

fsi industries
20 Technology Way
West Greenwich, RI 02817

Extra Width Extension (Extension
is wider than attaching stairs)



STAIR EXTENSION PLATFORM ASSEMBLY MANUAL



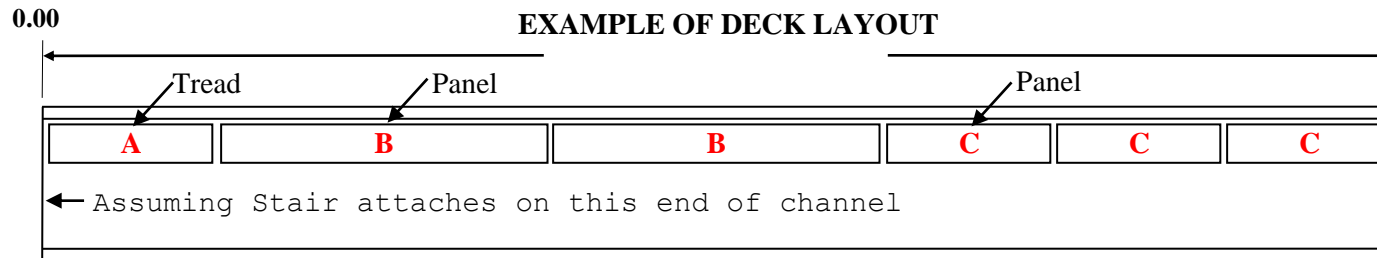
Standard Stair Extension
(Stair and extension are
same width)

Stair and Extension
Connection



Instructions Apply To All Extension Types

1. Position the two extension channels on blocks or dunnage in order to allow installation of the deck panels shown on the deck layout page, located in the components section of these instructions (See Sheets in the 5000 series). Starting at the stair end of the channels start with deck piece A (tread) and follow the order of pieces shown on the deck layout page. If your extension is the center of a crossover stair, there will be a piece A (tread) at each end of the extension.



PLEASE NOTE:
 Number of pieces shown are
 for layout orientation only.
 Refer to quantities in
 components section.

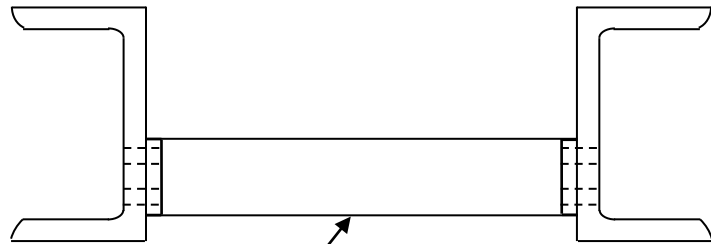
Begin by attaching 1 Pc 'A' on the Stair End
 Continue by adding all Pc 'B'
 Finish by adding all Pc 'C'

(STEP 1)

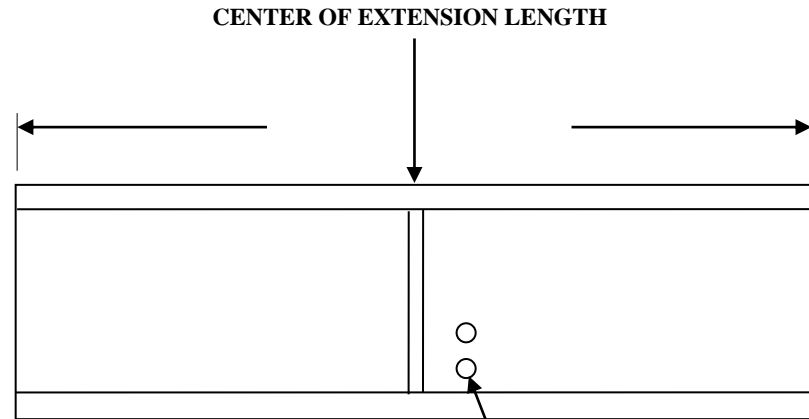
Deck Hardware Use:
 3/8" – 16 x 1-1/2 HHCS
 3/8" Flat Washer
 3/8" Lock Washer
 3/8" – 16 Hex Nut



1A) If the stair extension length is less than 60" skip this step, else install an extension cross tie between the bottoms of the extension channels near center of the extension length as shown if figure 1A, using the same 3/8" hardware as Step 1.

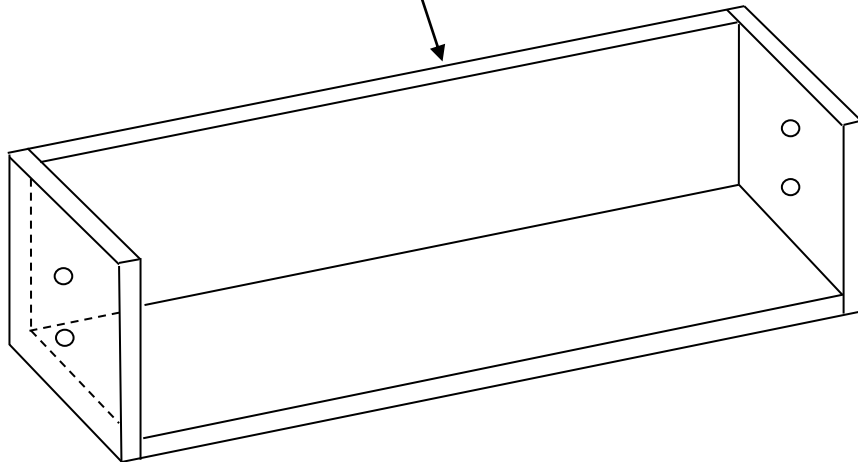


3 X 3 EXTENSION CROSS TIE



CROSS TIE HOLE

FIGURE 1A



- Cross Tie Hardware Use:**
 4 of each
 3/8" – 16 x 1-1/2 HHCS
 3/8" Flat Washer
 3/8" Lock Washer
 3/8" – 16 Hex Nut



2. If your extension exits left, right or dead ends, install the separate handrail frame on the extension end opposite the stair end using 1/2" hardware.



Handrail End Frame

Hardware Use:
1/2" – 13 x 2-1/2 HHCS
1/2" – Lock Washer
1/2" – 13 Hex Nut

(STEP 2)

(STEP 3)

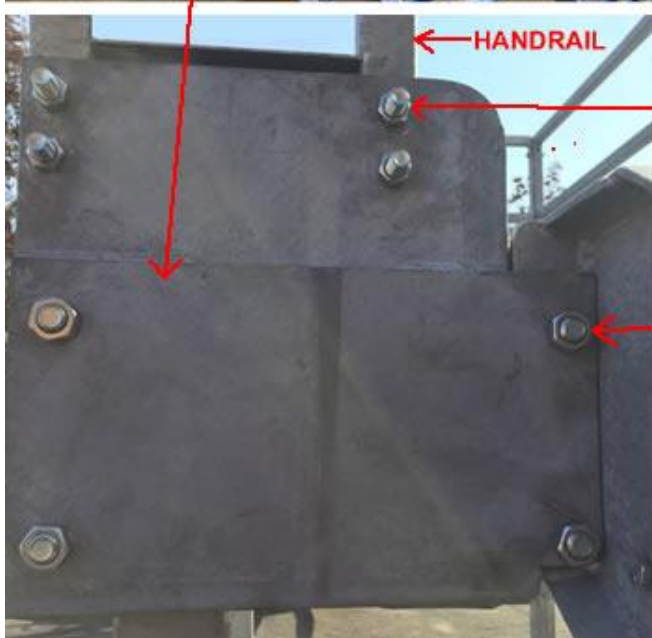


3. If your extension is wider than your stair you will be provided support plates to adapt the extension to the stair. Install the support plate on the stair end of the extension as shown on the next page or else skip this step if stair and extension are the same width. If your extra width support plate is wider than 4", you will be provided a filler handrail piece which bolts to the top of the support plate. Bolt this handrail now as shown.

Note: This Plate With Handrail is Provided for Extra Width Extension Dimensions of 4" or More



(Plate Without Handrail Shown for Location Purposes Only)



