Tips & Tricks of modelling in Midas Gen

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Technical Support Engineer

MIDAS

Midas Gen

One-stop solution for Building & General Structures

Introduction

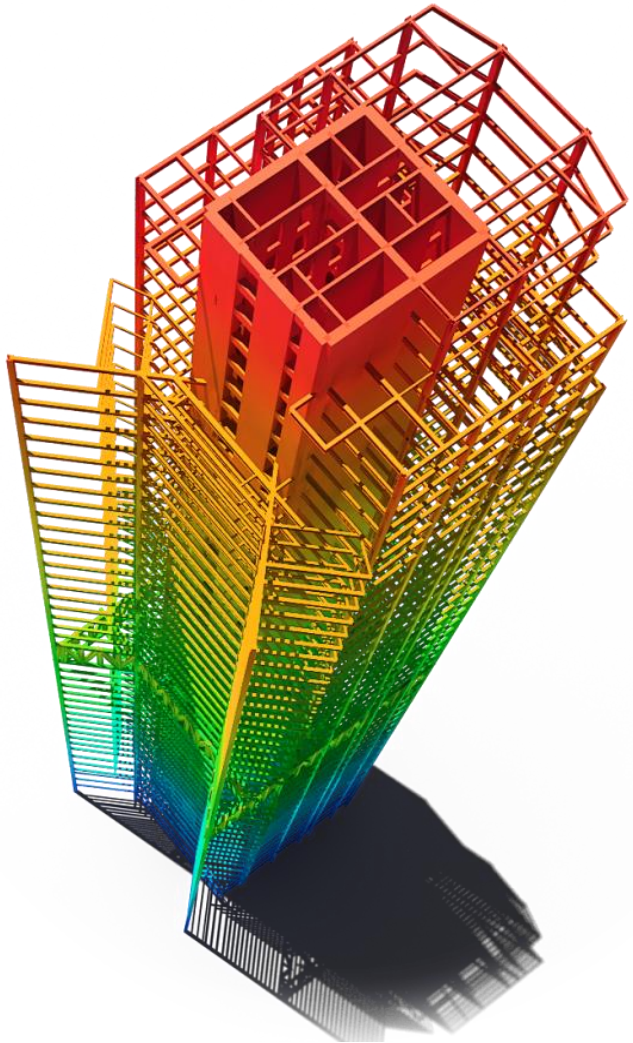
midas Gen

Analysis &
Design

midas Design+

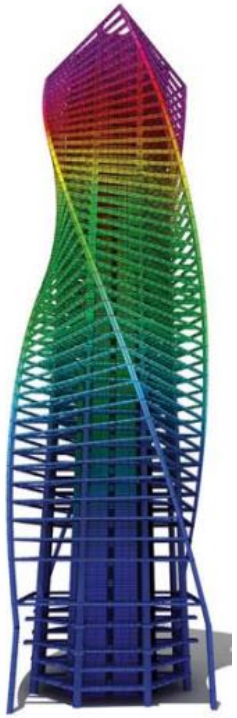
Design &
Drawings

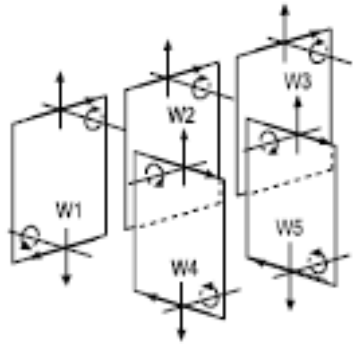
Contents



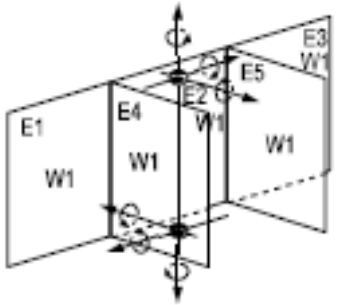
Wall ID

- *Member forces of wall elements are produced for each story by wall IDs. If two or more wall elements at a given floor are numbered with a same wall ID, they are recognized as a single wall structure and each element force is combined together for the force output.*

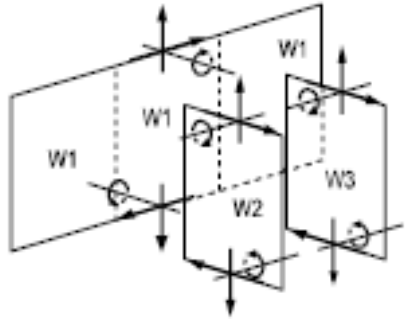




(c) Different wall IDs are assigned to each element



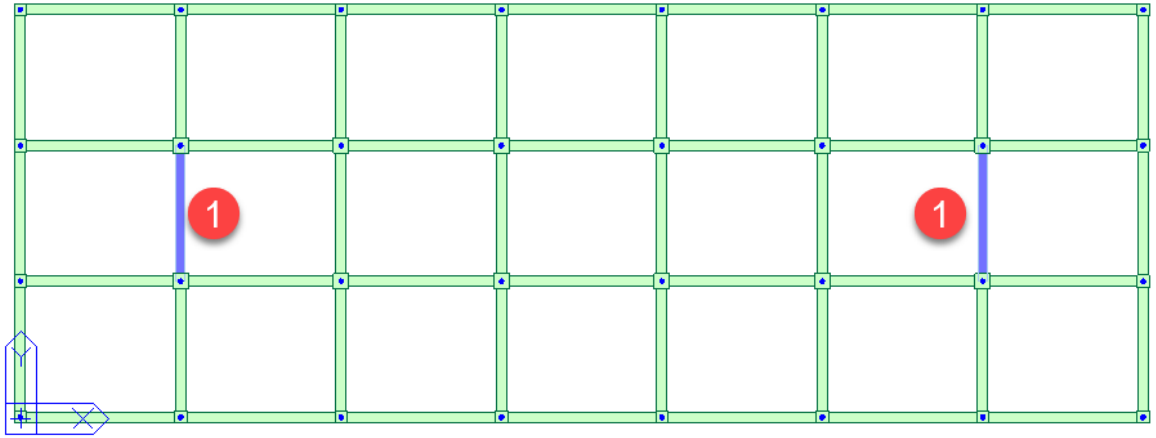
(d) Same wall ID is assigned to all elements

