

Product Information Bulletin

BULLETIN NO.	208
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2006 OBC Prescriptive Requirements for ICF Systems

Page 1 of 2

(see also Detail Dwg. D.0.1 & D0.2)

The National Building Code of Canada 2005 (NBC 2005) introduced *prescriptive* requirements for construction of concrete walls using insulating concrete forming (ICF) systems. These provisions were also adopted in the 2006 Ontario Building Code (2006 OBC). The *prescriptive* requirements in the 2006 OBC specifically address ICF construction that results in solid concrete walls of uniform thickness over the height— i.e. floor to floor height of a below grade wall or above grade wall – and width of the wall section.

The patented Advantage ICF System® combines rigid expanded polystyrene (EPS) insulation panels with a web and interlock connector system that results in a concrete wall of uniform thickness. The exterior EPS insulation panels in the Advantage ICF System stay in place permanently to provide an insulated cast-in-place concrete wall resulting in a superior, energy efficient building envelope.

The table below summarizes prescriptive requirements contained in 2006 OBC, Section 9.15. and associate references related to ICF below-grade wall applications. The attached Plasti-Fab detail drawing **D.0.1: Residential Below Grade Code Requirements** provides an additional reference tool identifying the requirements.

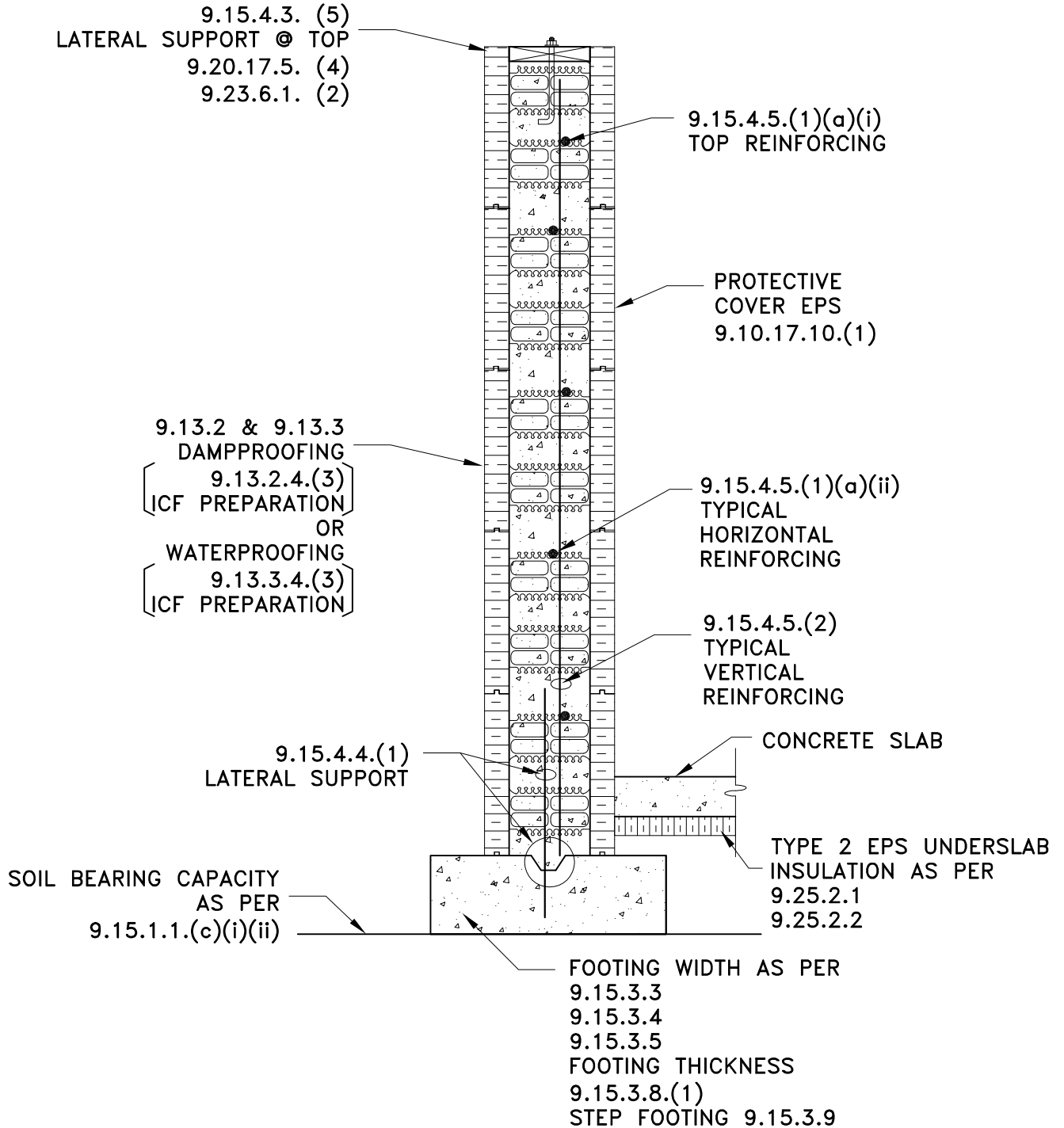
Below-Grade ICF Wall Applications:
Sentences 9.13.2.4.(3) and 9.13.3.4.(3) – ICF surface Preparation for application of dampproofing or waterproofing
Clause 9.15.1.1.(1)(c) – General requirements for footings and foundations related to ICF foundation walls
Articles 9.15.3.3., 9.15.3.4. and 9.15.3.5. – Footing width and area requirements for ICF foundations
Sentence 9.15.3.8.(1) – Footing thickness
Sentence 9.15.3.9.(1) – Step footings
Sentence 9.15.4.1.(1) – Reference to CAN/ULC-S701 for insulation used in ICF systems
Sentences 9.15.4.2.(2) and (3) – Foundation wall thickness and required lateral support
Sentence 9.15.4.3.(5) – Required lateral support at the top of foundation using floor joists installed according to Article 9.20.17.5.
Sentence 9.15.4.4.(1) – Required lateral support at the bottom of foundation using floor joists and shear key or dowels to footing
Article 9.15.4.5. and Tables 9.15.4.5.A. to 9.15.4.5.C. – Reinforcement for ICF walls
Article 9.20.17.5. – Framing supported on flat ICF walls
Sentences 9.20.17.5.(2) and (3) – Size and attachment requirements for ledger boards used for support of floor joists
Table 9.20.17.5. – Anchor bolt spacing for the connection of ledger boards

