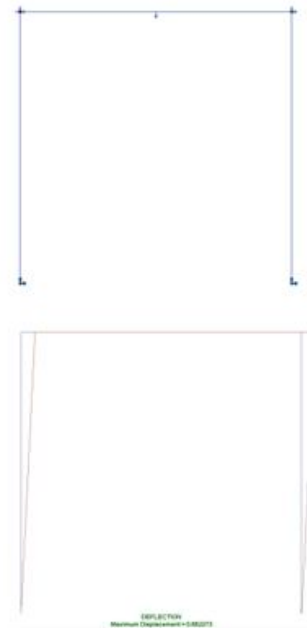
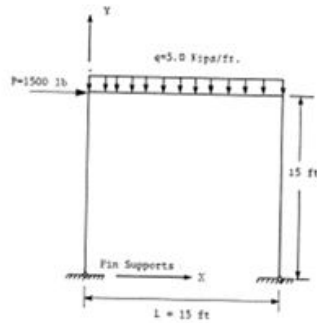


Static analysis of a frame structure under general loading



Material property : $E=30 \times 10^6 \text{ psi}, \nu = 0.3$
 2-D planar beam element. Cross-section: For Vertical Members: $A = 1.5 \times 10^5 \text{ in}^2, I_{YY} = 110.0 \text{ in}^4, I_{ZZ} = 110.0 \text{ in}^4$, For Horizontal Members: $A = 2.0 \times 10^5 \text{ in}^2, I_{YY} = 220.0 \text{ in}^4, I_{ZZ} = 220.0 \text{ in}^4$, Load $F_X = 1500 \text{ lb}$, uniform pressure $P=5 \text{ kips/ft}=417 \text{ kips/in}$

Element type :

Finite element statistics :

Number of nodes	Number of elements	Degrees of freedom
4	3	8

Output parameters	Theoretical value	FEAST ^{SMT}	NISA2 [®]
Horizontal displacement of the middle member, (in)	0.55	0.55	0.55