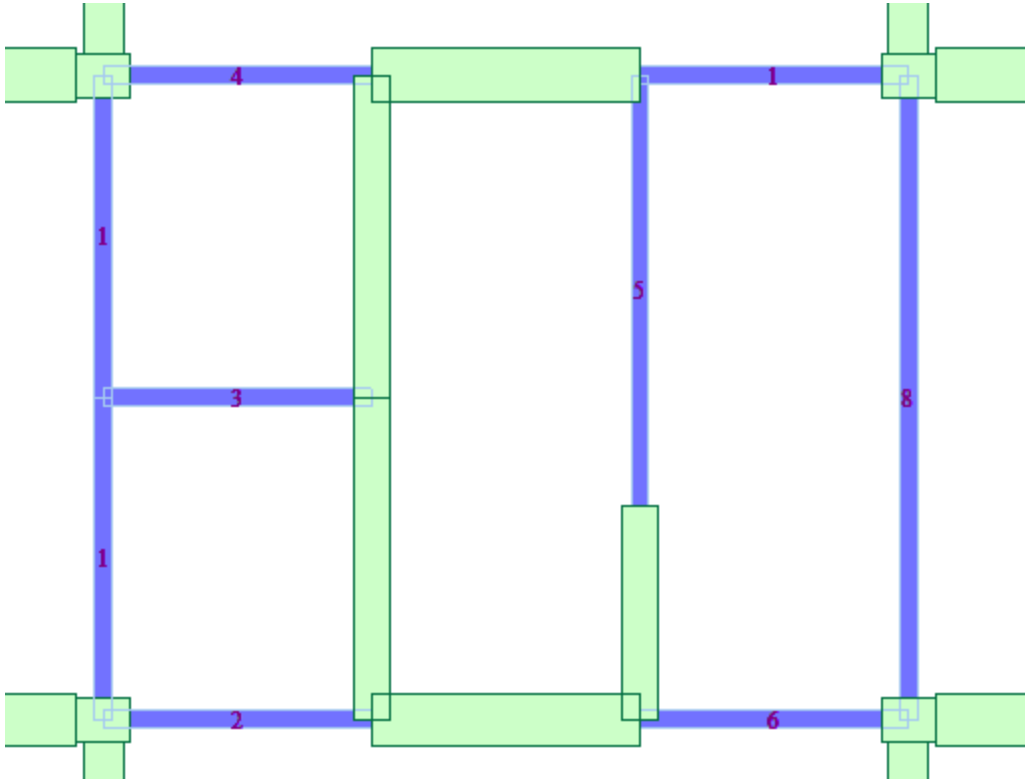


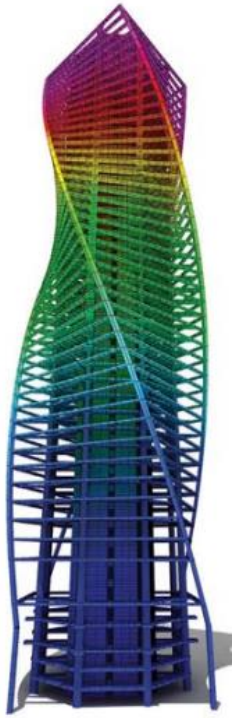
(e) W1 is assigned to Wall elements E1, E2 & E3. E4 and E5 are assigned with W2 and W3 respectively.

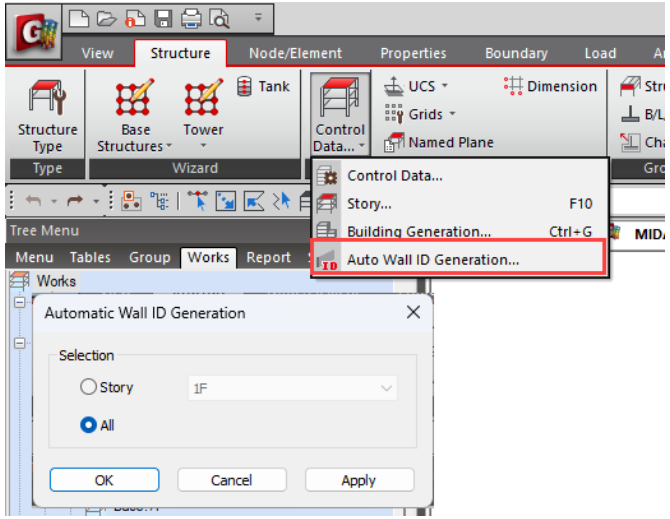
Wall ID

➢ ***Common Mistake***



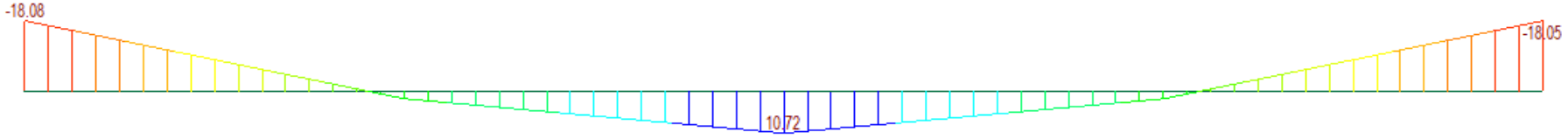


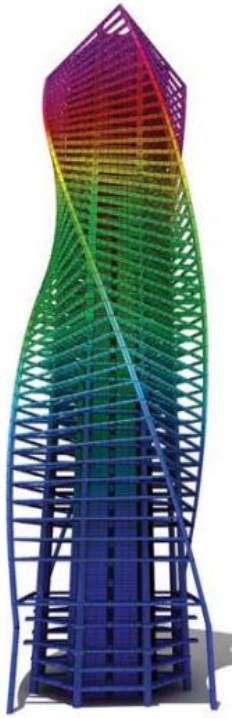


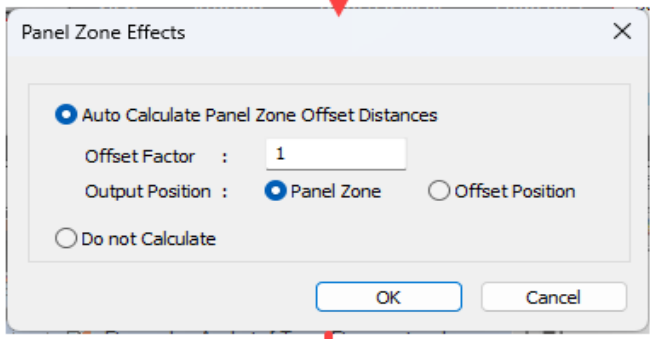


Pannel Zone Effect

- Automatically consider the stiffness effects of the Panel Zone where column members and girder members (horizontal elements connected to columns) of steel structures are connected.







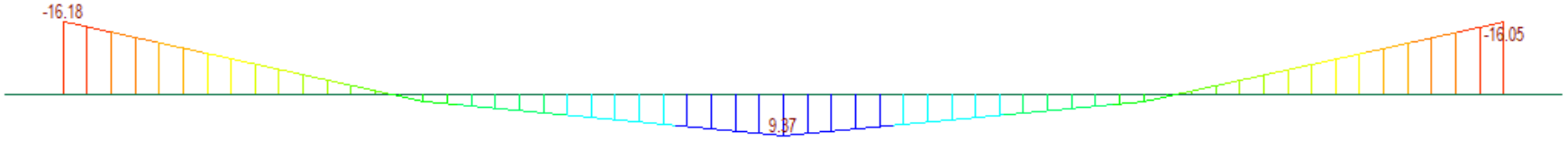
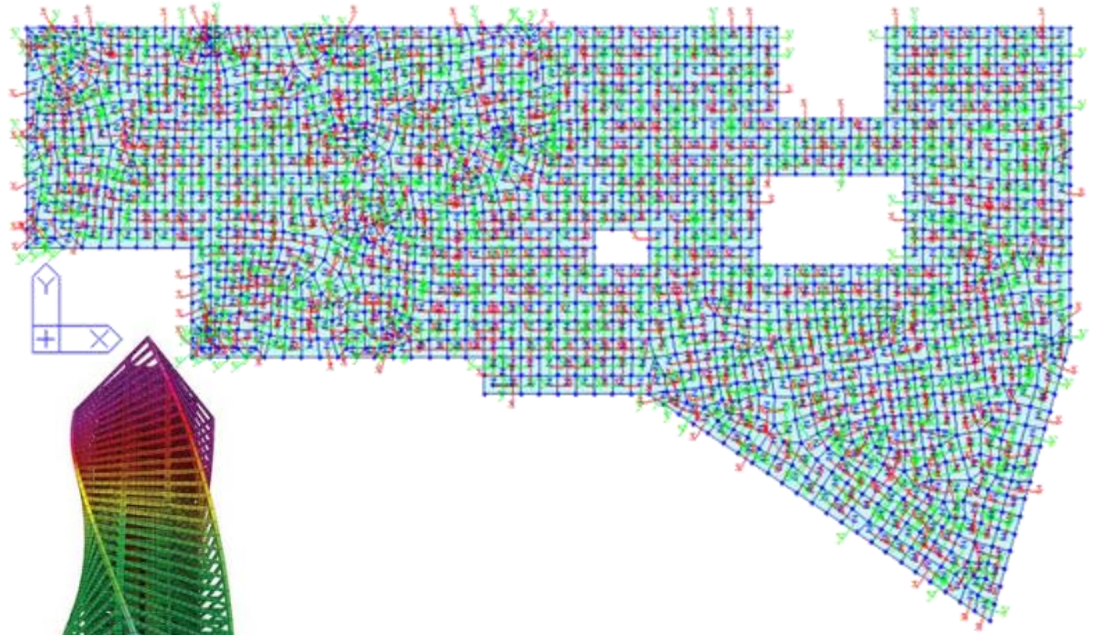
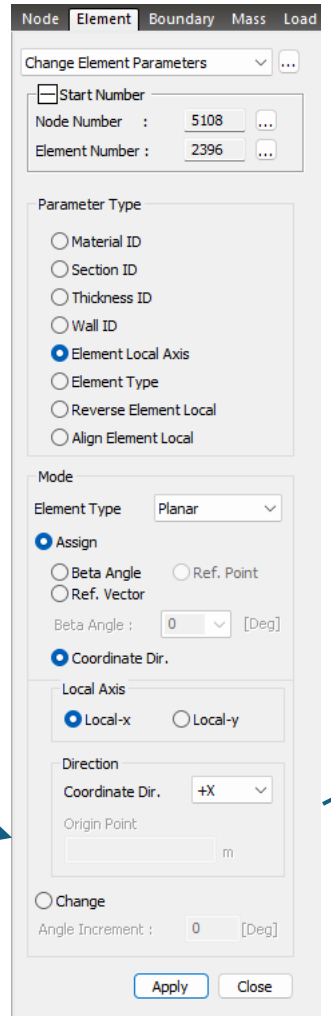


