INTEGRATED LEARNING CENTER
BY FOX BLOCKS

PRIMARY INSTALLER
ILC TRAINING WORKBOOK

SECTION 2: The Build

MODULE 7: 1st and 2nd Course

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FOX BLOCKS TRUEGRID

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PRIMARY INSTALLER TRAINING ILC WORKBOOKS

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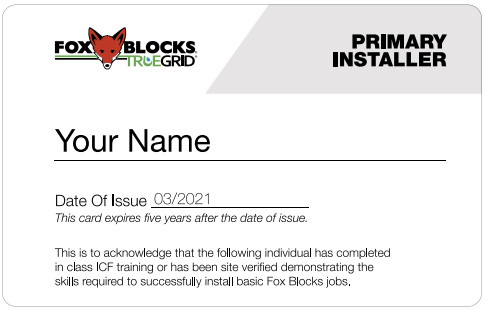
OVERVIEW

Congratulations on the completion of Section 1. This is the second section of the Primary Installer Training Course - Building the Fox Blocks wall.

Workbook, Section 2 covers 6 modules, highlighting key content, plus reference documentation, videos and checklists that will further enhance the educational and construction experience with Fox Blocks. Utilize this Workbook when following the ILC video training for Section 2.

PRIMARY INSTALLER COURSE



This training course is a series of self-paced educational modules. Register on the website and open each module in order, successfully complete the questions for each of the modules. Once you have completed all the modules in all four sections, you will be sent a notification of completion and registered as a **Fox Blocks Primary Installer,** receiving a certificate and wallet card.

Once you are registered, the site allows you to login and logout anytime and will track your progress. There are 20 modules in total with an estimated viewing time of approximately 6+ hours. Some modules are 5± minutes and some are 20± minutes. View all the modules in full screen mode and answer the questions to complete each module.

FOX BLOCKS REFERENCE MATERIAL

All reference materials are available on the Fox Blocks website – www.foxblocks.com

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MODULE 7: 1st and 2nd Courses

The objectives of this module are to highlight and discuss the importance and key construction steps in starting the installation of a Fox Blocks project.

The success of the whole build depends on how the first two courses are installed.

Key Items to Consider for 1st Course

- Bearing surface clean and level
- Chalk lines are complete along outside of edge of formwork
- Mark out the opening locations with rough opening sizes to include buck
- Start block layout from the corners work toward stacked seam joint if required
- Use Fox Blocks HV Clips to secure 1st course together
- Install horizontal rebar in the location for either a below grade or above grade wall
- Install rebar with appropriate lap joint lengths – 60 times bar diameter

Key Items to Consider for 2nd Course

- Use reversible corner to establish a running bond layout
- Lay blocks to stacked seam
- Use Fox Blocks HV clips vertically and horizontally to tie 1st and 2nd courses
- Install horizontal rebar stagger one notch over from the one below

Key Items for Completion of 1st and 2nd Courses

- Align wall to be on the chalk lines
- Check walls to be level, adjust to suit
- Check project to be square and at plan dimensions
- Spot spray foam under blocks to secure walls to the bearing surface

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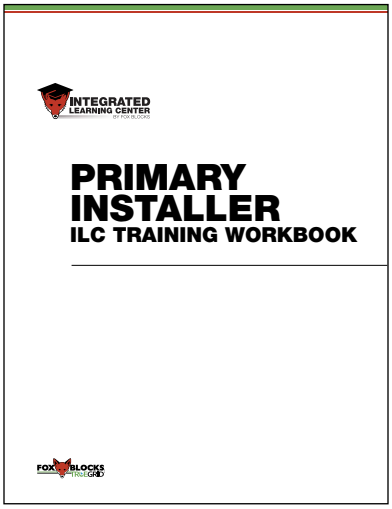
Tips

