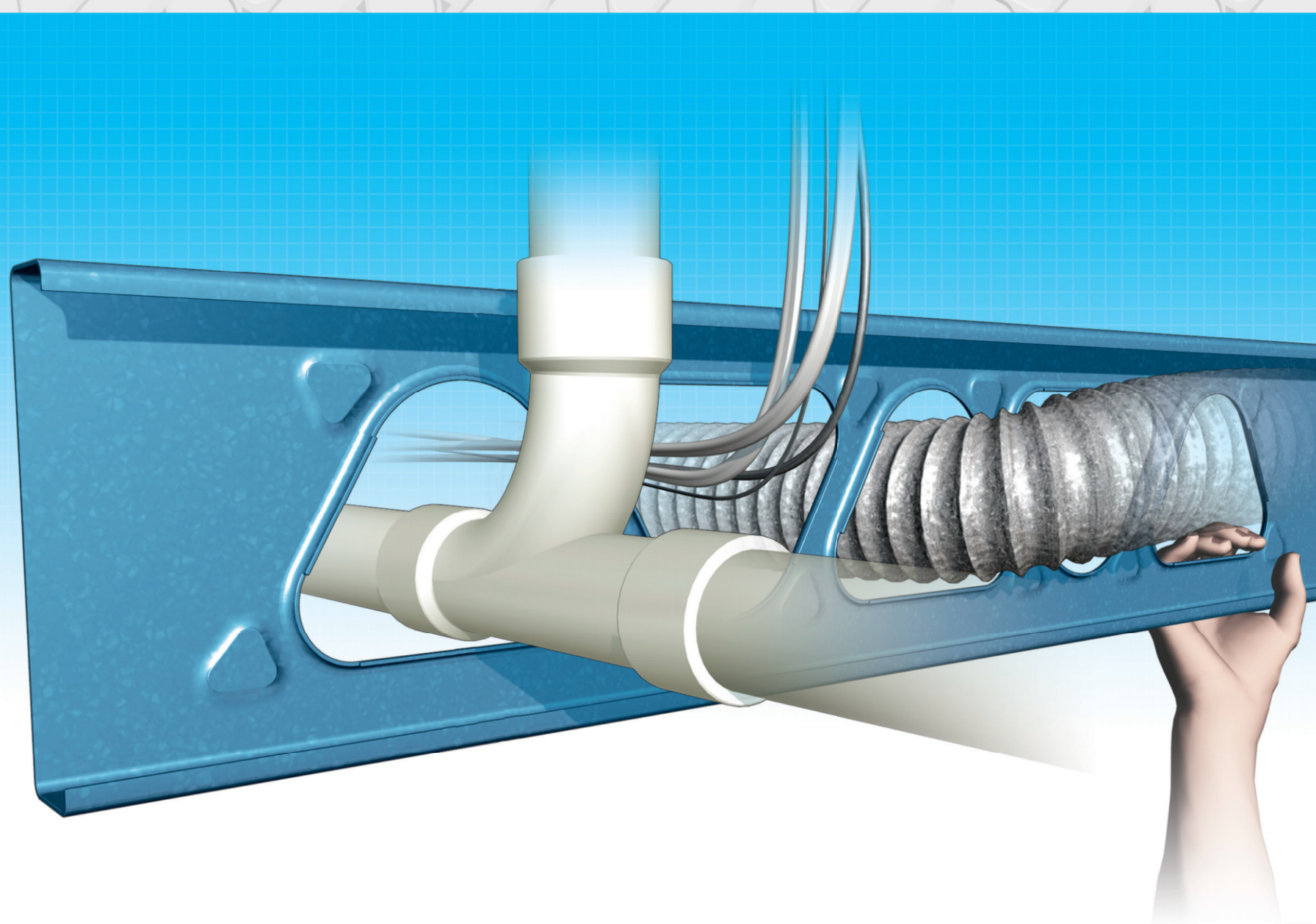


# JoistRite®

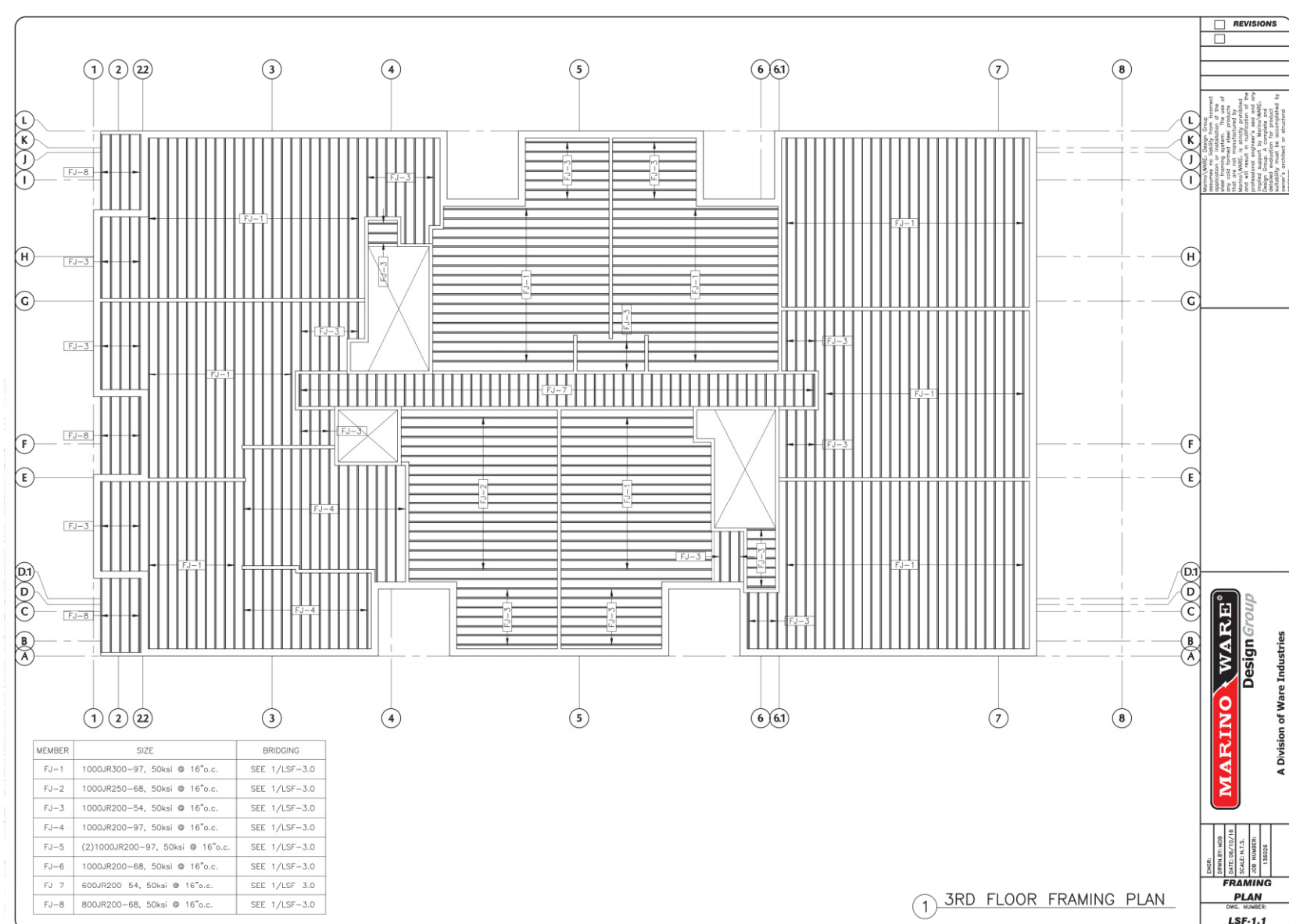
## Steel Floor System Installation Guide



A part of the **FrameRite® Building Systems**  
Building Stronger With Steel.

