SST Building Modeling Results 12/2/22

Notes:

- Mass and UFP's updated per Sarah's latest modeling parameters (10-05-2022)
- Additional damping set to 2% all modes
- Crushing under walls included
- Ground motions are the 5 MCER ground motions for which the table was tuned (no additional scaling factor) from the Box folder "Final Phase 1 Ground Motions Sent to UCSD"
- Motions were either 1D or 3D as per the files
- SST use only: Files R46_3D_US and R47_3D_US

Results:

Periods:

Mode	Period	
Unitless	Sec	Direction
1	1.759663	Global Mode 1 MPP
2	1.730787	Global Mode 1 CLT
3	1.254904	Global Mode 1 Torsion
4	0.349887	Global Mode 2 MPP
5	0.349309	Global Mode 2 CLT
6	0.26234	Global Mode 2 Torsion
7	0.163032	Global Mode 3 CLT
8	0.160824	Global Mode 3 MPP
9	0.146806	Cantilever Floor plate vertical vibration

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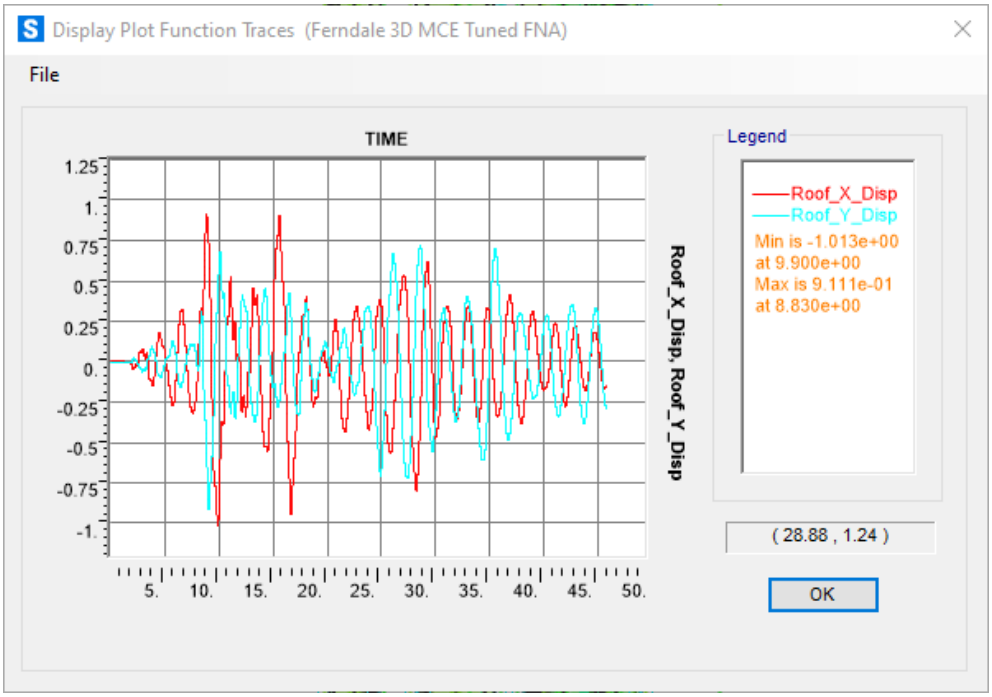
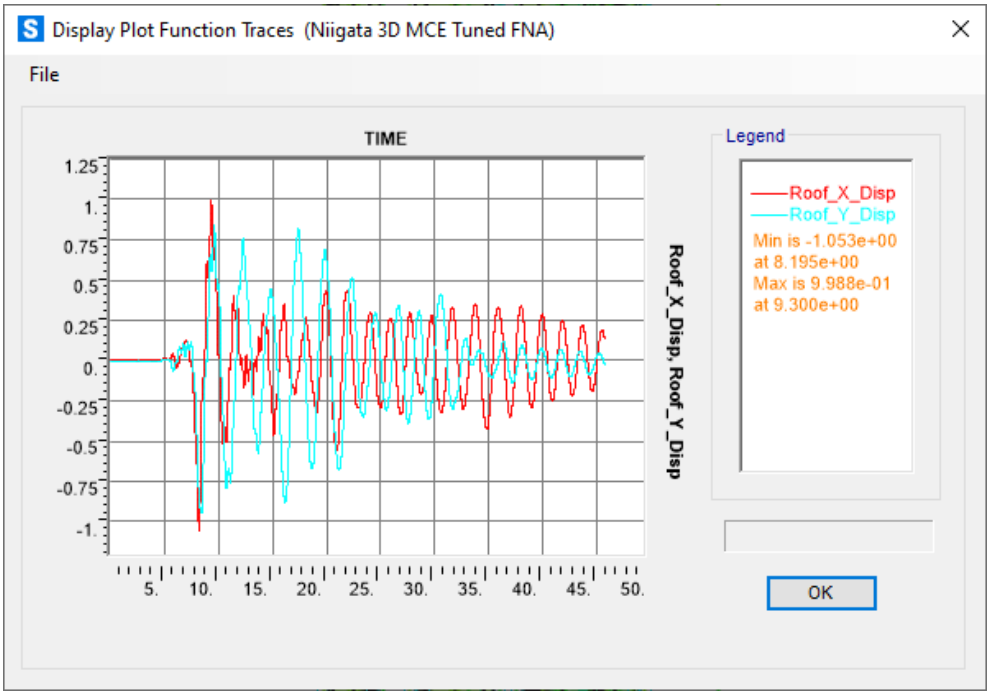
  - Interesting that for Mode 3, the order switched between CLT and MPP as to who came first

