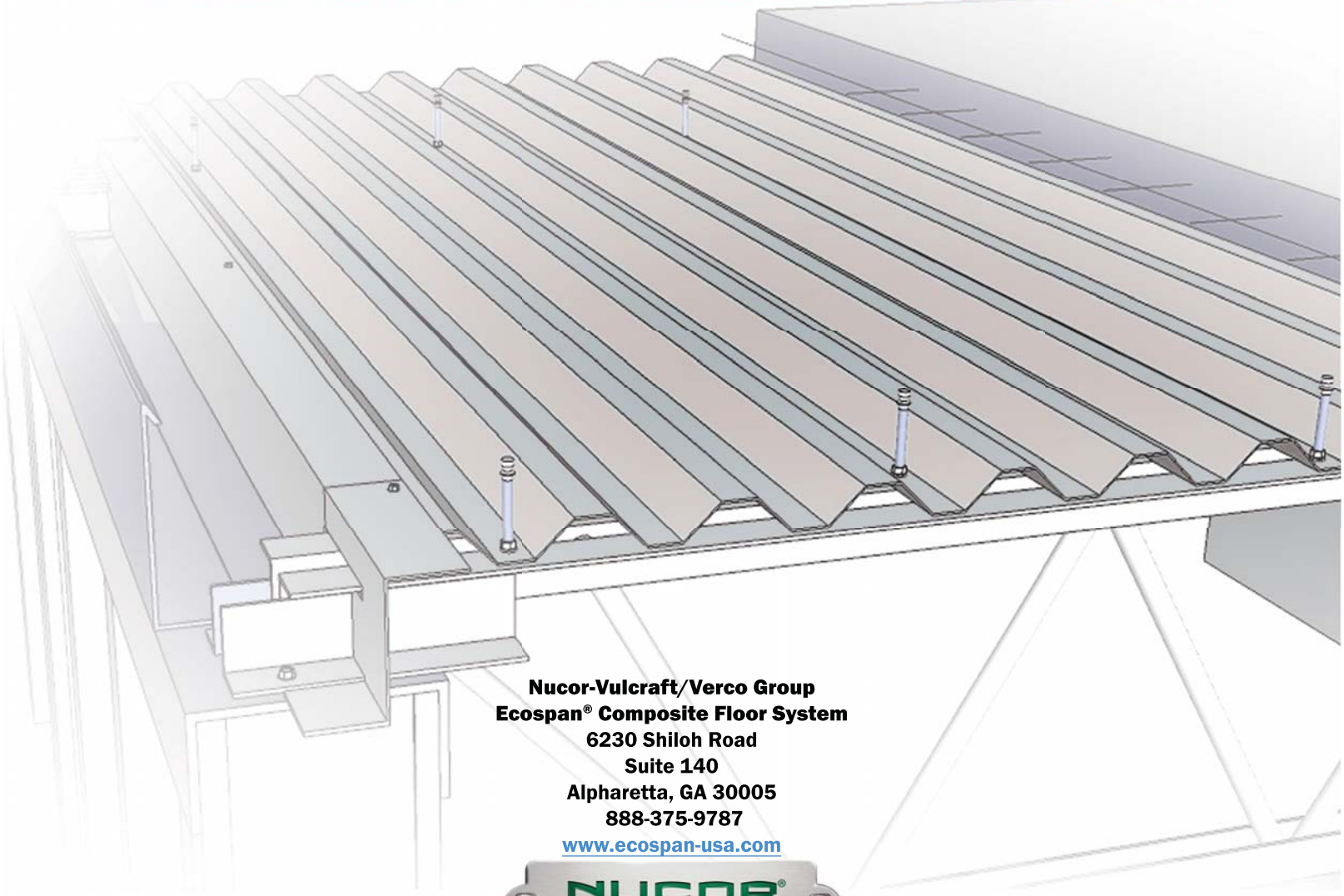
ECOSPAN®

COMPOSITE FLOOR SYSTEM

INSTALLATION GUIDE

ECONOMY THROUGH ECOLOGY®



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2015v1.2

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Installation Guide

This guide must be read in its entirety prior to installation. The information contained in this Installation Guide is intended to assist erectors with the installation practices involved in erecting the Ecospan® Composite Floor System. However, the information herein **does not** replace installation practices required by local codes. In the case of a discrepancy between the information provided in this Installation Guide and local codes, the most stringent method shall take precedence.