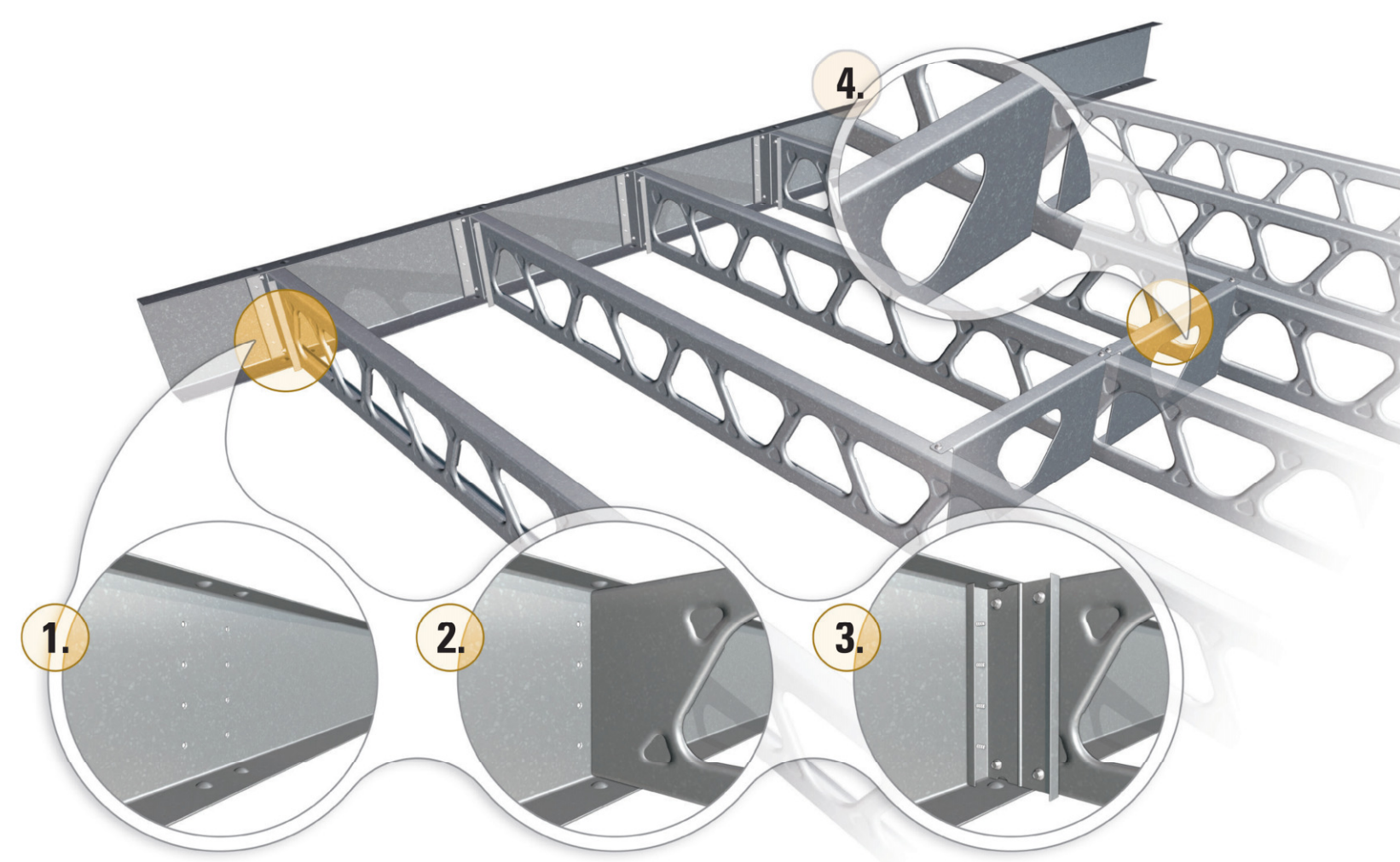


MarinoWARE® offers professional Engineered Shop Drawings. These drawings are created using AutoCAD software and are prepared for the submittal process. In addition, these drawings assist the installer in the construction process indicating product gauge, spacing and connections. Most shop drawings can be completed within 2-3 weeks.



**NEW JERSEY FACILITY** • **GEORGIA FACILITY** • **INDIANA FACILITY** • **NY SALES OFFICE** • **ENGINEERING OFFICE**  
400 Montuoch Road, South Plainfield, NJ 07080  
777 Greenbelt Parkway, Griffin, GA 30223  
4245 Railroad Avenue, East Chicago, IN 46312  
51 John Street, Suite 1, Babylon, NY 11702  
175 Hendrick Drive, Suite 200, McDonough, GA 30253  
908-627-4651 Toll-Free  
800-504-9199 Toll-Free  
908-757-9000 Phone  
908-412-1442 Fax  
800-504-9199 Toll-Free  
678-688-1312 Phone  
9678-688-1379 Fax  
866-636-6012 Toll-Free  
219-378-7100 Phone  
219-378-7106 Fax  
800-627-4657 Toll-Free  
631-691-2200 Phone  
631-691-1492 Fax  
866-545-1545 Toll-Free  
770-507-2600 Phone  
770-507-2605 Fax

## JoistRite® Components



### 1. Track

- Preset spacing for joists – built in “dimples,” located at conventional intervals along the track, surround the joist for easy initial placement.
- Pre-drilled holes – act as guides that assist in lining up components while eliminating the need to fasten screws through both joist and track.

### 2. Track and Joist

- Exclusive Snap-Lock technology – allows joists to lock into place with little effort and with less labor.

### 3. Web Stiffeners

- JoistRite® Web Stiffeners are the very first to come with pre-drilled holes and pre-cut to fit standard joist sizes, allowing for easier installation.

### 4. Blocking

- Unlike traditional blocking, JoistRite Solid Blocking comes equipped with unique tabs that eliminate the need for additional accessory clips and fasteners – and additional clamping or fastening. The product is also pre-cut to fit between the joists, resulting in more stability based on less labor.

## Installation Suggestions

### How to Secure the JoistRite® Track

The JoistRite Track is the same as rim joist in wood framing. For steel, it can be set directly on the concrete, or on top of a wood sill plate.

- The JoistRite Track can be set on a wood plate or directly on level concrete.
- When setting on level concrete, apply building paper before placing JoistRite Track.
- Set on the endwalls first.
- See building code or prescriptive method for anchoring to structure.
- Stand the JoistRite Track on the long flange with the web on the outside of the foundation wall.
- Tack the JoistRite Track down with a power actuated fastener, screw or brace to keep it straight.
- Splice JoistRite Tracks together if needed with a scrap piece of JoistRite or flat gusset plate. Splices are used whenever one section of the JoistRite Track is not long enough to extend the whole length of the structure.
- The JoistRite Track sets your spacing with its built in dimples spaced at your desired location, no need to mark the track.

- Fasten JoistRite in place using the patented JoistRite Web Stiffener. Use #10-16 screws thru each predrilled hole in the JoistRite Web Stiffener to joist.

- Fasten the JoistRite Track to the JoistRite Web Stiffener through each predrilled hole in the JoistRite Track.

- Continue setting joists the length of the building one at a time, keeping the hard side of the joists in the same position.

### How to Brace JoistRite

Bracing has never been easier.

- Slide JoistRite Solid Blocking into the desired location. See detail JR 1 on opposite side.
- Fasten JoistRite Solid Blocking to the JoistRite Track through each of the 4 predrilled tabs in the blocking with #10-16 screws.
- Temporary “strong-backs” can be used before sheathing is applied.

### How to Apply Sub Flooring

Use the correct thickness sub flooring allowed by code based on the joist spacing.

- Apply glue to the floor joists before laying down the sub flooring.
- Screw the sub flooring down using a minimum No. 8 bugle-head screw, 6 inches on center for the edges, and 12 inches on center in the field.
- Use a screwgun with an adjustable depth setting nosepiece.

### How to Set JoistRite

- Turn JoistRite on an angle and slip the end of the joist inside the JoistRite Track.
- Twist the joist into its vertical position, lining it up with the dimples on the JoistRite Track.
- Using a speed square, adjust the end of the joist so it is perpendicular to the rim track.

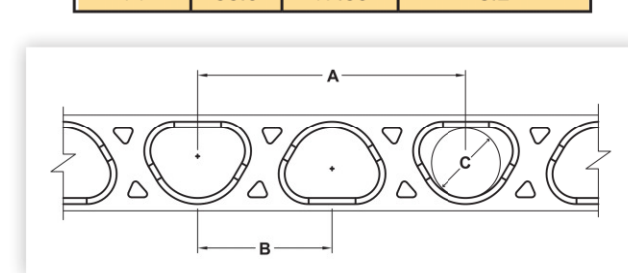
## General Information

Hole Sizes:

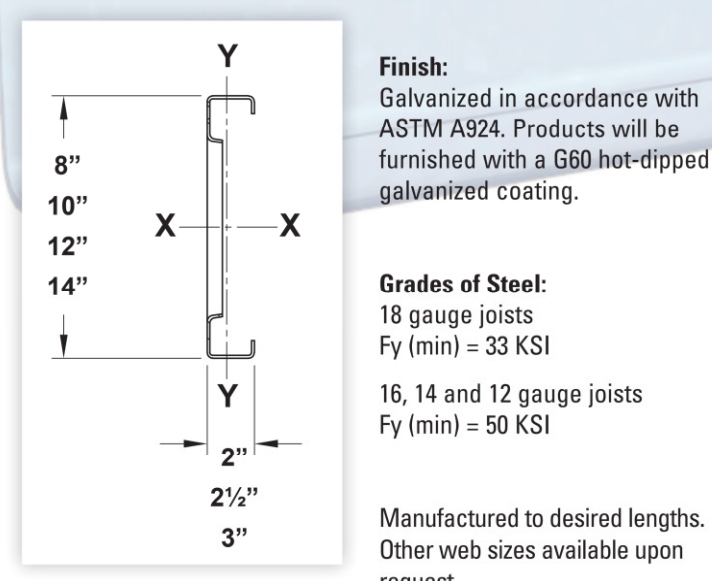
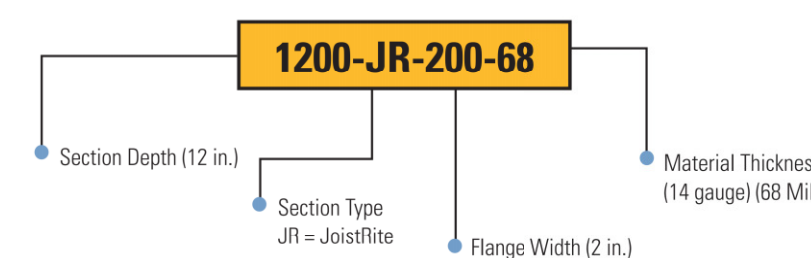
Section Depth in.	A Pitch in.	B 1/2 Pitch in.	C Max Diameter in.
8	28.0	14.00	5.5
10	28.0	14.00	7.2
12	35.0	17.50	9.2
14	35.0	17.50	9.2

