

The new issue of the National Building Code of Canada 2005 (2005 NBC) was recently released late last year, and now covers requirements for flat insulated concrete forms. The advantage of the new provisions for ICFs is that buildings that meet the provisions should no longer require site-specific engineer review and approvals. However, this should be confirmed by your local jurisdiction. The more notable ICF requirements are outlined below.

TERMITE PROTECTION (Section 9.3.2.9)

In areas where termites are known to occur, a termite barrier is required through the insulation and finish materials above finished ground level.

FOOTINGS AND FOUNDATIONS (Section 9.15)

These provisions apply to buildings of ICF construction and

1. not more than 2 storeys in building height;
2. maximum 3m floor-to-floor heights;
3. and containing a single dwelling unit.

Major changes are the addition of vertical reinforcement tables, and horizontal and cold joint reinforcement requirements.

1. **Vertical reinforcement tables** for foundation walls (Section 9.15.4.5) are provided for 140mm, 190mm and 240mm thick ICF walls (5.5", 7.5" and 9.5" respectively).

Since Logix ICFs are available in slightly larger sizes of 158mm (6.25"), 203mm (8") and 254mm (10"), it would be conservative, and therefore, acceptable to use the 140mm, 190mm and 240mm tables for Logix 158mm, 203mm and 254mm ICFs, respectively.

2. **Horizontal reinforcement** shall be:
 - a. One 10M bar at not more than 300mm (12") from the top of wall.
 - b. 10M bars at 600mm (2ft) on center.
3. **Cold joint reinforcement** shall be no less than one 15M bar spaced at no more than 600mm (24") on center, and embedded 300mm (12") on each side of the joint.

ABOVE-GROUND WALLS (Section 9.20.17)

These provisions also apply to buildings of ICF construction and

1. not more than 2 storeys in building height;
2. maximum 3m floor-to-floor heights;
3. containing a single dwelling unit;
4. concrete wall thickness not less than 140mm (5.5");
5. and in locations where the seismic spectral response acceleration, S_a , is not greater than 0.4.

Major changes are the addition of reinforcement requirements for vertical and horizontal rebar, openings and lintels, and anchor bolt spacings.

1. **Vertical reinforcement** shall be 10M bars at 400mm (16") on center.
2. **Horizontal reinforcement** shall be:
 - a. One 10M bar at not more than 300mm (12")

- from the top of wall.
- b. 10M bars at 600mm (24") on center.
 3. **Lintel tables** are provided for various spans, depths and thicknesses.
 4. **Anchor bolt spacing tables** are provided where ledger boards are used to support the floor system.

Section 6 of the Logix Product Manual contains extensive load tables for above- and below-grade walls and lintels for Logix ICFs. These load tables are a good alternative to the new provisions listed above, or where residential construction projects fall outside the scope of the provisions.

The 2005 NBC will likely be adopted late this year or next year by most major cities in Canada. The NBC 2005 can be purchased on-line at http://irc.nrc-cnrc.gc.ca/pubs/codes/index_e.html. For more information contact info@logixicf.com.