ICC-ES Evaluation Report

ESR-2270

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This report is subject to re-examination in one year.

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DIVISION: 03 00 00—CONCRETE
Section: 03 11 19—Insulating Concrete Forming

REPORT HOLDER:

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EVALUATION SUBJECT:

FOX BLOCK INSULATING CONCRETE FORMS (ICFs)

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2009 *International Building Code*® (2009 IBC)
- 2009 *International Residential Code*® (2009 IRC)
- 2006 *International Building Code*® (2006 IBC)*
- ~~2006 *International Residential Code*® (2006 IRC)*~~ *

*Codes indicated with an asterisk are addressed in Section 8.0.

Properties evaluated:

- Structural
- Surface-burning characteristics
- Fire-resistance-rated construction
- Types I through IV (noncombustible) construction

2.0 USES

Fox Block Insulating Concrete Forms (ICFs) are used as stay-in-place forms for structural concrete, load-bearing and nonload-bearing, below-grade and above-grade walls. The forms are used in construction of plain and reinforced concrete beams, lintels, exterior and interior walls and foundation and retaining walls. The forms remain in place after placement and curing of concrete and must be covered with approved interior and exterior finish materials as described in Sections 4.2.2 and 4.2.3, respectively. For use in fire-resistance-rated construction, installation must be in accordance with Section 4.3. For use in buildings of Types I, II, III and IV (noncombustible) construction, installation must be in accordance with Section 4.4.

3.0 DESCRIPTION

3.1 General:

The Fox Block ICFs consist of two expanded polystrene (EPS) foam plastic panels separated by injection-molded polypropylene plastic cross-ties, which are partially embedded into the EPS panels. The cross-ties maintain the EPS panel facings at a clear distance of 4 inches (102 mm), 6 inches (152 mm), 8 inches (203 mm), or 12 inches (305 mm). The Fox Block ICFs are filled at the jobsite with concrete to provide a solid monlithic concrete wall, which complies with the flat ICF wall system requirements specified in IRC Section R611.3.1 In addition to straight forms, 45-degree angle, 90-degree corner, corbel ledge, taper top, T-block and 6-inch radius forms are also available. See Table 3 for form images and dimensions.

3.2 Materials:

3.2.1 Foam Plastic: The EPS foam plastic panels have a nominal density of 1.5 pcf (23.2 kg/m^3), and a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84, and comply with ASTM C 578, Type II.

3.2.2 Polypropylene Plastic Cross-ties: The polypropylene plastic cross-ties, spaced 8 inches (203 mm) on center, connect the EPS foam plastic panels at a fixed clear distance. The cross-ties consist of a flange that is embedded in the foam plastic panel during the foam plastic molding process, and a web that connects the two flanges and, therefore, the two foam panels. The cross-ties have openings to permit concrete placement, and have slots to support horizontal steel reinforcing bars. The plastic flange is recessed 0.625 inch (15.9 mm) below the outer EPS surface and is used for attachment of exterior and interior finish materials. The flange of the cross-tie is 1.5 inches (38.1 mm) wide by 16 inches (406 mm) high by 0.23 inch (5.8 mm) thick.

3.2.3 Concrete: Concrete must be normal-weight concrete complying with the applicable code, having a maximum aggregate size of $^3/_4$ inch (19.1 mm) and a minimum specified compressive strength of 3,000 psi (21 MPa) at 28 days. ~~Under the IRC, concrete must comply with IRC Sections R404.1 and R611.5.1.~~ *

3.2.4 Reinforcement: Deformed steel reinforcement bars must have a minimum specified yield stress of either 40 ksi (275 MPa) or 60 ksi (413 MPa), depending on the structural design, and must comply with Section 3.5.3.1 of ACI 318 and IBC Section 1903; ~~under the IRC, reinforcement must comply with IRC Sections R404.1.2.3.7 and R611.5.2.~~ *

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3.2.5 Other Components: Wood members in contact with concrete for plates of window and door framing must be treated with an approved wood preservative or be of a naturally-durable species, and must be attached with hot-dipped galvanized steel fasteners complying with IBC Section 2304.9.5 or IRC Section R317.3, as applicable.

4.0 DESIGN AND INSTALLATION

4.1 Design:

4.1.1 IBC Design, Including Alternative IBC Wind Design in Accordance with ICC 600-2008: Concrete walls formed by the Fox Block ICFs must be designed and constructed in accordance with IBC Chapters 16 and 19, as applicable. Footings and foundations must be designed and constructed in accordance with IBC Chapter 18.

