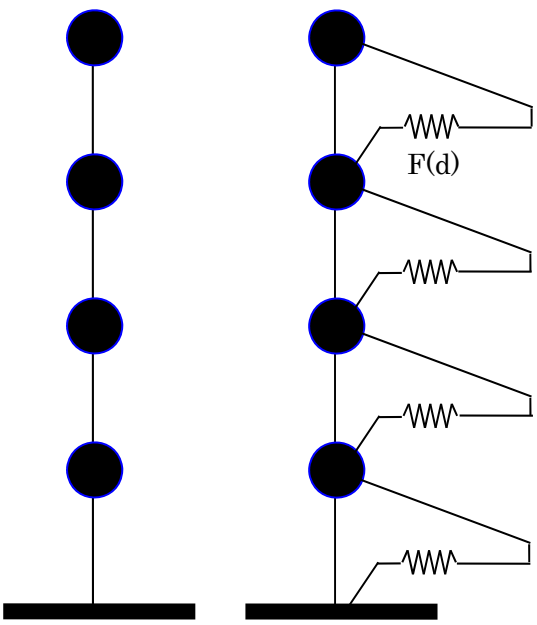
2011-12-03 T. SAITO

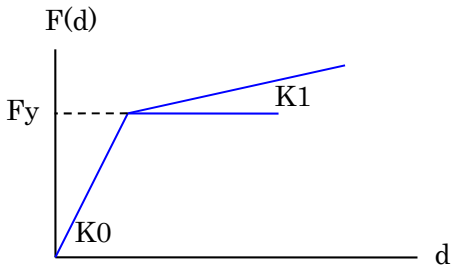
Instruction to create STERA3D data (MDOF model)