Steel Thickness:

Product Gauge	Design Mils	Design (in.)	Design (mm)	Minimum (in.)	Minimum (mm)	Color
18	43	0.0451	1.15	0.0428	1.09	Yellow
16	54	0.0566	1.44	0.0538	1.37	Green
14	68	0.0713	1.81	0.0677	1.72	Orange
12	97	0.1017	2.58	0.0966	2.45	Red



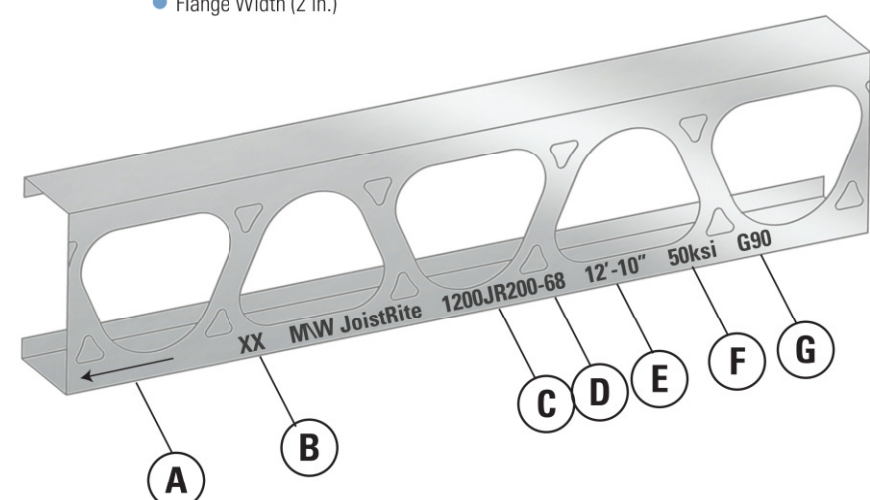
JoistRite Identification System



**Finish:** Galvanized in accordance with ASTM A924. Products will be furnished with a G60 hot-dipped galvanized coating.

**Grades of Steel:**  
18 gauge joists  
Fy (min) = 33 KSI  
16, 14 and 12 gauge joists  
Fy (min) = 50 KSI

Manufactured to desired lengths. Other web sizes available upon request.



### A. Leading Edge (Indicated by the direction of the arrows)

- All joists must have their leading edges pointing in the same direction.

### B. Member Callout Identification

- Joists and Girders will be identified by R1, R2, etc.

### C. Product Code

- 1200JR200-68 (Identifies the joist type)

### D. Member Thickness (mils)

- 18, 16, 14, 12 gauge

### E. Member Length

- 12'-10"

### F. Steel Strength

- 50ksi

### G. Type of Galvanization Coating

- G60 or G90

## Perfect for Trades

With JoistRite there really should never be a reason to cut the joist for the passing of trades. The large repetitive openings make it simple to locate HVAC, plumbing and electrical trades right through any bay of framing. Custom orders can be manufactured with specific start and stop locations of the holes if necessary. Never cut through a JoistRite column without engineering approval.



## Construction Tips

### On Your First Job, Confirm Material List Covers the Required Amount Needed

Always double check that material “cut” list has ample amount of material to frame the area. It is recommended that extra material is ordered to cover any deviations in the framing.

### Use the Largest Depth Joist Possible

By using a deeper floor joist; plumbing, electrical and mechanical services are installed with ease and deflection is reduced. Select the appropriate floor joists based on the required floor loading, use the MarinoWARE JoistRite catalog or as specified by your architect or engineer. Smaller JoistRite depths are available to meet height restrictions.

### Do Not Put Steel Joist in Direct Contact with Certain Materials

Do not put steel joists in contact with copper, pressure treated lumber, ACQ or Portland based masonry products. Use recommended grommets or protective barrier. Use of sill sealer or tar paper is recommended.

### Be Familiar with Standard Stud Designators

These are easy to understand and are the standards for which steel framing products are designated. This is the universal system used by the professional industry. Visit [www.sma.com](http://www.sma.com) and view the technical library for information. Refer to the General Information section of this guide for an example.

### Always Be Familiar with Plans

Always check the plans to ensure floor joists are installed according to design criteria. The

span direction and starting points are important so that the JoistRite knockouts (holes) are in line. As with any framing material, if the joists exceed their span limits, the resulting floor will be “bouncy” and potentially unsafe.

### Expanded Floor Areas

This is accomplished many times by cantilevering joists over a load bearing wall or a foundation wall. This also requires JoistRite blocking to be installed between every other joist at this bearing point. See detail JR 4 on opposite side. The blocking keeps the joists from rolling and stabilizes the floor. The perfect solution for this application is the use of the one piece JoistRite blocking system for easy installation. For additional framing requirements of cantilevered steel joists, please refer to the Steel Framing Alliance’s (SFA) “National Training Curriculum”.

### Use the Required Sheathing

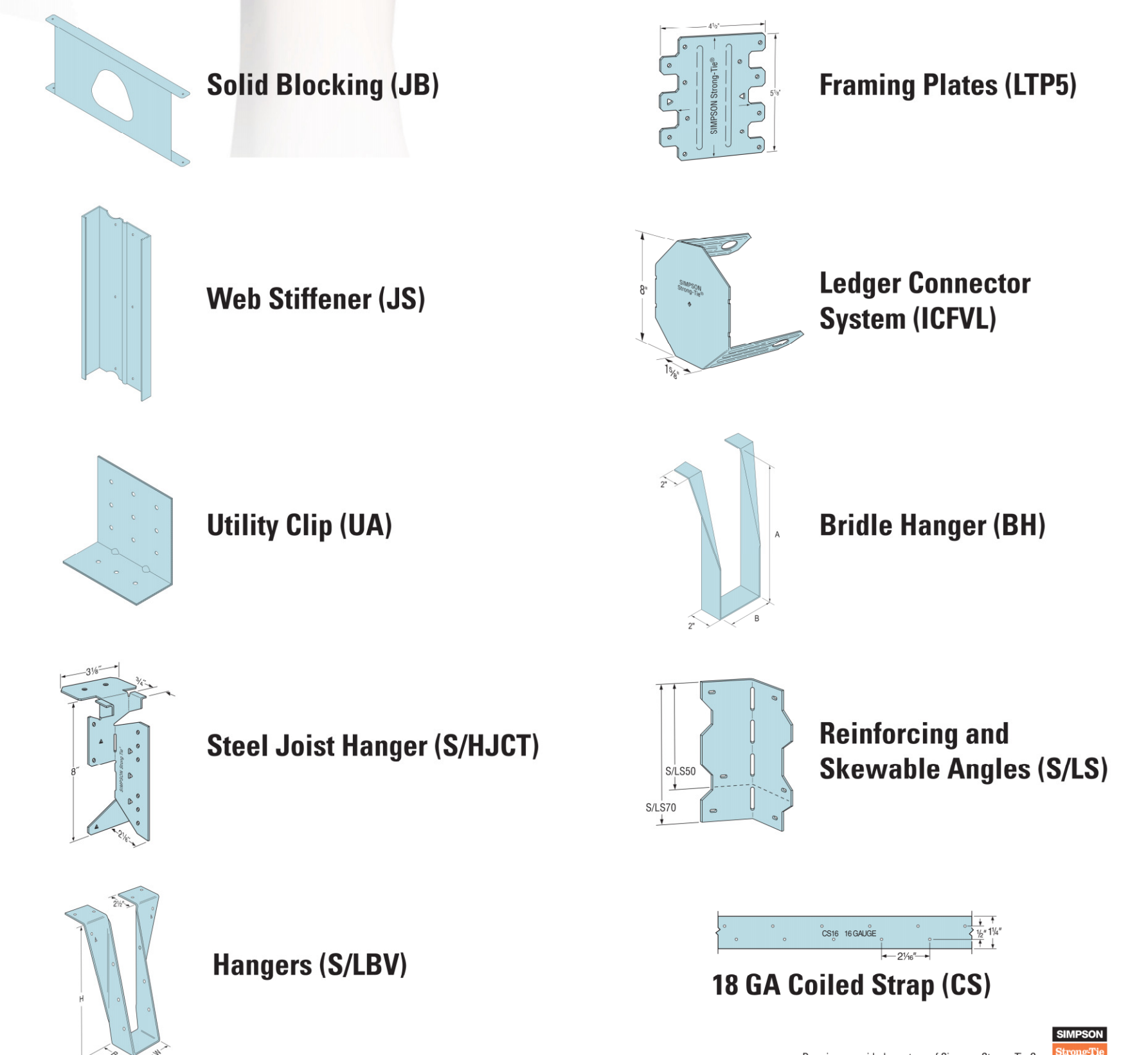
When floor joists are spaced wider than standard 16” on center, its imperative sheathing meets all local building codes.