Plate Modelling and Results

➢ ***Plate element local axis arrangement issue***





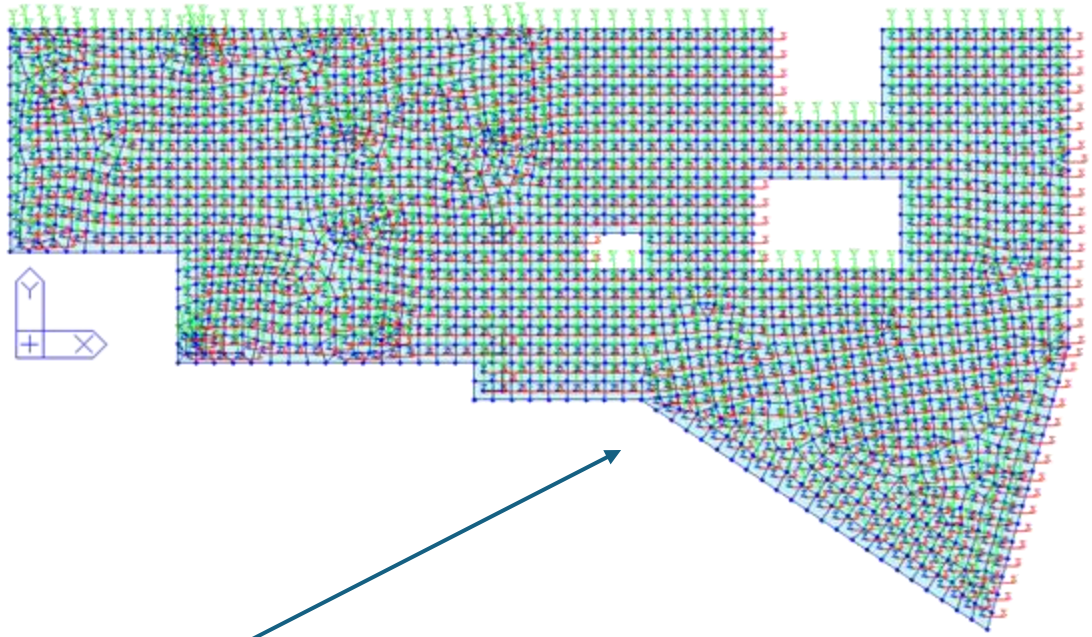
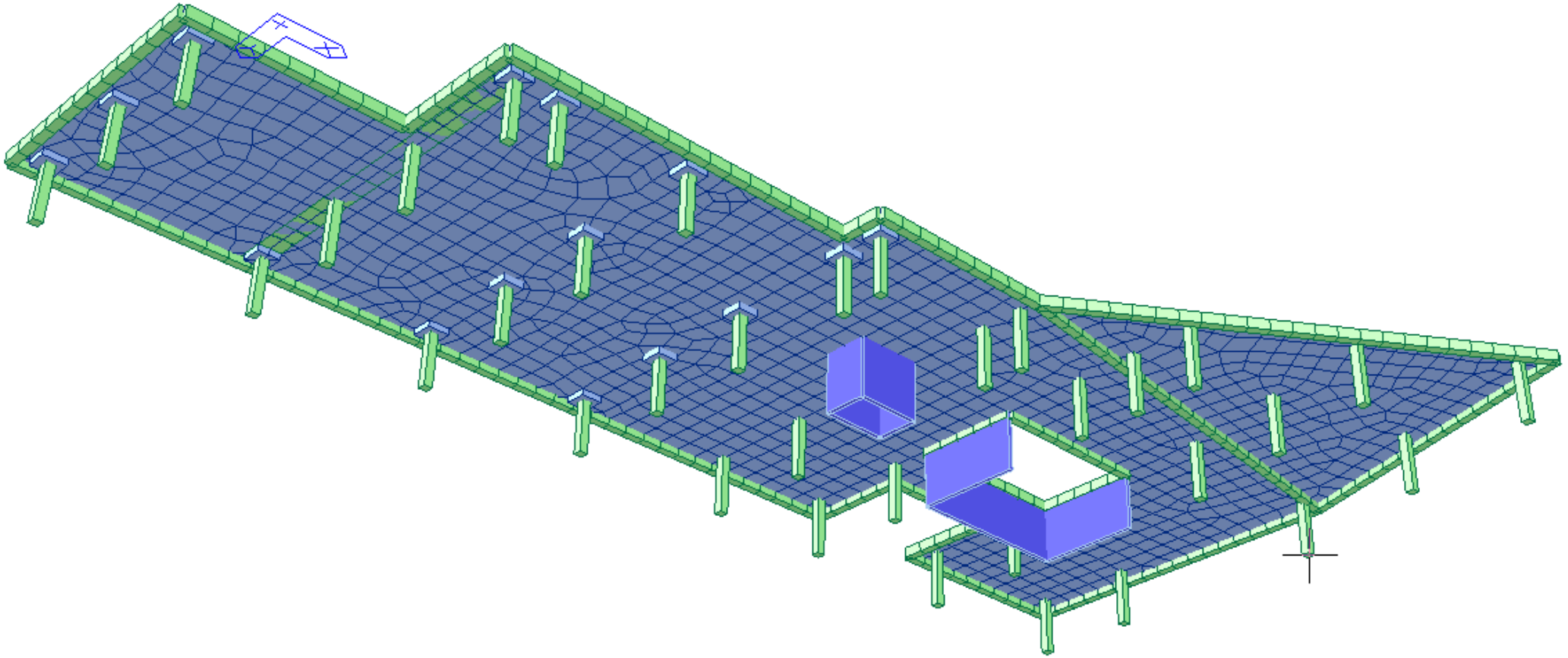