Roof Displacement (as % of building height, relative to ground)

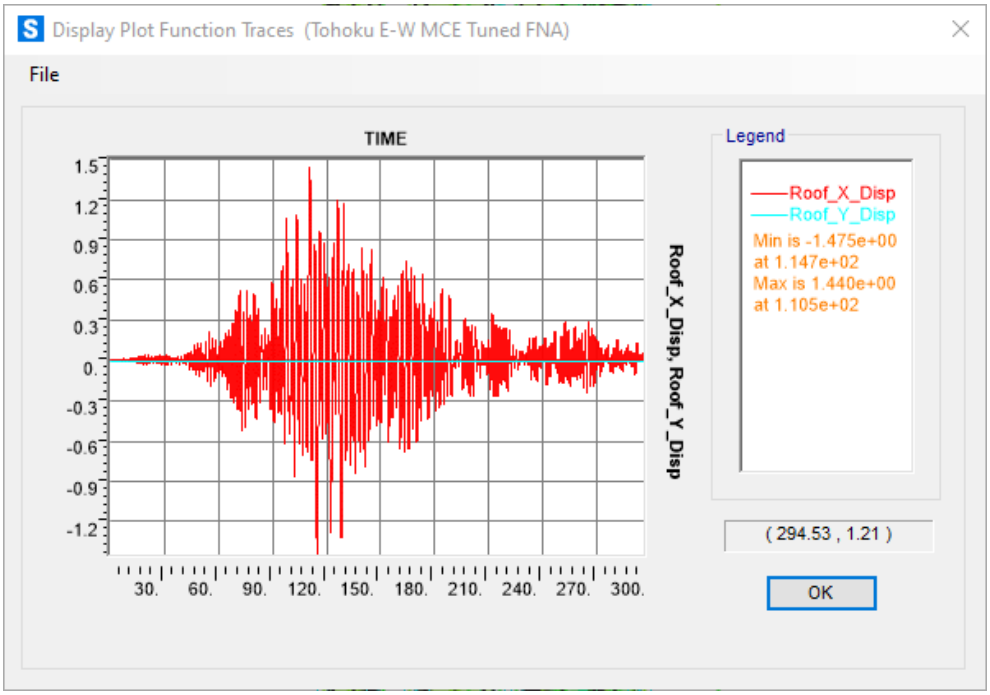
- Ferndale