### Use the Most Current Construction Details

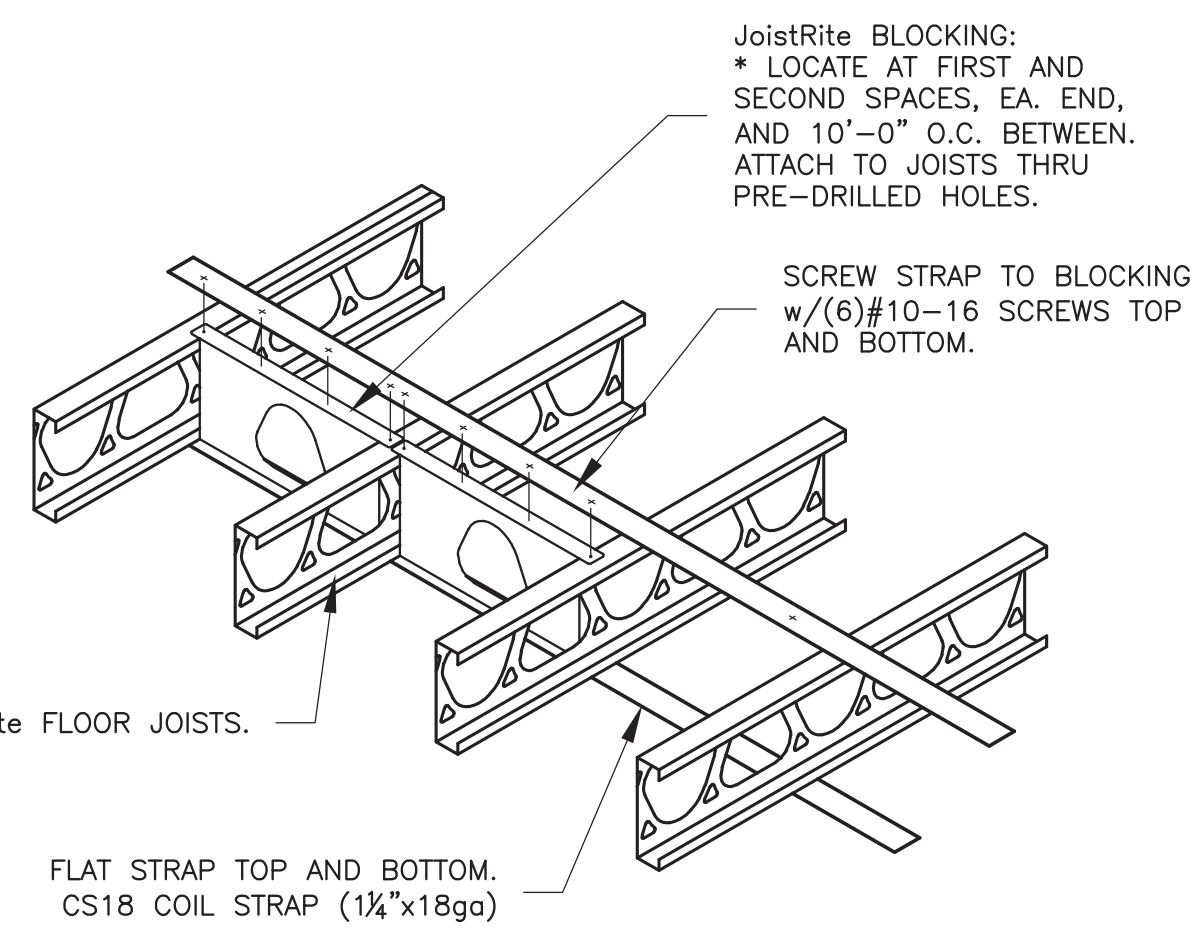
Use the framing details of this guide along with the JoistRite technical catalog. There are many standard steel construction details in the “Low-Rise Residential Construction Details” book. This consists of standard application for floors, load-bearing walls, roof framing as well as interior non-load bearing walls. Visit [www.steel framing alliance.com](http://www.steel framing alliance.com) (SFA) or [www.marinoWARE.com](http://www.marinoWARE.com) and click on FrameRite to refer to these details.

## JoistRite® Accessories

From MarinoWARE, creator of the revolutionary FrameRite family of proprietary framing solutions comes the industry’s most comprehensive line of cold formed steel framing connectors. Designed to significantly reduce time, labor, materials and costs, FrameRite Connectors facilitate quicker and more cost-effective installation. Along with our partner Simpson Strong-Tie®, the industry leader in connectors, we offer over 300 varieties of connectors, covering every load requirement encountered on the jobsite. Save time, labor and money. FrameRite Connectors give you more control, more options, and more ways to build better with steel.

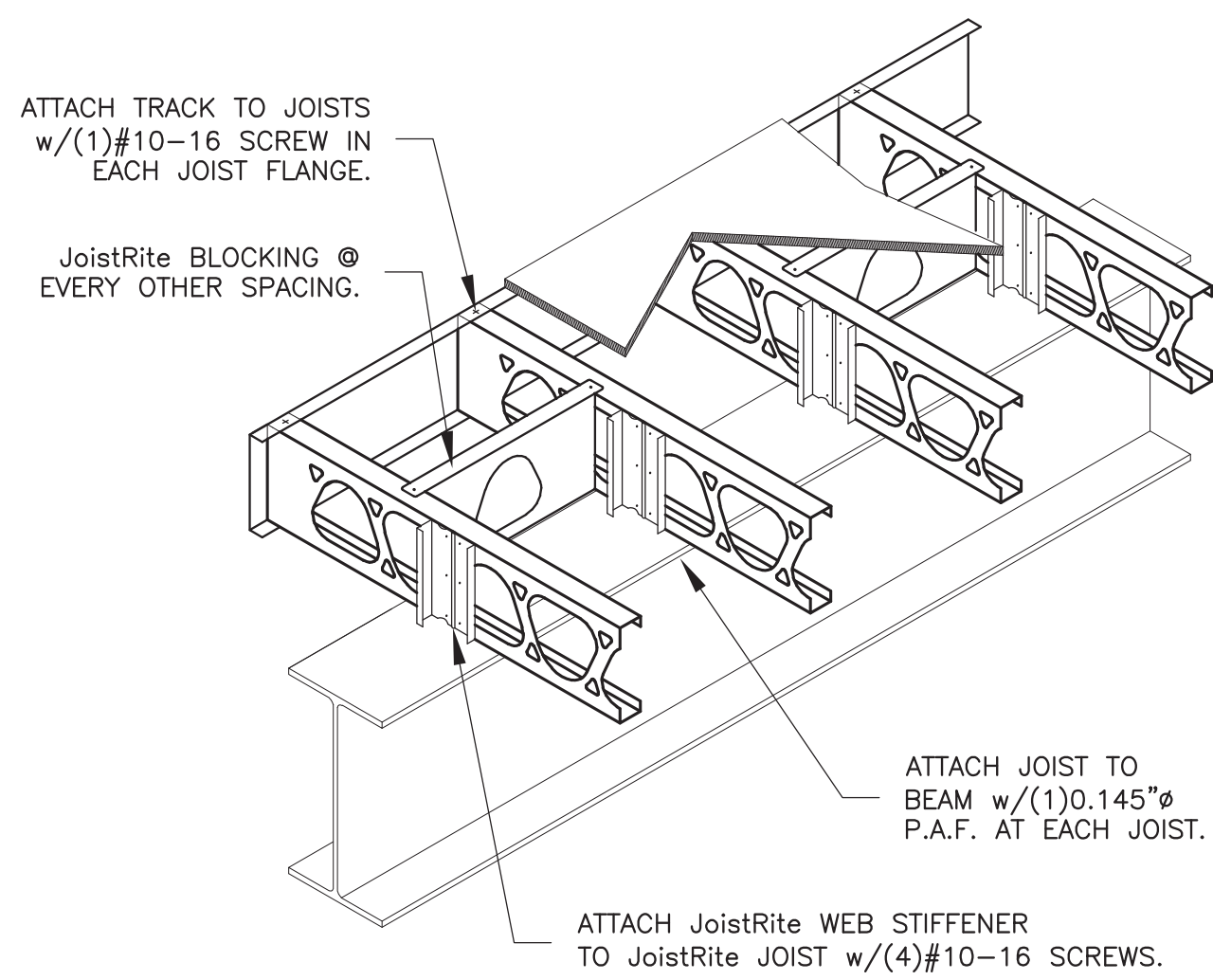


Drawings provided courtesy of Simpson Strong-Tie Co.

