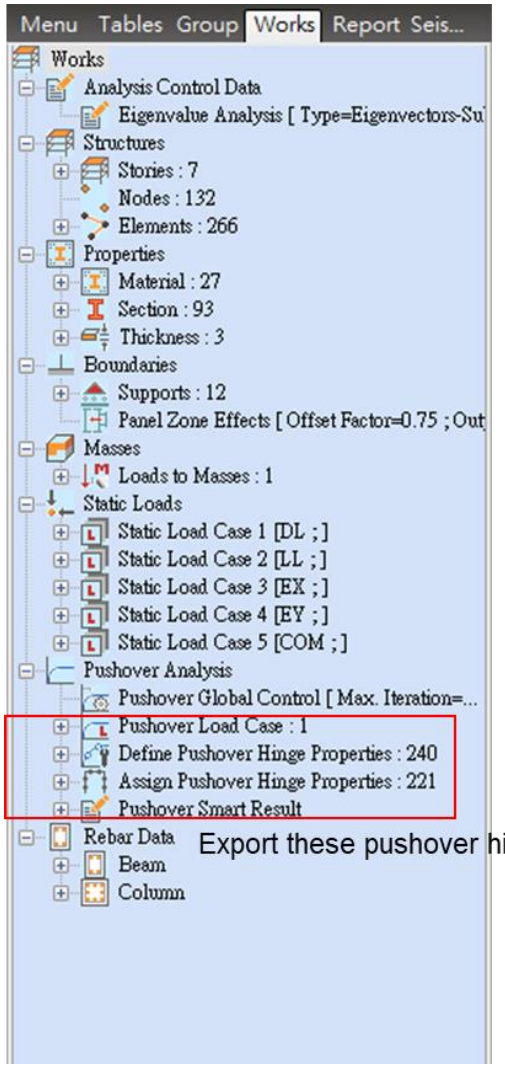
Properties > Inelastic Hinge > Import Pushover Hinge Properties