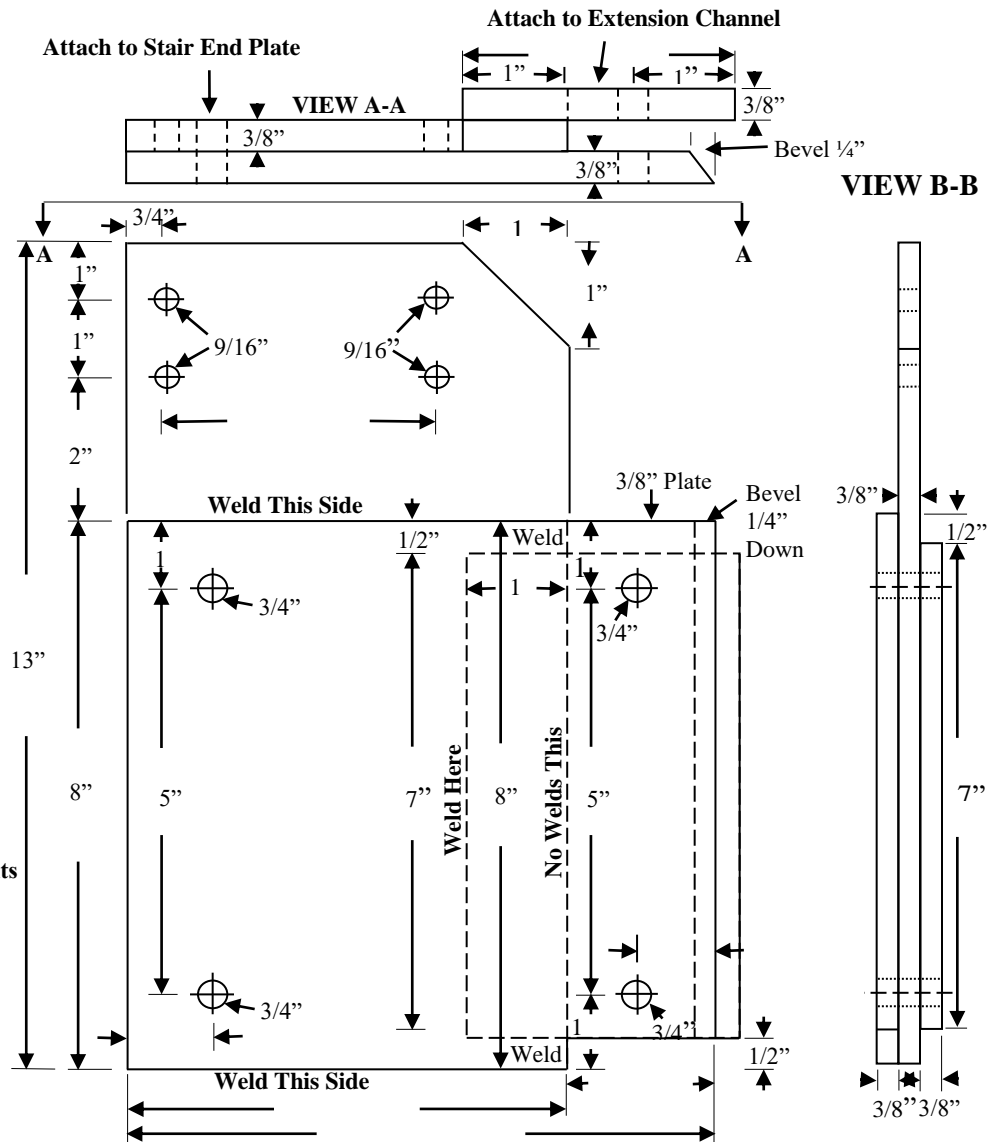
HANDRAIL

(STEP 3)

1/2" - 13 x 3" Bolts
1/2" Flat Washer
1/2" Lockwasher
1/2" - 13 Hex Nut

(4) 5/8"-11 x 2" Bolts
5/8" Lockwasher
5/8" Hex Nut

Left Hand Plate Shown

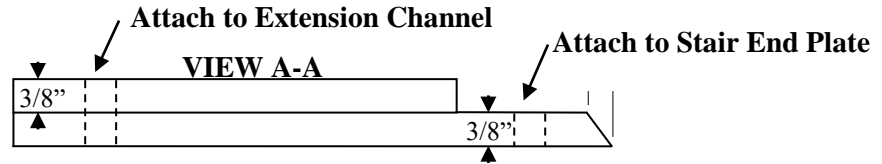


Extended Exit Support Plate - Left with Handrail Plate



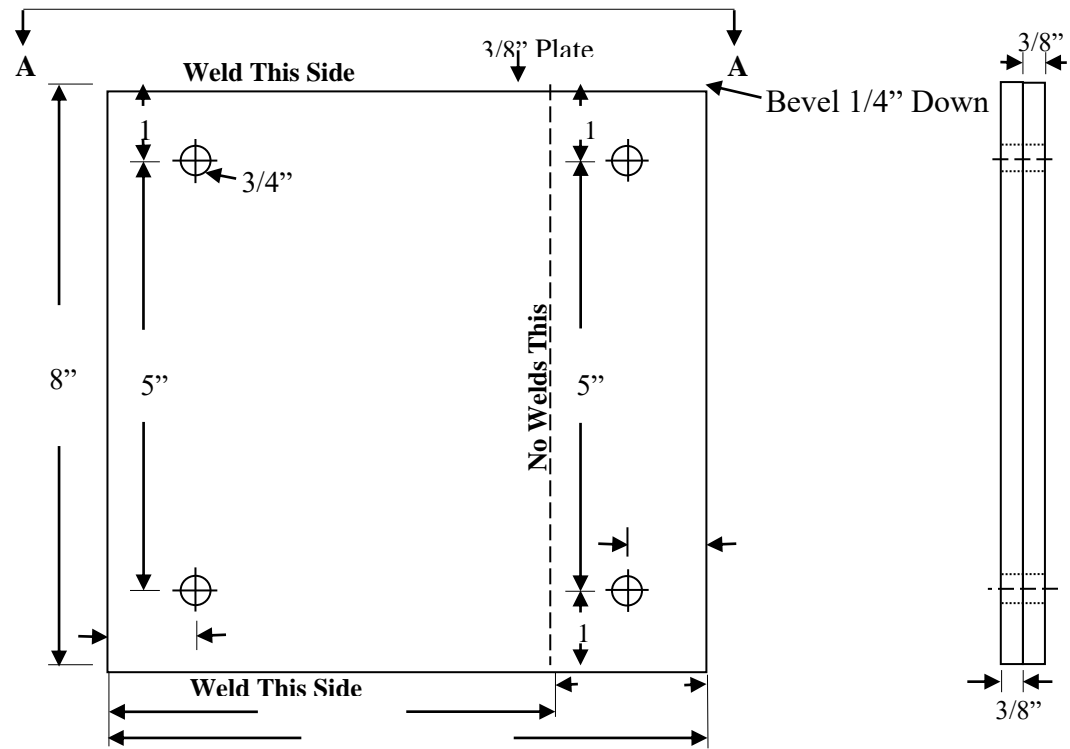
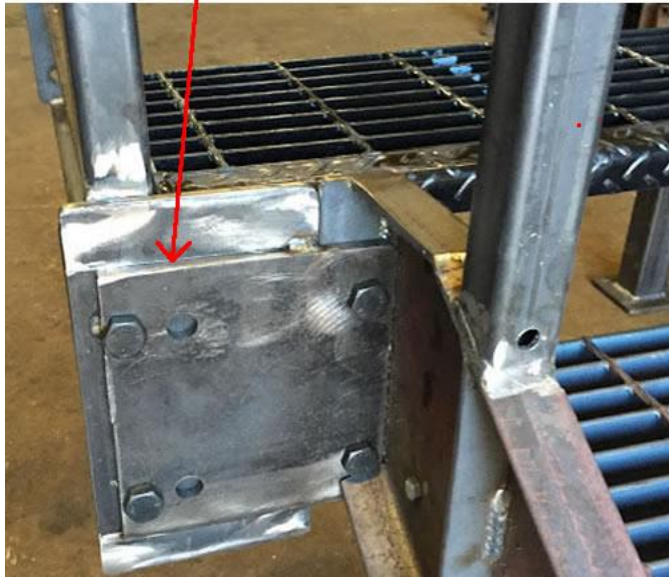
Extra Width Extension Support Plate Shown Bolted in Place Using (4) 5/8"- 11 x 2" Bolts With Loc Washer and Hex Nuts Provided

MAKE: _____



(STEP 3)

Note: This Plate is Provided for Extra Width Extension Dimensions of 4" or Less



Extended Exit Support Plate - Left or Right

4. Elevate the extension platform to the appropriate height and safely secure it in a stable position.
5. If optional support columns were ordered, attach them to the inside of the extension channels as shown in sheet AI2000-8 which will be included here or else skip this step.
6. Elevate the completed stair into position and connect to the extension channels or to the extra width support plates as shown here using 5/8" hardware.
7. Square and level the assembled structure and anchor in place. (Anchors not provided unless ordered separately.)
8. If provided install the diagonal cross braces on the support columns (only required on heights greater than 72"). Refer to sheet AI2000-9 or else skip this step.
9. If optional extension wall brackets were ordered they can be attached to the bottom flange of the extension channel using a tek screw per sheet AI2000-10.

(STEP 6)

5/8" Bolts



If stair was supplied with an extension platform or landing, the top mounting hardware is supplied using (4) 5/8"-11 x 2 bolts, lock washers, and hex nuts.



Extra Width Extension (Extension is wider than attaching stairs) **(STEP 6)**

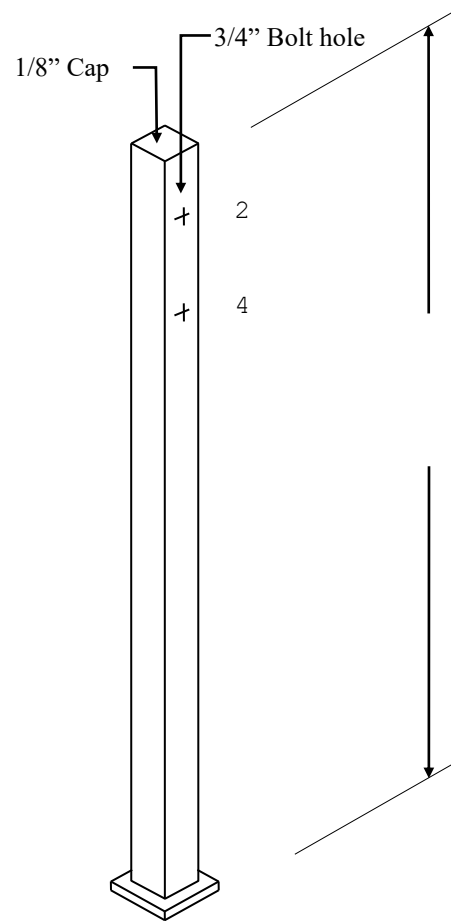
Instructions Apply To All Extension Types

EXTENSION SUPPORT COLUMNS PROVIDED AS CUSTOMER ORDERED OPTIONS

(STEP 5)