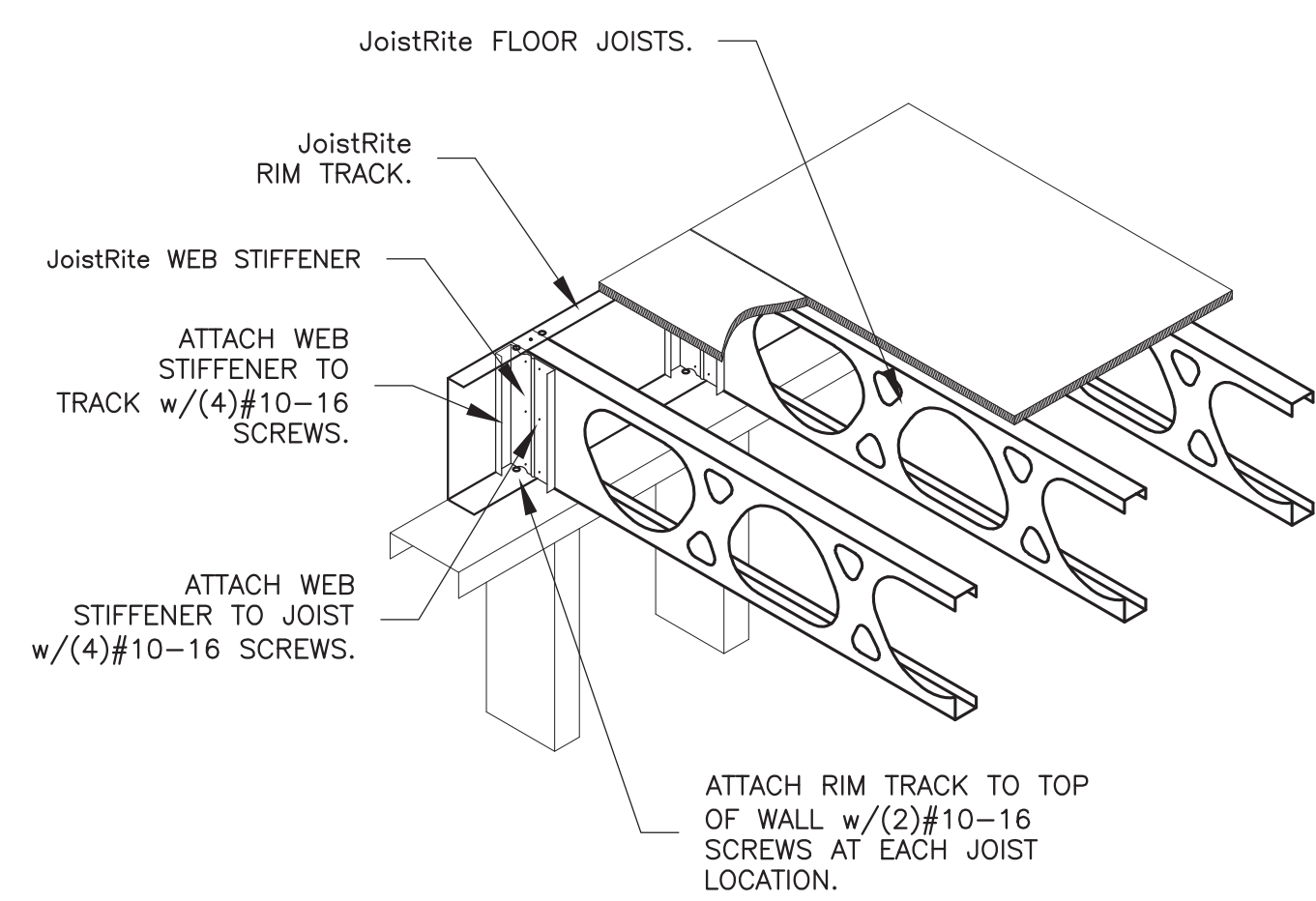


NOTE:  
TOP STRAP MAY BE ELIMINATED WITH THE PROPER ATTACHMENT OF DIAPHRAGM RATED SHEATHING OR DECKING.

