



DESIGN
RIGHT



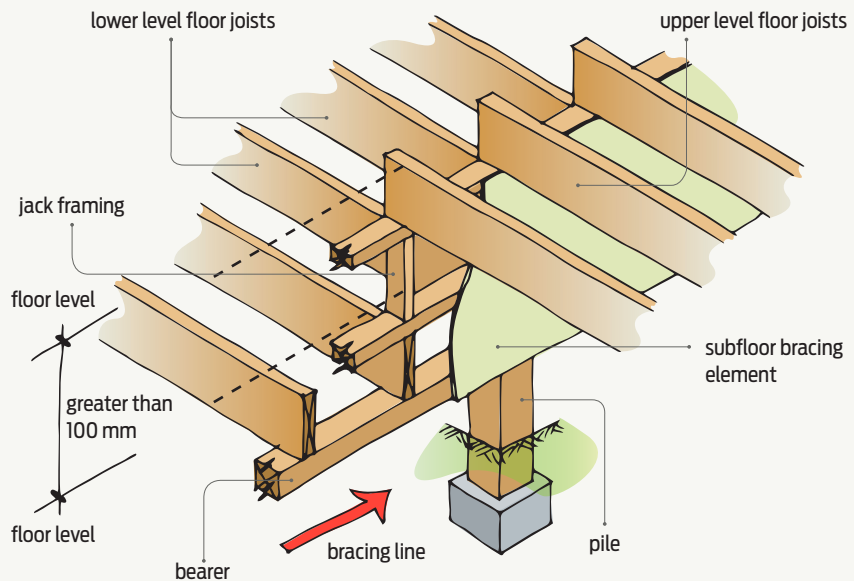
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Bracing for steps in floors or ceilings

READERS HAVE ASKED ABOUT BRACING REQUIREMENTS IN TWO EXTRA SITUATIONS, SO TOM EDHOUSE OUTLINES THE RULES. FIRST UP ARE DISCONTINUOUS FLOORS OR CEILINGS.

NZS 3604:2011 clause 5.15 has the bracing requirements for buildings with a step or break greater than 100 mm in the finished levels. This requires:

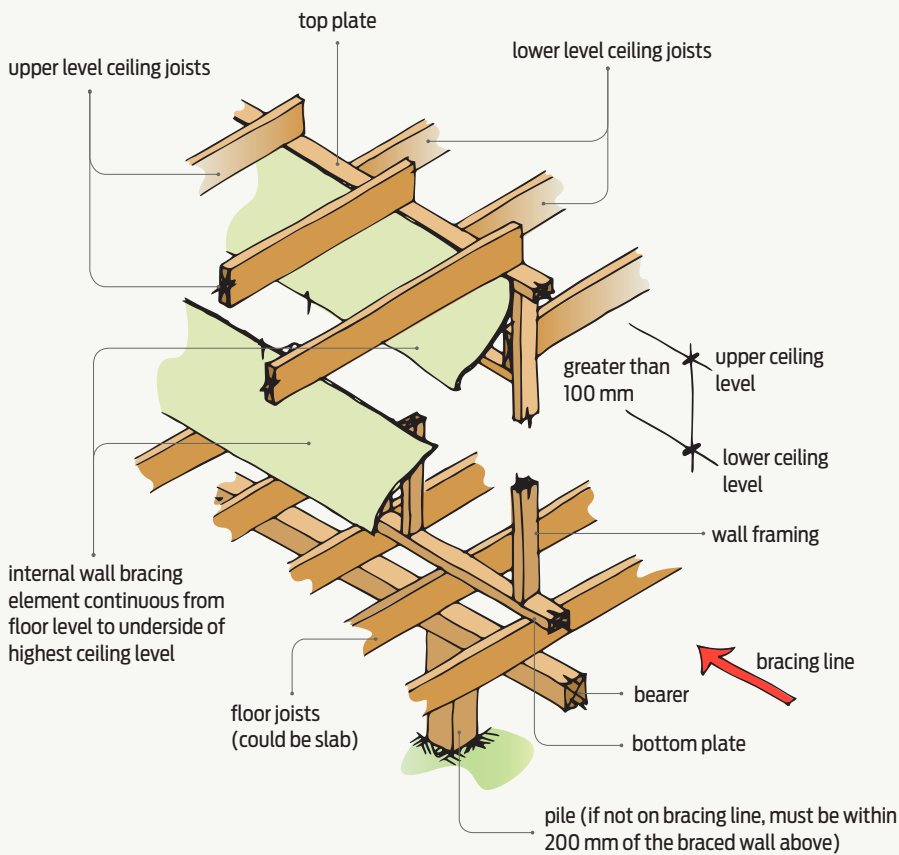
- a bracing line in the storey below, directly under the discontinuity, and
- the bracing elements in the storey below must be continuous from floor level to the underside of the highest ceiling level (see Figures 1 and 2).



Piles need to be braced (anchor or cantilevered) and meet at least the minimum required bracing line capacity of:

- 100 BUs or
- 50% of the total bracing demand, divided by the number of bracing lines in the direction being considered.

Figure 1 Bracing design where floor is discontinuous.



The minimum bracing for internal walls in bracing lines is:

- 100 BUs or
- 50% of the total bracing demand, divided by the number of bracing lines in the direction being considered.

Piles on the subfloor bracing line must be anchor or cantilevered or a braced system combination and meet at least the minimum subfloor bracing requirements.

Figure 2 Bracing design where ceiling is discontinuous.