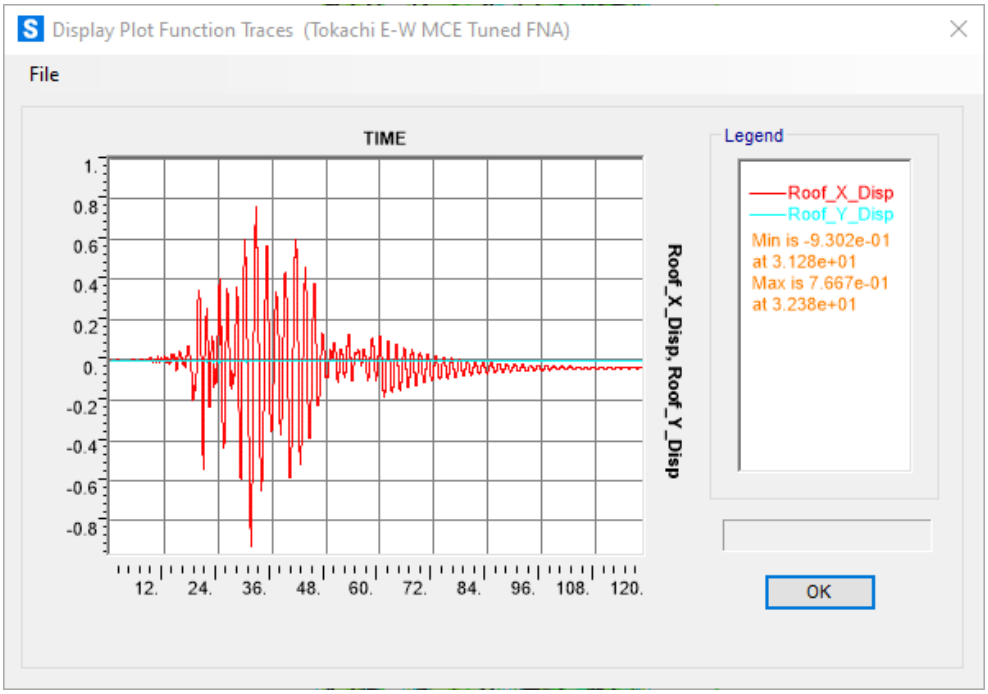
- Niigata



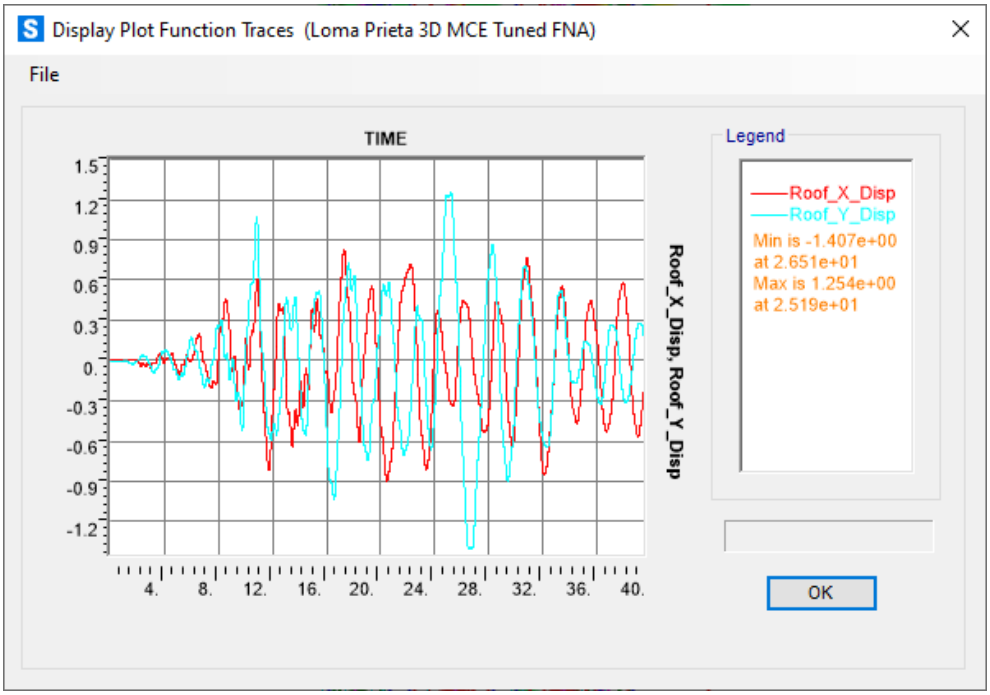
- Tohoku E-W



- Tokachi E-W