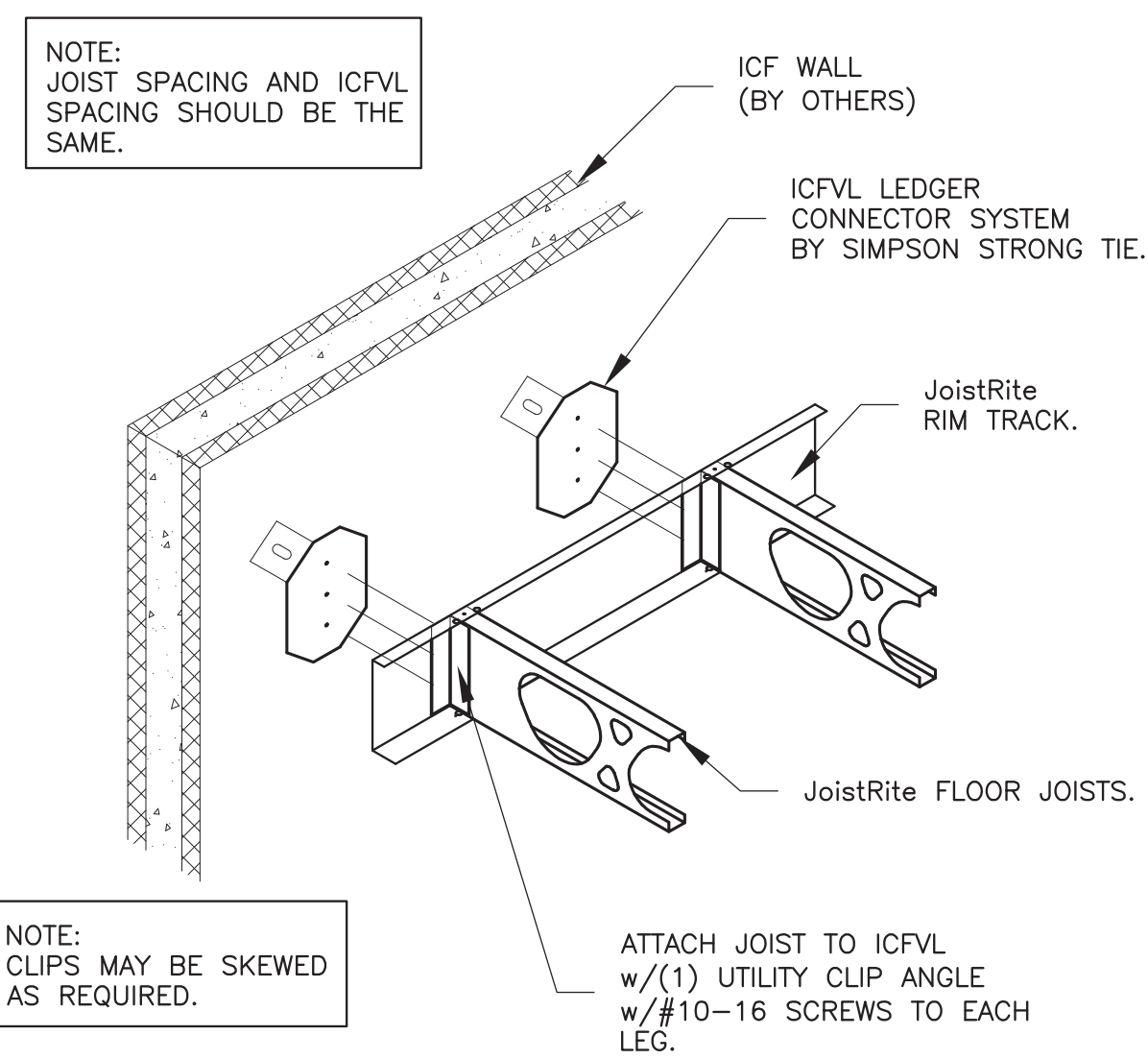
**JR1 JOISTRITE BRIDGING**



**JR4 JOIST CANTILEVERED OVER I-BEAM**

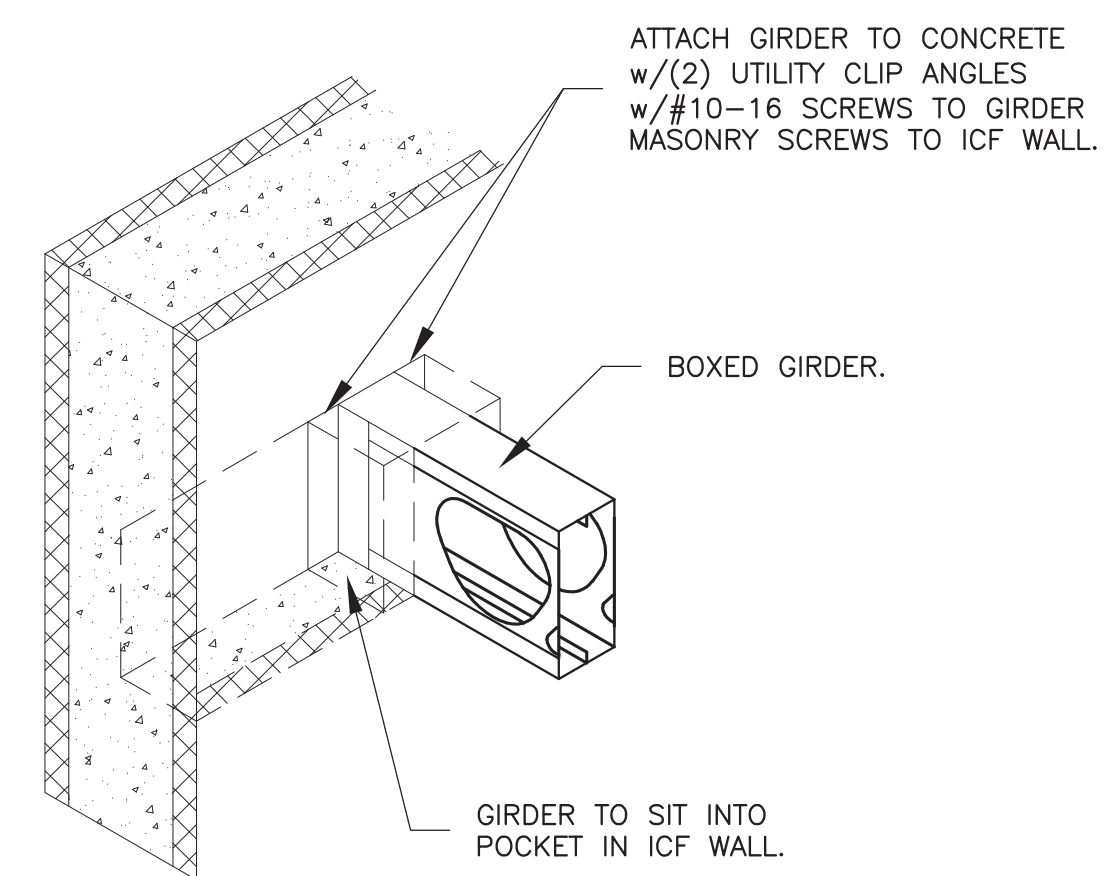


**JR5 JOIST BEARING ON STUD WALL**

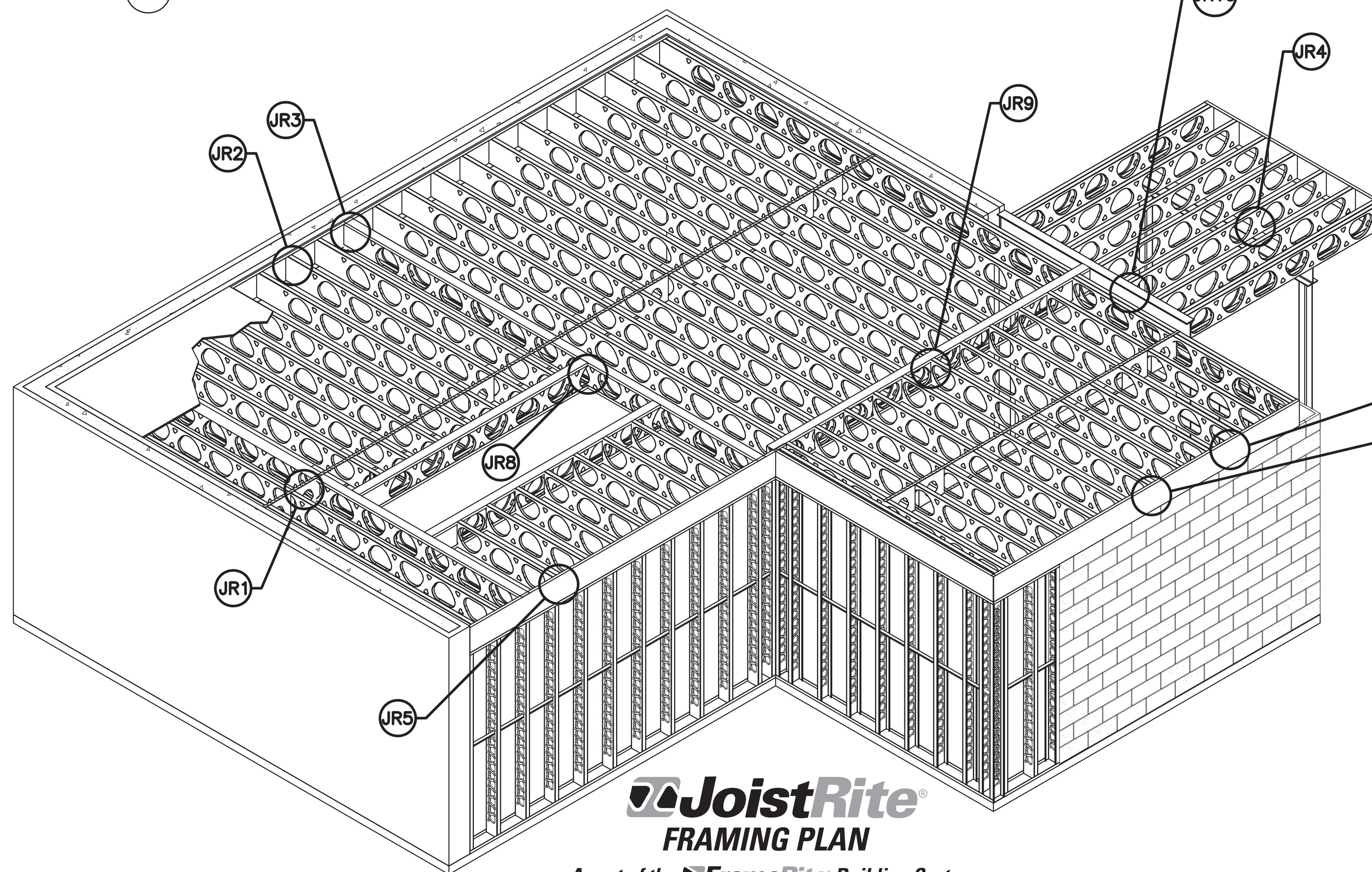


NOTE:  
CLIPS MAY BE SKEWED AS REQUIRED.

