sections (Yu 2005) and are recommended for application for any cold-formed steel cross-section.

Global (lateral-torsional) buckling occurs at long lengths. To determine $M_{cre}(L)$ two options are available: (1) use the closed-form expression in the main *Specification* as illustrated in Section 2.6 of this Guide, or (2) recognize the form of M_{cre} as a function of L and fit an appropriate expression to the generated finite strip data (see Section 3.3.4 of this Guide for further discussion). Method (2) does not require the calculation of cross-section properties and is relatively easily implemented. The form of M_{cre} as a function of L is known:

$$M_{cre}^{\ 2} = \alpha(1/L)^2 + \beta(1/L)^4$$

To find α and β pick any two pairs of points in the finite strip analysis curve at half-wavelengths long enough that the mode shapes display the lateral-torsional mode. Defining such pairs as (L_{cr1}, M_{cre1}) and (L_{cr2}, M_{cre2}), then α and β are:

$$\alpha = \frac{M_{cre1}^{\ 2} L_{cr1}^{\ 4} - M_{cre2}^{\ 2} L_{cr2}^{\ 4}}{L_{cr1}^{\ 2} - L_{cr2}^{\ 2}} \qquad \beta = \frac{(M_{cre1}^{\ 2} L_{cr1}^{\ 2} - M_{cre2}^{\ 2} L_{cr2}^{\ 2}) L_{cr1}^{\ 2} L_{cr2}^{\ 2}}{L_{cr2}^{\ 2} - L_{cr1}^{\ 2}}$$

Following this methodology a beam chart is developed for the C-section with lips, of Section 3.2.1. The complete development of the chart is given in Section 8.13 of this Guide. The final chart is provided in Figure 37(a)and(b). Additional charts for the Z-section with lips are provided in parts (c) and (d) of this figure.