Solid concrete walls formed by flat ICFs may be designed and constructed in accordance with the prescriptive provisions of Section 209 of the ICC Standard for Residential Construction in High Wind Regions (ICC 600-2008), subject to the limitations found in Exception 1 of IBC Sections 1609.1.1 and 1609.1.1.1. Design and construction under the provisions of ICC 600-2008 are limited to resistance to wind forces.

* ~~**4.1.2 IRC Method:** Insulating concrete walls formed by the Fox Block ICFs, which comply with IRC Section R611.3.1 as flat insulating concrete wall forms, must be designed and constructed in accordance with IRC Sections R404.1.2 and R611, for flat wall systems.~~

~~The 4-inch-thick (102 mm) concrete walls are limited to above-grade construction in accordance with IRC Section R611.~~

~~Footings and foundations must be designed and constructed in accordance with IRC Chapter 4.~~

* **4.1.3 Alternate IRC Design Method:** ~~When the Fox Block ICFs are used to construct buildings that do not conform to the applicability limits of IRC Sections R404.1.2 and R611.2, construction must be in accordance with the prescriptive provisions of the 2007 Prescriptive Design of Exterior Concrete Walls (PCA 100), or~~ the structural analysis and design of the concrete must be in accordance with ACI 318 and IBC Chapters 16, 18 and 19.

4.2 Installation:

4.2.1 General: Installation of ICFs must comply with this report, the Airlite Plastics published installation instructions and the applicable code. Airlite Plastics published installation instructions and this report must be strictly adhered to, and a copy of the Airlite Plastics published installation instructions must be available at the jobsite at all times during installation.

The Fox Block ICFs and resulting concrete walls must be supported on concrete footings complying with IBC Chapters 18 and 19 and IRC Chapter 4, as applicable. Vertical reinforcement bars embedded in the footing must extend into the base of the wall system the minimum development length necessary for compliance with * Chapter 12 of ACI 318 (IBC) ~~or IRC Section R611.5.4, as applicable.~~ Additional reinforcement around doors and windows must be described in the approved plans. Concrete quality, mixing and placement must comply with IBC Section 1905 or IRC Sections R404.1.2.3 and R611.5.1, as applicable. Window and door openings must be built into the forms, with frames of the same dimensions as the "rough stud opening" specified by the window or door manufacturer, prior to the placement of concrete. Connections of concrete walls to footings, floors, ceilings and roofs must ~~be in accordance with IRC Section R611.9, or~~ be engineered in accordance with the ~~IBC, whichever code is applicable.~~ * Anchor bolts used to connect wood ledgers and plates to the concrete must be cast in place, with the bolts sized and spaced as required by design and the applicable code. Details must be prepared to accommodate the specific job situation, in accordance with the applicable code and the requirements, subject to the approval of the code official.

4.2.2 Interior Finish Requirements: Fox Block ICFs exposed to the interior of the building must be finished with an approved 15-minute thermal barrier, such as minimum $^1/_2$-inch-thick (12.7 mm) regular gypsum board complying with ASTM C 36 or C 1396, attached to the cross-tie flanges. The minimum $^1/_2$-inch-thick (12.7 mm) wallboard must be installed vertically and attached to the flanges with minimum $1^1/_2$-inch-long (38 mm), No. 6, Type S, gypsum board screws complying with ASTM C 954 or C 1002, spaced 16 inches (406 mm) on center horizontally and vertically. Gypsum wallboard joints must be taped and finished with joint compound in accordance with ASTM C 840 or GA 216.

4.2.3 Exterior Finish:

4.2.3.1 Above Grade: An approved exterior wall covering must be designed and installed in accordance with the applicable code or a current ICC-ES evaluation report. Under the IRC, the walls must be flashed in accordance with IRC Section R703.8. Approved exterior wall coverings must be attached to the cross-tie flanges with the fasteners described in Table 1. The fasteners must be corrosion-resistant and have sufficient length to penetrate through the cross-tie flange at least $^1/_4$ inch (6.4 mm). The fasteners have allowable withdrawal and lateral capacities as shown in Table 1. The fastener spacing must be designed to support the gravity loads of the wall covering and resist the negative wind pressures. The negative wind pressure capacity of the exterior finish material must be the same as that recognized in the applicable code for generic materials, or that recognized in a current L.A. City Research Report for proprietary ** materials.

