Approximate RBS beam stiffness

- 10% reduction in beam stiffness very conservative for most cases
  - High span-to-depth ratios
    - ≥7 required for SMF
  - Typical flange/web thickness ratios
    - Rolled WF beams
- Sabelli approximate equation:

$$\frac{I_{ef}}{I} = \frac{1}{1 + \frac{12 L_h b}{(L_h + 2s_h)^2}\left[\frac{1}{1 - \left({}^{2}/_{3}\, c{t_f}/_{I}\right)\left({}^{d}/_{2} - {}^{t_f}/_{2}\right)^2} - 1\right]} = 0.93$$

2 W24x62 beams
2 W14x132 columns