**JR2 JOISTRITE CONNECTION TO ICF WALL**



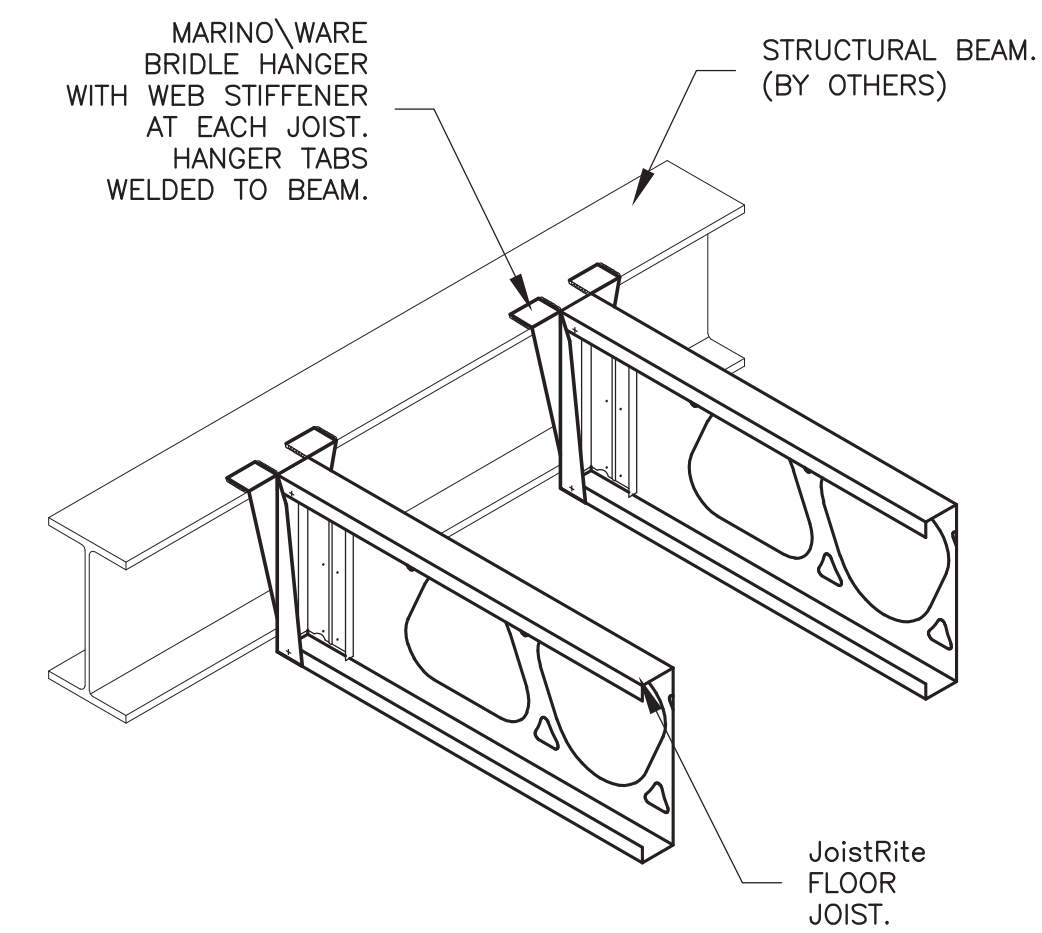
**JR3 GIRDER POCKETED IN ICF WALL**



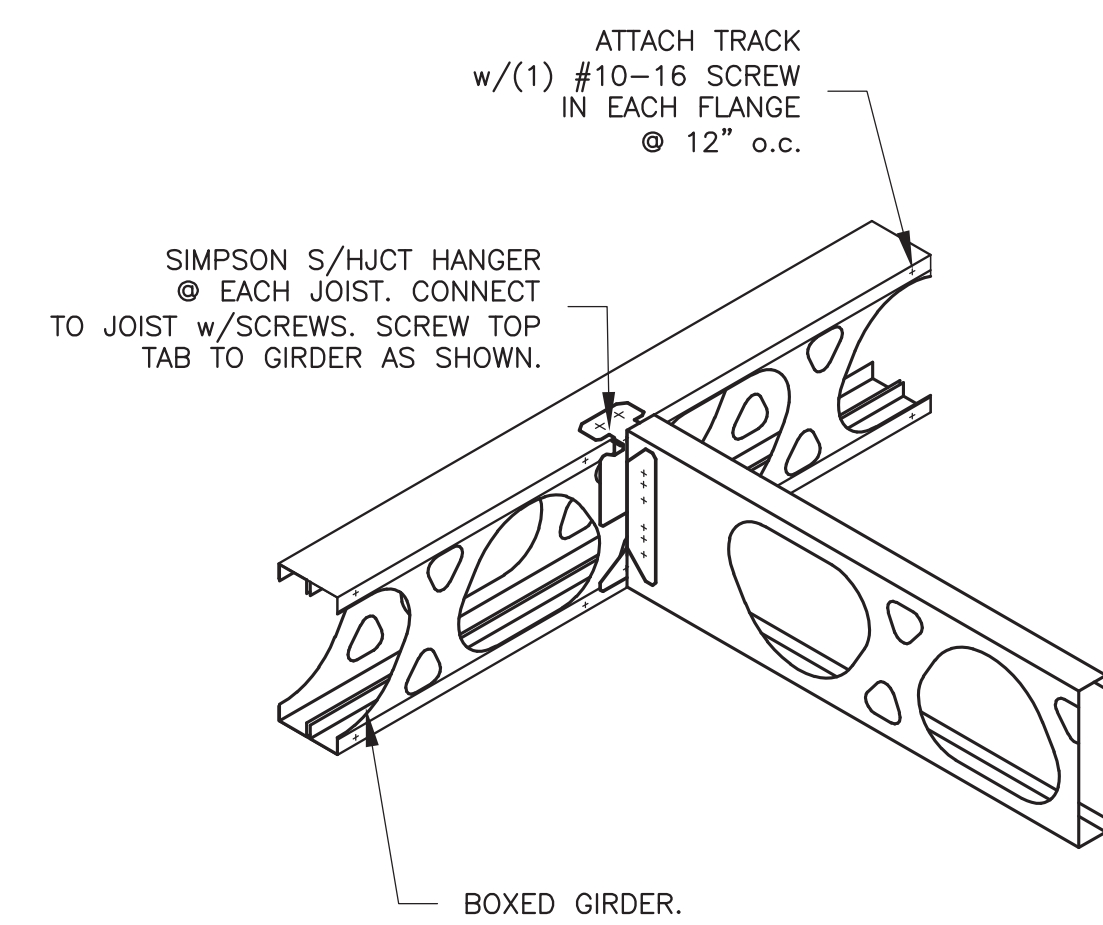
**Joistrite**  
FRAMING PLAN

A part of the **FrameRite** Building Systems

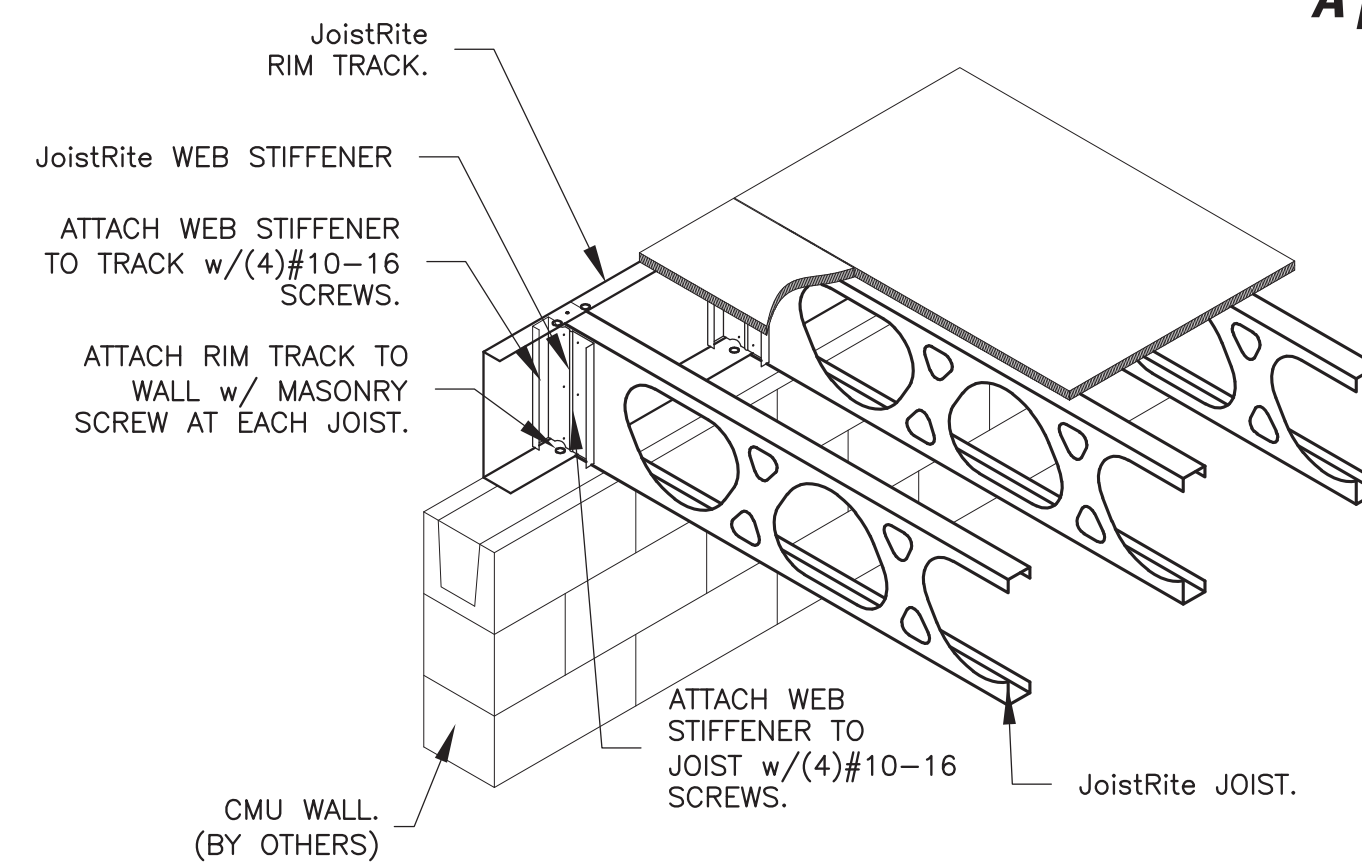
- GENERAL NOTES:**
1. DETAILS SHOWN ON THIS PAGE ARE GENERIC IN NATURE & AS AN AID IN THE GENERAL CONSTRUCTION OF JOISTRITE PRODUCTS. THE SPECIFIC SIZE, GAUGE, SPACING, FASTENERS, & CONNECTIONS SHALL BE ENGINEERED FOR SPECIFIC LOADING & FRAMING CONDITIONS.
  2. THESE DRAWINGS DO NOT TAKE INTO CONSIDERATION THE OVERALL STABILITY OF THE STRUCTURE. IT IS THE RESPONSIBILITY OF THE E.O.R. TO DESIGN THE FLOOR DIAPHRAGM & ALL RELEVANT CONNECTIONS TO COMPLETE THE BUILDING STABILITY LOAD PATH DUE TO WIND & SEISMIC LOADS.
  3. JOIST MUST BEAR DIRECTLY OVER STUD BELOW. IF NOT, A DISTRIBUTION MEMBER IS REQUIRED ON TOP OF THE LOAD BEARING WALL FOR PROPER BEARING & ANCHORAGE.
  4. A 1/8" MAXIMUM GAP IS PERMITTED BETWEEN RIM TRACK & END OF THE JOIST.
  5. NO NOTCHING OR CUTTING OF JOISTRITE OR THE PUNCHOUTS IS ALLOWED. CONTACT A LICENSED PROFESSIONAL ENGINEER FOR GUIDANCE BEFORE CUTTING HOLES.
  6. TEMPORARY BRACING MUST BE INSTALLED AT THE TIME OF ERECTION.
  7. PRECAUTIONS MUST BE TAKEN TO AVOID CONSTRUCTION LOADS EXCEEDING DESIGN LIVE LOADS.
  8. JOIST BRIDGING MUST BE INSTALLED AT THE TIME THE FLOOR IS ERECTED. FAILURE TO INSTALL BRACING AT THIS TIME MAY COMPROMISE THE STRUCTURAL INTEGRITY.
  9. ALL SPLICE REQUIREMENTS FOR JOISTS MUST BE DETERMINED THROUGH ENGINEERING ANALYSIS. ALL SPLICES MUST BE MADE OVER A SUPPORT.
  10. GALVANIZED STEEL JOISTS SHOULD NOT COME IN DIRECT CONTACT WITH PRESSURE TREATED LUMBER OR CONCRETE.