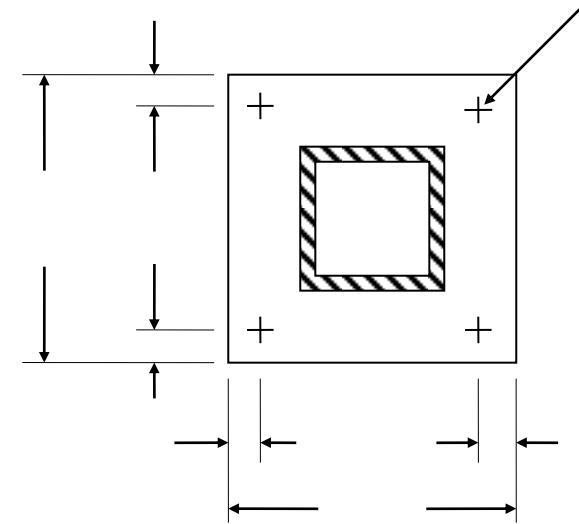
5/8" - 11 x 4-1/2" GR 5 HHCS
 5/8" - 11 Lockwasher
 5/8" - Hex Nut



COLUMN SIZE:

_____ x _____ x _____ Square Tube

Cut length = _____



FOOT PLATE

Size: _____ x _____ x _____

MAKE: _____

SWAY BRACES PROVIDED FOR COLUMNS OVER 72" HIGH

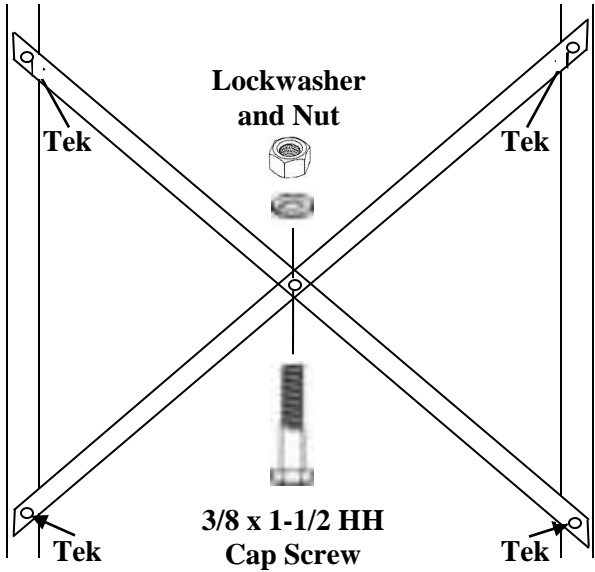
1/4" x 2" SWAY BRACE FOR SUPPORT COLUMNS

1/4 - 14 x 1-1/2" Tek Screw

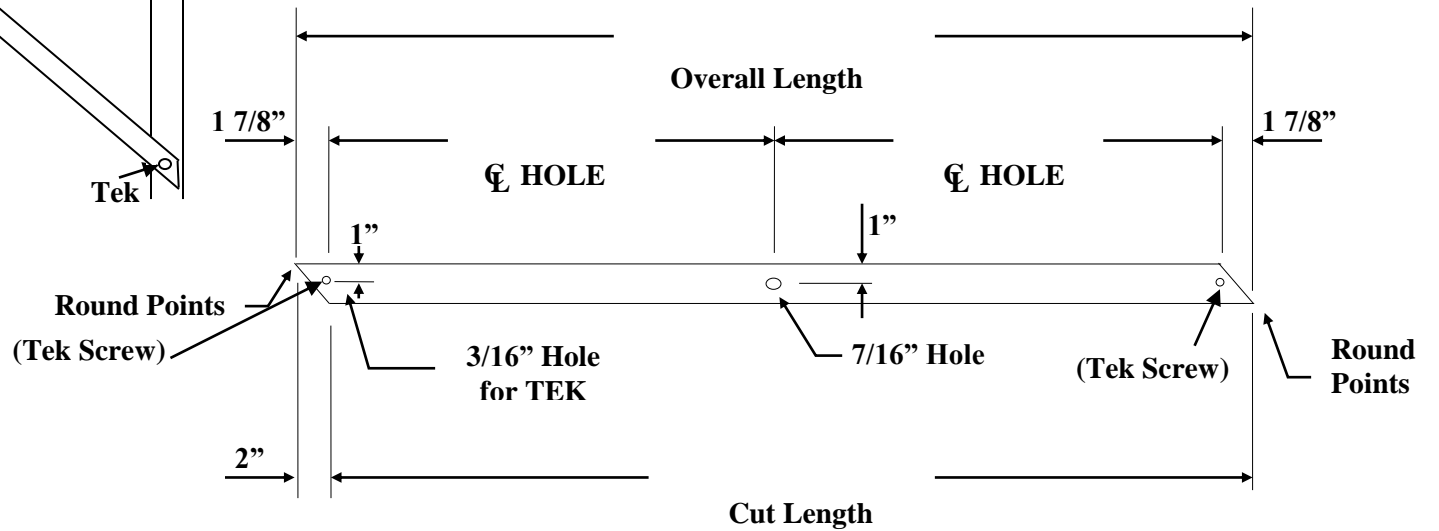


Hardware Use:

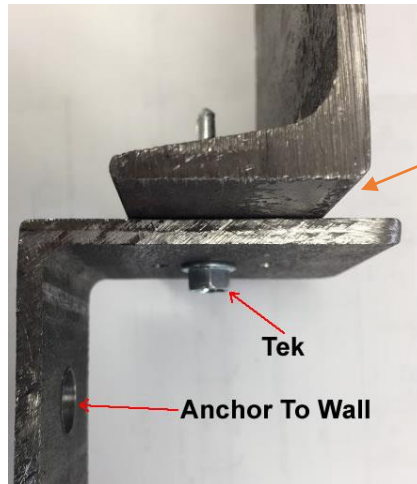
- 3/8" - 16 x 1-1/2 GR 5 HHCS
- 3/8" Lockwasher
- 3/8" - 16 GR 5 Hex Nut



(STEP 8)



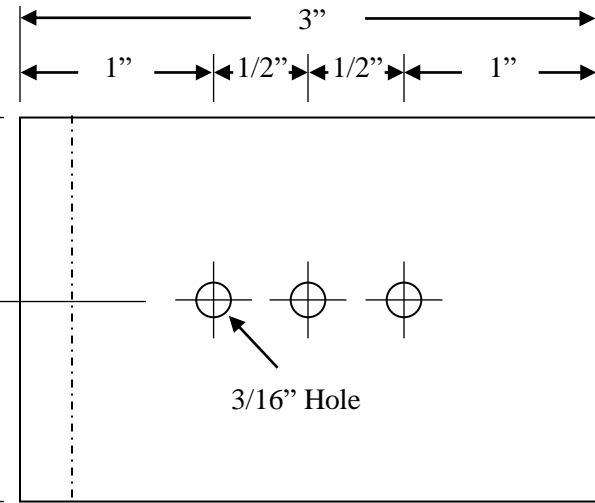
Extension Sway Brace for Support Columns



Bottom of Extension Channel

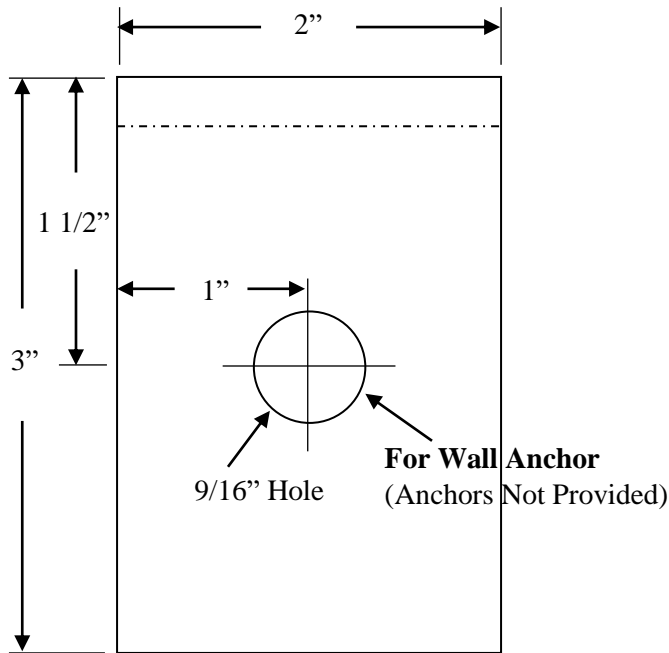
Tek

Anchor To Wall

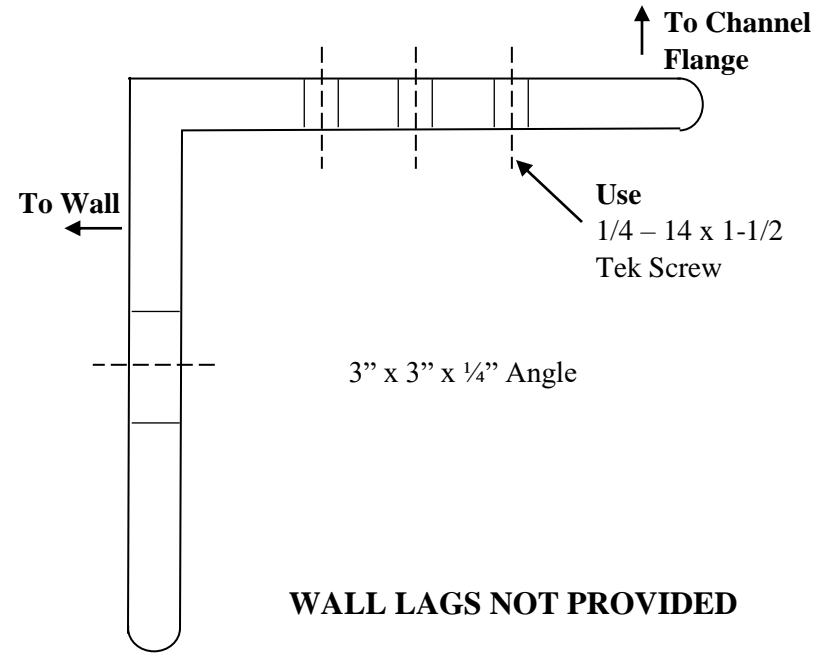


Tek Angle Clip under Extension Channel Bottom Flange

(STEP 9)

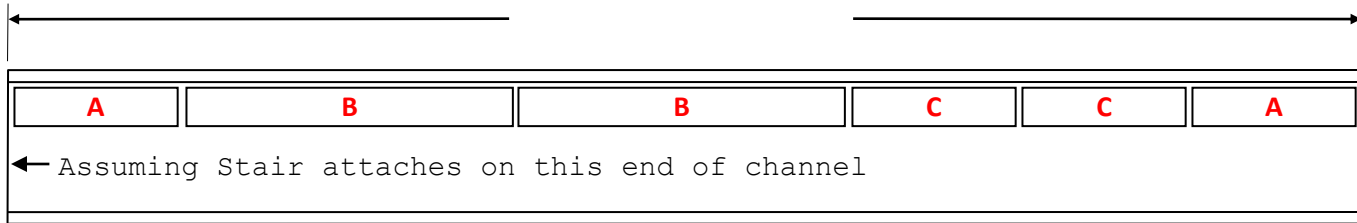


For Wall Anchor
(Anchors Not Provided)



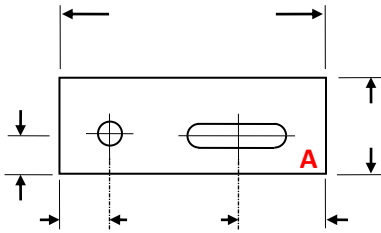
WALL LAGS NOT PROVIDED

0.00

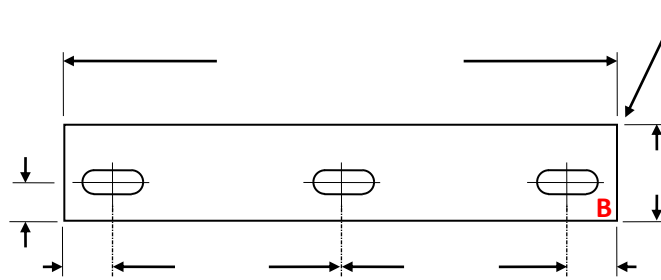


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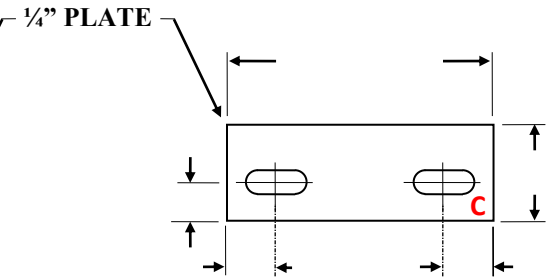
Begin by attaching 1 Pc 'A' on the Stair End
 Continue by adding all Pc 'B', then all Pc 'C'
 Finish by adding 1 Pc 'A'



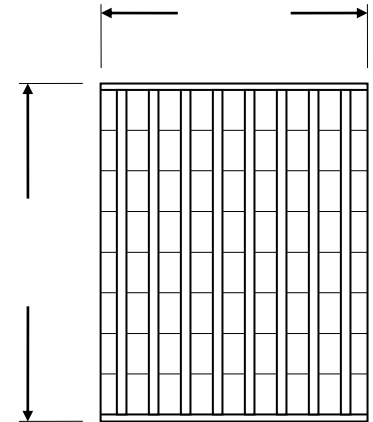
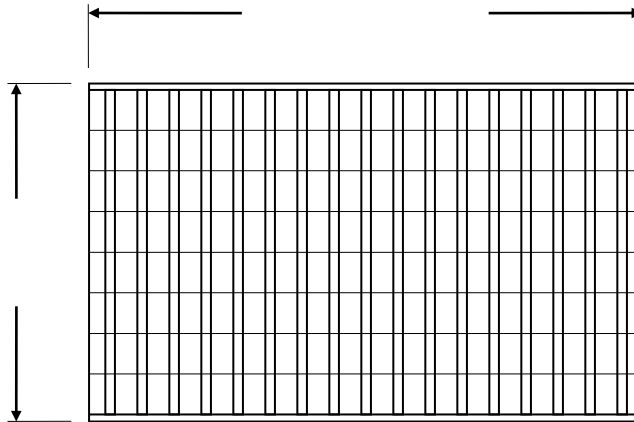
USE: _____ TREADS



USE: _____ FILL PANELS



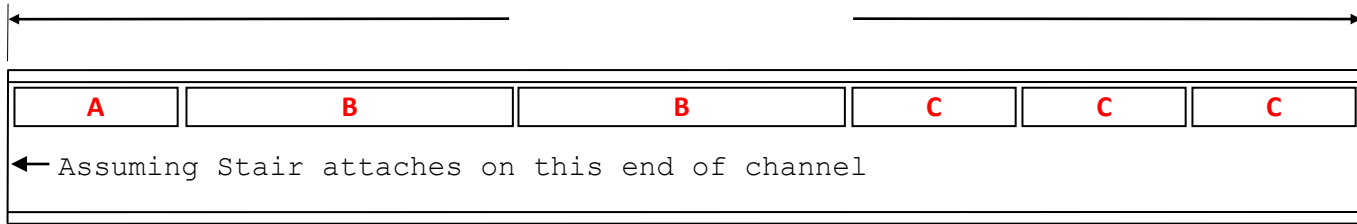
USE: _____ FILL PLATES



Rev: 12/28/18

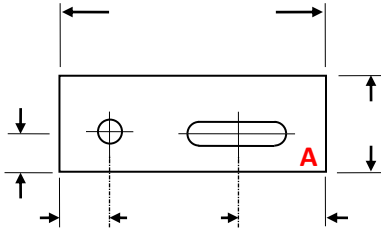
SHOP NOTE: ALL HOLES TO BE 7/16"

0.00

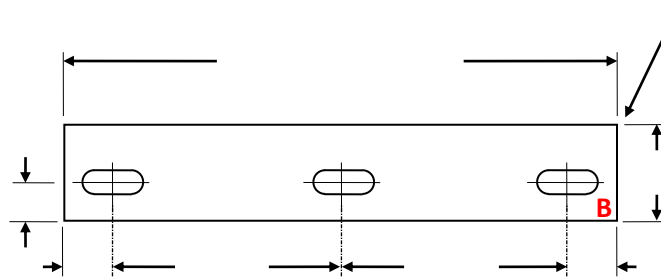


PLEASE NOTE:
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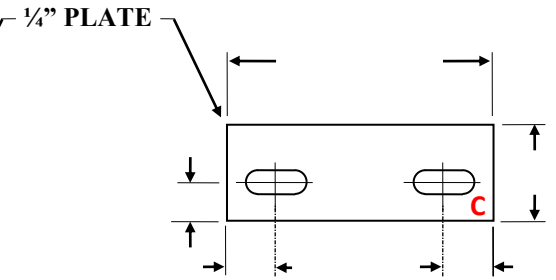
Begin by attaching 1 Pc 'A' on the Stair End
 Continue by adding all Pc 'B'
 Finish by adding all Pc 'C'



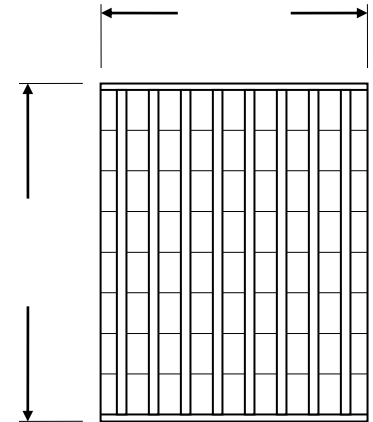
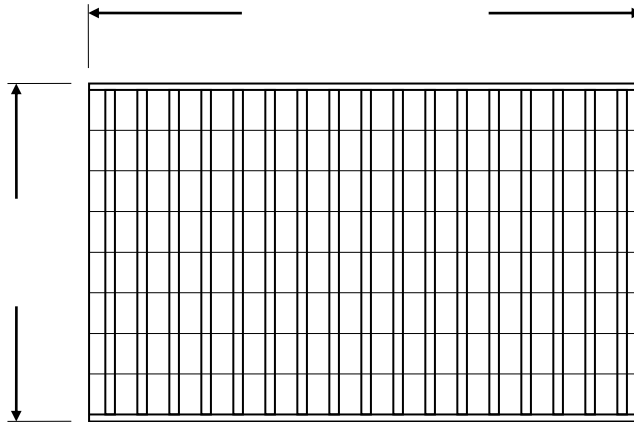
USE: _____ TREADS