4.2.3.2 Below Grade: Materials used to dampproof or waterproof basement walls must be specified by Airlite Plastics Co. and must comply with the applicable code or a current ICC-ES evaluation report, and must be compatible with ICF foam plastic units. Dampproofing and waterproofing requirements are in IBC Section 1807 and IRC Section R406, as applicable. Foundation drainage must be provided in accordance with IBC Section 1805.4 or IRC Section R405.1, as applicable No backfill may be applied against the wall until the complete floor is in place, unless the wall is designed as a freestanding wall that does not rely on the floor system for structural support.

4.2.4 Foundation Walls: The ICFs may be used as a foundation stem wall when supporting wood-framed or concrete construction and when the structure is supported on concrete footings complying with the applicable code. Design and installation of Fox Block ICFs as foundation stem walls must comply with IBC Section 1807.1.5 ~~or IRC Sections R404 and R404.1.2, as applicable. For concrete foundation walls under the IRC, vertical reinforcement size and spacing must be in accordance with IRC Tables R404.1.2(2), R404.1.2(3), R404.1.2(4), and R404.1.2(8).~~ * For concrete foundation walls under the IBC, vertical reinforcement size and spacing must be in accordance with IBC Table 1807.1.6.2. Alternative design and construction may be in accordance with ACI 318, ~~ACI 332 or PCA 100 (see IRC Section R404.1.2)~~ * for buildings under the IRC.

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4.2.5 Retaining Walls: The ICF systems, with reinforcement designed in accordance with accepted engineering principles, Section 4.1 and the applicable code, may be used as a retaining wall.

4.2.6 Protection against Termites: Where the probability of termite infestation is defined as "very heavy" by the code official, the foam plastic must be installed in accordance with IBC Section 2603.8 or IRC Section R318.4, as applicable. Areas of very heavy termite infestation must be determined in accordance with IBC Figure 2603.8 or IRC Figure R301.2(6), as applicable.

4.3 Fire-resistance-rated construction (Limited Load-bearing Walls):

Fox Block ICFs may be used to construct fire-resistance-rated wall assemblies as shown in Table 2. The normal-weight concrete must have a minimum 28-day compressive strength of 3,000 psi (21 MPa). The minimum size reinforcement must be No. 5 reinforcing bars. The bars must be spaced as required by ACI 318, at a minimum; bars placed vertically must be in the center of the wall, and spaced 16 inches (406 mm) on center; and bars placed horizontally must be spaced 16 inches (406 mm) on center, and must be staggered on either side of the vertical bars, from row to row. For the 4-inch (102 mm) ICFs, the maximum axial compressive load must be 7,500 pounds per lineal foot (109.4 kN/m); for the 6- and 8-inch ICFs, the maximum axial compressive load must be 7 percent of the load determined in accordance with IBC Chapter 19. Loads are based on a 10-foot (3.05 m) wall height.

4.4 Types I, II, III and IV Construction (IBC):

General: Exterior walls constructed with Fox Block ICFs for use in buildings required to be Types I, II, III and IV construction (IBC), must comply with the applicable conditions cited below:

4.4.1 Interior Finish: The EPS foam plastic insulation must be separated from the building interior with an approved 15-minute thermal barrier, such as minimum $^1/_2$-inch-thick (12.7 mm) regular gypsum wallboard installed as specified in Section 4.2.2.

4.4.2 Exterior Finish—EIFS: The following EIFS lamina may be installed over the exterior of the forms when applied using the reinforcing fabric or lath, base coat and finish coat materials described in their respective evaluation reports:

- BASF Construction Chemicals, LLC - Wall Systems, Sonowall FlexWall, FlexWall WM-R1, FlexWall WM-R2 or FlexWall WM-R3 EIFS as described in ESR-2163.
- BASF Construction Chemicals, LLC - Wall Systems, Acrocrete Acrowall-ES or Acrowall-ESV EIFS as described in ESR-2164.
- BASF Construction Chemicals, LLC - Wall Systems, Finestone Pebbletex or Pebbletex-D EIFS as described in ESR-2165.
- Sto Corp. StoTherm Essence as described in ESR-1720.