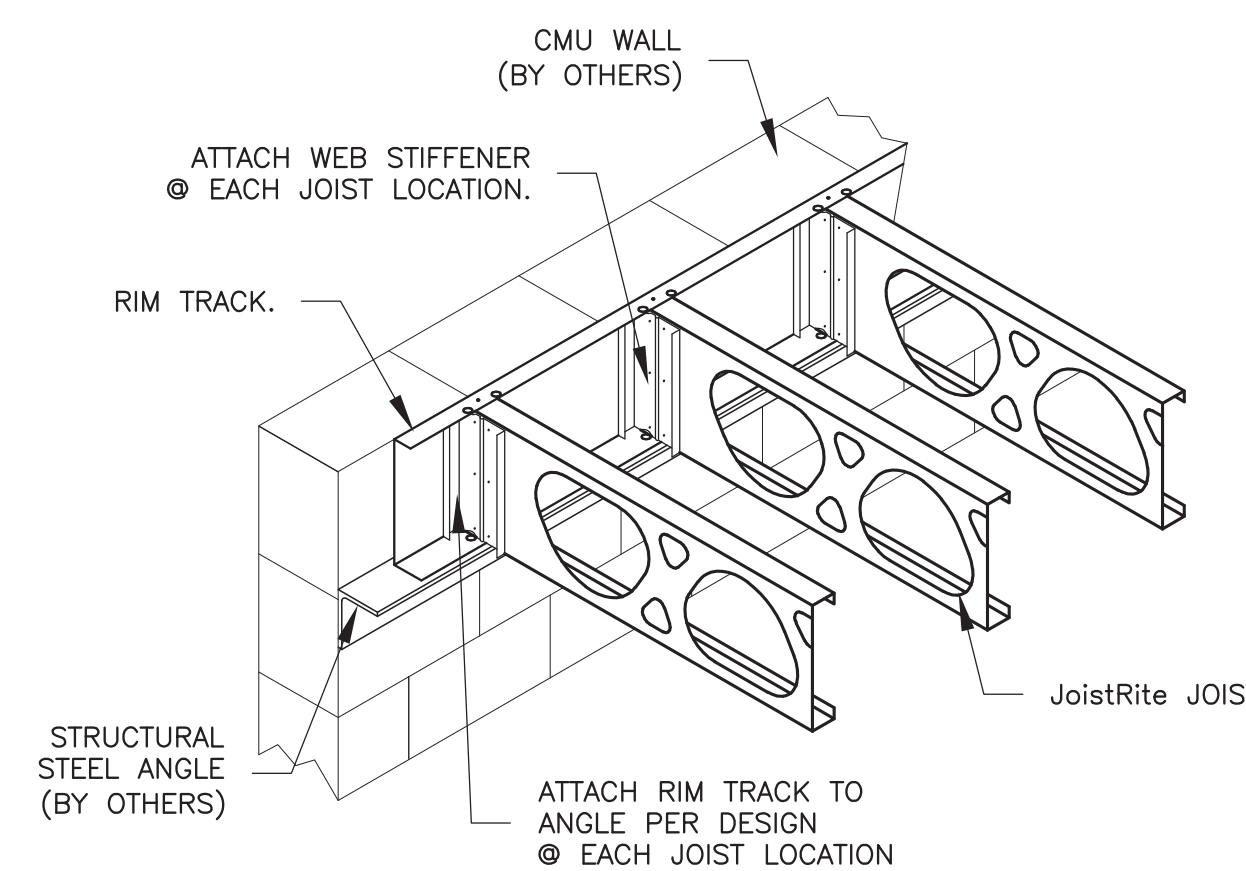
**JR10 JOIST CONNECTION TO I-BEAM**



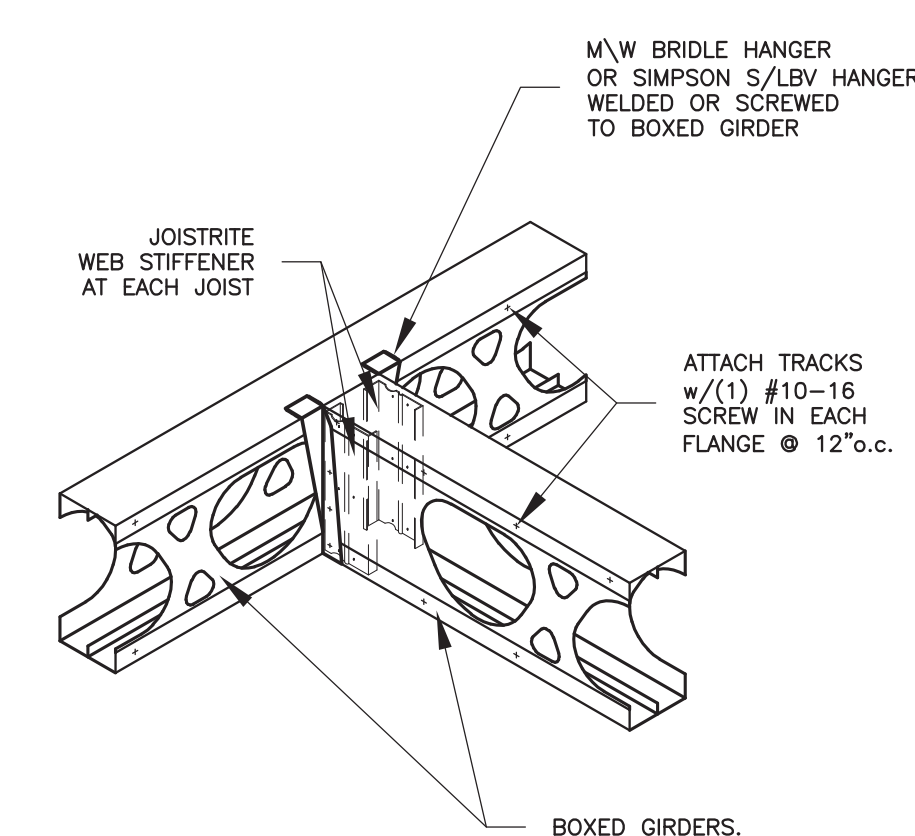
**JR9 JOIST CONNECTION TO GIRDER**



**JR6 JOIST BEARING ON CMU WALL**



**JR7 JOIST BEARING ON STRUCTURAL ANGLE**



**JR8 GIRDER TO GIRDER CONNECTION**

**REVISIONS**

Marino Ware, Design Group, does not warrant or accept responsibility for the application or installation of the steel framing system. The use of any cold formed steel products without the approval of Marino Ware, is strictly prohibited and will result in nullification of the professional engineer's seal and any implied support by Marino Ware, Design Group.

**Joistrite**  
FLOOR SYSTEM  
TECHNICAL REFERENCE

**MARINO WARE**  
Design Group

A Division of Ware Industries  
100 Hendrick Dr., Suite 200, McDonough, GA 30253

ENGR.	DATE
DRWN BY:	SCALE: N.T.S.
DATE	JOB NUMBER

**SUGGESTED DETAILS**  
DWG. NUMBER: