Beams on an elastic foundation

Using links to model beams on an elastic foundation

Gap (compression-only) link objects may be used to model vertical deflection, including that of beams on an elastic foundation. Gap links may be applied as follows:

1. Define link properties through Define > Section Properties > Link/Support Properties.
   - Set the Link/Support Type to Gap (Figure 1).
   - Specify link properties under Directional Properties. Compression-only properties may be specified for each direction (Figure 1).
   - Set stiffness and open distance through Nonlinear > Modify/Show.

2. Select the joint to which the link will be assigned, then model the link through Draw > Draw Joint Link.

Please note that both links and springs are available for modeling, though links are more powerful because they enable nonlinear behavior and may be used either as supports or as connections between two non-grounded joints. Nonlinear link properties are only active when running a nonlinear load case.