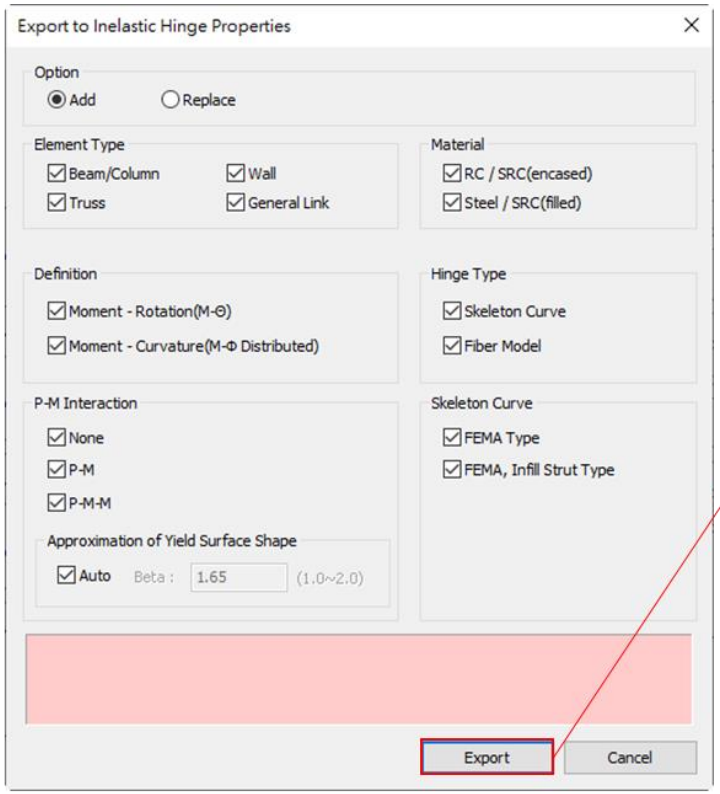


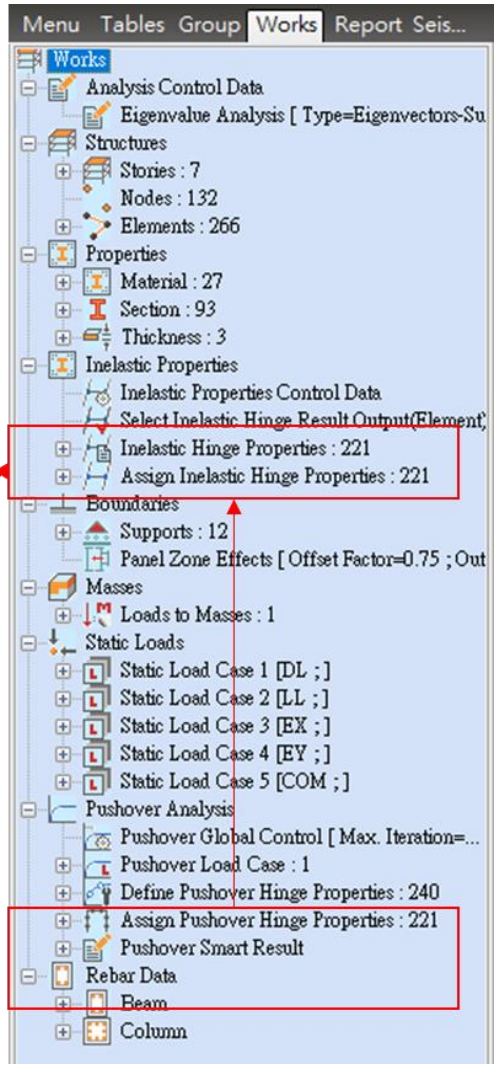
Select the pushover hinge that you want to export.