USE: _____ FILL PANELS



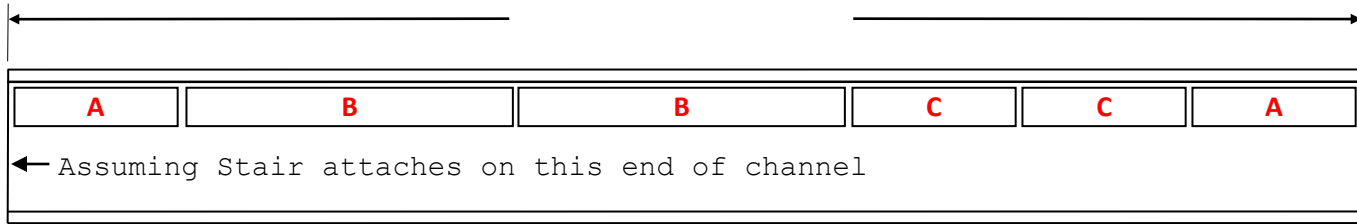
USE: _____ FILL PLATES



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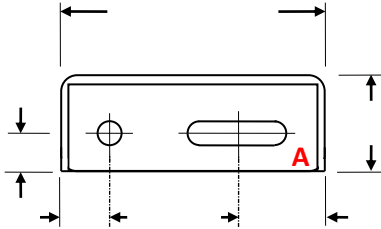
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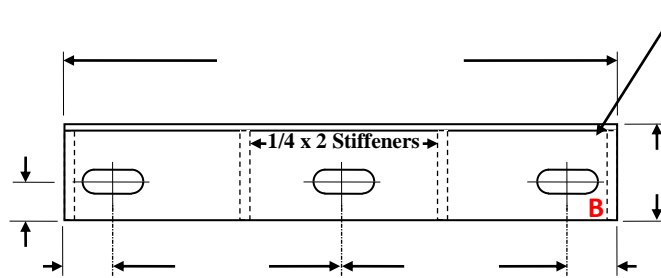


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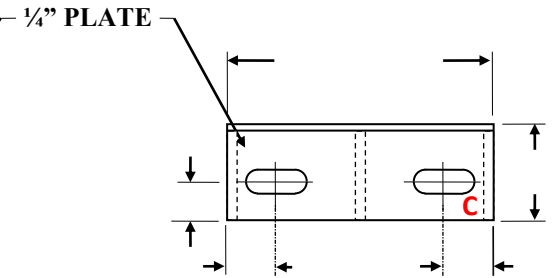
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 Continue by adding all Pc 'B', then all Pc 'C'
 Finish by adding 1 Pc 'A'



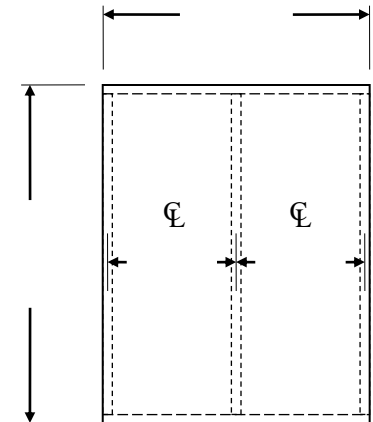
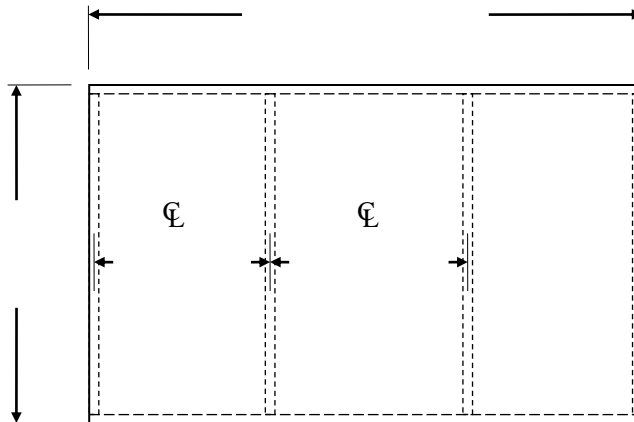
MAKE: _____ TREADS



MAKE: _____ FILL PANELS



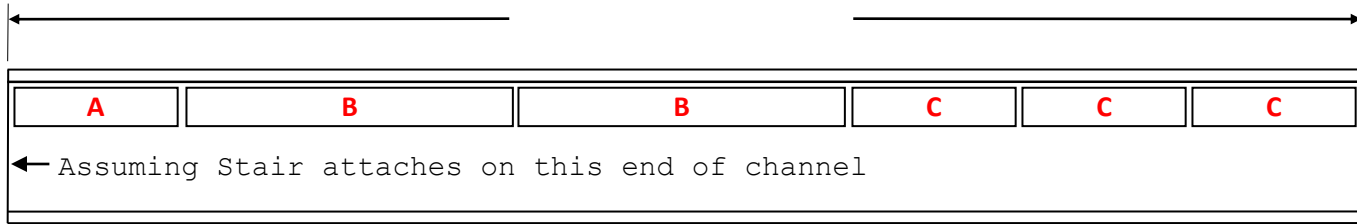
MAKE: _____ FILL PLATES



Rev: 12/28/18

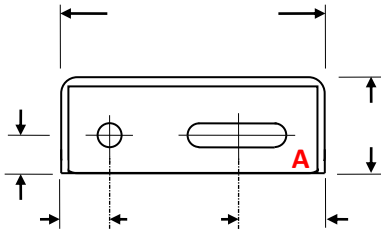
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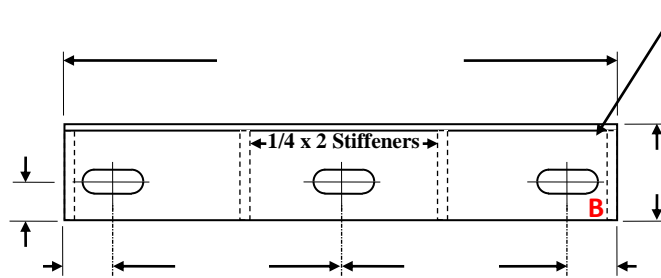


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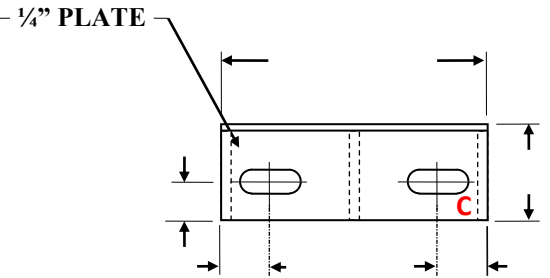
Begin by attaching 1 Pc 'A' on the Stair End
 Continue by adding all Pc 'B'
 Finish by adding all Pc 'C'



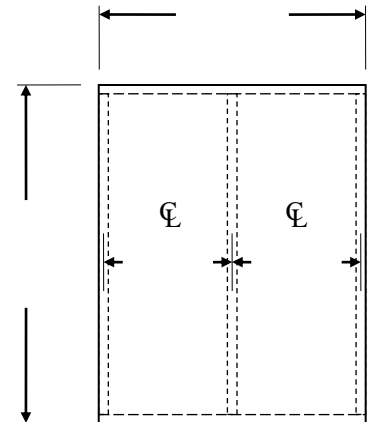
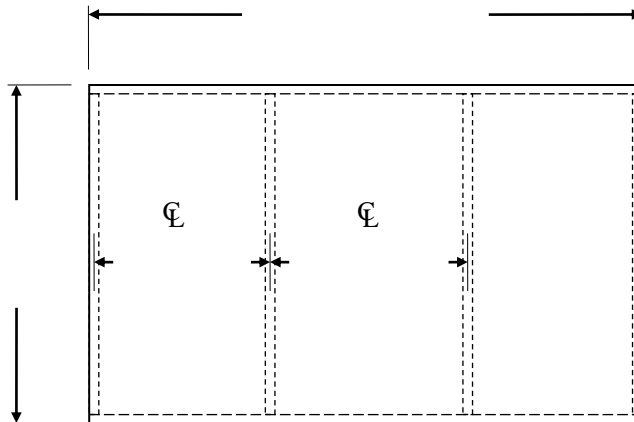
MAKE: _____ TREADS



MAKE: _____ FILL PANELS



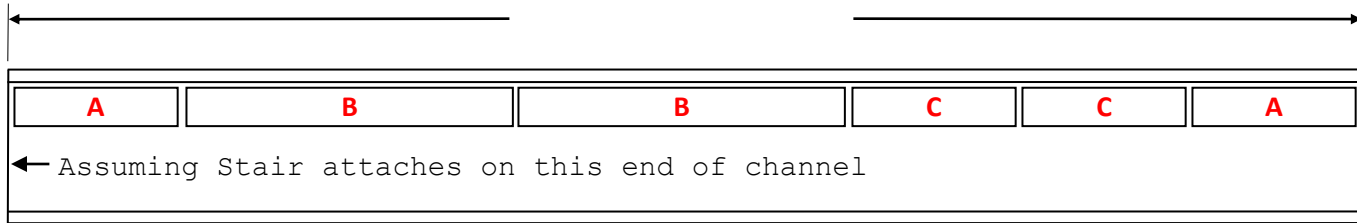
MAKE: _____ FILL PLATES



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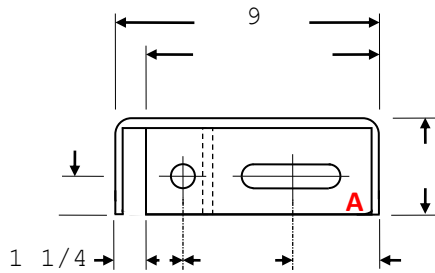
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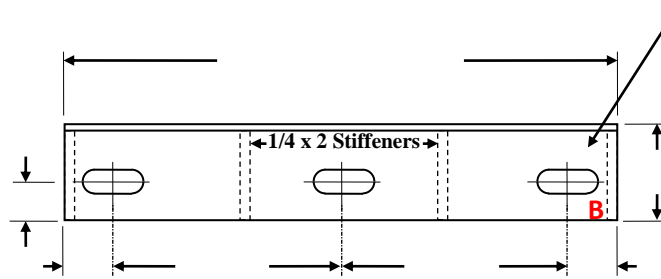


