



Subfloor bracing distribution



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Here, we offer a solution to NZS 3604:2011 *Timber-framed buildings* clause 5.5.2, which has had callers to the BRANZ helpline scratching their heads.

SOMETIMES THINGS don't quite go according to plan and unintended errors creep in. A case in point is clause 5.5.2 of NZS 3604:2011 *Timber-framed buildings* covering subfloor bracing distribution, which clearly doesn't make much sense.

The BRANZ helpline gets periodic enquiries about this one, so if you don't understand it, you're not alone. Subclauses (e) and (f) of 5.5.2.1 need to be deleted and clause 5.5.2.2 expanded to include the required minimum bracing values. The revisions should look like this.

5.5.2.1 Subfloor bracing systems – bracing lines

Bracing lines providing horizontal support shall run in two directions at right angles to each other and be located:

- in perimeter foundation and subfloor framing
- in internal lines parallel to perimeter foundation and subfloor framing
- at no more than 5 m spacing
- so that bracing elements are evenly distributed along each line as far as is practicable. When a structural floor diaphragm is present (clause 7.3), no internal bracing lines are required within the boundary of the diaphragm.

5.5.2.2 Minimum bracing capacity in subfloor bracing lines

Each subfloor bracing line shall have a total

bracing capacity of not less than the greater of 100 bracing units (BU) or 50% of the total demand at subfloor level divided by the number of bracing lines in the direction being considered – along and across. In addition, each external subfloor bracing line shall have at least 15 bracing units times the length in metres of the external wall.

Parallel subfloor bracing lines under external walls offset not more than 2 m from each other may be treated as one bracing line.

Will be in the revised NZS 3604

This solution, shown in Figure 1, is to be incorporated into the upcoming revision of the standard and is offered to help clarify any enquiries that may arise before then. ◀

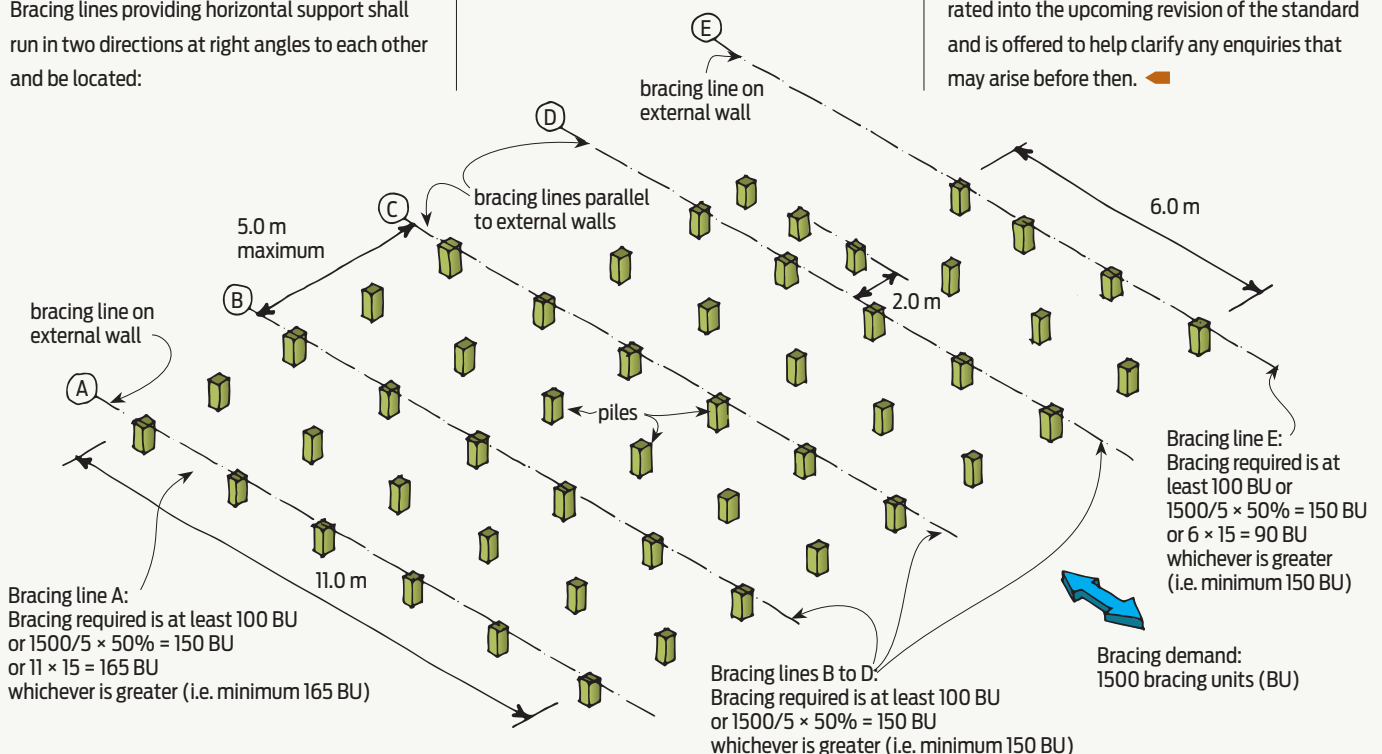


Figure 1: Foundation plan showing subfloor bracing lines. Note: Bracing lines shown in one direction only for clarity.