Export Pushover Hinge to Inelastic Hinge Property

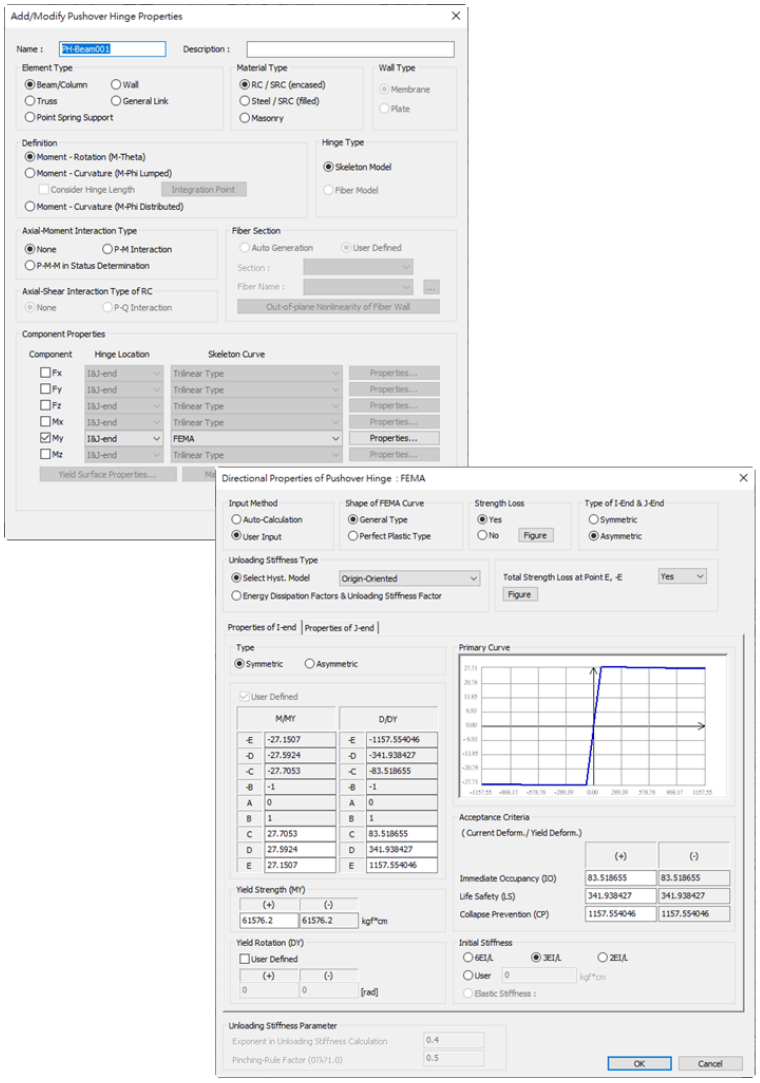


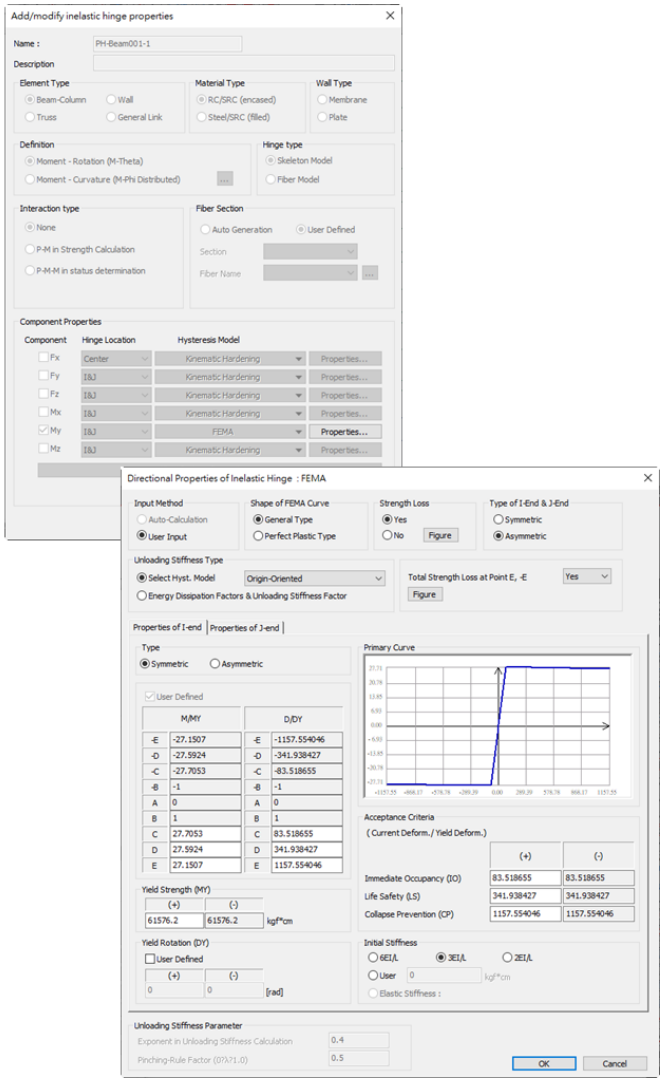
Export these pushover hinge.