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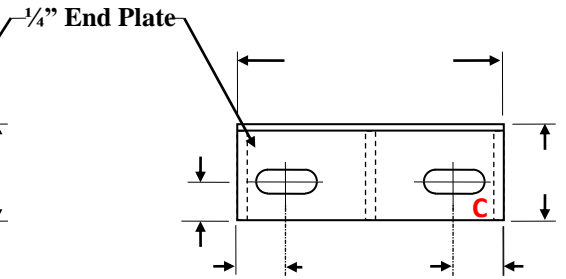
Begin by attaching 1 Pc 'A' on the Stair End
 Continue by adding all Pc 'B', then all Pc 'C'
 Finish by adding 1 Pc 'A'



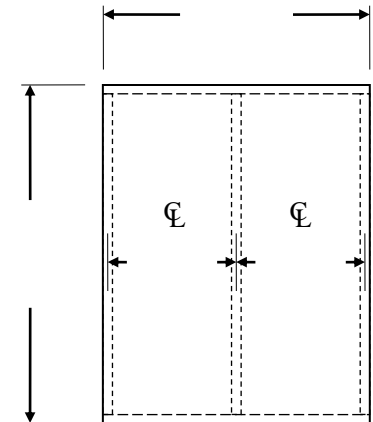
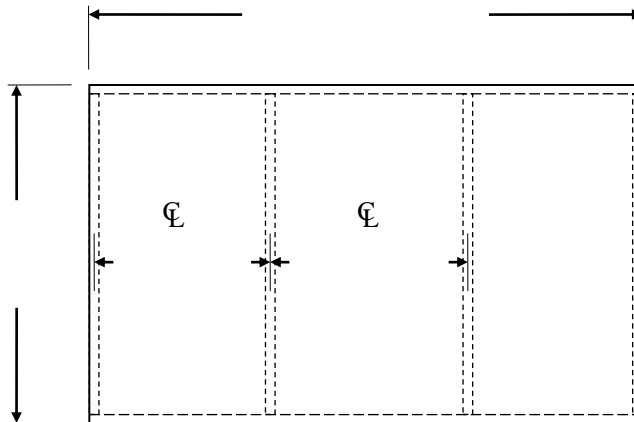
MAKE: _____ TREADS



MAKE: _____ FILL PANELS

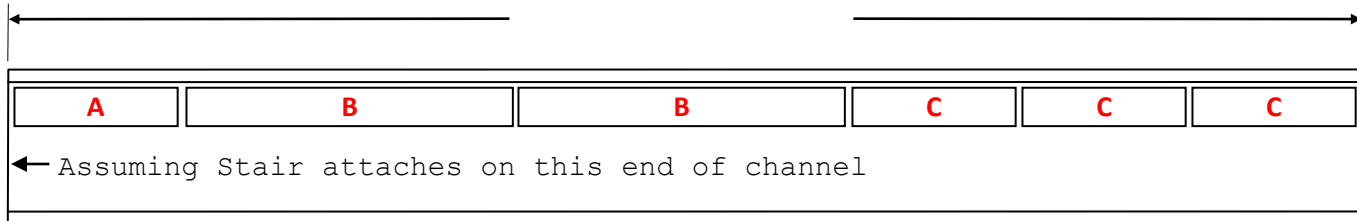


MAKE: _____ FILL PLATES



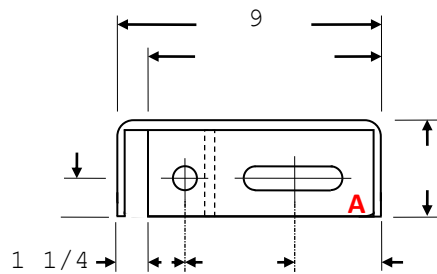
SHOP NOTE: ALL HOLES TO BE 7/16"

0.00

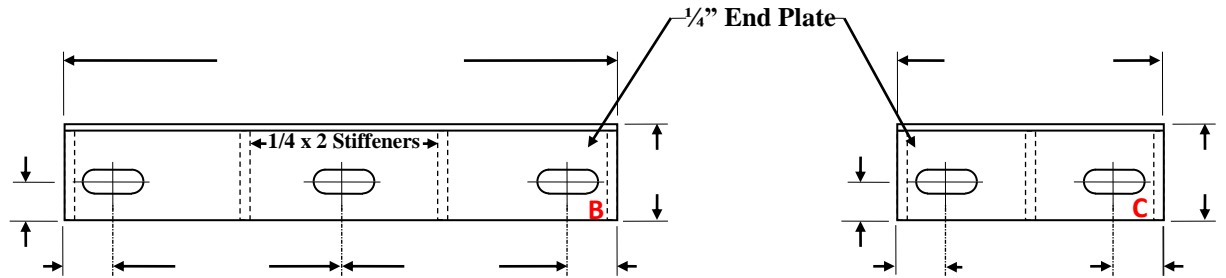


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 Finish by adding all Pc 'C'

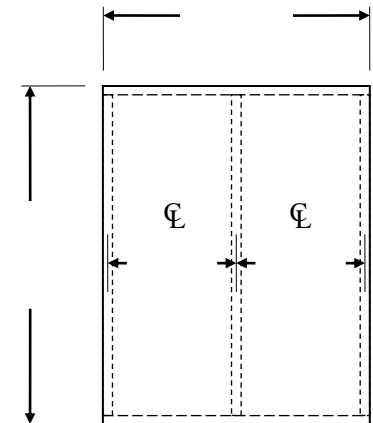
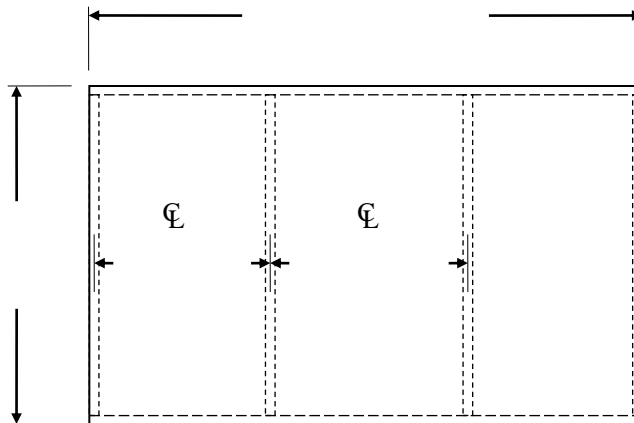


MAKE: _____ TREADS



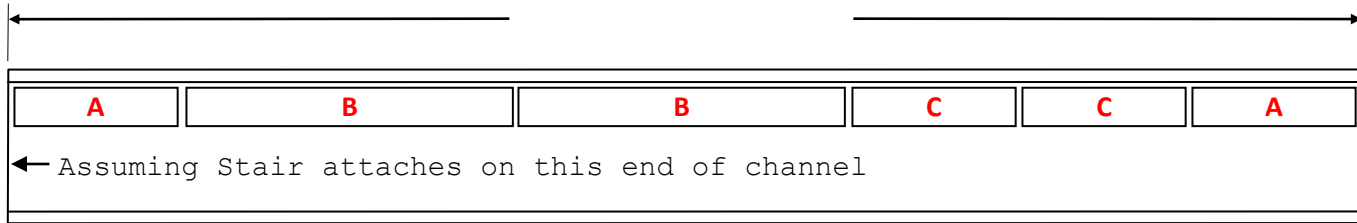
MAKE: _____ FILL PANELS

MAKE: _____ FILL PLATES



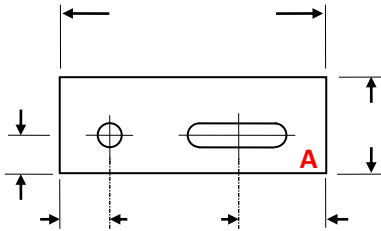
SHOP NOTE: ALL HOLES TO BE 7/16"

0.00

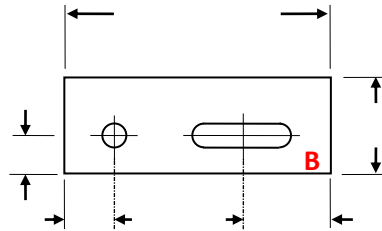


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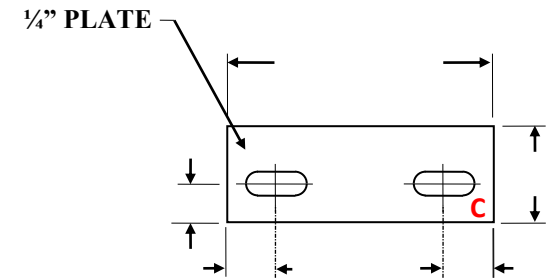
Begin by attaching 1 Pc 'A' on the Stair End
 Continue by adding all Pc 'B', then all Pc 'C'
 Finish by adding 1 Pc 'A'