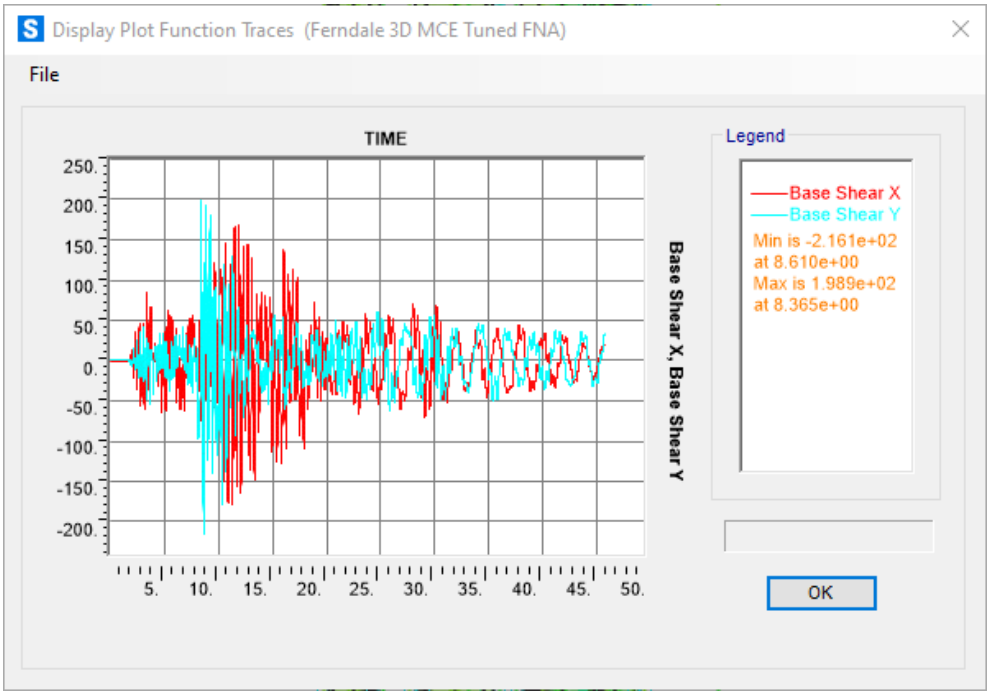


- Loma Prieta

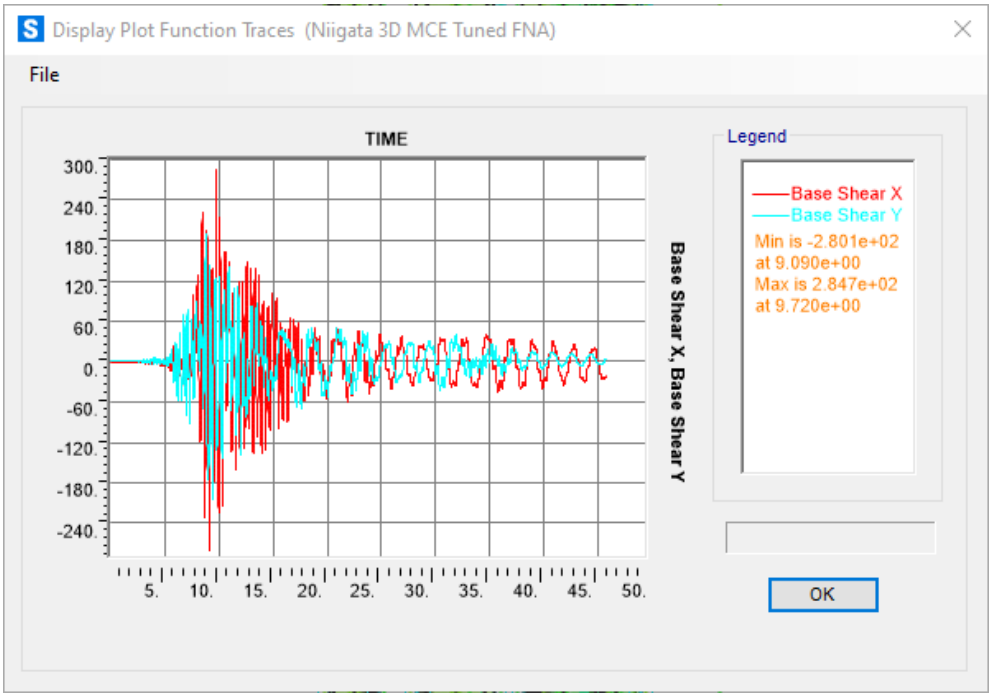


Base Shear (total, kips)