SAMPLE BUILDING MDOF4F-2 :
4-STORY MDOF MODEL WITH STEEL DAMPER

4-Story MDOF (Multi-Degree of Freedom) model with steel damper



Bare frame　　Bare frame with damper

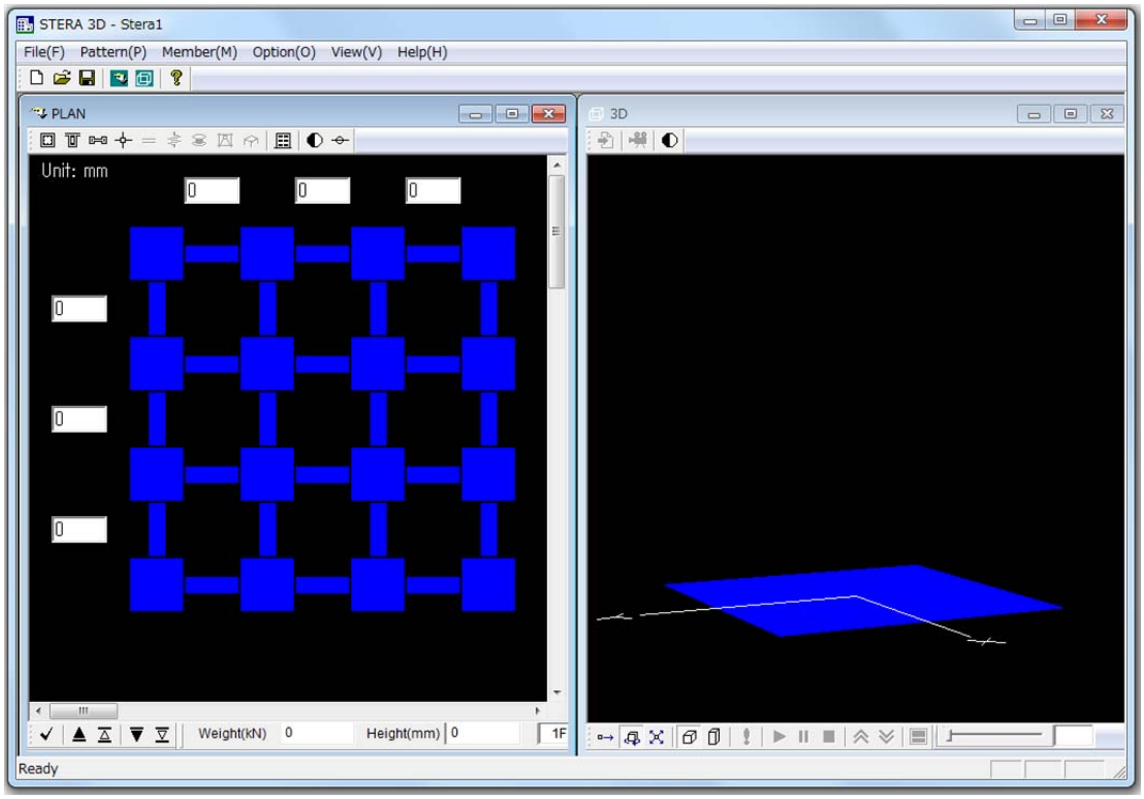


	W (kN)	H (mm)	K (kN/mm)	K0 (kN/mm)	Fy (kN)	K1/K0
4	4894	4000	62.7	277.2	1848	0.02
3	3669	4000	72.9	447.3	2982	0.02
2	3691	4000	91.0	513.9	3426	0.02
1	3762	6000	56.2	410.3	4103	0.02

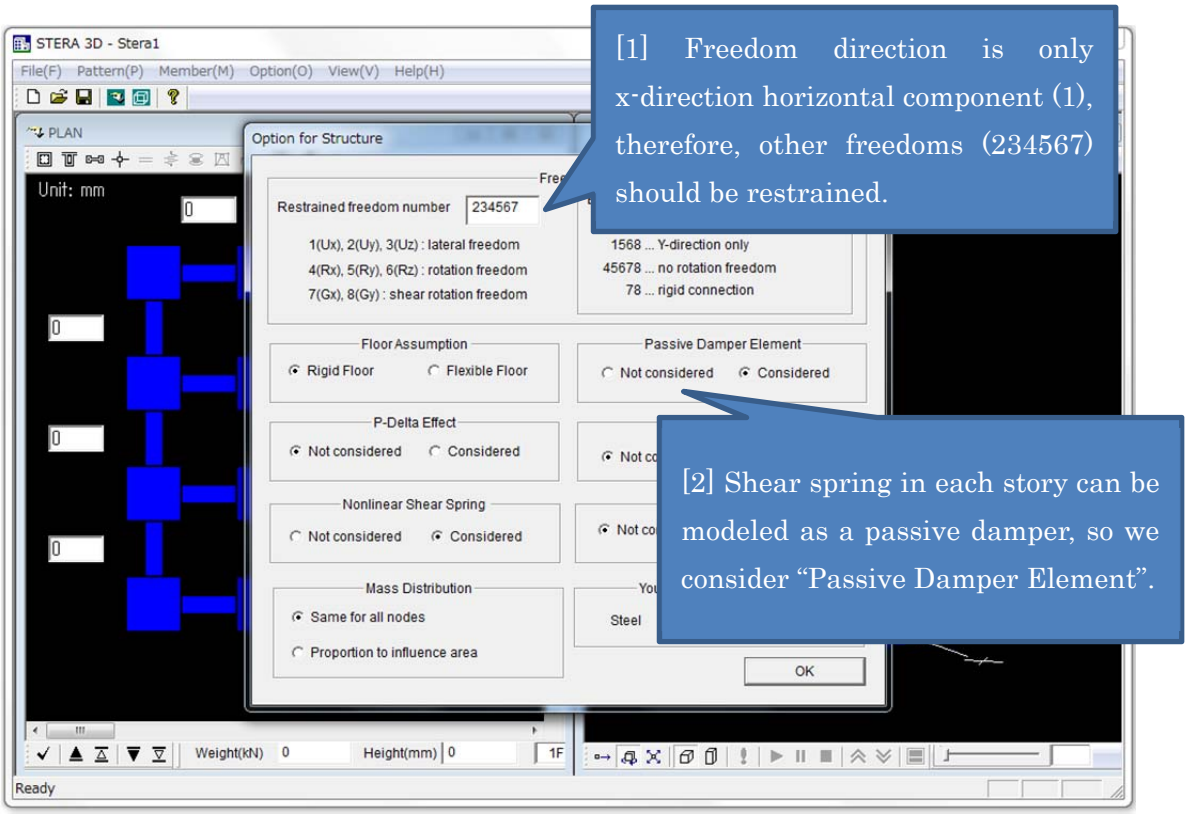
W: floor weight, H: story height, K: story stiffness