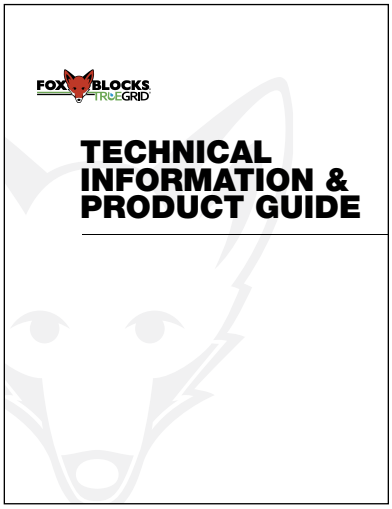
- Utilize the block layout for the first two courses for the of the wall
- Re-use cut block wherever possible, eliminating waste
- The robust interlock of a Fox Blocks eliminates any gluing
- Always strap on both sides of the wall, across a stacked seam

Reference Material

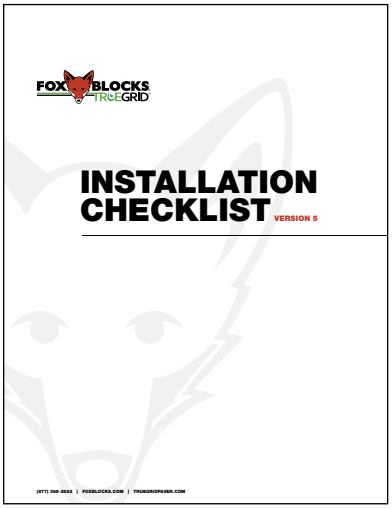
Download these main reference guides and reference material from Fox Blocks website:



ILC Workbook



1.01.01 Technical Information & Product Guide



1.02.01 Installation Checklist

Fox Blocks Reference Material

- 1.01.09 Fox Blocks HV Clips
- 1.02.04 Wall Layout Stacked Seams
- 1.02.06 6 in 1 Design Advantages
- 1.02.13 Frequently Asked Questions (FAQ)
- 1.03.01 Optimizing Wall Layouts
- 1.03.02 Vertical coursing Tables
- 1.03.05 Sizes, volumes and Weights
- 1.04.02 Technical Performance Data Sheet
- CCRR 1010 Product Code Compliance Report

MODULE 8: Alignment, Bracing and Scaffolding

Alignment, bracing and scaffolding systems made and engineered specifically for ICF walls and are a valuable asset in building safely and successfully with Fox Blocks.

These systems are specifically design and engineered for safety to meet OSHA requirements. Systems have the ability to adjust the ICF walls making them straight and plumb, plus provide a safe support for a working scaffolding platform around the perimeter of the project.

Key Items to Review

- Following manufacturer's installation and engineering requirements
- Typically install bracing system after the 3rd or 4th course
- Install strongbacks at adequate spacing - 5' to 6' o.c to support scaffold planks
- Strongbacks – use center of slot, fasten with large thread screws into fastening strip in each block course
- Before anchoring brace pole, adjust the alignment screw to be at center point
- Ensure brace pole is at 90˚ to the wall and at the correct angle 50˚±, securely anchored to ground or slab
- Install scaffolding at a comfortable height for placing concrete – 3' to 4' from top of wall
- General safe rule is guard rails are required if scaffold is 5' to 6' from ground, check your local safety and manufacturer's regulations. Follow manufacturer's safety guidelines.
- During and after the ICF wall is built, adjust the bracing to make the wall straight and plum
- Systems are available for walls taller than 12'
- Systems are generally installed on the inside of the wall
- Use 2x wood or thicker planks for scaffolding
- Install a 2x4 toe kick

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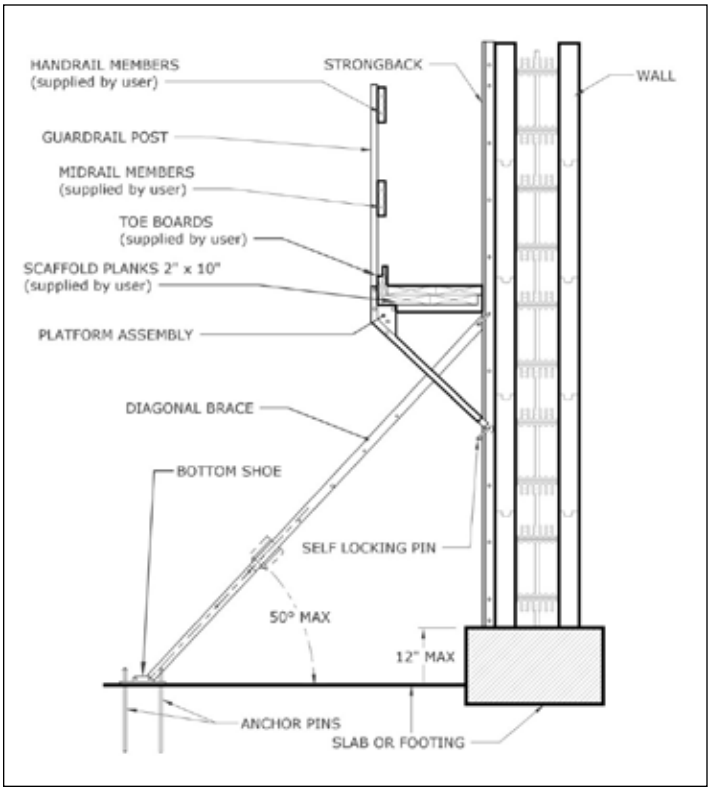
Alignment, Bracing and Scaffolding Systems

