3 TYPICAL DETAILING OF CONNECTION

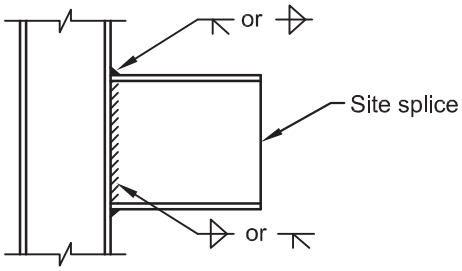

FIGURE 5 STUB GIRDER CONNECTION, FULLY SHOP WELDED BEAM STUB, BEAM SPLICED ON SITE

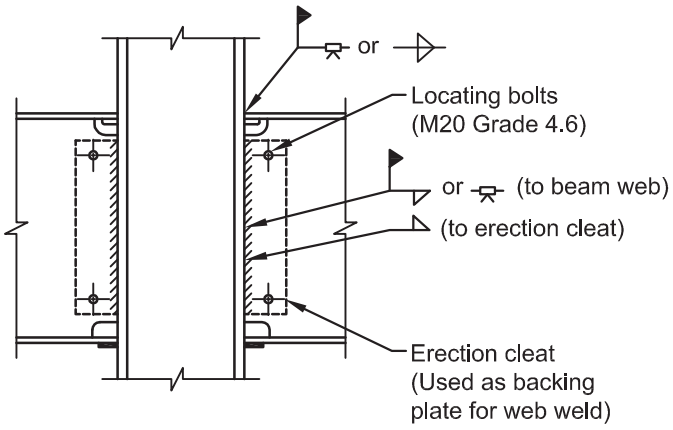

FIGURE 6 FIELD WELDED MOMENT CONNECTION—INCLUDING ERECTION CLEAT

Areas of the I-section column which require checking and which may require subsequent stiffening are:

(a) the column web adjacent to the compression flange of the beam which may cripple or buckle;

(b) the column flange which is subject to bending action due to the beam flange forces—this effect is most serious in the region stressed by the beam tension flange but also occurs at the beam compression flange;

(c) the column web which may be subject to a large resultant shear force when the bending moments in two beams at an interior connection differ by a large amount, or when a one-sided beam-to-column moment connection is involved. The resultant column shear force due to the imbalance of the design bending moments must be compared with the design capacity of the column web in shear in order to determine if shear stiffening is required.

Stiffening of the column may be effected by one or more of the following:

- local removal of column flange and welding in of thicker plate (Figure 7c);
- doubler plates to the flange of the column (Figure 7a);
- doubler plates to the web of the column (Figure 7b);
- tension stiffeners behind the column tension flange (Figures 8a, 8b);
- compression stiffeners behind the column compression flange (Figures 8c, 8d, 8e);
- diagonal shear stiffeners (Figure 8f).

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T.J. Hogan

contributing author

N. van der Kreek

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