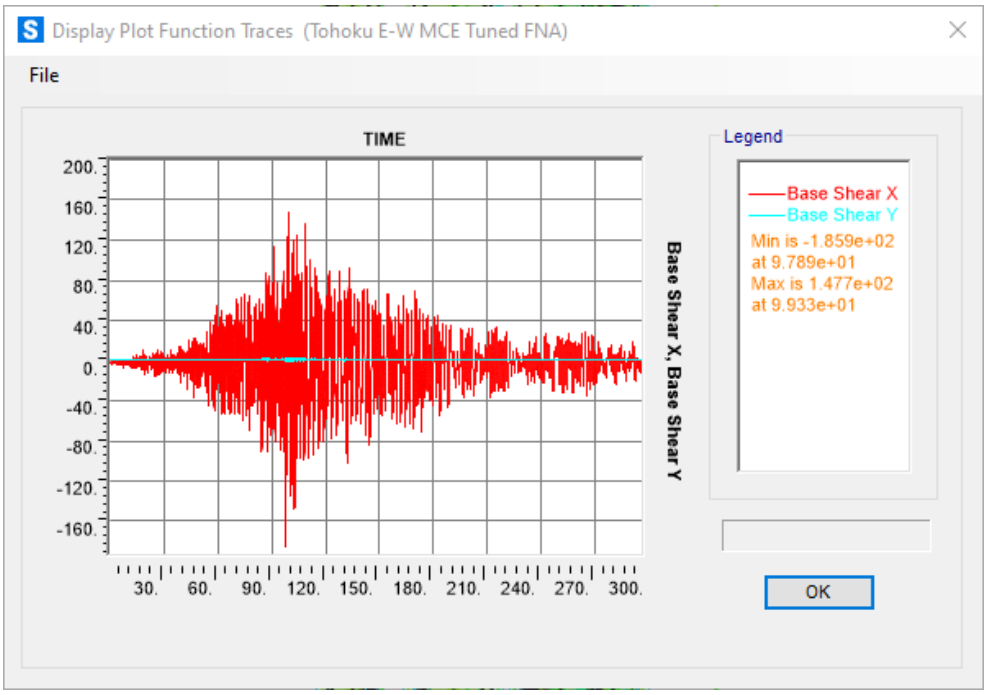
- Ferndale



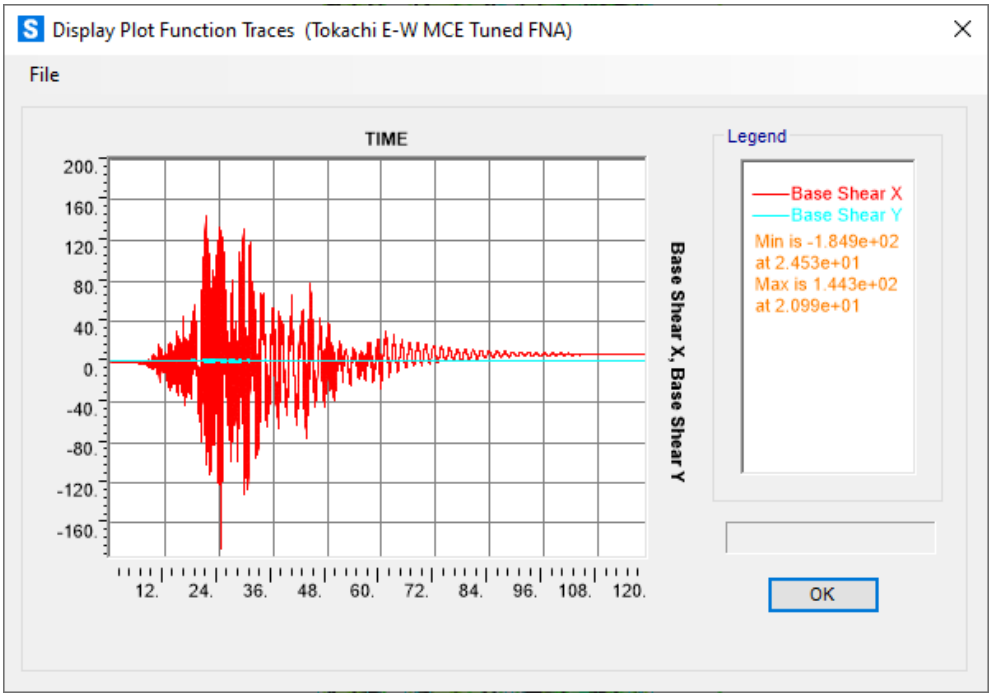
- Niigata



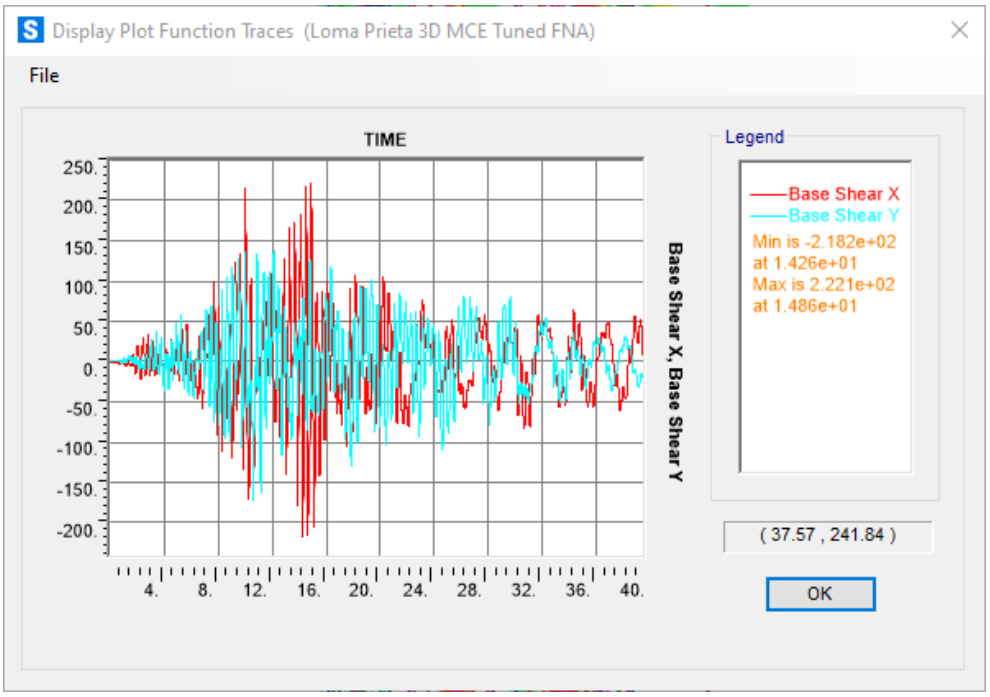
- Tohoku E-W