The systems have the following parts:

- Strongbacks (steel or aluminum) – 8', 10', 12' and 16'
- Bracing pole – adjustable with foot anchor plates
- Scaffold bracket
- Gravity pins to connect brace pole and scaffold bracket
- Guard rail uprights

General Rule - bracing remains on the walls for 72 hours after concrete placement or addition temporary bracing is installed prior to the walls being laterally support at top by the floor or roof system.



Typical Bracing System Components

Follow alignment, bracing and scaffolding system manufacturer's recommendations for installation and safety to meet OSHA requirements.

MODULE 8: Alignment, Bracing and Scaffolding

Systems may be purchased or rented, check with your Fox Blocks distributor or an ICF Alignment manufacturer.

ICF adjustable alignment systems provide a key function to installing straight and plumb wall assemblies.

Fox Blocks Reference Material

- 1.07.01 Bracing
- 1.02.01 Installation Checklist
- Giraffe Bracing – www.giraffebracing.com
- Plumwall Bracing – www.plumwall.com
- Superior Alignment – www.superioraligmentsystems.com

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MODULE 9: Openings, Service Penetrations and Embeds

This module discusses the installation of openings in an ICF wall. The importance of the engineering requirements to distribute the load over an opening and the installation of a buck system in the opening.

All projects require service penetrations through the concrete wall. This module reviews the procedures on how to successfully install these penetrations prior to concrete placement

Key Items to Review

- Prior to the block installation mark out all opening locations on the bearing surface
- Add the buck thickness (Fox Buck 2") to each side of the opening R.O. size
- Install a buck system and install addition temporary support for concrete pressure
- When using Fox Buck, use spray foam to seal buck to EPS
- Install concrete pour holes in the sill
- Check that rebar is installed around opening per engineering requirements
- Prior to concrete placement ensure all openings are well supported
- During concrete placement consolidate around openings
- Co-ordinate the location sleeve sizes for all penetrations through the wall for other trades and services
- Seal all service penetrations for air and water intrusion, as required.

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MODULE 9: Openings, Service Penetrations and Embeds

Fox Blocks Reference Material

- 1.02.01 Installation Checklist
- 1.01.07 Fox Buck
- 1.09.01 Plumbing
- 1.09.02 Electrical
- 1.15.01 Compatible Products
- 1.15.02 Spray Foam Adhesive

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MODULE 10: Building the Wall

This module reviews the steps and guidelines to efficiently complete the block installation from the 3rd course to the top of the wall.

The importance of continuing the running bond block layout as set-out in the first two courses, installing rebar and ensuring the walls are straight, plumb and to the design dimensions

Key Items to Review

- With the rows 1 and 2 set, leveled and adhered to bearing surface the 3rd course can be installed
- Course 1,3,5,7, etc. will all match. Course 2,4,6,8, etc. will match
- All the webs should all line up within the wall
- Prepare to install alignment system after 3rd or 4th course
- Maintain the stacked seam, mark for strapping install on both sides of wall
- Utilize cut block anywhere else in the project to minimize waste
- Install horizontal rebar as required, alternate location to allow for vertical bar between

Fox Blocks Resource Material

- 1.01.01 Technical Information and Training Guide
- 1.02.01 Installation Checklist
- 1.02.06 6 in 1 Design Advantages
- 1.14.05 Step by Step Project Checklist
- Fox Blocks Project Log

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MODULE 11: Top Course

Objectives of this module are to review the procedures and requirements for the top block of the wall course, as either the last course or the top course continuing on with another level of ICF.