K0: initial stiffness of steel damper, Fy: yielding strength of steel damper

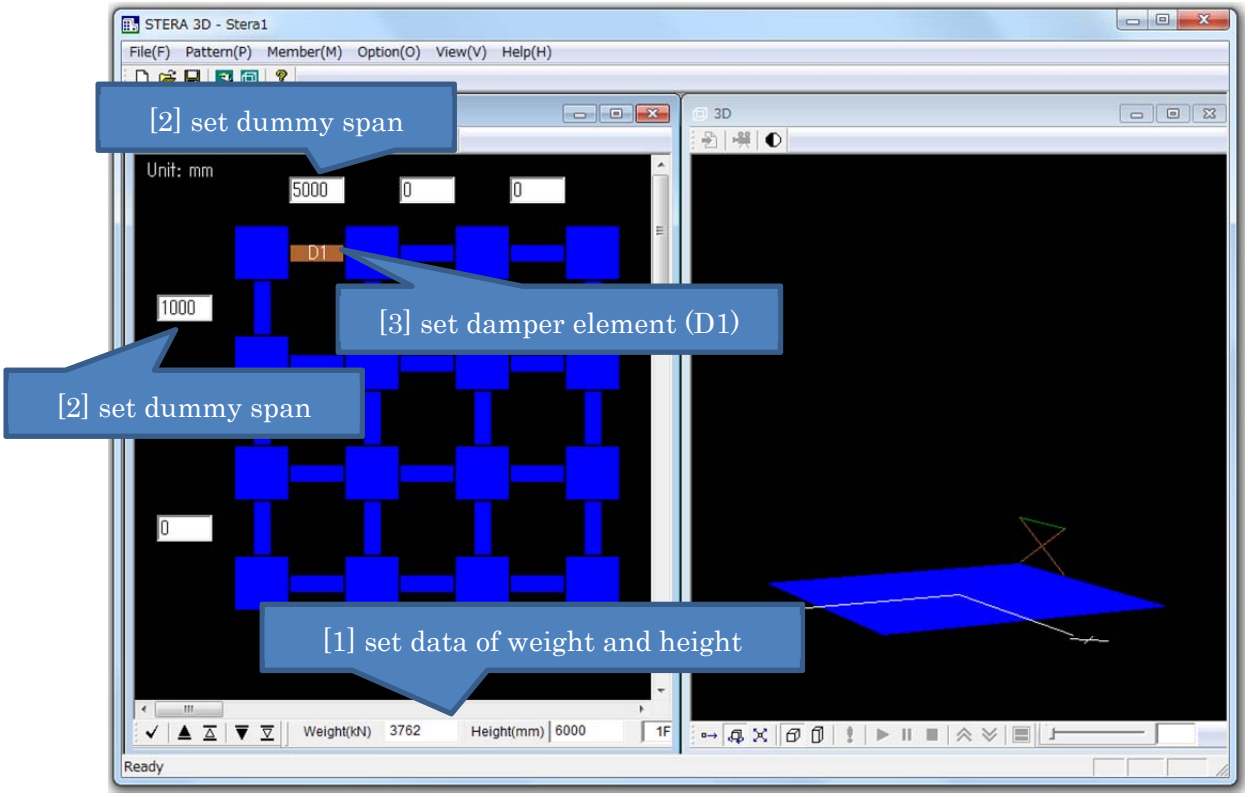
1. Run “STERA 3D.exe”