- Tokachi E-W

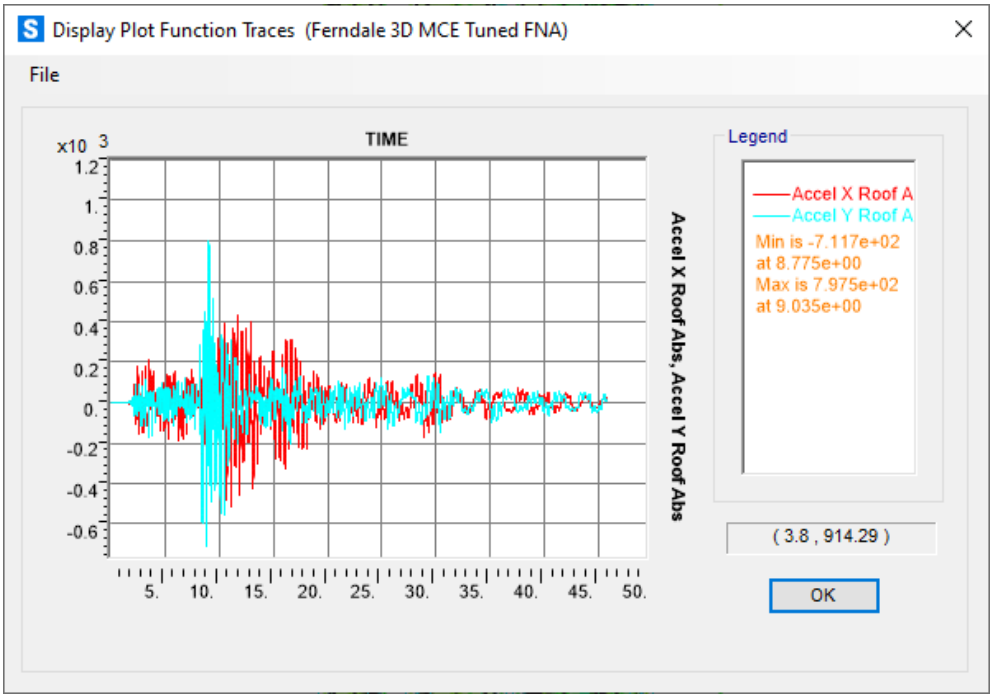


- Loma Prieta

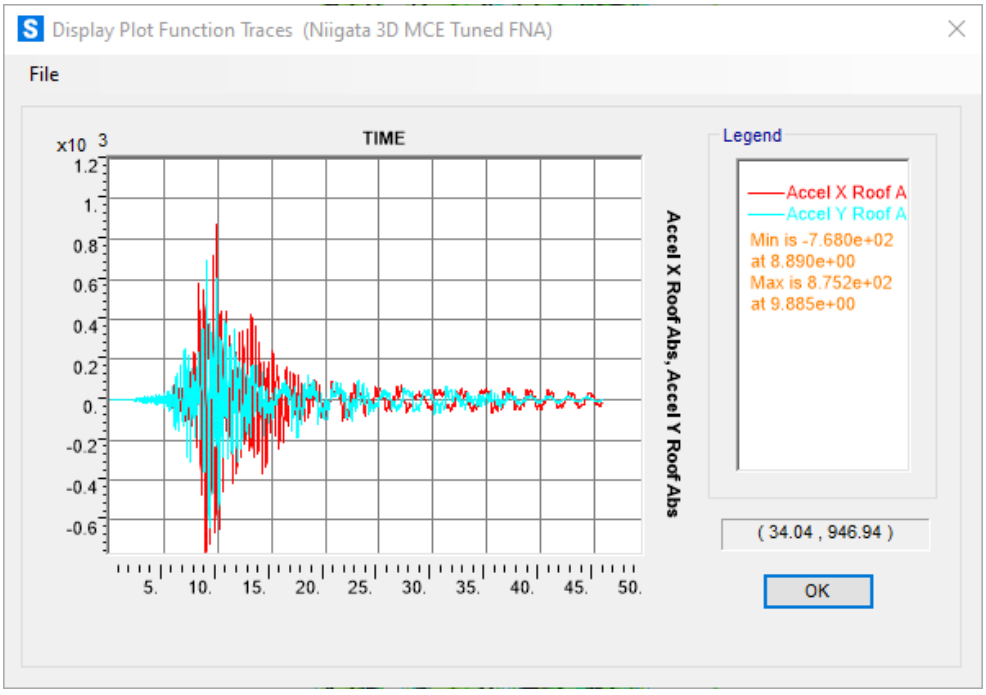


Roof Acceleration (absolute, in/sec^2)