The table below summarizes prescriptive requirements contained in 2006 OBC, Section 9.20. and associated references related to ICF above-grade wall applications to a maximum of two storeys. The attached Plasti-Fab detail drawing **D.0.2: Residential Above Grade Code Requirements** provides a reference tool for identifying specific requirements.

Above Grade ICF Wall Construction:
Sentence 9.20.1.1.(1)(b) – General requirements form ICF above-grade walls
Sentence 9.20.17.1.(1) – Thickness of flat ICF walls
Article 9.20.17.2. – Reinforcement for ICF walls
Article 9.20.17.3. – Openings in non-load bearing ICF walls
Article 9.20.17.4. – Lintels over Openings in load bearing ICF walls
Article 9.20.17.5.(1) – Floor joists supported on the side of ICF Walls
Sentences 9.20.17.5.(2) and (3) and Table 9.20.17.5 – Size and attachment requirements for ledger boards used for support of floor joists
Article 9.20.17.5. (4) – Floor joists supported on top of ICF walls in accordance with Article 9.23.6.1.
Article 9.20.17.6. – Anchoring of roof framing to top of ICF walls
Table 9.23.3.3.4. – Attachment of roof framing to top plates
Sentence 9.20.17.7. – Protection from precipitation and damage

The following notes provide additional information related to design and installation of wall construction using the Advantage ICF System:

1. For design conditions beyond the scope of the 2006 OBC provisions refer to the **Advantage ICF System Design Manual**.
2. The **Advantage ICF System Installation Manual** provides additional information on the construction of ICF walls.
3. See Attachments: Plasti-Fab Detail Drawings D.0.1 and D.0.2.