4.4.3 Exterior Finish—Exterior Plaster: Metal lath and exterior plaster must comply with the applicable code, and the exterior plaster must be a minimum of $^7/_8$ inch (22.2 mm) thick. The lath must be attached to the flanges of the plastic cross-ties with fasteners as described in Section 4.2.3.1.

4.4.4 Exterior Finish—Brick Veneer: Anchored brick veneer must be attached to the flanges of the plastic cross-ties with fasteners as described in Section 4.2.3.1. Installation of the 4-inch-thick (102 mm) brick veneer must comply with the applicable code, and the veneer must be installed with a minimum 1-inch (25.4 mm) air gap between the face of the exterior EPS formwork and the brick. The brick must be installed with a steel shelf angle attached to the concrete, and at each floor line and at the top of each window and door opening.

4.4.5 Fireblocking: For applications on buildings of any height, floor-to-wall intersections must be fireblocked in accordance with the IBC to prevent the passage of flame, smoke and hot gases from one story to another. The foam plastic insulation on the interior side of the exterior walls and on both sides of interior walls must not be continuous from one story to another. See Figure 1 for typical details.

4.5 Special Inspections:

4.5.1 IBC: Special inspection is required in accordance with IBC Section 1704 for placement of reinforcing steel and concrete, and for concrete cylinder testing. Special inspection in accordance with IBC Sections 1704.1 and 1704.14 is required when an EIFS wall covering is applied. Duties of the special inspector include verifying field preparation of materials, expiration dates, installation of components, curing of components, treatment of joints and application of sealants.

4.5.2 ~~IRC: For walls constructed in accordance with Section 4.1.2 or PCA 100 as described in Section 4.1.3, special inspection is not required.~~ * For walls designed for use under the IRC, in accordance with the IBC as described in Sections 4.1.1 and 4.1.3, special inspection in accordance with Section 4.5.1 is required.

5.0 CONDITIONS OF USE

The Fox Block ICFs described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0, subject to the following conditions:

5.1 The ICF units are manufactured, identified and installed in accordance with this report and the Airlite Plastics Co. published installation instructions. If there is a conflict between the Airlite Plastics Co. published installation instructions and this report, this report governs.

5.2 ICF units are separated from the building interior as described in Section 4.2.2 with an approved 15-minute thermal barrier.

5.3 When use is as part of a fire-resistance-rated assembly, Section 4.3 applies.

5.4 Except as described in Section 4.4, concrete walls formed by the forms are limited to buildings of combustible construction as defined in IBC Chapter 6, and to construction in accordance with the IRC.

5.5 When use is in buildings required to be of noncombustible construction, as described in Section 4.4, the forms must have at least one label as described in Section 7.0 visible in every 160 square feet (15m^2) of wall area, prior to the application of the wall covering.

5.6 When required by the code official, calculations showing compliance with the design requirements of Section 4.1.1 of this report must be submitted to the code official for approval, ~~except that calculations are not required when the building design is based on the prescriptive provisions in Sections 4.1.2 and 4.1.3, or when foundation design is based on the prescriptive provisions in Section 4.2.4~~. * The calculations and details must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.7 Concrete quality, mixing and placement must comply with IBC Section 1905 ~~or IRC Sections R404.1.2.3 and R611.5.1, as applicable.~~ *

5.8 Special inspection must be provided as described in Section 4.5.

5.9 In areas where the probability of termite infestation is defined as "very heavy" and when insulation boards are used with wood construction, the foam plastic must be installed in accordance with Section 4.2.6.

5.10 When required by the code official, calculations showing compliance with IRC Sections R611.5.3 and R404.1.2.3.6 must be submitted to the code official for approval. The calculations and details, establishing that the ICFs provide sufficient strength to contain concrete during placement and that the cross-ties are capable of resisting the forces created by fluid pressure of fresh concrete, must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.11 The forms are manufactured by Airlite Plastics Co. in Omaha, Nebraska, under a quality control program with inspections conducted by Underwriters Laboratories (AA-668) and Intertek Testing Services NA, Inc. (AA-690); and for Airlite Plastics Co. in Orlando, Florida, and Northbridge, Massachusetts, under a quality control program with inspections conducted by Intertek Testing Services NA, Inc. (AA-690).

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Stay-in-place, Foam Plastic Insulating Concrete Form (ICF) Systems for Solid Concrete Walls (AC353), dated February 2010.