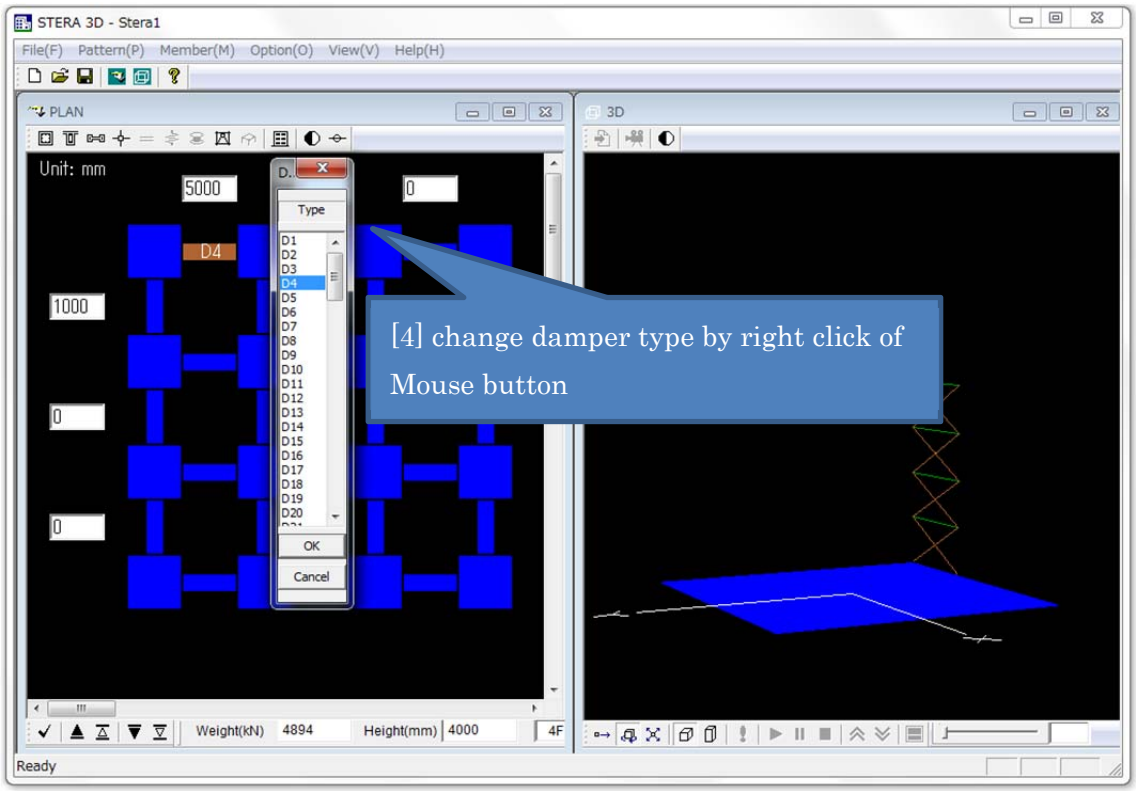
2. “Option” → “Structure”



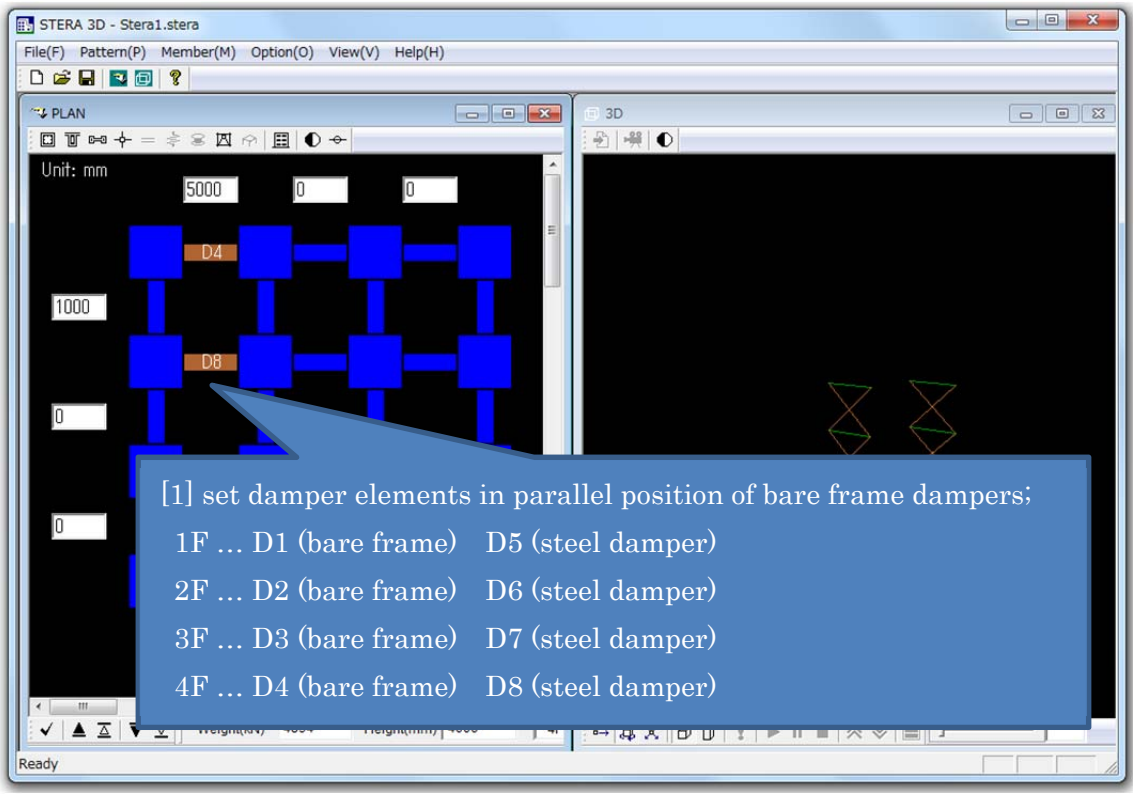
3. Set damper elements for Bare Frame



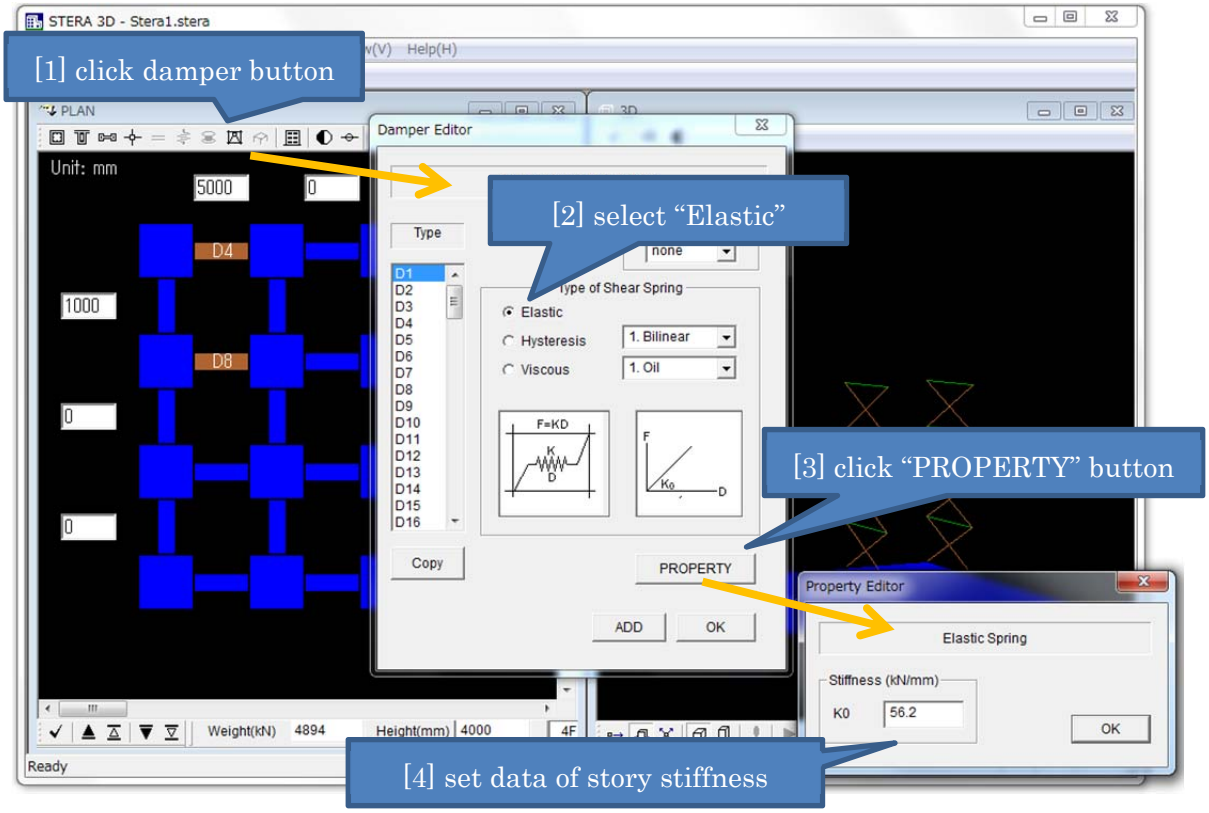
Go upper floor and set data until 4F.



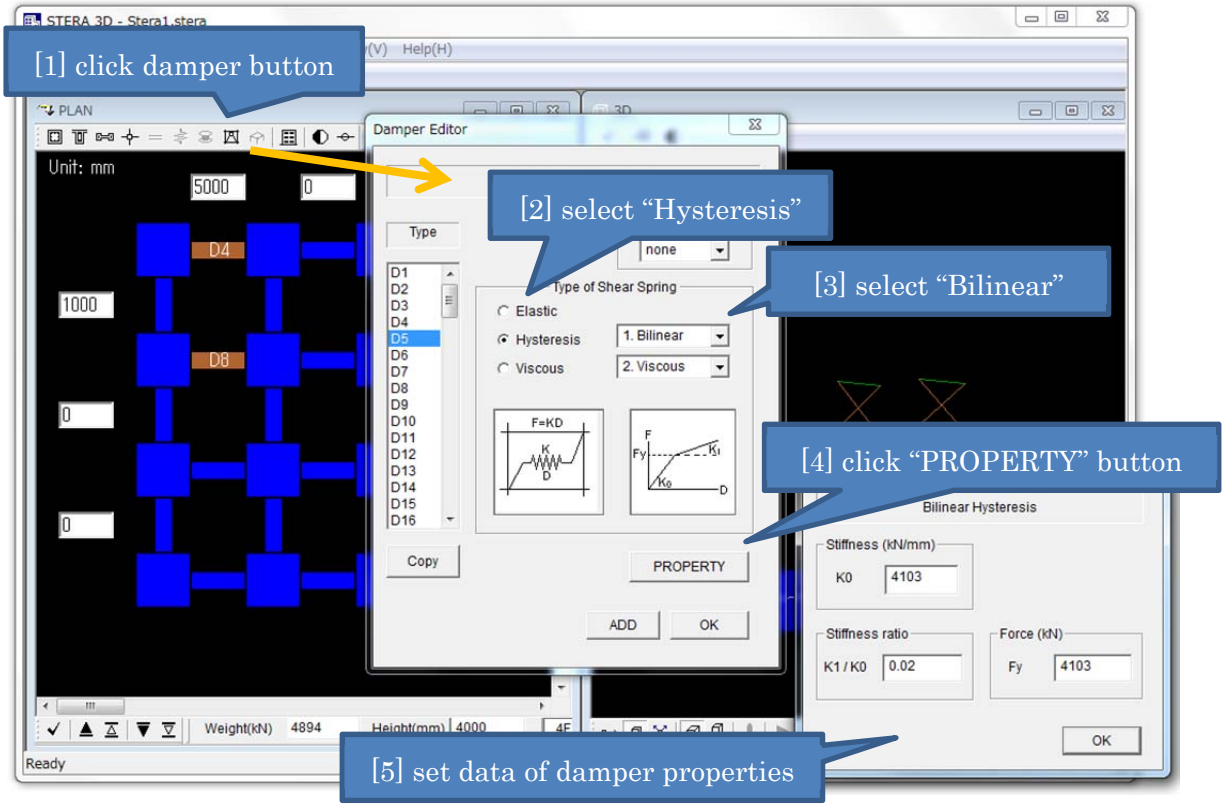
4. Set damper elements for Steel Dampers



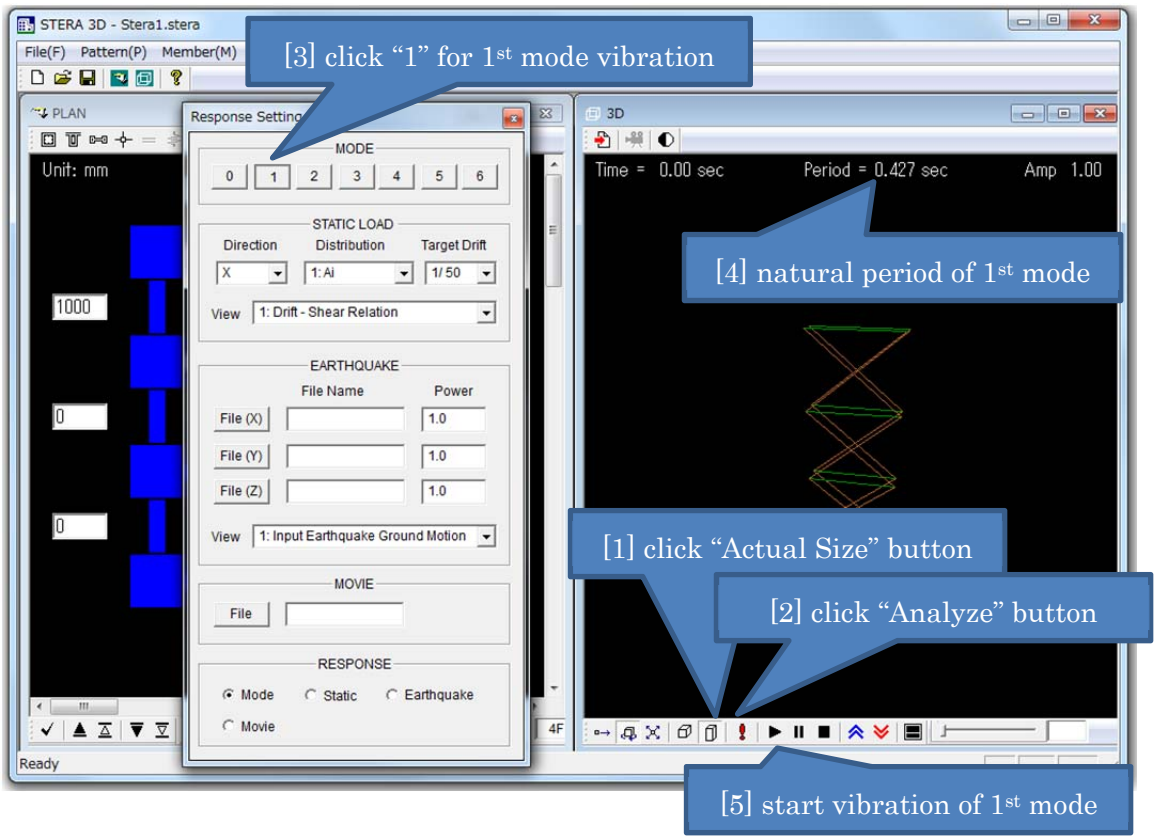
5. Set damper properties for Bare Frame



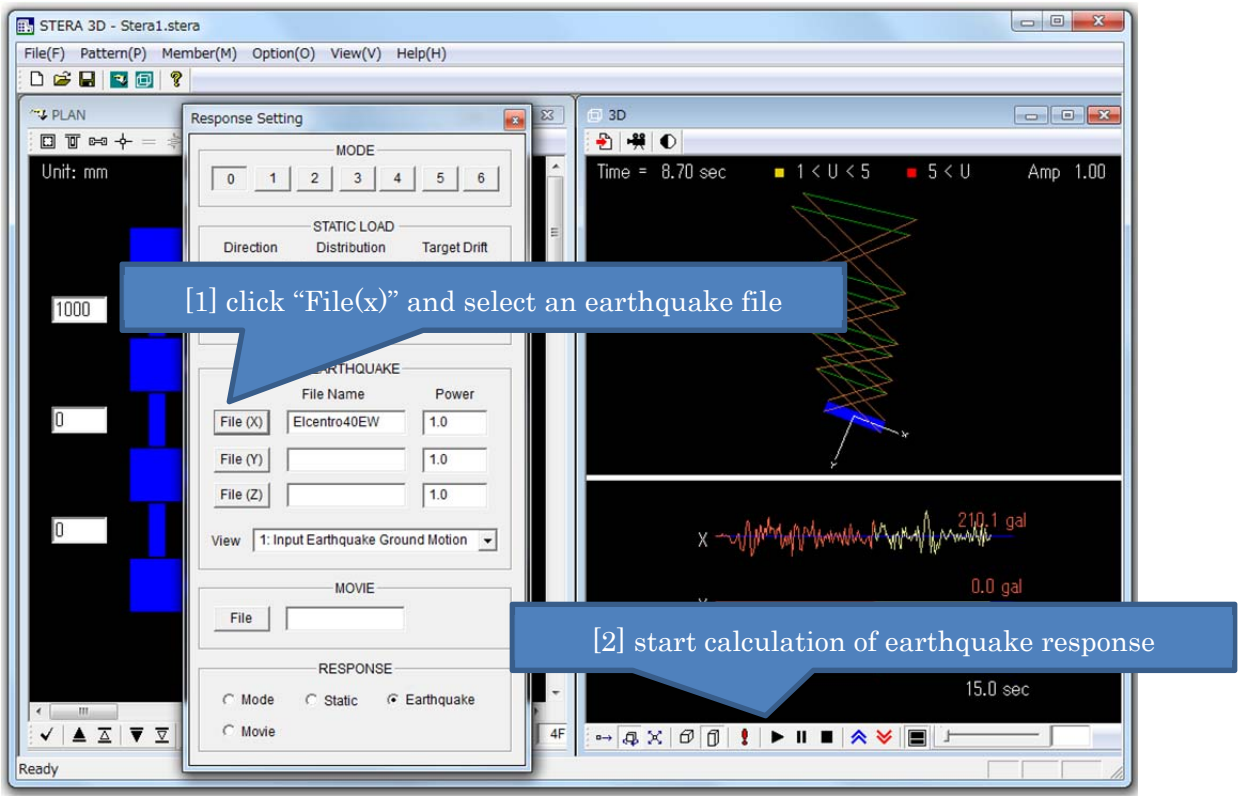
6. Set damper properties for Steel Dampers



