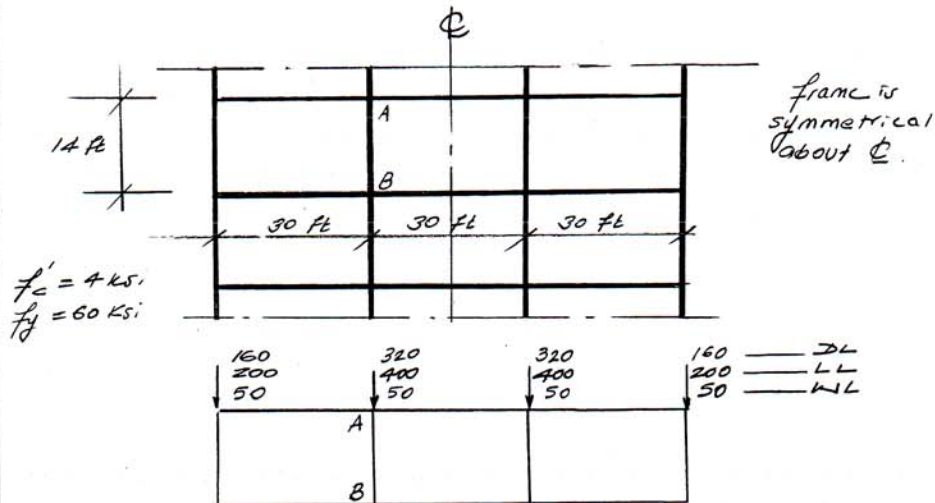


B. Unbraced Frame :

Column AB moments : $M_{DL} = 40 \text{ ft-kip}$
 $M_{LL} = 175 \text{ ft-kip}$
 $M_{WL} = 150 \text{ ft-kip}$
 Assume $M_1 = M_2$ or $M_{top} = M_{bot}$.

All beams : (18x30)
 All columns : (18x24)

Design column AB of the given unbraced frame.

Since this is a symmetrical frame, the gravity loads (DL and LL) will not cause appreciable sideways. Thus the dead- and live-load moments combine to give M_{1NS} and M_{2NS} . The wind-load moments make up M_{1S} and M_{2S} .