7.0 IDENTIFICATION

Each pallet of Fox Block ICFs bears a label that includes the company name (Airlite Plastics Co.), the product name, the manufacturing location (Nebraska, Florida or Massachusetts) the names of the inspection agencies (Underwriters Laboratories and Intertek Testing Services NA, Inc., as applicable), and the evaluation report number (ESR-2270). Additionally, one ICF on each pallet is labeled on the outer sides of the ICF with the same information.

8.0 OTHER CODES:

8.1 Scope:

In addition to the 2009 IBC and 2009 IRC, the products described in this report were evaluated for compliance with the requirements of the following codes:

- 2006 *International Building Code*® (2006 IBC)
- ~~2006 *International Residential Code*® (2006 IRC)~~ *

8.2 Uses:

See Section 2.0.

~~8.3 Description:~~ *

~~See Section 3.0, except:~~

- ~~In Section 3.1, change wording to say that the Fox Block ICFs are classified as a flat ICF wall system in accordance with 2006 IRC Section R611.3.~~
- ~~In Section 3.2. 3, change wording to say that under the 2006 IRC, concrete must comply with 2006 IRC Sections R404.4 and R611.6.1.~~
- ~~In Section 3.2.4, change wording to say that the deformed steel bars must comply with 2006 IRC Sections R404.4.6 and R611.6.2.~~ *
- ~~In Section 3.2.5, change wording to say that attachment of wood members in contact with concrete must comply with 2006 IRC Section R319.3.~~

8.4 Design and Installation:

8.4.1 Design:

8.4.1.1 2006 IBC Method: Concrete walls formed by the Fox Block ICFs must be designed and constructed in accordance with 2006 IBC Chapters 16 and 19, as applicable. Footings and foundations must be designed and constructed in accordance with 2006 IBC Chapter 18.

~~**8.4.1.2 2006 IRC Method:** Concrete walls formed by the Fox Block ICFs must be designed and constructed in accordance with 2006 IRC Sections R404.4 and R611 for flat ICF wall systems. Footings and foundations must be designed and constructed in accordance with 2006 IRC Chapter 4.~~ *

~~**8.4.1.3 Alternate 2006 IRC Method:** When buildings constructed under the 2006 IRC provisions do not conform to the applicability limits of 2006 IRC Sections R404.4.1 and R611.2, the structural analysis and design of the concrete must be in accordance with ACI 318 and 2006 IBC Chapter 19. The empirical design approach specified in ACI 318 Section 14.5 is applicable to the design of concrete walls formed by the Fox Block flat wall forms.~~ *

8.4.2 Installation: Same as Section 4.2, except as follows:

- In Section 4.2.1, change wording to say that concrete quality, mixing and placement must comply with 2006 IBC Section 1905 ~~or 2006 IRC Section R611.6.1.~~ * Anchorage of wood ledger boards supporting bearing ends of joists or trusses to flat ICF walls must ~~be in accordance with IRC Section R611.8.2, or~~ be * engineered in accordance with the IBC, ~~whichever code is applicable.~~ *
- In Section 4.2.3.2, change wording to say that compliance is required with drainage requirements in 2006 IBC Section 1807.4 ~~or 2006 IRC Section R405.1, as applicable.~~ *
- In Section 4.2.4, change wording to say that design and installation of foundation stem walls must comply with 2006 IBC Section 1805.5 ~~or 2006 IRC Sections R404 and R404.1.2, as applicable.~~ *
- In Section 4.2.6, change wording to say that where the probability of termite infestation is defined as "very heavy" by the code official, the foam plastic must be installed in accordance with 2006 IBC Section 2603.8 ~~or 2006 IRC Section R320.5, as applicable.~~ *

8.4.3 Fire-resistance-rated Construction (Limited Load-bearing Walls): See Section 4.3.

8.4.4 Types I, II, III and IV Construction: See Section 4.4

8.4.5 Special Inspection:

8.4.5.1 2006 IBC: Special inspection is required as noted in 2006 IBC Section 1704 for placement of reinforcing steel and concrete, and for concrete cylinder testing. Special inspection, in accordance with 2006 IBC Sections 1704.1 and 1704.12, is required when an EIFS wall covering is applied. Duties of the special inspector include verifying field preparation of materials, expiration dates, installation of components, curing of components, and installation of joints and sealants.