Plate Modelling and Results

- ***Modelling of Flat slabs having opening, column capitals and Drop panels***



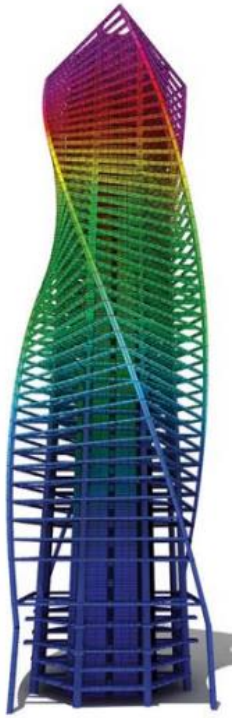
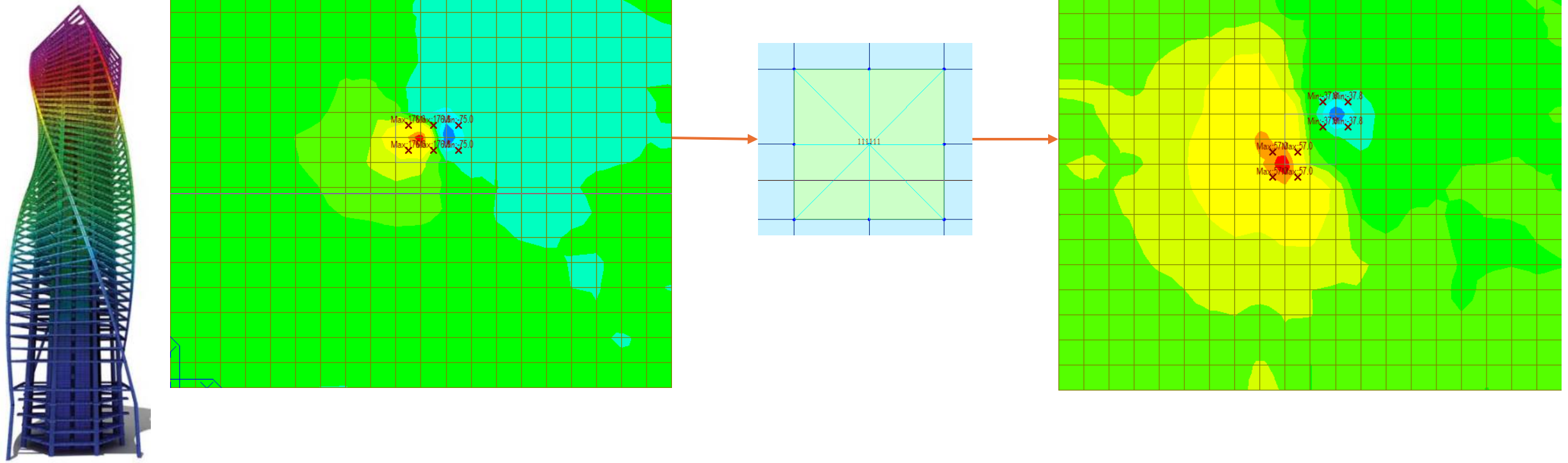
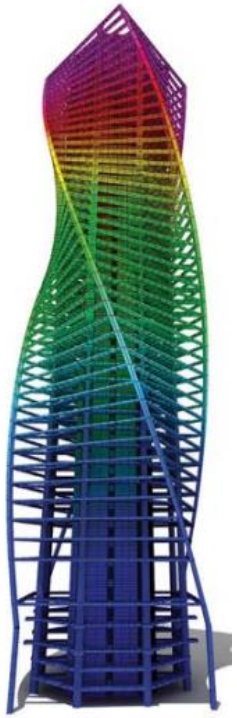


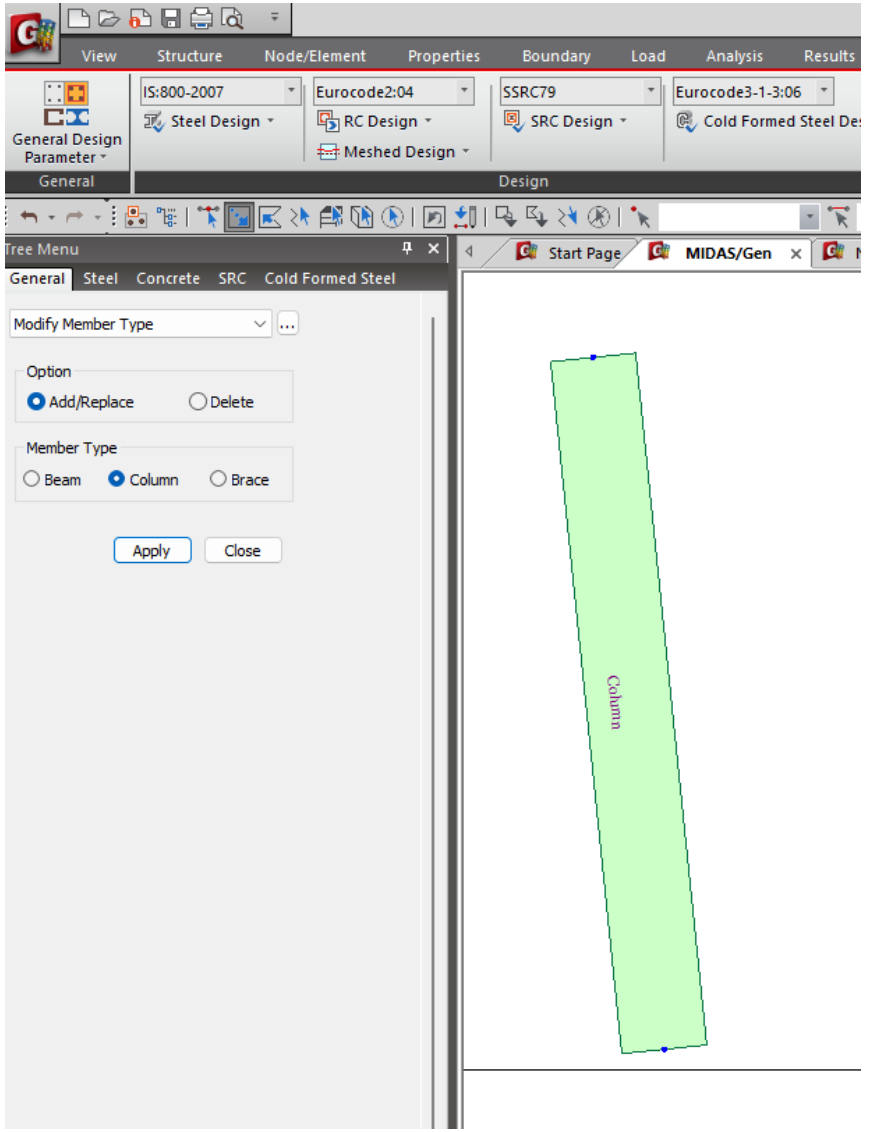
Plate Modelling and Results

➢ ***Results comparison of plates With and without Rigid links around the columns***