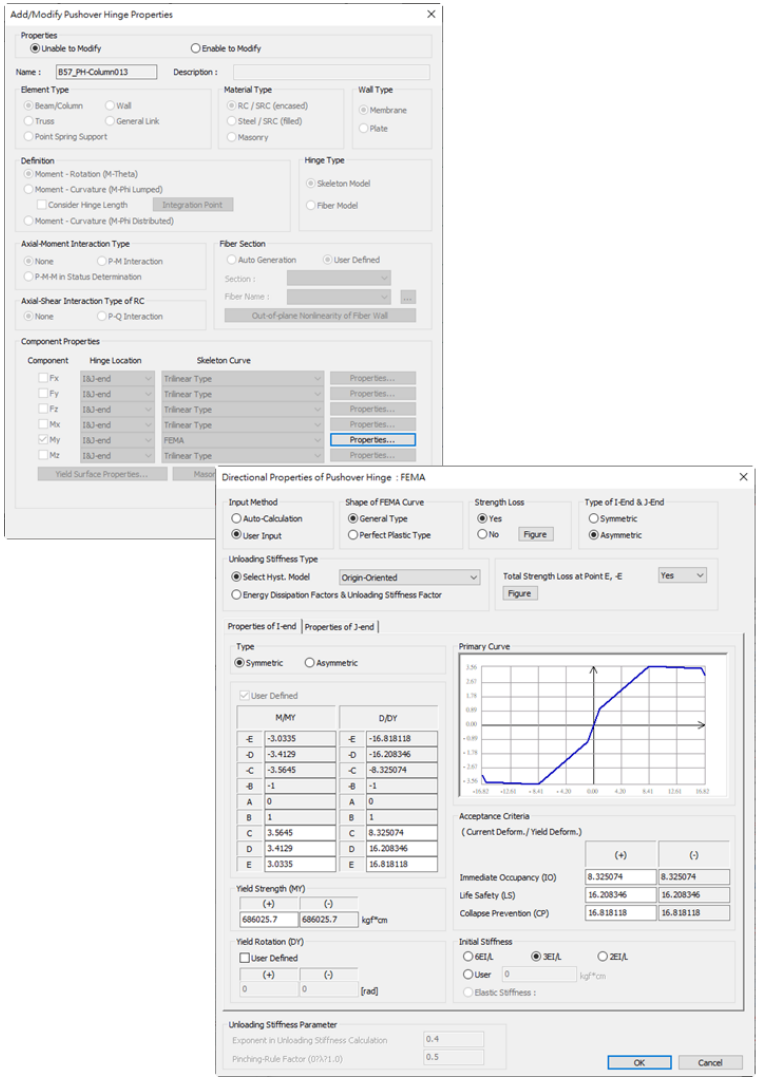


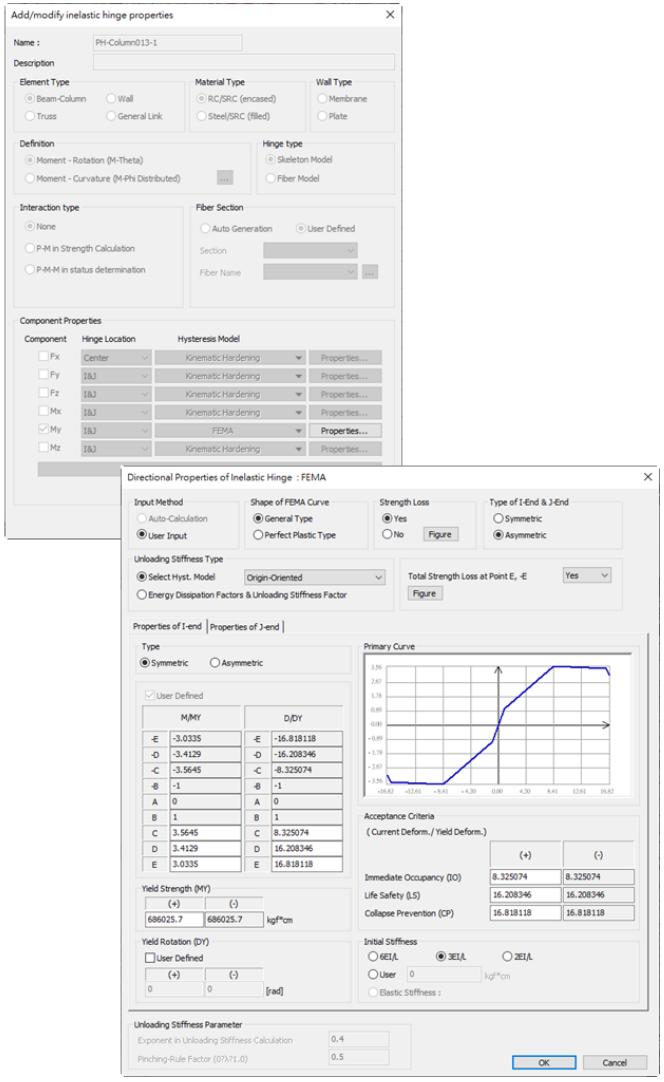
Export Pushover Hinge to Inelastic Hinge Property





Export Pushover Hinge to Inelastic Hinge Property





Export Pushover Hinge to Inelastic Hinge Property