

3) Anchor bolts referred to in Sentence (2) shall be fastened to the sill plate with nuts and washers and shall be embedded not less than 100 mm in the *foundation* and so designed that they may be tightened without withdrawing them from the *foundation*.

9.23.6.2. Anchorage of Columns and Posts

1) Except as provided in Sentences (2) and (3), exterior columns and posts shall be anchored to resist uplift and lateral movement.

2) Except as provided in Sentence (3), where columns or posts support balconies, decks, verandas or other exterior platforms, and the distance from finished ground to the underside of the joists is not more than 600 mm,

- a) the columns or posts shall be anchored to the *foundation* to resist uplift and lateral movement, or
- b) the supported joists or beams shall be directly anchored to the ground to resist uplift.

3) Anchorage is not required for platforms described in Sentence (2) that

- a) are not more than 1 *storey* in height,
- b) are not more than 55 m² in area,
- c) do not support a roof, and
- d) are not attached to another structure, unless it can be demonstrated that differential movement will not adversely affect the performance of the structure to which the platform is attached.

9.23.6.3. Anchorage of Smaller Buildings

1) *Buildings* not more than 4.9 m wide and not more than 1 *storey* in *building height* that are not anchored in accordance with Sentence 9.23.6.1.(1) shall be anchored in conformance with the requirements of CSA Z240.10.1, "Site Preparation, Foundation, and Anchorage of Mobile Homes."

9.23.7. Sill Plates

9.23.7.1. Size of Sill Plates

1) Where sill plates provide bearing for the floor system, they shall be not less than 38 mm by 89 mm material.

9.23.7.2. Levelling and Sealing of Sill Plates

1) Sill plates shall be

- a) levelled by setting them on a full bed of mortar, or
- b) laid directly on the *foundation* if the top of the *foundation* is level.

(See also Article 9.23.2.3.)

2) The joint between the sill plate for exterior walls and the *foundation* shall be sealed in accordance with Subsection 9.25.3.

9.23.8. Beams to Support Floors

9.23.8.1. Bearing for Beams

1) Beams shall have even and level bearing and the bearing at end supports shall be not less than 89 mm long, except as stated in the notes to Tables A-8 to A-11.

9.23.8.2. Priming of Steel Beams

1) Exterior steel beams shall be shop primed.

9.23.8.3. Built-up Wood Beams

(See Appendix A.)

1) Where a beam is made up of individual pieces of lumber that are nailed together, the individual members shall be 38 mm or greater in thickness and installed on edge.

2) Except as permitted in Sentence (3), where individual members of a built-up beam are butted together to form a joint, the joint shall occur over a support.

3) Where a beam is continuous over more than one span, individual members are permitted to be butted together to form a joint at or within 150 mm of the end quarter points of the clear spans, provided the quarter points are not those closest to the ends of the beam.

4) Members joined at quarter points shall be continuous over adjacent supports.

5) Joints in individual members of a beam that are located at or near the end quarter points shall not occur in adjacent members at the same quarter point and shall not reduce the effective beam width by more than half.

6) Not more than one butt joint shall occur in any individual member of a built-up beam within any one span.

7) Except as provided in Sentence (8), where 38 mm members are laid on edge to form a built-up beam, individual members shall be nailed together with a double row of nails not less than 89 mm in length, spaced not more than 450 mm apart in each row with the end nails located 100 mm to 150 mm from the end of each piece.

8) Where 38 mm members in built-up wood beams are not nailed together as provided in Sentence (7), they shall be bolted together with not less than 12.7 mm diam bolts equipped with washers and spaced not more than 1.2 m o.c., with the end bolts located not more than 600 mm from the ends of the members.

9.23.9. Floor Joists

9.23.9.1. End Bearing for Joists

1) Except when supported on ribbon boards, floor joists shall have not less than 38 mm length of end bearing.

2) Ribbon boards referred to in Sentence (1) shall be not less than 19 mm by 89 mm lumber let into the studs.

9.23.9.2. Joists Supported by Beams

1) Floor joists may be supported on the tops of beams or may be framed into the sides of beams.

2) When framed into the side of a wood beam, joists referred to in Sentence (1) shall be supported on

- a) joist hangers or other acceptable mechanical connectors, or
- b) not less than 38 mm by 64 mm ledger strips nailed to the side of the beam, except that 38 mm by 38 mm ledger strips may be used provided each joist is nailed to the beam by not less than four 89 mm nails, in addition to the nailing for the ledger strip required in Table 9.23.3.4.

3) When framed into the side of a steel beam, joists referred to in Sentence (1) shall be supported on the bottom flange of the beam or on not less than 38 mm by 38 mm lumber bolted to the web with not less than 6.3 mm diam bolts spaced not more than 600 mm apart.

4) Joists referred to in Sentence (3) shall be spliced above the beam with not less than 38 mm by 38 mm lumber at least 600 mm long to support the flooring.

5) Not less than a 12 mm space shall be provided between the splice required in Sentence (4) and the beam to allow for shrinkage of the wood joists.

9.23.9.3. Restraint of Joist Bottoms

1) Except as provided in Sentence 9.23.9.4.(1), bottoms of floor joists shall be restrained from twisting at each end by toe-nailing to the supports, end-nailing to the header joists or by providing continuous strapping, blocking between the joists or cross-bridging near the supports.