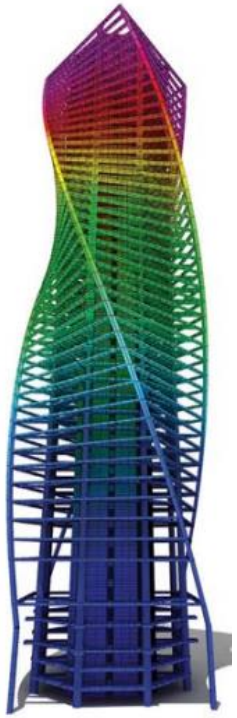


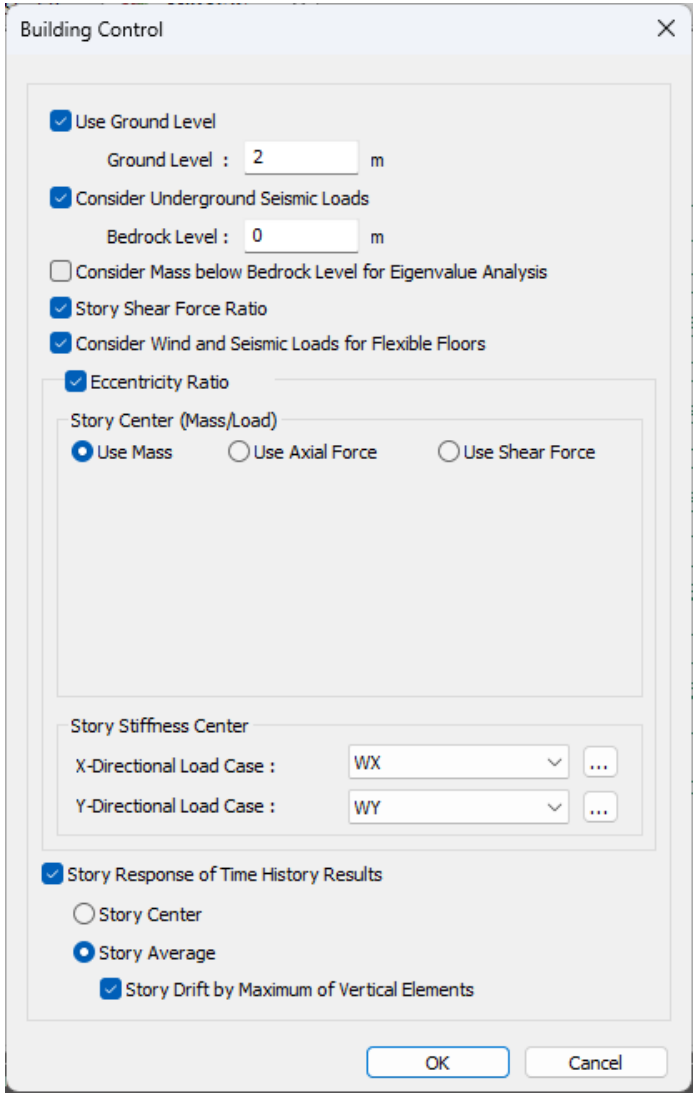
Design of Inclined Members





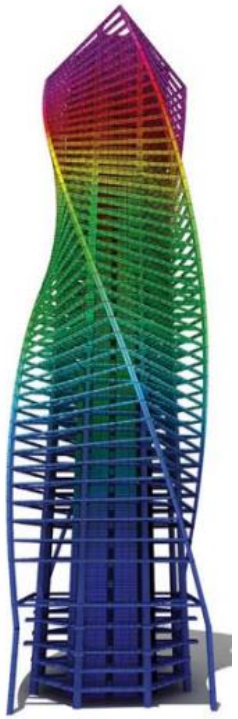
Underground Seismic loads

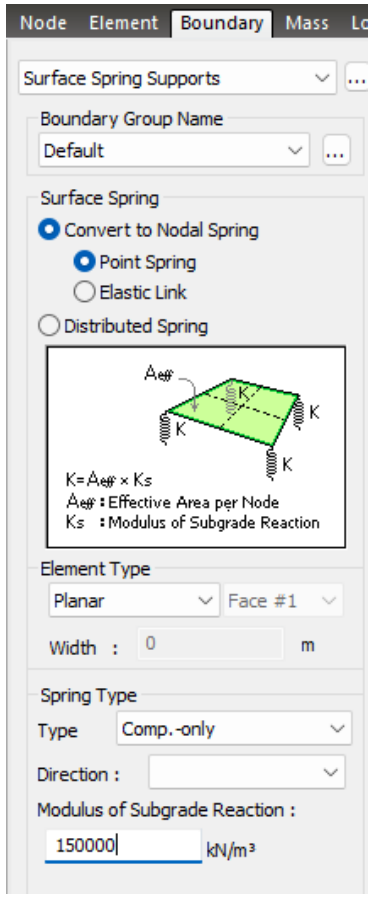




Modeling of compression-only Springs for Mat/Raft

➢ ***Q1: So many warnings are there in the analysis when I am assigning a compression-only springs in footings.***






```
WARNING : DISPLACEMENT RX AT NODE NO.       4 IS ABNORMAL.
WARNING : DISPLACEMENT RY AT NODE NO.       4 IS ABNORMAL.
WARNING : DISPLACEMENT RX AT NODE NO.       5 IS ABNORMAL.
WARNING : DISPLACEMENT RY AT NODE NO.       5 IS ABNORMAL.
WARNING : DISPLACEMENT DZ AT NODE NO.       6 IS ABNORMAL.
WARNING : DISPLACEMENT RX AT NODE NO.       6 IS ABNORMAL.
WARNING : DISPLACEMENT RY AT NODE NO.       6 IS ABNORMAL.
WARNING : DISPLACEMENT DZ AT NODE NO.       7 IS ABNORMAL.
WARNING : DISPLACEMENT RX AT NODE NO.       7 IS ABNORMAL.
WARNING : DISPLACEMENT RY AT NODE NO.       7 IS ABNORMAL.
WARNING : DISPLACEMENT DZ AT NODE NO.       8 IS ABNORMAL.
WARNING : DISPLACEMENT RX AT NODE NO.       8 IS ABNORMAL.
WARNING : DISPLACEMENT RY AT NODE NO.       8 IS ABNORMAL.
WARNING : DISPLACEMENT DZ AT NODE NO.       9 IS ABNORMAL.
WARNING : DISPLACEMENT RX AT NODE NO.       9 IS ABNORMAL.
WARNING : DISPLACEMENT RY AT NODE NO.       9 IS ABNORMAL.
WARNING : DISPLACEMENT DZ AT NODE NO.      10 IS ABNORMAL.
WARNING : DISPLACEMENT RX AT NODE NO.      10 IS ABNORMAL.
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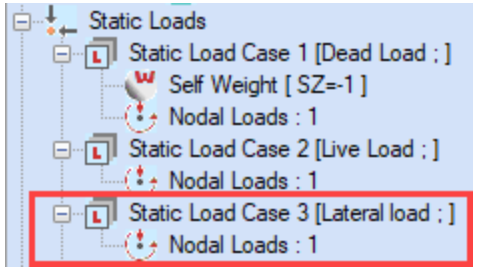
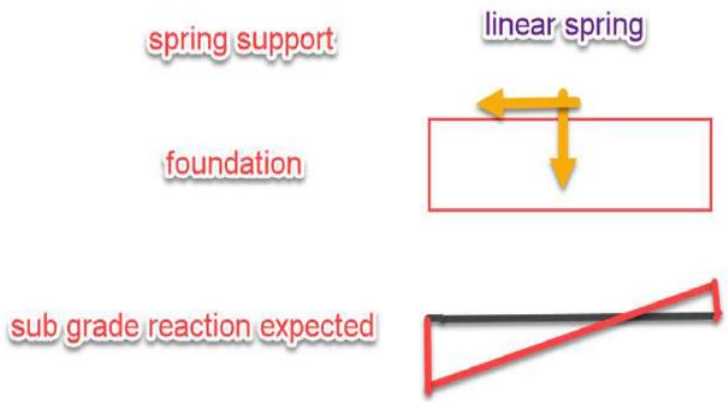
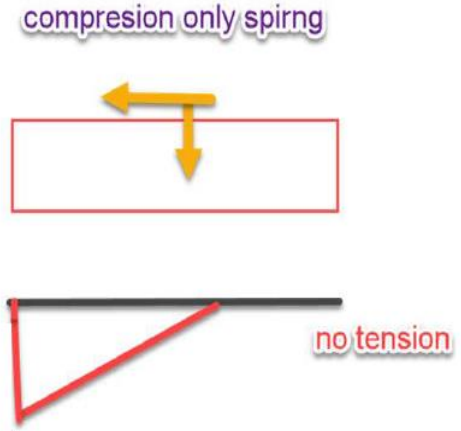


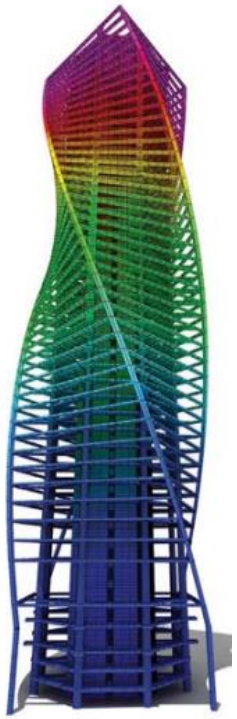
➢ ***Loads assigned***

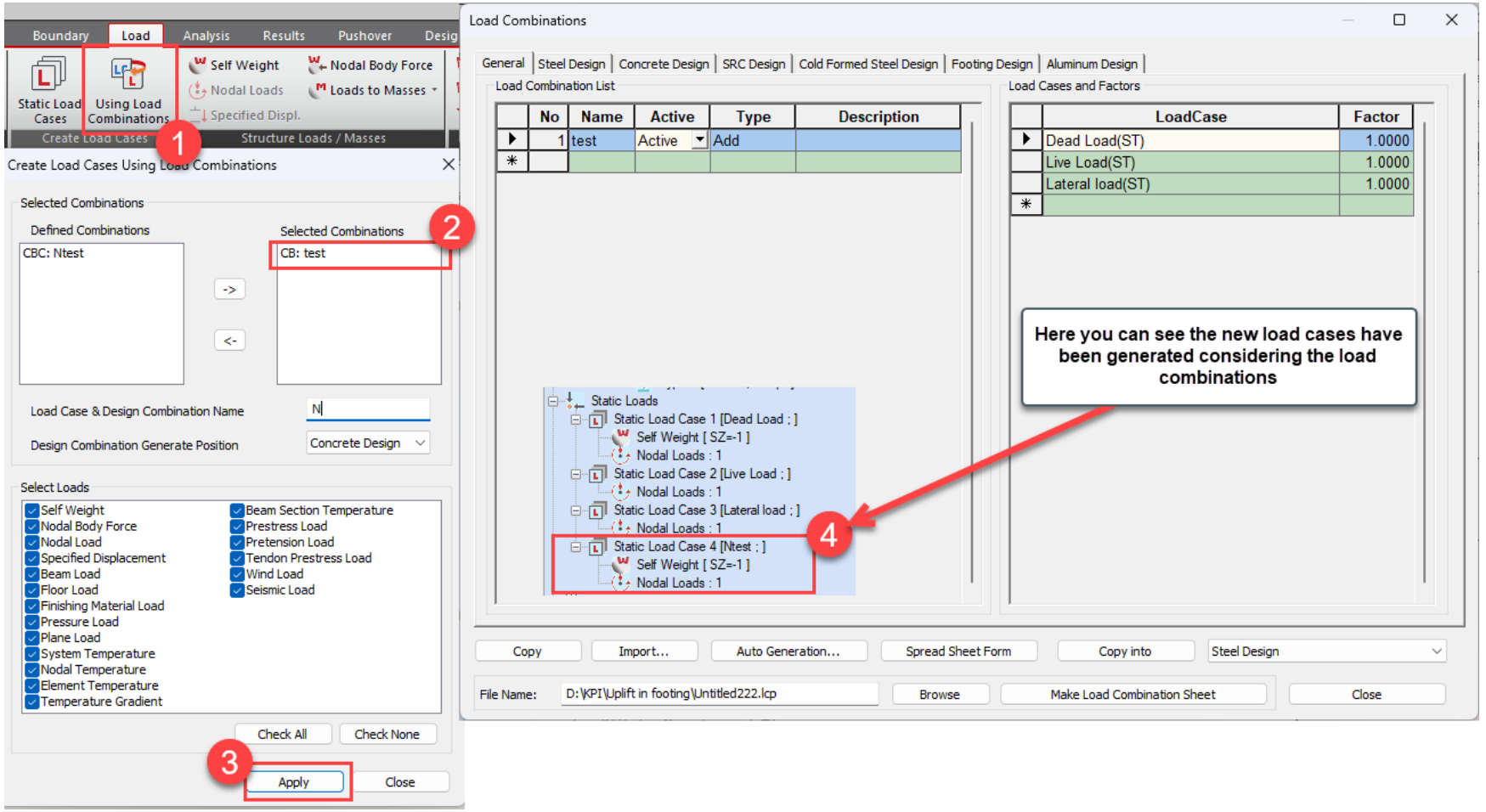




Modeling of compression-only Springs for Mat/Raft

➢ ***Correct way of applying the Loads cases***

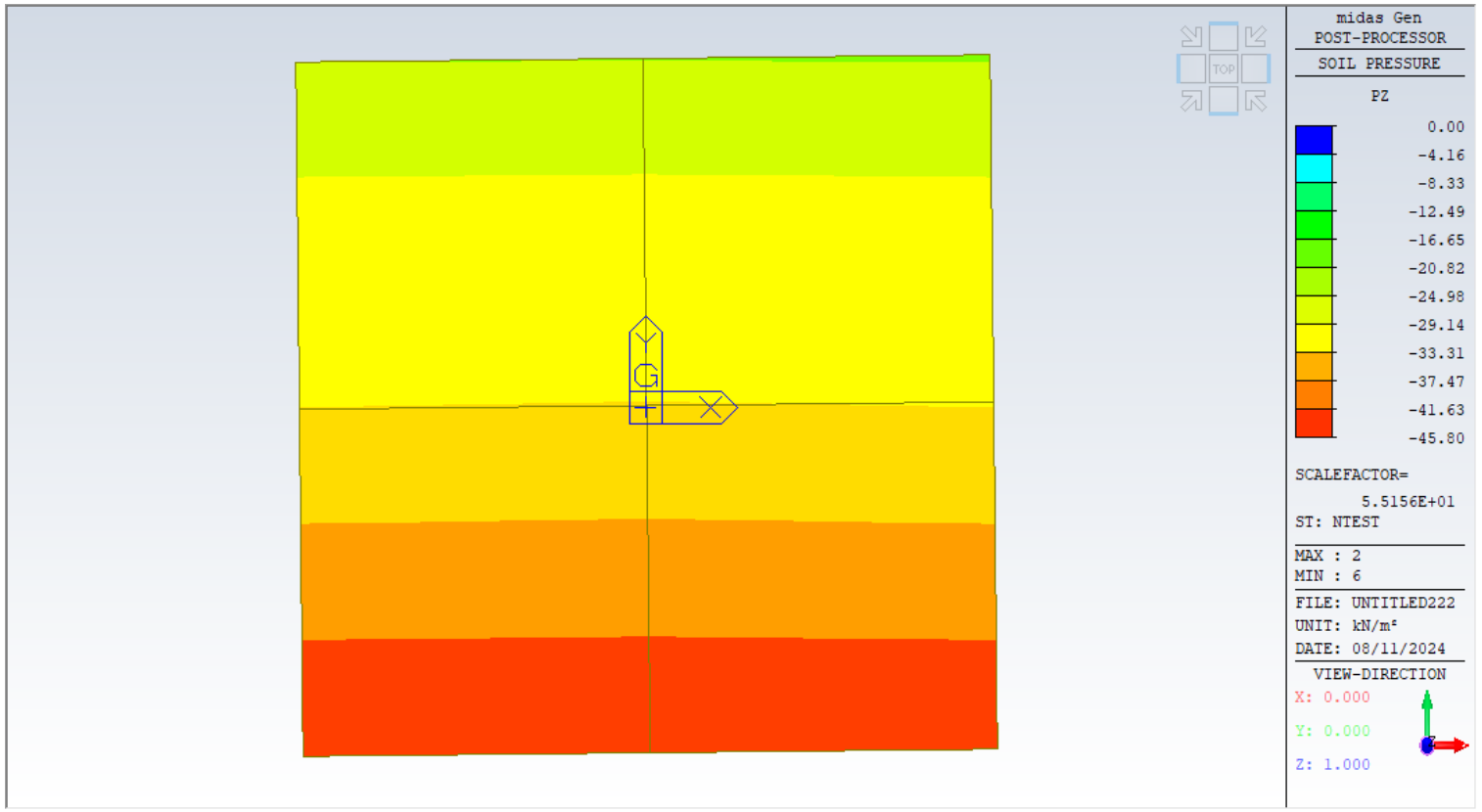


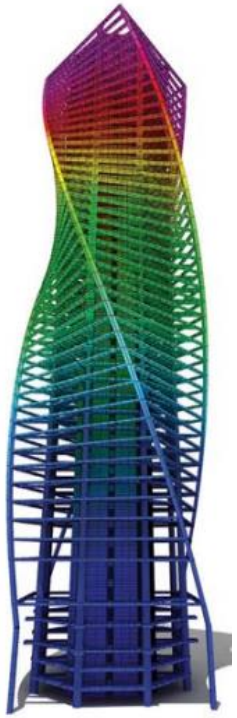


Modeling of compression-only Springs for Mat/Raft

➢ ***Soil pressure checks for Compression-only springs***

No Uplift condition

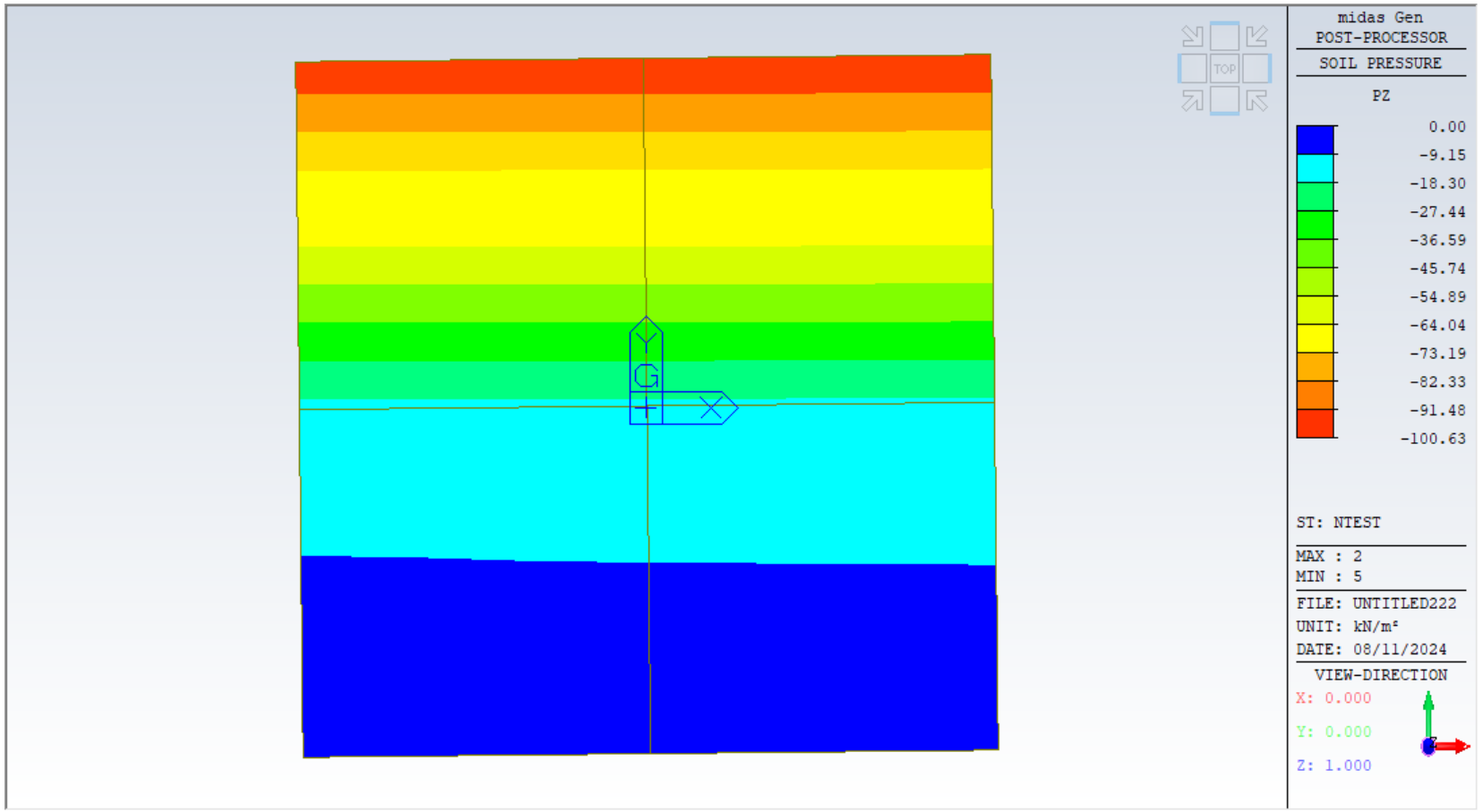


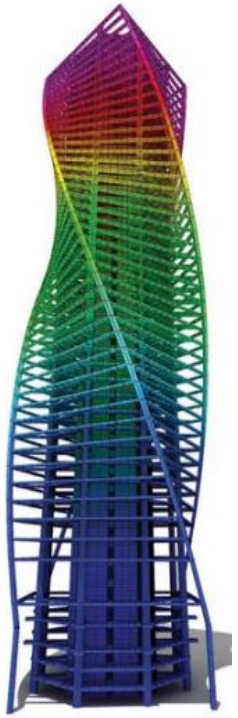


Modeling of compression-only Springs for Mat/Raft

- ***Soil pressure checks for Compression-only springs***

Uplift condition





Modeling of compression-only Springs for Mat/Raft

- ***Soil pressure checks for Compression-only springs***

Overturn condition

