where:

\[ Y_c = \left( \frac{C_2}{2} + \frac{2}{C_1} \right) + \left( C_2 + C_i \right) \left( \frac{4}{C} + \frac{2}{s} \right) \]  

(3-26)

\[ C_i = \frac{g}{2} - k_j \]  

(3-27)

\[ C_2 = \frac{b_{fc} - g}{2} \]  

(3-28)

\[ s = \sqrt{\frac{C_1 C_2}{C_2 + 2C_1} \left( 2b_{fc} - 4k_1 \right)} \]  

(3-29)

If \( t_{fc} \) is less than the calculated value, a column with a thicker flange must be selected.

**Step 8:** Check column flange thickness for adequacy for beam flange compression according to the following:

\[ t_{fc} > \frac{M_f}{\left( d_b - t_{fb} \right) \left( 6k + 2t_{pl} + t_{bf} \right) F_{ye}} \]  

(3-30)

where \( k \) is the \( k \)-distance of the column from the *AISC Manual*.

If \( t_{fc} \) is less than given by Equation 3-30, than beam flange continuity plates are required in accordance with Section 3.3.3.1.

**Step 9:** Check the panel zone shear capacity in accordance with Section 3.3.3.2. For purposes of this calculation, \( d_b \) may be taken as the distance from one edge of the end plate to the center of the beam flange at the opposite flange.

**Step 10:** Detail the connection as shown in Figure 3-13.