* ~~**8.4.5.2 2006 IRC:** For walls designed and constructed in accordance with Section 8.4.1.2, special inspection is not required. For walls designed for use under the 2006 IRC, in accordance with Section 8.4.1.3 of this report, special inspection in accordance with Section 8.4.5.1 is required.~~

8.5 Conditions of Use:

The conditions of use in Section 5.0 apply except as follows:

- In Section 5.6, change wording to say that when required by the code official, calculations showing compliance with the design requirements of Section 8.4.1.1 of this report must be submitted to the code official for approval, * ~~except that calculations are not required when the building design is based on the prescriptive method noted in Section 8.4.1.2.~~ The calculations and details must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.
- In Section 5.7, change wording to say that concrete quality, mixing and placement must comply with 2006 IBC Section 1905 * ~~or 2006 IRC Sections R404.4.5 and R611.6.1, as applicable.~~
- In Section 5.8, change wording to say that special inspection must be in accordance with Section 8.4.5.
- In Section 5.9, change wording to say that in areas where the probability of termite infestation is defined as "very heavy" and when insulation boards are used with wood construction, the foam plastic must be installed in accordance with Section 8.4.2.
- Section 5.10 is not applicable.

8.6 Evidence Submitted:

Data in accordance with the ICC-ES Acceptance Criteria for Stay-in-place, Foam Plastic Insulating Concrete Form (ICF) Systems for Solid Concrete Walls (AC353), dated October 2000 (editorially revised April 2008).

8.7 Identification:

See Section 7.0.

TABLE 1—ALLOWABLE CAPACITIES OF FASTENERS IN CROSS-TIE FLANGES

FASTENER	ALLOWABLE LOAD CAPACITY (lbf)	
	Lateral	Withdrawal
#10 wood screw by $2^1/_2$ inches	68	38
No. 6 course-thread drywall screw by $1^5/_8$ inches	45	29
No. 6 fine-thread drywall screw by $1^5/_8$ inches	37	32
0.098-inch-diameter,ring shank drywall nail by 2 inches	19	16
#8 saw tooth-thread exterior deck screw by 2 inches	71	36

For **SI:** 1 lbf = 4.45 N; 1 inch = 25.4 mm.

TABLE 2—LIMITED LOAD-BEARING FIRE-RESISTANCE-RATED WALL ASSEMBLIES

CONCRETE THICKNESS (inches)	FIRE-RESISTANCE RATING (hours)
4	2
6	3
8	4

For **SI:** 1 inch = 25.4 mm.