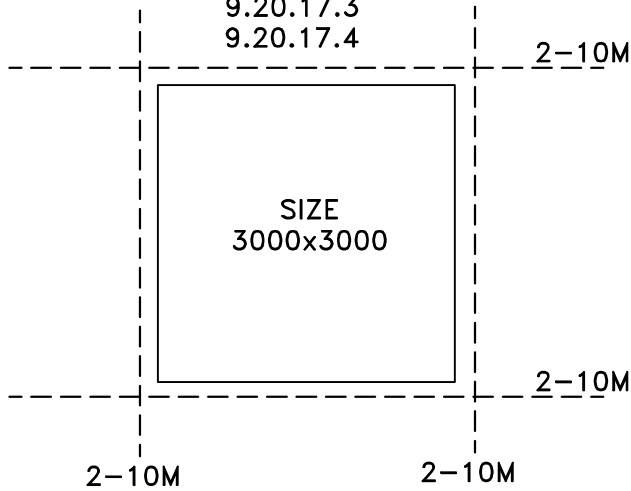
No.	REVISION DESCRIPTION	DATE	BY	CHKD	APPD



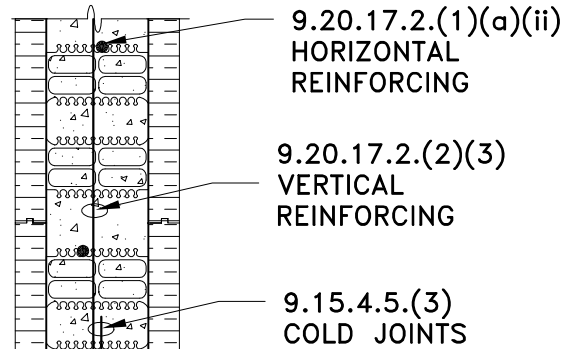
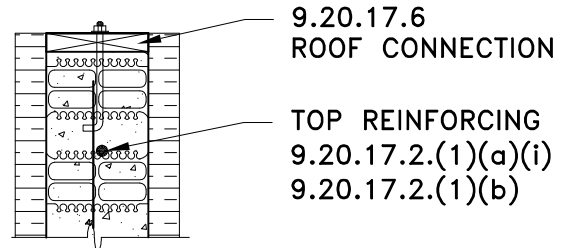
PLANT OR PROJECT	PLASTI-FAB LTD	SCALE	NTS
RESIDENTIAL BELOW GRADE CODE REQUIREMENTS 2006 OBC	DESIGN	P. CYMBALA	DATE
	DRAWN	L. XIE	DEC. 07
	CHECKED	J. WHALEN	DEC. 07
	DRAWING No.	D.0.1	REV.

BELOW GRADE
 OPENING REINFORCING
 9.15.4.3.(3)(4)(5)
 9.15.4.5.(4)

ABOVE GRADE
 OPENING REINFORCING
 9.20.17.3
 9.20.17.4



LINTEL DEPTH
 GROUND SNOW LOAD
 THICKNESS (MIN.)
 TABLE A17, A18, A19



9.20.17.5
 LEDGER
 CONNECTION

CONCRETE SLAB

TYPE 2 EPS UNDERSLAB
 INSULATION AS PER
 9.25.2.1
 9.25.2.2



No.	REVISION DESCRIPTION	DATE	BY	CHKD	APPD



PLANT OR PROJECT	PLASTI-FAB LTD	SCALE	NTS
RESIDENTIAL ABOVE GRADE CODE REQUIREMENTS 2006 OBC	DESIGN	P. CYMBALA	DATE DEC. 07
	DRAWN	L. XIE	DATE DEC. 07
	CHECKED	J. WHALEN	DATE DEC. 07
	DRAWING No.	D.0.2	
	REV.		