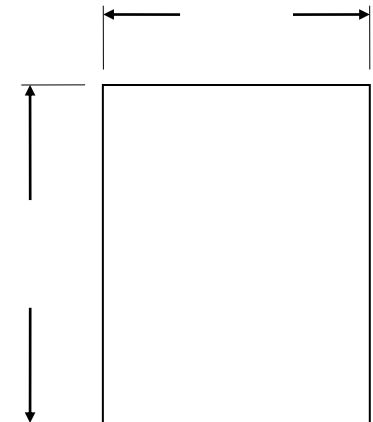
MAKE: _____ TREADS



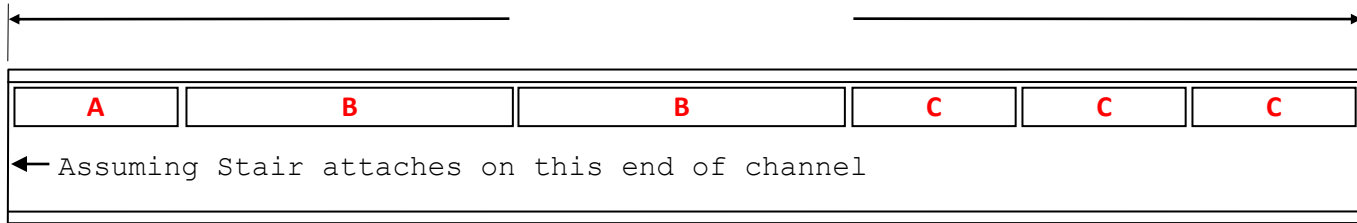
MAKE: _____ (Add'l Treads)



MAKE: _____ FILL PLATES

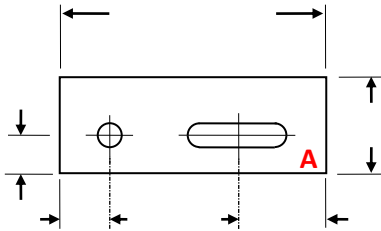


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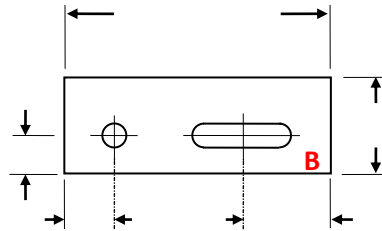


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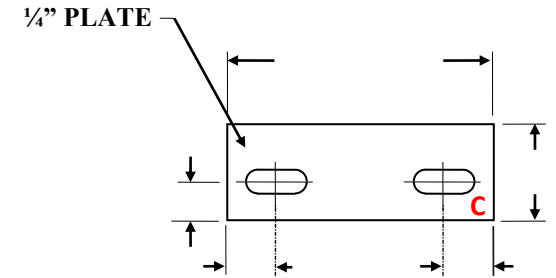
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 Finish by adding all Pc 'C'



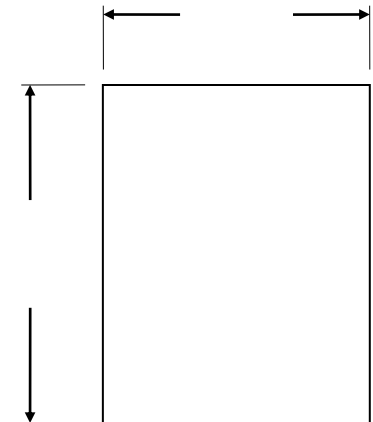
MAKE: _____ TREADS



MAKE: _____ (Add'l Treads)



MAKE: _____ FILL PLATES

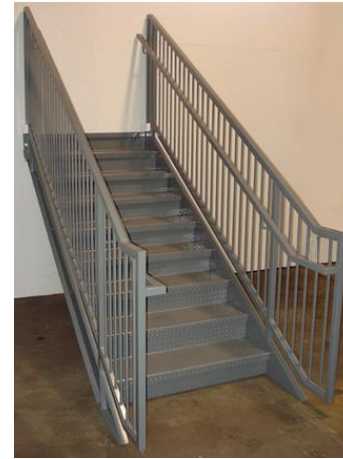
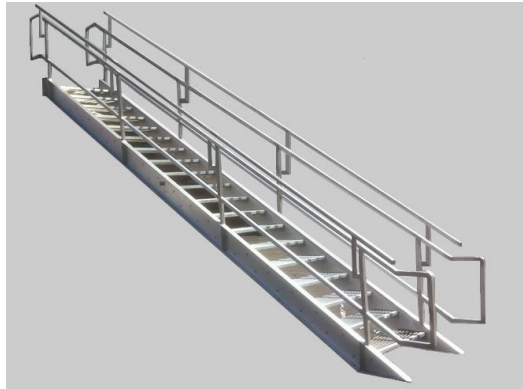


Rev: 12/28/18

SHOP NOTE: ALL HOLES TO BE 7/16"

fsi industries
20 Technology Way
West Greenwich, RI 02817

STAIR ASSEMBLY MANUAL FOR ALL TYPES



Rev: 2/15/18

COVER

AI1000-1

INSTRUCTIONS APPLY TO ALL STAIR TYPES

Stair Stringer
3/4" Mounting Holes

5/8" Bolts



If stair was supplied with an extension platform or landing, the top mounting hardware is supplied using (4) 5/8"-11 x 2 bolts, lock washers, and hex nuts.

Tread Hardware Use:
3/8" - 16 x 1-1/2 HHCS
3/8" Flat Washer
3/8" Lock Washer
3/8" - 16 Hex Nut

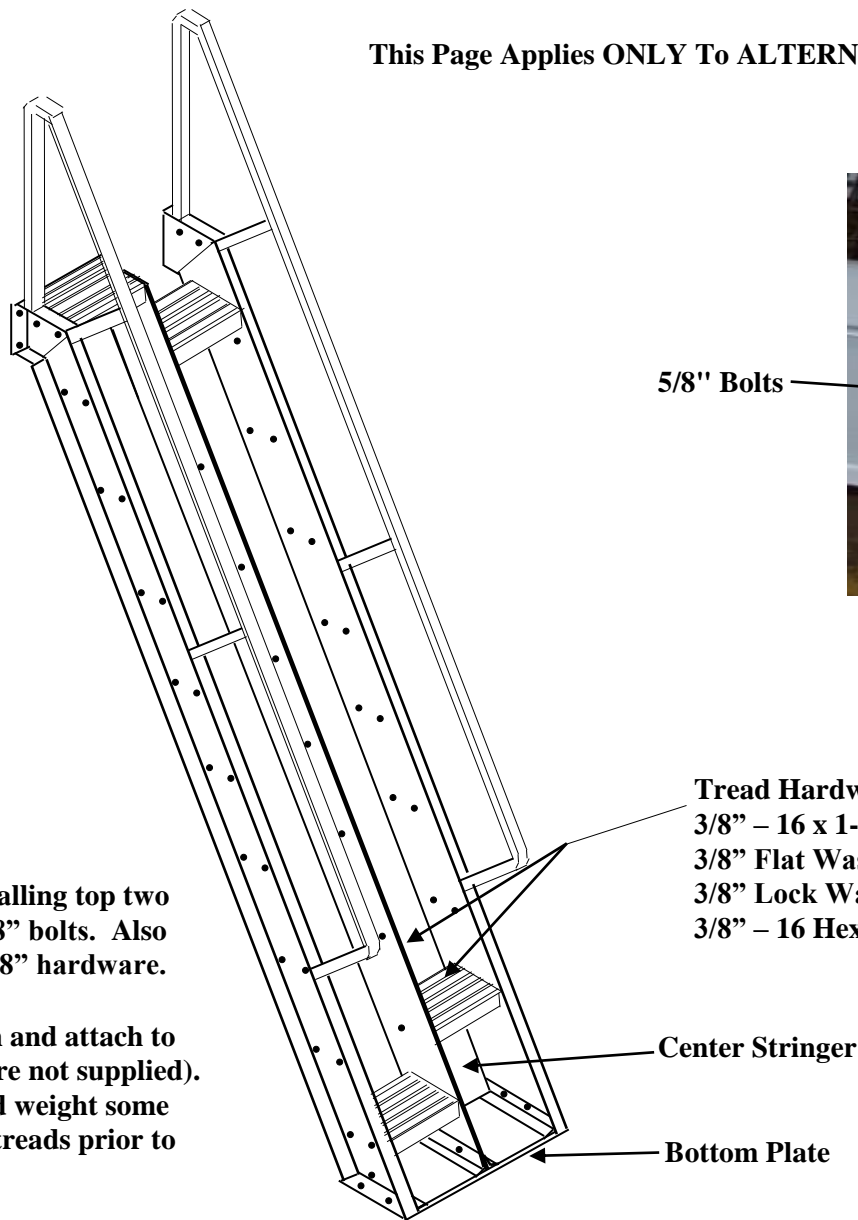


1. Assemble stair stringers by installing top and bottom treads using 3/8" bolts. **NOTE: IF STAIR IS AN ALTERNATING TREAD DESIGN SKIP TO NEXT PAGE AI1000-2A**
2. Lift stair assembly into position and attach to top mounting location (hardware not supplied). **Note: Based on stair height and weight some individuals prefer to install all treads prior to placement.**

Top and Bottom Tread Assembly

This Page Applies ONLY To ALTERNATING TREAD STAIRS

**Stair Stringer
3/4" Mounting Holes**



5/8" Bolts



If stair was supplied with an extension platform or landing, the top mounting hardware is supplied using (4) 5/8"-11 x 2 bolts, lock washers, and hex nuts.