TABLE 3—ICF IMAGES AND DIMENSIONS

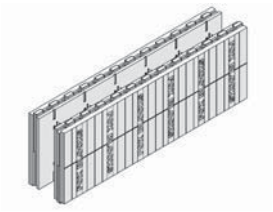
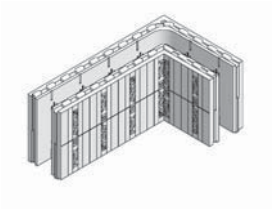
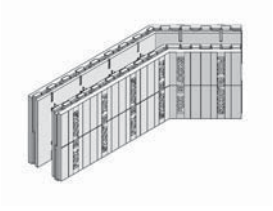
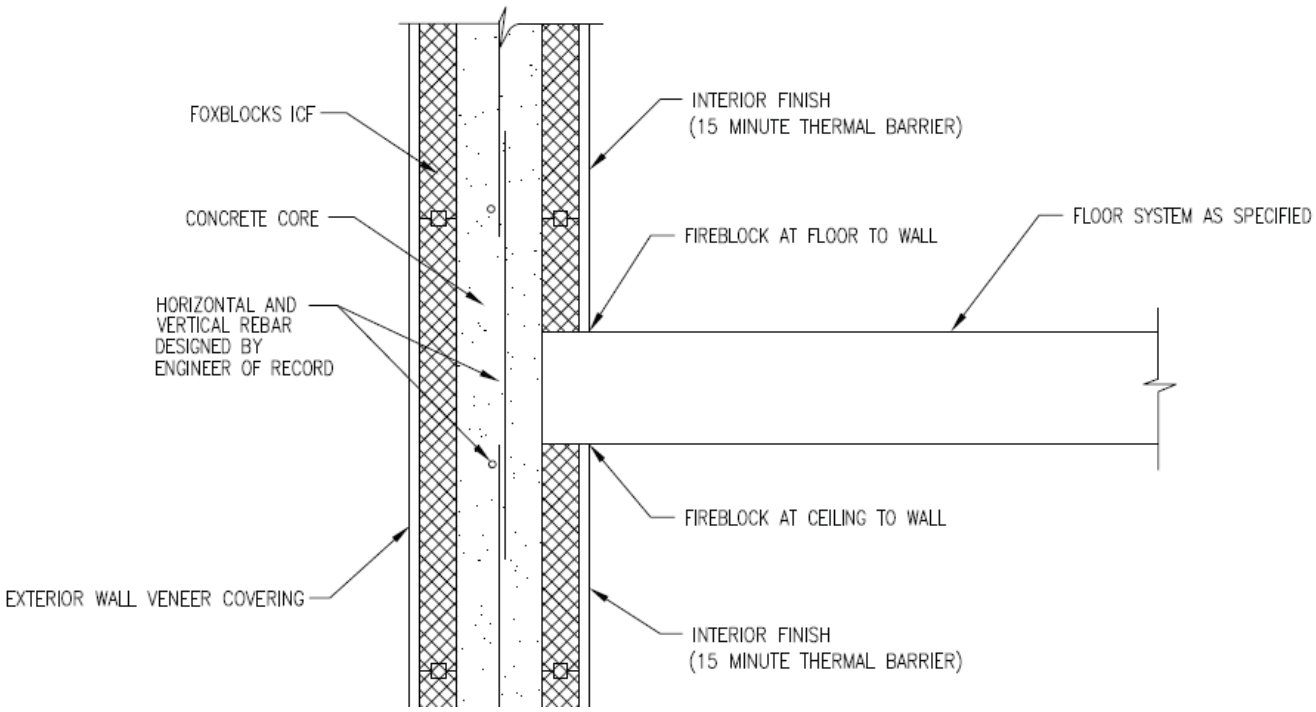
		Width (Inches)	Length (Inches)	Return (Inches)
	4” Straight	9.25”	48”	N/A
	4” 90° Corner	9.25”	38” (ext.) 28.75” (int.)	22” (ext.) 12.75” (int.)
	4” 45° Angle	9.25”	34” (ext.) 30.17” (int.)	18” (ext.) 14.17” (int.)

TABLE 3—ICF IMAGES AND DIMENSIONS (Continued)

Form Image	Form Name	Width	Length	Return
	6" Straight	11.25"	48"	N/A
	6" 90° Corner	11.25"	32" (ext.) 20.75" (int.)	24" (ext.) 12.75" (int.)
	6" 45° Angle	11.25"	26" (ext.) 21.4375" (int.)	18" (ext.) 13.4375" (int.)
	6" Corbel Ledge	15.75"	48"	N/A
	6" Taper Top	11.25"	48"	N/A
	6" T-Block Short leg	11.25"	44" (ext.) 12.375" (int.) 20.375" (int.)	4.375" (int.)
	6" T-Block Long Leg	11.25"	44" (ext.) 12.375" (int.) 20.375" (int.)	12.375" (int.)
	**6" Radius blocks**	**11.25"**	**16"**	**N/A**

TABLE 3—ICF IMAGES AND DIMENSIONS (Continued)

Form Image	Form Name	Width	Length	Return
	8" Straight	13.25"	48"	N/A
	8" 90° Corner	13.25"	34" (ext.) 20.75" (int.)	26" (ext.) 12.75" (int.)
	8" 45° Angle	13.25"	28" (ext.) 22.5" (int.)	20" (ext.) 14.5" (int.)
	8" Corbel Ledge	17.75"	48"	N/A
	8" Taper Top	13.25"	48"	N/A
	8" T-Block Short Leg	13.25"	44" (ext.) 11.375" (int.) 19.375" (int.)	4.75" (int.)
	8" T-Block Long Leg	13.25"	44" (ext.) 11.375" (int.) 19.375" (int.)	8.75" (int.)


FOXBLOCKS ICF
CONCRETE CORE
HORIZONTAL AND VERTICAL REBAR DESIGNED BY ENGINEER OF RECORD
EXTERIOR WALL VENEER COVERING
INTERIOR FINISH (15 MINUTE THERMAL BARRIER)
FIREBLOCK AT FLOOR TO WALL
FLOOR SYSTEM AS SPECIFIED
FIREBLOCK AT CEILING TO WALL
INTERIOR FINISH (15 MINUTE THERMAL BARRIER)