Review strategies involved with the top block course in preparation for placing concrete.

Key Items - Top Course is the Final Course

- Check walls for level, cut interlock nubs off
- Install string lines to straighten up the walls, pre and post concrete
- Use HV clips to secure top course
- Top course typically has a horizontal rebar which may be moved temporarily for easier placement of concrete
- Place a little more concrete to allow for consolidation
- Prepare to trowel top of concrete either to top of form or recessed for roof top plate
- Insert anchor bolts, hurricane straps or other fasteners to be cast into concrete

Key Items – Top Course in a Multi-Story Build

- Install string lines to straighten walls, pre and post concrete
- Pre-plan concrete placement height to ensure floor anchors have adequate concrete coverage for support
- Stop concrete placement half-way in top course to allow for use of HV clips for future next course
- Protect the interlock (tape) to keep clean from concrete during placement

Fox Blocks Resource Material

- 1.14.05 Step by Step Checklist
- 1.14.06 Pre-Concrete Checklist

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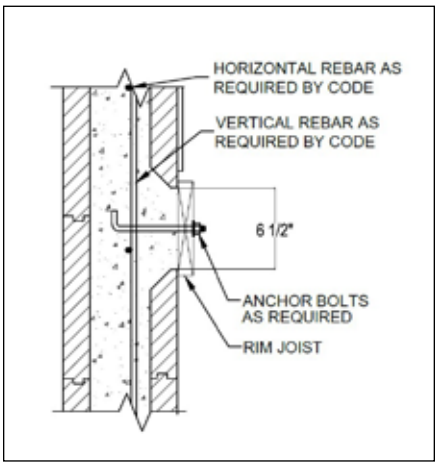
MODULE 12: Floor, Roof and Embeds

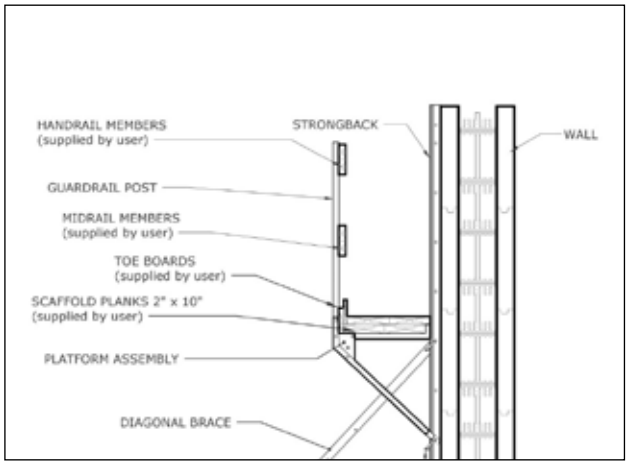
This module reviews the bearing and connection requirements for floor and roof systems to an ICF wall. A review of the materials, methods and procedures for anchors, connectors and embeds into the concrete.

Key Items to Review

- Have materials ready to be placed into the wall and concrete
- The concrete is the structural bearing surface or connection substrate
- All connections to meet code requirements and engineering for high winds, seismic and applicable loads
- Floor and roof systems bearing on top of the ICF wall require structural anchors or engineered connectors cast into the concrete
- Floor or roof system may be fastened to the side of the ICF, using ICF specific engineered connector systems, following manufacturer's details
- Ledger boards with anchor bolts to be mounted to the side of an ICF wall must have the EPS removed, per design standards, and bear directly on the concrete. The top edge of the cut in the EPS needs to be angled to allow air to escape from concrete during consolidation.
- Embed plates, typically have the EPS removed to be cast directly into the concrete



Ledge - Anchor Bolt Detail



Alternative Ledge - Detail

CADdetails

Fox Blocks Resource Material

- Fox Drawings – www.caddetails.com

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Please go to:
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WHERE YOU WILL FIND:

Product Information
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Training - Integrated Learning Center (ILC)
Links to 2D and 3D CAD and BIM Details
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