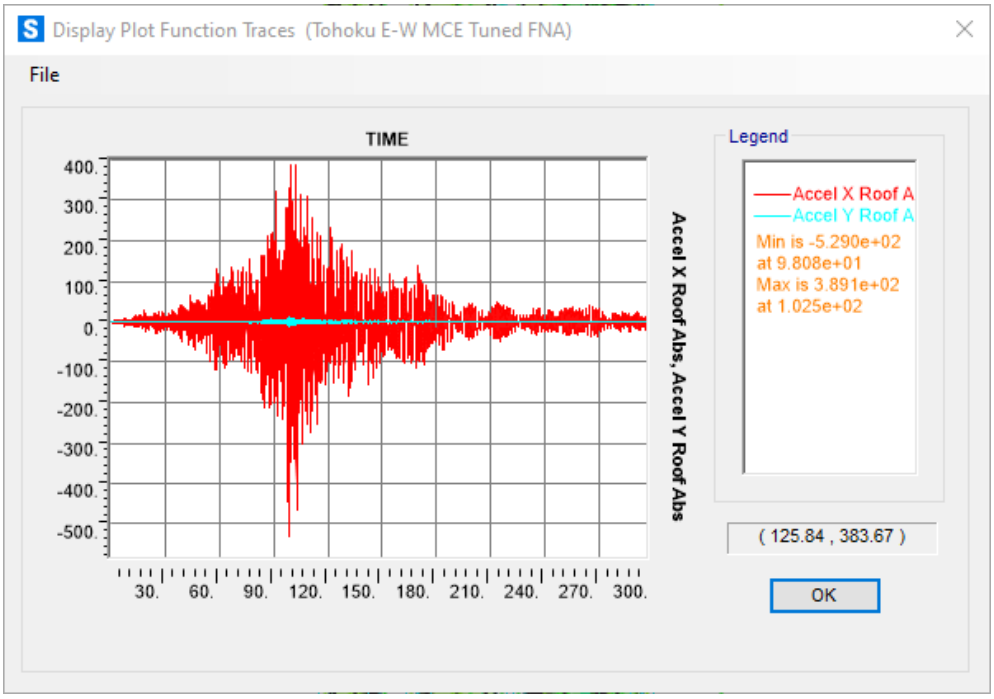
- Ferndale



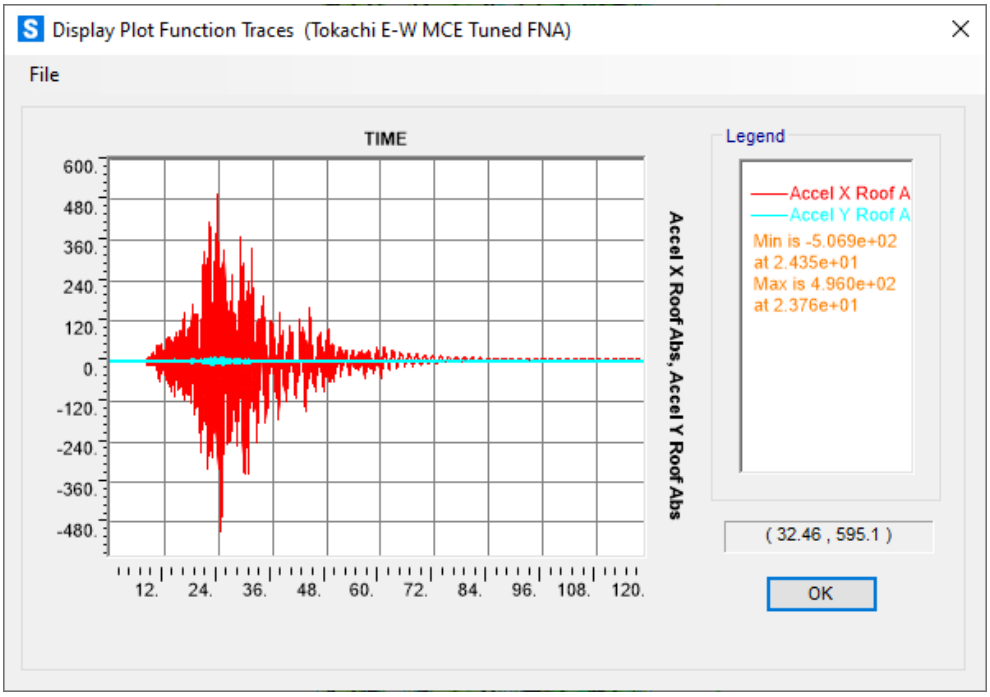
- Niigata



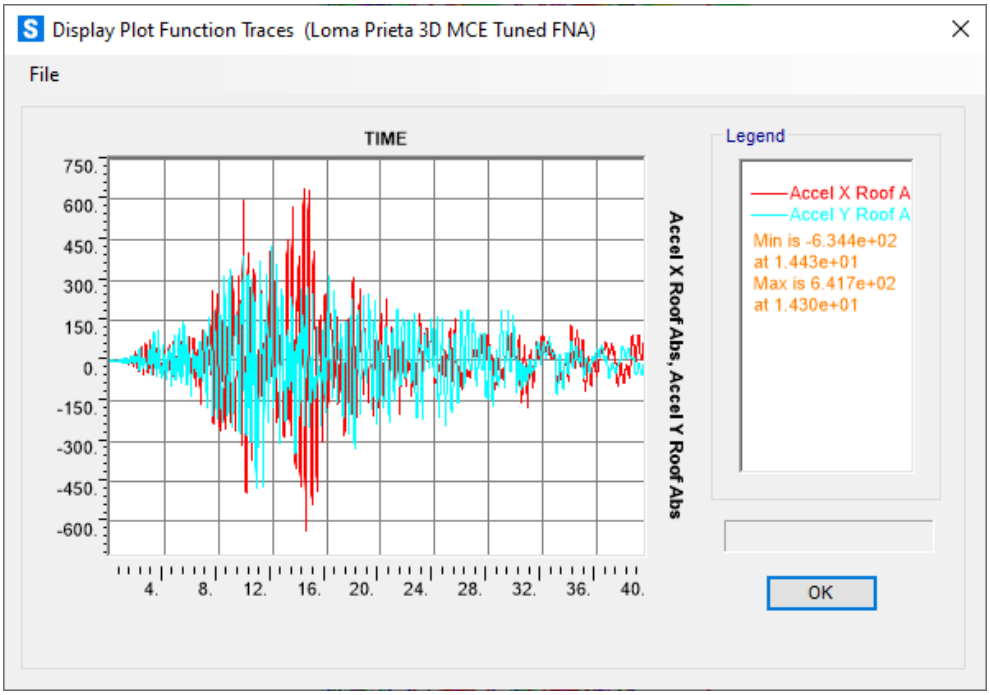
- Tohoku E-W



- Tokachi E-W



- Loma Prieta


Display Plot Function Traces (Loma Prieta 3D MCE Tuned FNA)
File
TIME
750.
600.
450.
300.
150.
0.
-150.
-300.
-450.
-600.
4.
8.
12.
16.
20.
24.
28.
32.
36.
40.
Accel X Roof Abs, Accel Y Roof Abs
Legend
Accel X Roof A
Accel Y Roof A
Min is -6.344e+02
at 1.443e+01
Max is 6.417e+02
at 1.430e+01
OK