

# CE 4542

## Lab Assignment #5

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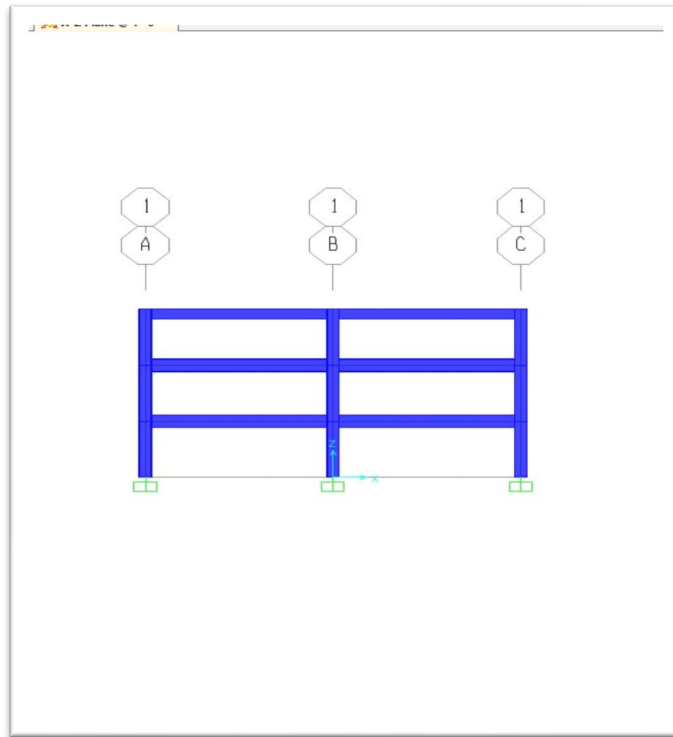
SAP Lab

Lori Fomenko

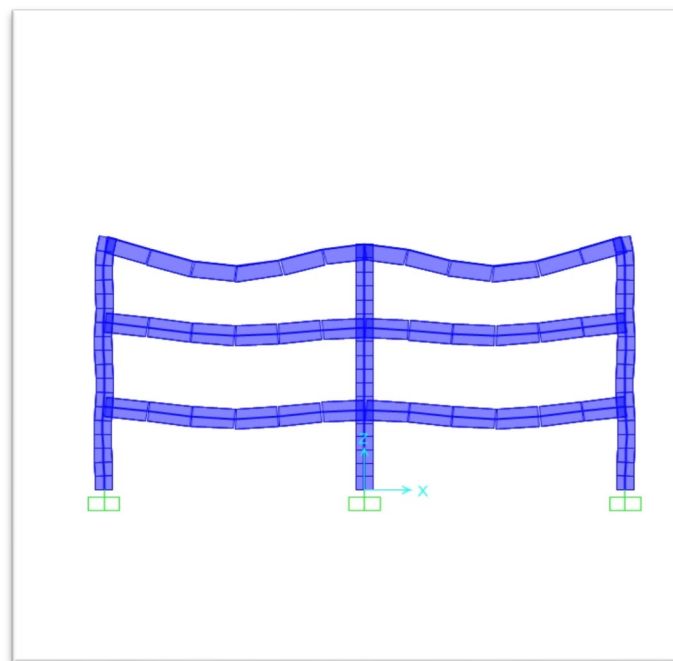
12/9/2015

Detailed Model:

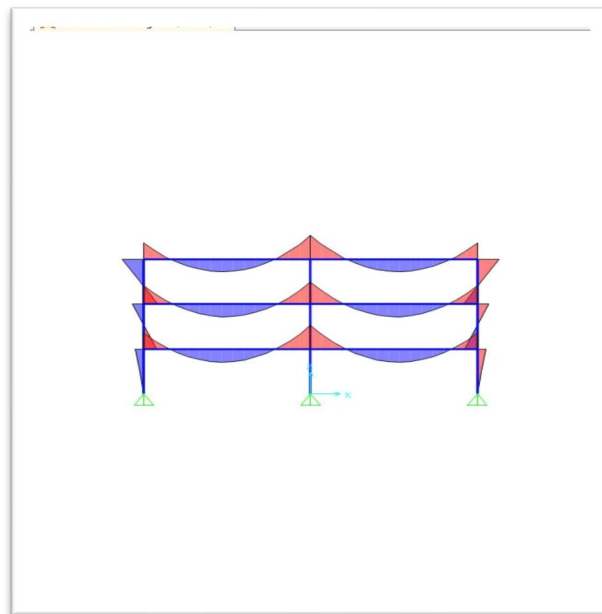
Undeformed Shape:



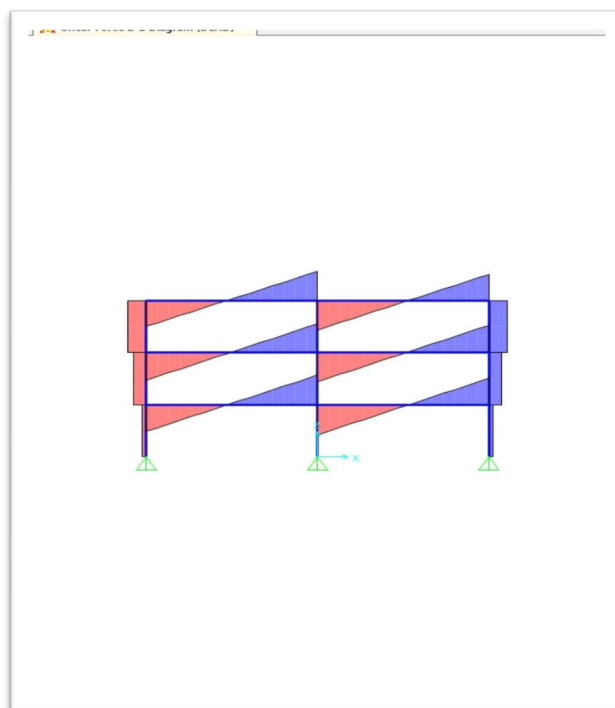
Deformed Shape (all loads):



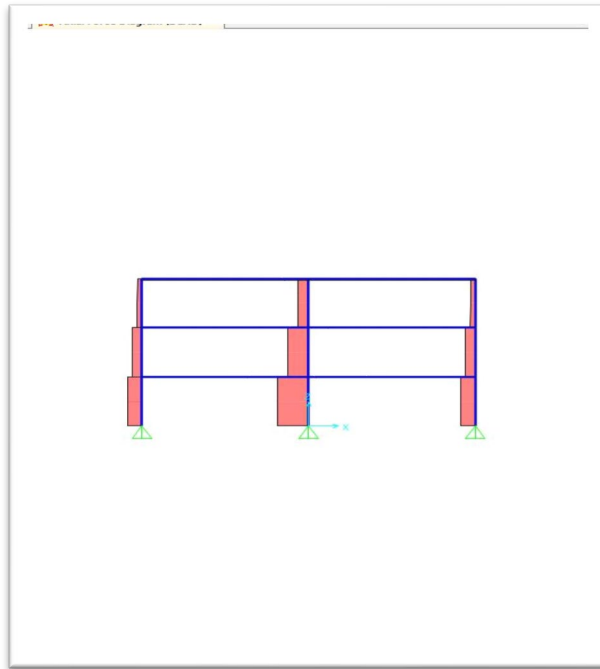
Moment:



