ranges of drift increase from 4% to 7%, depending on the amount of flange reduction and other factors. The default factor to increase drift is expected to be slightly conservative for most cases.

3.1.5.1 Design Procedure

Step 1: Determine the length and location of the beam flange reduction, based on the following:

\[ a \equiv (0.5 \text{ to } 0.75) b_f \]  

\[ b \equiv (0.65 \text{ to } 0.85) d_b \]

where \( a \) and \( b \) are as shown in Figure 3-12, and \( b_f \) and \( d_b \) are the beam flange width and depth respectively.

Step 2: Determine the depth of the flange reduction, \( c \), according to the following:

a) Assume \( c = 0.20 b_f \).

b) Calculate \( Z_{RBS} \).

c) Calculate \( M_f \) according to the method of Section 3.2.6 and Figure 3-4 using \( C_{pr} = 1.15 \).

d) If \( M_f < R_y Z_b F_y \) the design is acceptable. If \( M_f \) is greater than the limit, increase \( c \). The value of \( c \) should not exceed \( 0.25 b_f \).

Step 3: Calculate \( M_f \) and \( M_c \) based on the final RBS dimensions according to the methods of Section 3.2.7.

Step 4: Calculate the shear at the column face according to the equation:

\[ V_f = 2 \frac{M_f}{L - d_c} + V_g \]  

Where: \( V_g \) = shear due to factored gravity load.

Step 5: Design the shear connection of the beam to the column. If a CJP welded web is used, no further calculations are required. If a bolted shear tab is to be used, the tab and bolts should be designed for the shear calculated in Step 4. Bolts should be designed for bearing, using a resistance factor \( f \) of unity.

Step 6: Design the panel zone according to the methods of Section 3.3.3.2.

Step 7: Check continuity plate requirements according to the methods of Section 3.3.3.1.

Step 8: Detail the connection as shown in Figure 3-12.