

## LATERAL SUPPORT OF FOUNDATION WALLS

### ONTARIO BUILDING CODE

#### 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 or solid concrete and subject to lateral earth pressure shall conform to Table 9.15.4.2.A. for walls not exceeding 2.5 m (8 ft 2 in) in unsupported height.

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

- (1) Sentences (2) to (4) apply 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,

- (b) the floor joists are embedded in the top of the foundation walls, or

- (c) the floor system is anchored to the top of the foundation walls with anchor bolts, in which case the joist may run either parallel or perpendicular to the foundation walls.

- (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) 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 1118 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

