INTEGRATED LEARNING CENTER
BY FOX BLOCKS

PRIMARY INSTALLER
ILC TRAINING WORKBOOK

SECTION 3: Concrete

MODULE 13: Planning for Concrete

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MODULE 15: Post Concrete

FOX BLOCKS TRUEGRID

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PRIMARY INSTALLER TRAINING ILC WORKBOOKS

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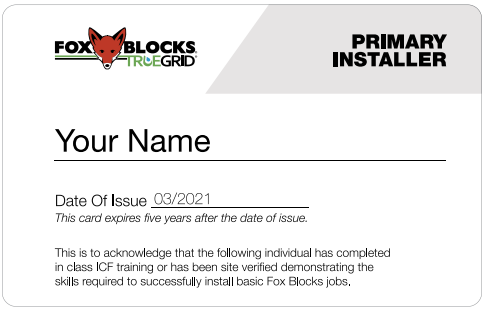
OVERVIEW

Congratulations on the completion of Sections 1 and 2. This is the third section of the Primary Installer Training Course - Concrete.

Workbook, Section 3 covers 3 important 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 3.

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

MODULE 13: Planning for Concrete

The objectives of this module are to stress the importance of a pre-placement checklist for the wall assembly. Planning requirements for concrete specifications, ordering, delivery, crew prep and placement methods are keys to the successful and safe placement of the concrete.

Once the walls are built and prior to the arrival of the pump truck and concrete truck, the walls need to be reviewed and the site made ready for concrete placement.

Key Items to Consider for the Walls

- Attach a string line to all the walls and adjust the walls to be straight and plum
- Check all walls and lintels for rebar placement as per the design drawings
- Check all openings for temporary supports within the opening
- Ensure all stacked seamed joints are strapped – every course, both sides of wall
- Strap any short wall section (4' or less)
- Check that all service penetrations are in place and secured
- Beam pockets, if required) are in place
- Sill plate anchors, floor and roof connectors are installed or ready
- If walls are to continue for another level, has the interlock been covered
- Is scaffolding secure and safe for access around the whole perimeter

Key Items to Consider for the Site

- Plan location of pump truck for safety and to reach all the walls
- Plan access for concrete trucks
- Check tools and equipment (vibrator)

Key Items to Consider Before Ordering Concrete

- Review concrete volume estimate and allow extra for pump truck
- Understand concrete specifications for ICF walls – aggregate size and slump
- Review weather conditions and how that may influence placement day
- Have a realistic plan on timeframe to fill all the walls

Fox Blocks Reference Material

- 1.02.01 Installation Checklist
- 1.03.03 Sizes, Volumes and Weights
- 1.14.06 Pre-Placement Checklist
- 1.14.10 Field Guide Checklist - Project Log

Key Items to Consider in Ordering Concrete

- Concrete specifications recommended concrete compressive strength – minimum 2500 psi.
- Local ready-mix supplier should be made aware concrete is for an ICF wall, they will have specific design mixes that meets the aggregate size and slump
- Coordinate concrete delivery timing with ready-mix supplier
- Organize pump truck arrival with enough time for set up prior to concrete arrival. Pump truck needs to get situated, and extended to reach all walls.

MODULE 13: Planning for Concrete

Fox Blocks Aggregate Specs

Form Core Size	4"	6"	8"	10" & 12"
Aggregate	⅜"	⅜" to ½"	½" to ¾"	¾"

Fox Blocks Slump Specs

Form Core Size	4"	6"	8"	10" & 12"
Concrete Slump	6" to 7"	5½" to 6½"	5" to 6"	5" to 6"

Key Items to in Planning Concrete Placement

- Establish a placement plan, where to start, direction and review with crew
- Coordinate placement plan with pump operator, understand hand signals
- Ensure walking path around perimeter is clear and safe

Guidelines on Timing

Experience and organization improves placement timing. The following are some general experiences in placement speed and the need for concrete to be available:

- Rule of thumb one 3' - 4' lift around a 200 LF perimeter would take one hour or less
- Rule of thumb during placement a full concrete truck could be empty in 15 to 25 minutes
- Midsize job 220 LF using 8" block would take 5.43 yards of concrete per foot of height. This means that two 9 yard capacity trucks would be able to get a 3' - 4" high lift.