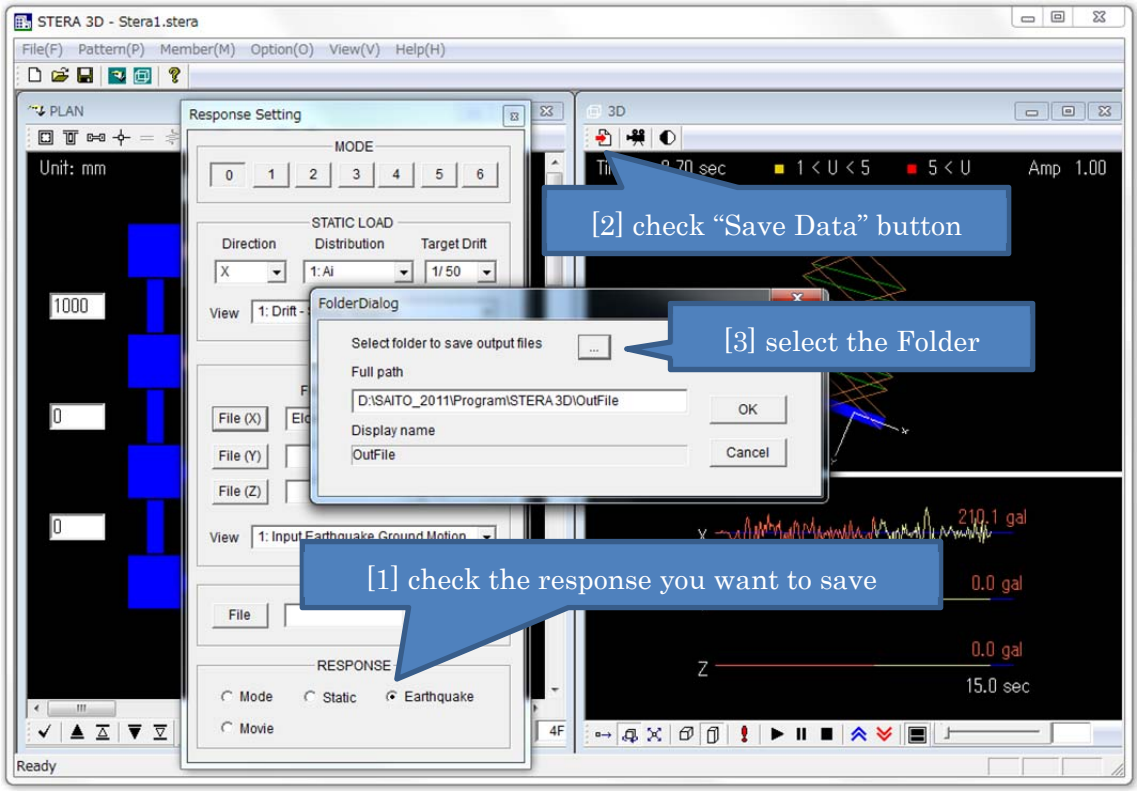
7. Modal analysis



8. Earthquake response analysis



9. Save data of earthquake response analysis



Time history of response (story drift, shear force, displacement, acceleration) will be stored in "response_structure.txt".