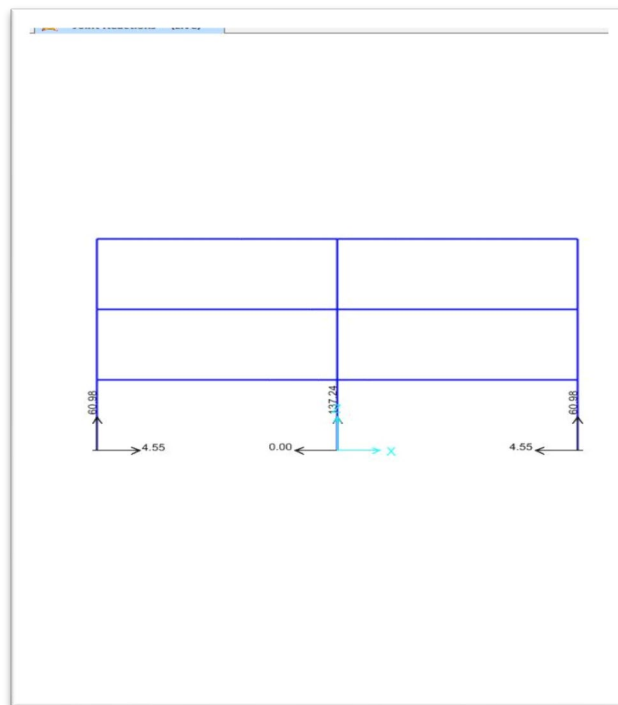
Shear:



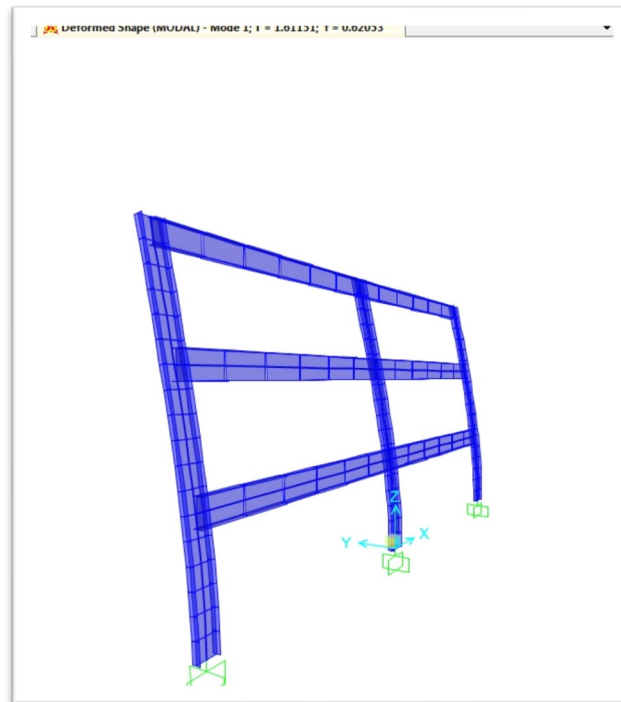
Axial Forces:



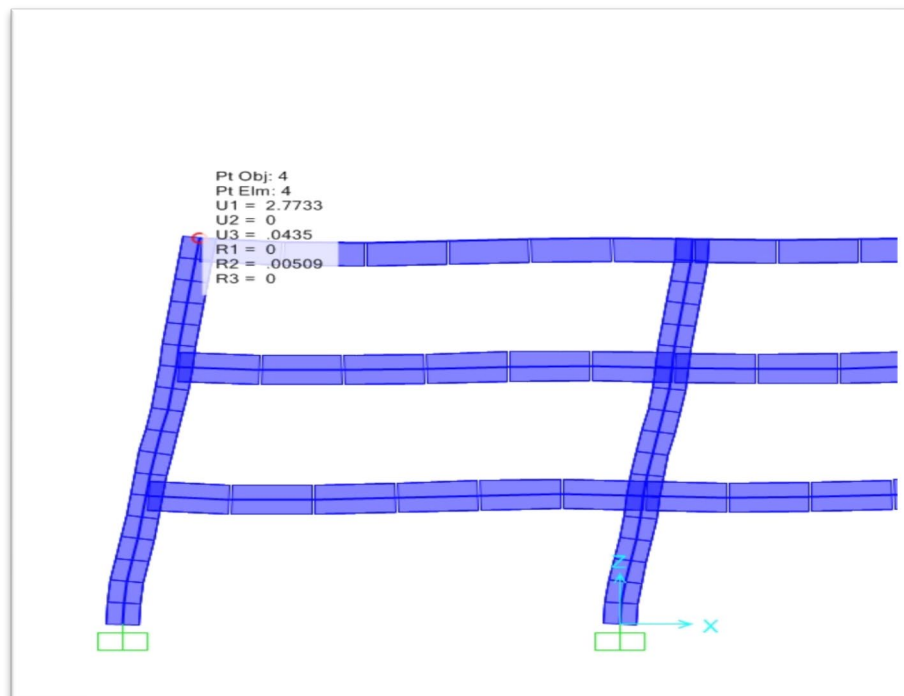
Joint Reactions:



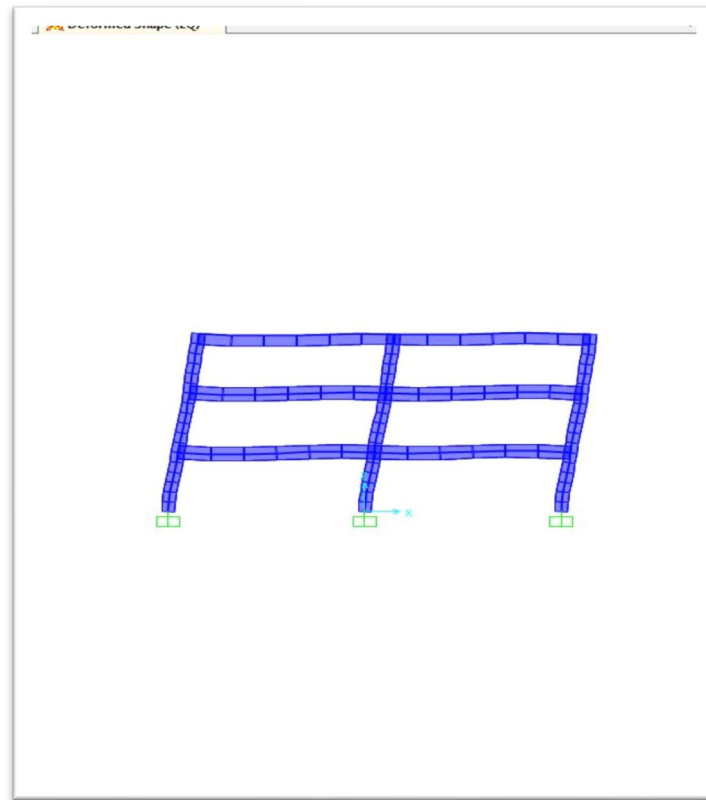
Modal Deformation (Mode 1):



Displacement:

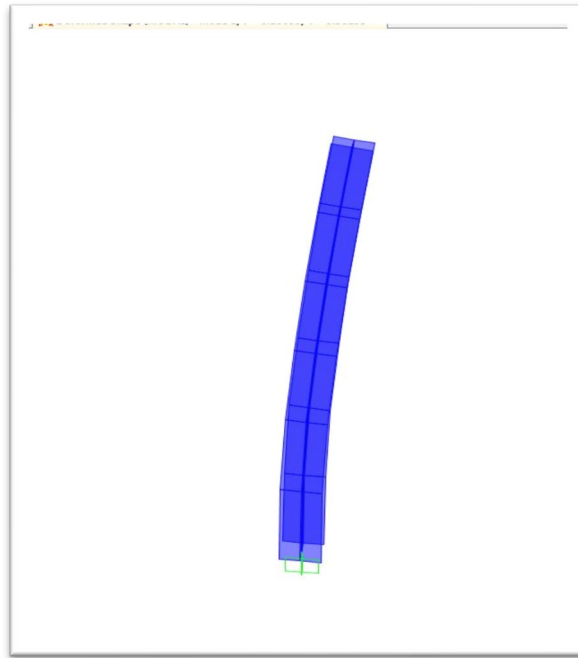


Deformation due to Earthquake loads:

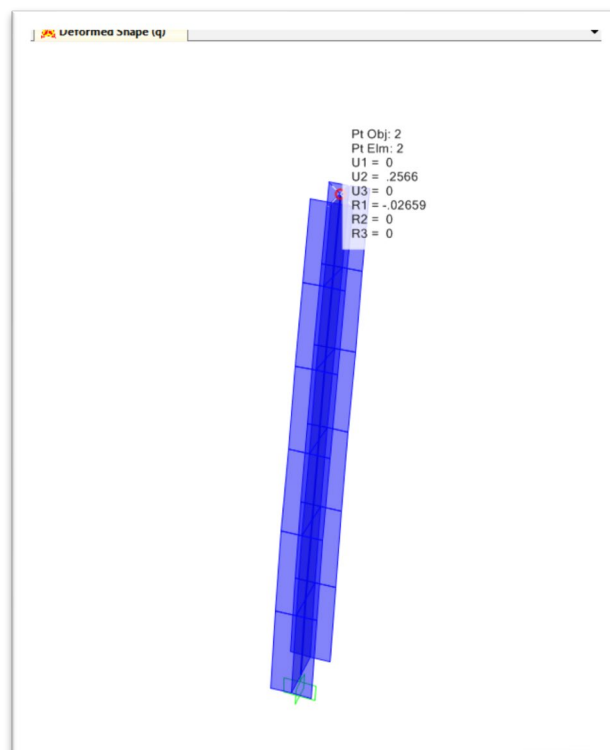


**Substitute Model (W24x192 Steel selection due to similarity in stiffness factor):**

1<sup>st</sup> natural period, modal analysis:

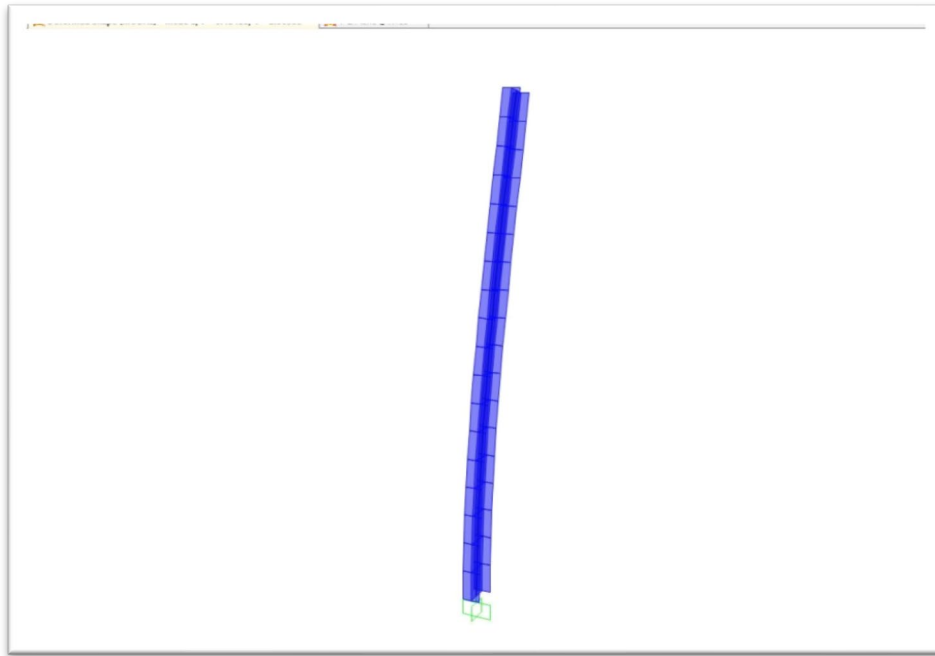


Displacement due to EQ lateral loading:



## Stick Model:

First Natural Period:



Lateral Displacement due to EQ loads:

Deformed Shape (q)

