

## Building Movements and Joints, EB086.01B

### Errata Sheet

Page 40, paragraph 1 (“DRYING SHRINKAGE EFFECT ON TOTAL MOVEMENT”), line 6:

...A typical coefficient of shrinkage determined in the laboratory may be about 600 millionths. Thus, for a 100-ft-long (30.5-m) *unrestrained* wall, the contraction could be about ¾ in. (19 mm). The shortening *also* varies with the mass of the concrete. Mass is not usually considered in calculating expansion-joint movement and ~~may explain~~ *partially explains* why observations of buildings in service indicate the total movement at less than half that anticipated by combining shrinkage with the contraction due to temperature drop. The restraining effect of the reinforcing steel *and structural framing* also *play a major role* ~~undoubtedly plays a part~~ in the reduction of this movement. ...

Page 40, paragraph 2 (“FOUNDATION MOVEMENTS”), line 1:

Major differences in foundation loading at different parts of a building can produce a tendency for significant parts of the building to move *in relation to each other*. ...

Page 40, paragraph 3 (“SPACING EXPANSION JOINTS”), Line 1:

Buildings under 200 ft (61 m) long are seldom provided with expansion joints. ~~The need for thermal expansion joints in longer buildings is first determined empirically. If the results are not sufficiently comprehensive to be applicable to the type of structure being studied, a more precise analysis should be undertaken.~~ *Buildings of more than 600 ft (183 m) have been constructed and performed satisfactorily without expansion joints.*

*The possible need for thermal expansion joints in long buildings may be determined initially using the empirical approach described in the following section.*

*Previously developed empirical rules for expansion joint spacing are not necessarily compatible with modern construction. Therefore, effects of thermal and other volume changes should be determined as part of the structural analysis. If results of the empirical approach indicate an expansion joint may be needed, a more comprehensive analysis can be done to determine if use of expansion joints can be avoided.*

As a minimum, each of the following factors should be taken into account for expansion joint location and design: ...

Page 40, paragraph 4 (“EMPIRICAL APPROACH FOR DETERMINING NEED”), line 1:

The following criteria taken from Reference 58 ~~should be used in the absence of more rational approaches;~~ *may be used to determine if a more comprehensive analysis is needed as described in Section III B of Reference 58:* ...

Page 41, Caption for Figure 56:

Fig. 56. Maximum allowable building length without use of expansion joints for various design temperature changes *unless more comprehensive analysis is done*. These curves are directly applicable to buildings of beam-and-column construction, ...

Page 41, Footnote 1:

\*A building is considered to have a beam-and-column or slab-and-column structural frame even if intermittent interior shearwalls or other stiffening elements are incorporated in the frame and even if the frame is supported on an above-grade, reinforced concrete, continuous-perimeter base wall. ~~This Fig. 56 does not apply to buildings with fully exposed exterior frames placed outside the cladding elements or to that portion of a building that consists of a reinforced concrete continuous-perimeter wall whether above grade or below grade.~~

Page 42, paragraph 6 (“CLOSURE STRIPS”), line 8:

... The normally required reinforcing steel protrudes from each side into the closure strip where it is ~~lap~~ *suitably spliced*. ...