Joists are typically installed prior to the installation of the other floor components. However, some projects may require the pourstop and Z-Closure to be installed prior to joists. Care should be taken in the order of installation of the individual components.

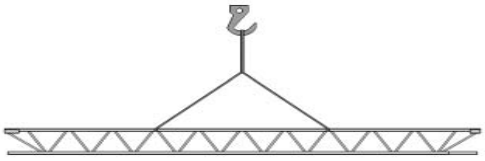
Delivery

Check quantities and mark numbers and condition of joists and accessories on arrival. Note on the delivery ticket any shortages or discrepancies. Nucor will not be liable for any shortages or damage not noted.

Unloading

When unloading joists by crane, always hook chains or sling to top or bottom chords at panel points (approximately at 1/3 points). Never hook to web members or jerk while lifting. When unloading by hand use extreme care when breaking bundles and unload each joist separately.

Store joists in bundles in a vertical position on wood blocking placed at panel points. Lighter joists should be stacked on heavier joists if more than one layer is required. Store joists on sides if height of bundle is greater than twice its width. Joists from broken bundles should be laid flat on blocking to prevent sagging of joists. If joists are not erected immediately, cover joists in a manner that provides adequate ventilation to protect primer coat.

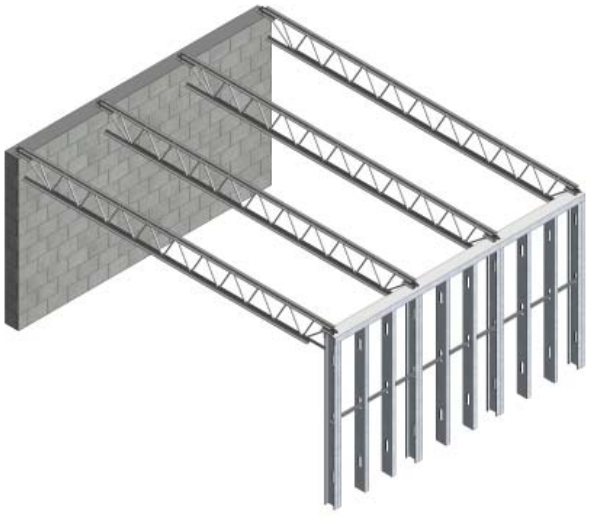


Installation - Joists

Erection must be done with plans noted "Final Plans for Field Use" and executed in accordance with the latest SJI and OSHA requirements. Reference the erection drawings from orientation of the tagged ends of joists and joist girders and any bolted erection stability bridging requirements.

Nucor shall be notified at once if joists, joists girders and accessories cannot be erected according to the final erection plans. Nucor will not be responsible for any field repairs or changes made without prior consent. OSHA requires modifications that affect the strength of a steel joist or steel joist girder to be approved by the project engineer of record.

Nucor joist are fabricated to meet the erection requirements of the Occupational Safety and Health Act (OSHA) 29 CFR Part 1926 Subpart R - Steel Erection. Field compliance with this act is necessary.



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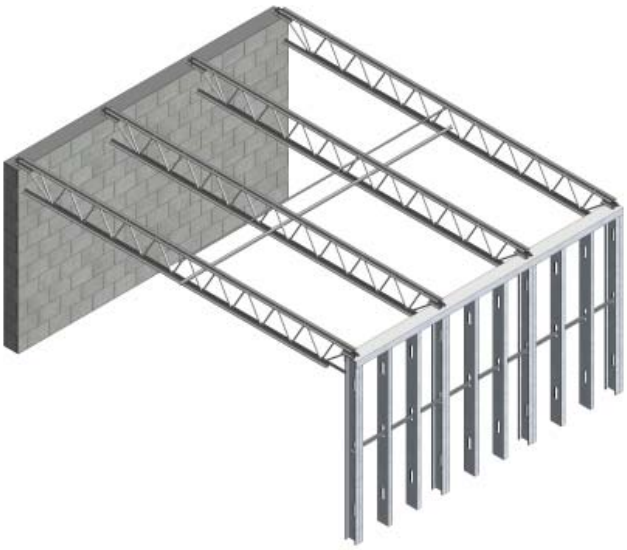
Installation - Bridging



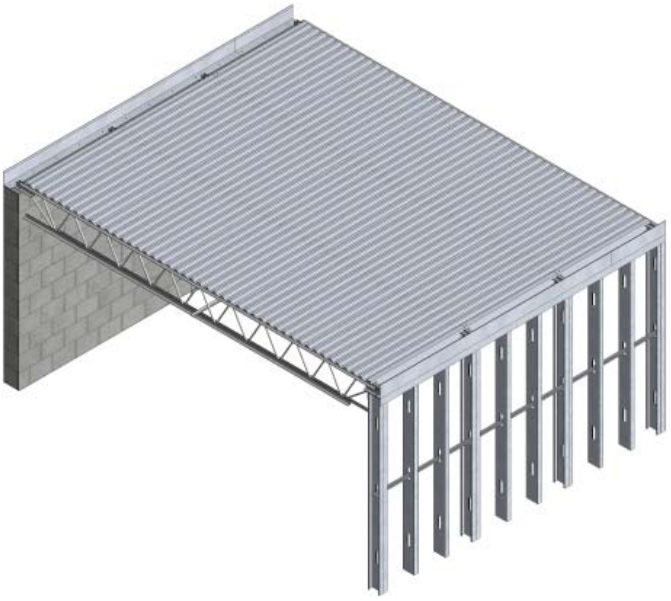
Bolted/Screwed Horizontal & Diagonal Bridging: Snug tighten bolted or screwed horizontal and diagonal bridging.

Welded Horizontal Bridging: Lap bridging a minimum of 3 inches. Connect bridging to joist with a minimum of 1/8 inch fillet weld 1/2 inch long. Use drops where possible.

Welded Diagonal Bridging: Weld at intersection with a minimum 1/8 inch fillet weld 1 inch long or equivalent.

Typically (1) or (2) rows of bridging will be required per bay. Locate bridging as shown on the Final Plans for Field Use. If more than one row is required, locate bridging equally spaced along the joist.

In cases where bridging is not required, care must be taken to align joists in accordance with the Final Plans for Field Use.



Installation - Accessories

Attach the deck accessories by screwing, welding, or button punching using the following **minimum** attachment requirements or as scheduled on the contract documents and Final Plans for Field Use:

Accessory Attachment Requirements	
Type	Maximum Spacing
Pour Stop	12” O.C.
Z-Closure	12” O.C.
Split Deck Sheets	18” O.C.
Cell Closure	36” O.C.
Flat Plate	18” O.C.
Girder Filler	12” O.C.
E-Closure	Each End

Installation - Decking

- Attachment of deck to joists as a working platform is the responsibility of the contractor.
- Fasten deck with Shearflex® Screws in accordance with deck attachment requirements on the Final Plans for Field Use. (**See Installation - Shearflex® Screws**)
- **Important Note:** Puddle welds or other fasteners **may not** be substituted in place of Shearflex® Screws.
- Ensure minimum deck bearing has been provided per manufacture's requirements.
- Ensure deck sheet end laps are a minimum of 2 inches and occur over a joist top chord angle or other support, unless noted otherwise.

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Installation - E-Closure

E-closure is supplied for the purpose of creating a concrete seal between joists. Note: E-closure may not be required on all Ecospan® projects.

