



# Lateral Support of Foundation Walls

The Building Standards Department issues Builder Tips as part of our customer service program. They are designed to provide an improved understanding of the Building Code and to reduce the costs associated with correcting infractions. Please contact your area building inspector for further information or call the Building Standards Department at 905.475.4848 extension 2189

## **9.12.3.4. Lateral Support of Foundation Wall**

(1) Where the height of foundation wall is such that lateral support is required, or where the required concrete strength of the wall has not been reached, the wall shall be braced or laterally supported before backfilling.

## **9.15.4.2. Foundation Wall Thickness and Required Lateral Support**

(1) Except as required in Sentence (2), the thickness of foundation walls made of unreinforced concrete block, concrete core in flat wall insulation concrete forms or solid concrete and subject to lateral earth pressure shall conform to Table 9.15.4.2.-A. for walls not exceeding 3.0 m (9 ft 10 in) in unsupported height.

## **9.15.4.3. Foundation Walls Considered to be Laterally Supported at the Top**

(1) Sentences (2) to (4) pertain to lateral support for walls described in Sentence 9.15.4.2.(1).

(2) Foundation walls shall be considered to be laterally supported at the top if

- (a) such walls support solid masonry superstructure or flat insulating concrete form wall,
- (b) the floor joists are embedded in the top of the foundation walls,
- (c) the floor system is anchored to the top of the foundation walls with anchor bolts, in which case the joists may run either parallel or perpendicular to the foundation walls, or
- (d) they extend from the footing to no more than 300 mm above the finished ground level and are backfilled on both sides such that the difference in elevation between the finished ground levels on either side of the wall is no more than 150 mm.



(4) For the purpose of sentence (3), the combined width of the openings shall be considered as a single opening if the average width is greater than the width of solid wall between them.

**OBJECTIVE**

During construction and prior to backfilling, foundation walls may require lateral support if the height of the backfill exceeds the height permitted by the Code for unsupported walls. The wall thickness, the wall type (solid concrete or unit masonry, flat insulating concrete form wall) and lateral support of the wall must be considered prior to backfilling.

A common foundation wall used by builders consists of a 203 mm (8 in) thick concrete wall with the strength of 2176 psi (15 MPa). This type of wall can be backfilled to a maximum height of 1200 mm (3 ft 11 in) without being laterally supported. For a greater height of backfill, the wall shall be braced or laterally supported by the floor system