```
ITERATIVE STATIC ANALYSIS CONVERGENCE INFORMATION
-------------------------------------------------------------
LOADCASE :     3   HAS NOT SATISFIED CONVERGENCE TOLERANCE.  PLEASE CHECK WINDOWS MESSAGE.
LOADCASE :     4   HAS NOT SATISFIED CONVERGENCE TOLERANCE.  PLEASE CHECK WINDOWS MESSAGE.

-----------------------------------------S O L U T I O N   T E R M I N A T E D
YOUR MIDAS JOB IS SUCCESSFULLY COMPLETED.......D:\KPI\Uplift in footing\Untitled222
TOTAL SOLUTION TIME..:     1.47 [SEC]
-------------------------------------------------------------------------------
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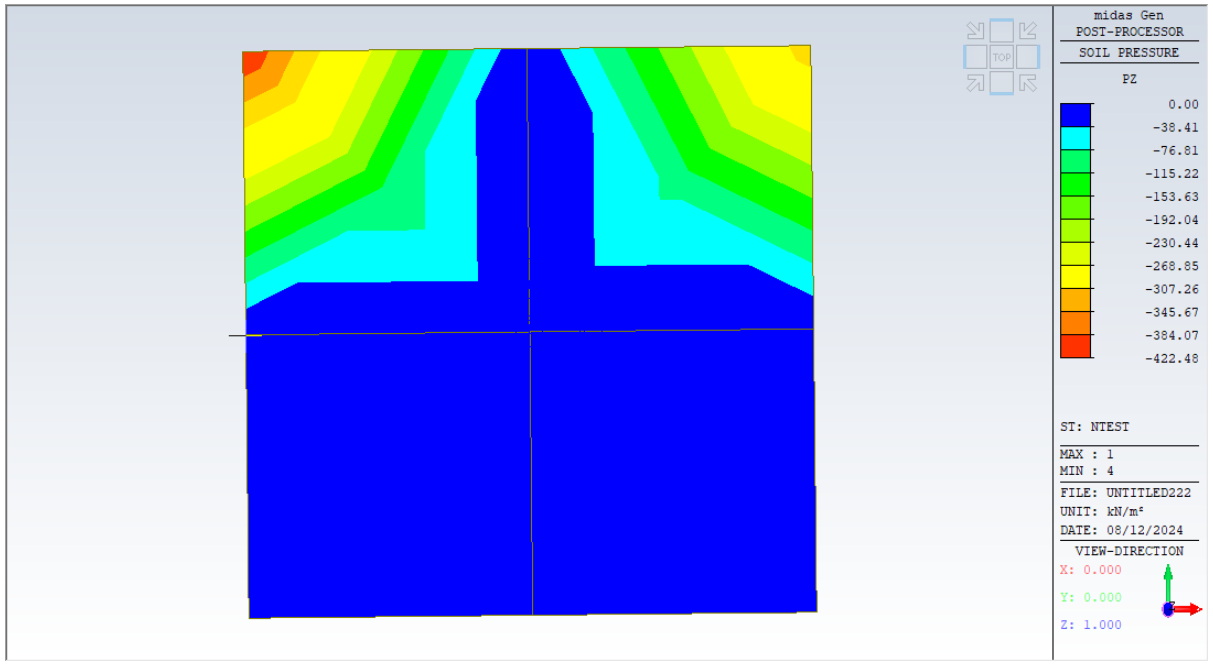
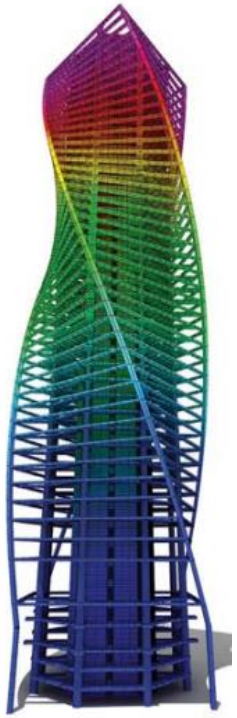
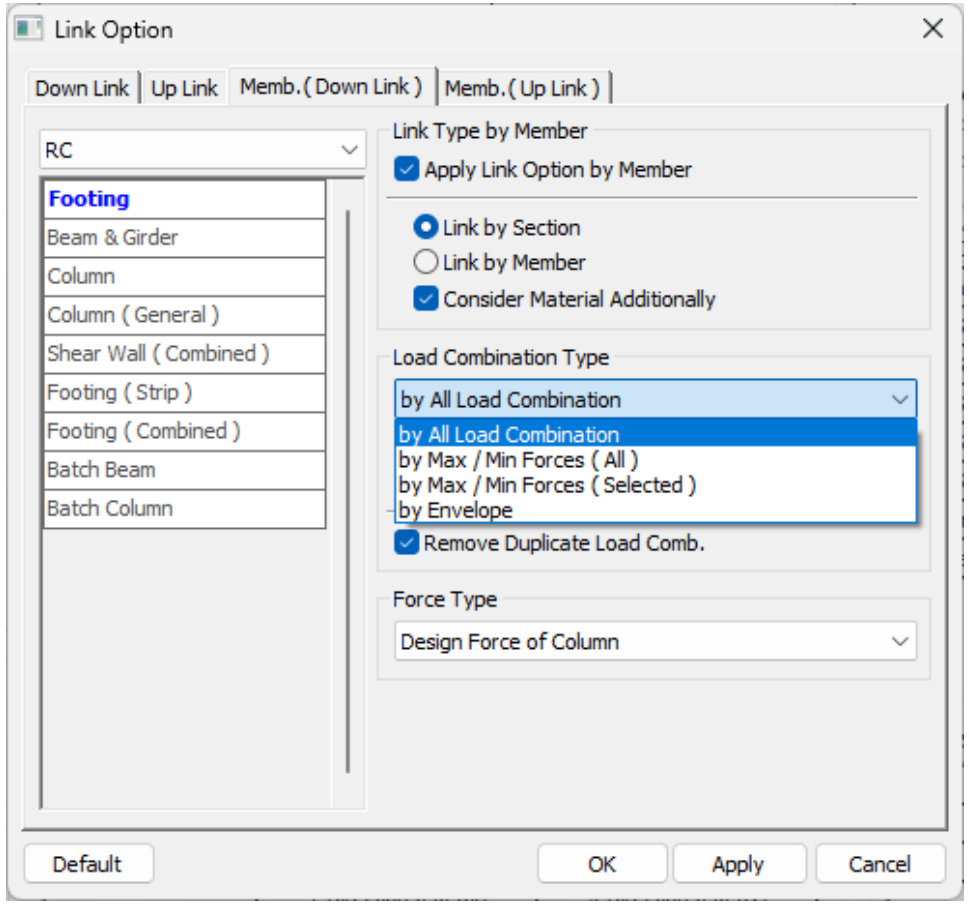
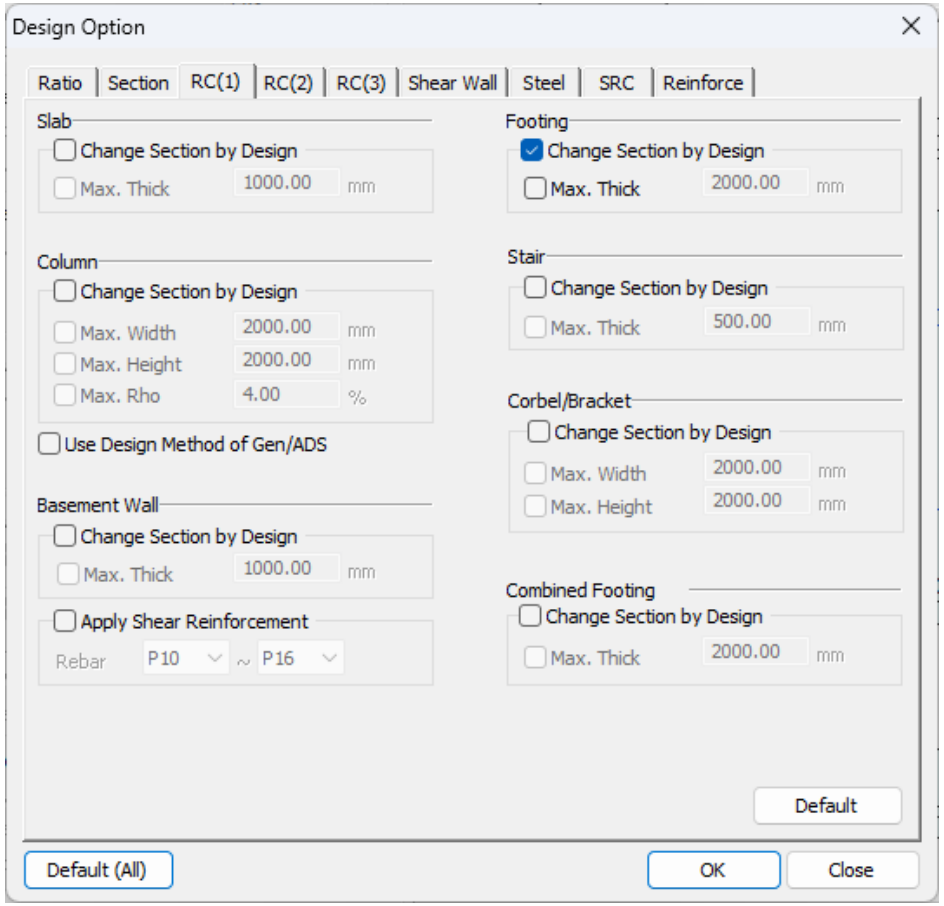




Midas Design+ Export (Gen)

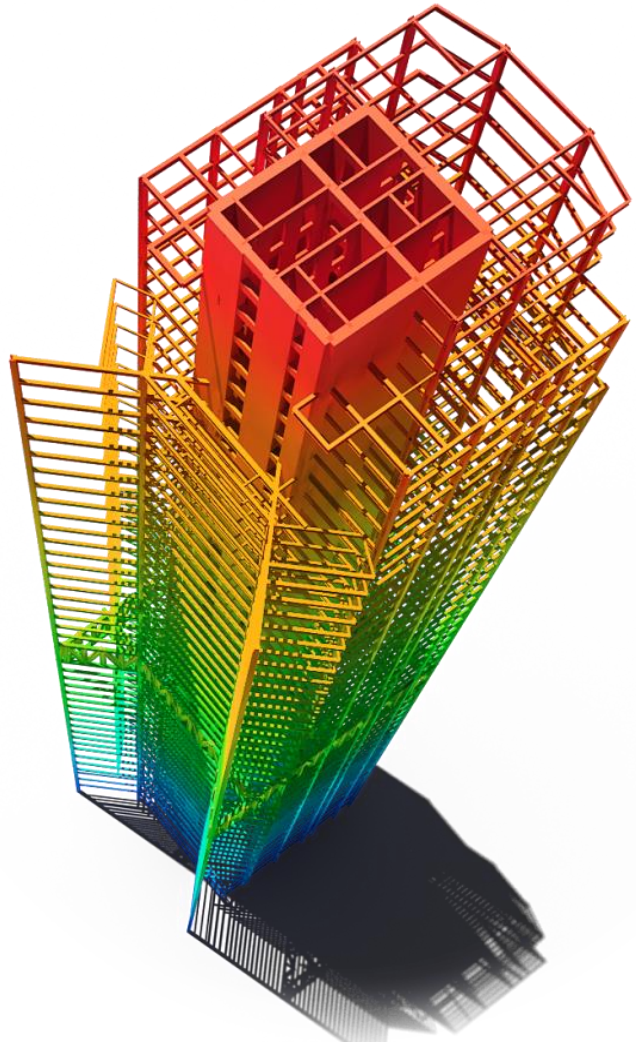
➢ ***Export function and optimization in Design+***





Thank You

Q & A



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-anmol@midasit.com