MODULE 14: Concrete Placement and Consolidation

The objectives in this module is to review the methods and procedures for concrete placement and consolidation to enable the safe and efficient construction of a Fox Blocks structure.

It is important that the pre-planning has been done, so on placement day the whole crew is focused on the task at hand. Be very conscience of safety with pump truck boom and concrete delivery.

Key First Step Items:

- Establish the concrete crew and who will be responsible for what
  - One person to place concrete
  - Two people to consolidate the concrete
  - One or two people to monitor and level walls
  - Extra manpower on pour day is not a bad thing
- Communicate with the pump truck operator
  - where to start, placing in 3' to 4' lifts around perimeter
  - concrete slump and delivery rate
  - confirm hand signals

Key Concrete Placement Tips

- Start placing concrete at least 2' from a corner. Always flow the concrete through the corner
- Always watch the concrete placement in the cavity
- Maintain the lift height in moving around the perimeter, let the concrete flow
- At a window, fill from one side and let concrete flow under the opening, stop and go to the other side and fill. If require place concrete through the holes is the sill buck.
- Organize the lifts so the final pour is 18" to 24" in height

(continued)

MODULE 14: Concrete Placement and Consolidation

- Before starting the final lift, calculate a concrete volume for the last pour, to ensure there is enough concrete on truck or coming
- Ensure the consolidation crew is right behind you as you place concrete

Key Consolidation Tips

- Check all equipment is in working order with power
- All consolidation equipment must reach all the walls, all walls are required to be consolidated
- Consolidation removes air from the concrete from the bottom up
- Insert whip quickly in center of cavity and remove at a rate approx. 3" per second
- Do not over vibrate, liquifying the concrete may damage to walls
- Follow concrete placement and vibrate in every cell of the block
- Ensure all window and door bucks have been consolidated

Fox Blocks Reference Material

- 1.06.01 Concrete Design and Placement
- 1.06.03 Concrete Placement in Corners
- 1.06.05 Concrete Consolidation
- 1.06.08 Cold Weather Concrete

MODULE 15: Post Concrete Placement

The objectives in this module are to review the project after placement of concrete to ensure the Fox Blocks walls are straight, plum and level.

Understanding that there is a short timeframe to make adjustments with the alignment system.

Routinely follow a post placement checklist as standard practice.

Key Items to Review

- Ensure all anchors, dowels and embeds are set in place and have not moved during concrete placement
- Trowel top of wall and check for level
- If ending on cold joint have top chord of web or tie exposed for future HV clip
- Check the wall for straightness using the string line adjust each alignment unit
- Check all the walls again, after all the crew is off the scaffolding.
- Clean any fresh concrete off equipment and surfaces before it sets
- Complete full alignment after crew is off the scaffolding
- Anticipate required wall protection from future weather in next 72 hours – high winds or cold weather
- Recommended bracing remains on wall for 72 hours

Fox Blocks Reference Material

- 1.14.07 Concrete Post Placement Checklist
- 1.14.10 Field Guide Checklist - Project Log

As best practice guide, use the experience of day to improve efficiency. Log the activities, quantities, times, crew, etc. Note, the good things and things to be improved, how to improve timing and tasks. Every concrete placement day is different, use each to make the next concrete placement even better.

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FOXBLOCKS.COM

WHERE YOU WILL FIND:

Product Information
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Case Studies
Training - Integrated Learning Center (ILC)
Links to 2D and 3D CAD and BIM Details
Educational Video Library (ILC)

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HEAD OFFICE:
6110 Abbott Drive | Omaha, NE 68110 | 1-877-369-2562

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