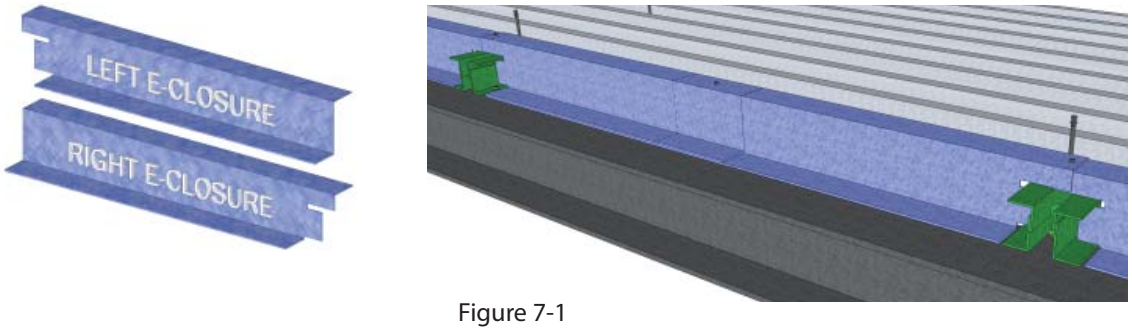

Figure 7-1

A combination of two pieces of E-Closure will be supplied (per joist spacing) with opposing profiles at one end (one Left Side and one Right Side). These two pieces are designed to be lapped and adjusted to accommodate the required joist spacing. See Figure 7-1 for example of E-closure installation. E-closure should be screwed at each end (one screw where pieces lap).

Installation - Shearflex® Screws

Locate and install Shearflex® screws per the Final Plans for Field Use using the Shearset® Tool supplied by Vulcraft.
1. Insert the Shearflex® screws into the end of the shaft of the tool.
2. Locate the placement area and stand vertically at 90° angle over the location.
3. When starting the drilling process, pull the trigger and let the weight of the drill start the screw into the deck. Once the screw has penetrated the deck, then apply downward pressure. Do not put all your weight on the tool.
4. Once the drill tip cuts through the decking and into the joist top chord, the threading on the screw will pull it down into the joist cord.
5. When you hear the tool shaft “ratcheting”, the screw should be seated so there is no space between the collar and the decking.

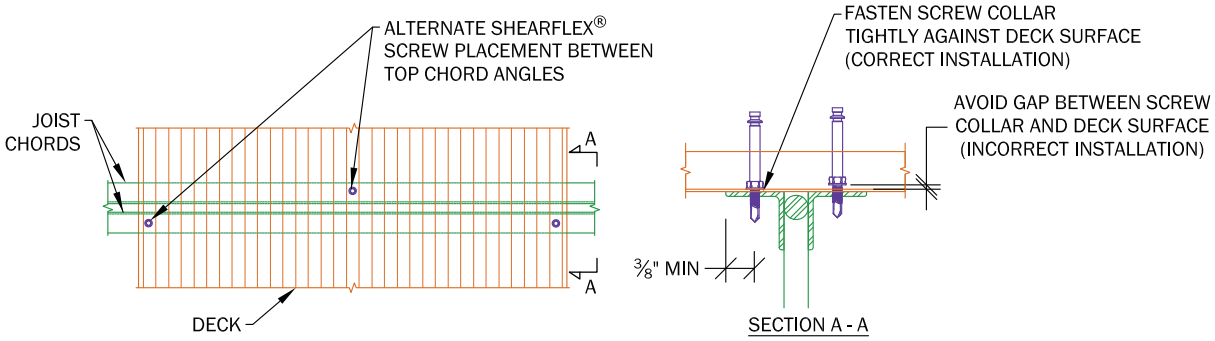

Figure 7-2

Installation - Concrete Reinforcing and Concrete

The Design Professional shall specify required concrete reinforcing. Install concrete reinforcing in accordance with American Concrete Institute (ACI) & Concrete Reinforcing Steel Institute (CRSI) installation guidelines. The Design Professional shall specify concrete material properties and strength requirements. Install concrete in accordance with ACI installation guidelines. Concrete shall be installed to a uniform depth.