- 1. Assemble stair stringers by installing top two and bottom two treads using 3/8" bolts. Also attach the bottom plate using 3/8" hardware.**
- 2. Lift stair assembly into position and attach to top mounting location (hardware not supplied). Note: Based on stair height and weight some individuals prefer to install all treads prior to placement.**

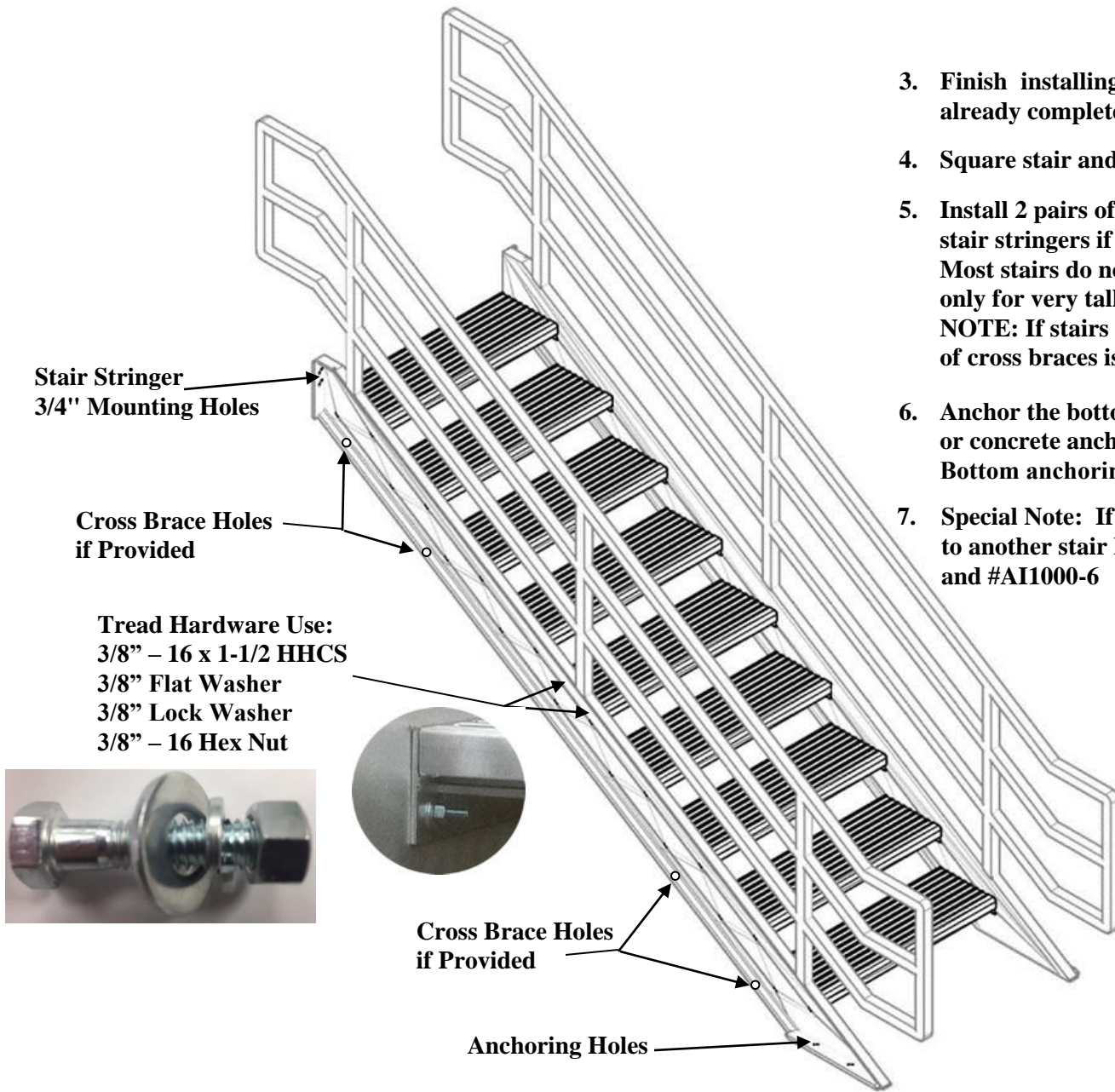
**Tread Hardware Use:
3/8" - 16 x 1-1/2 HHCS
3/8" Flat Washer
3/8" Lock Washer
3/8" - 16 Hex Nut**

Center Stringer

Bottom Plate

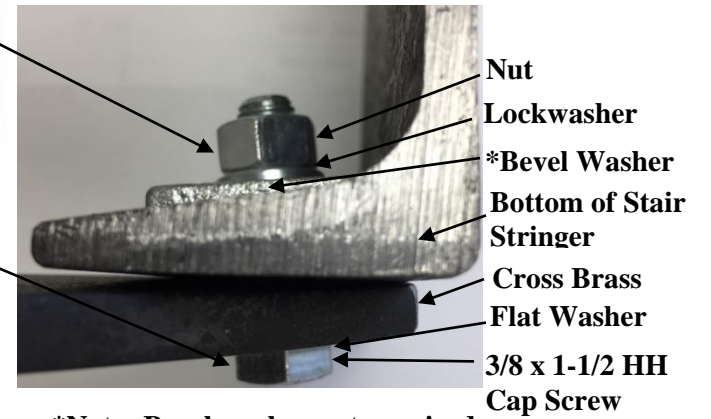
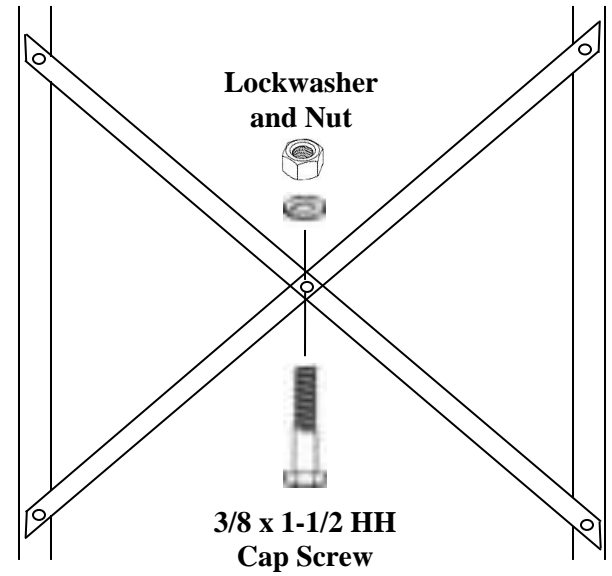
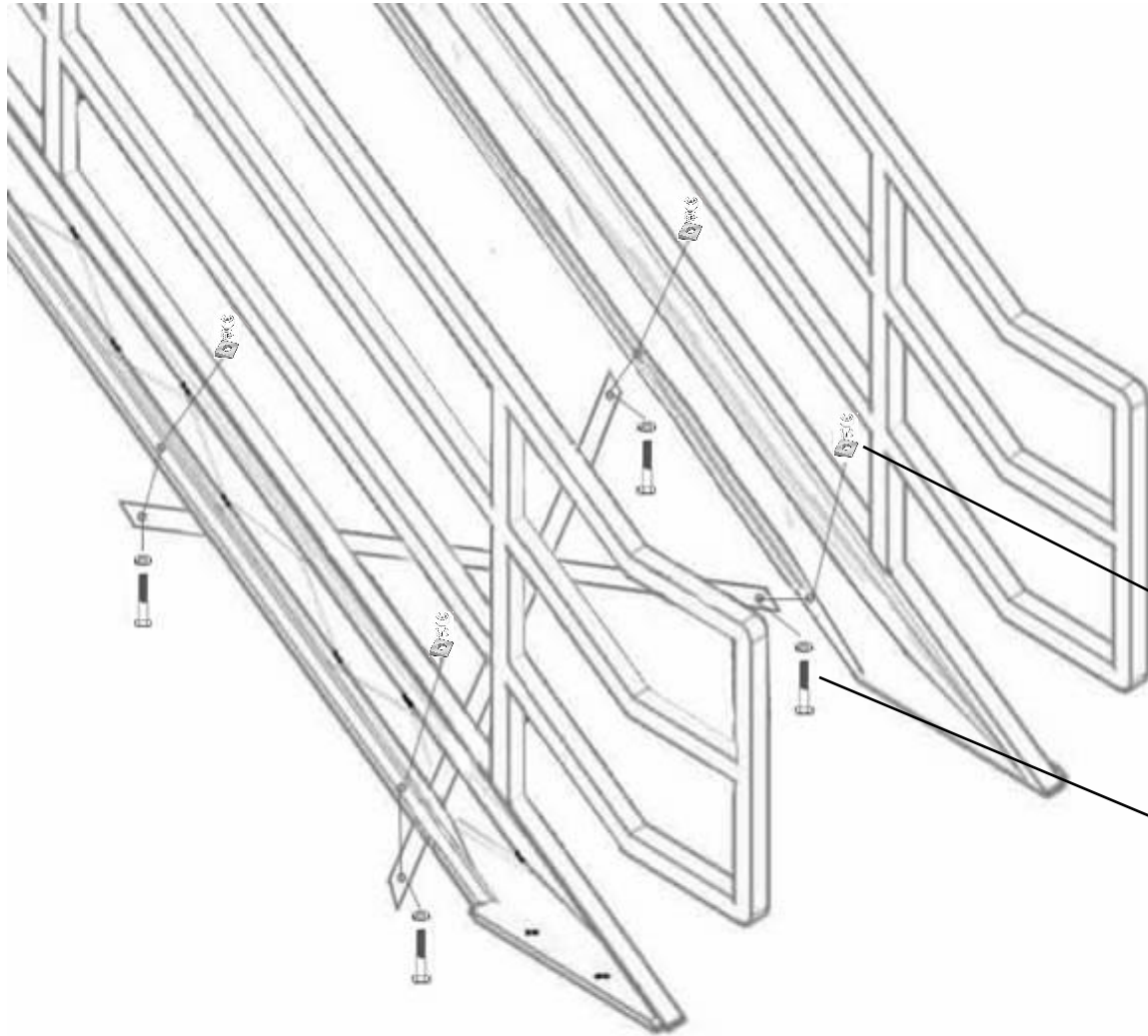


Top and Bottom Tread Assembly



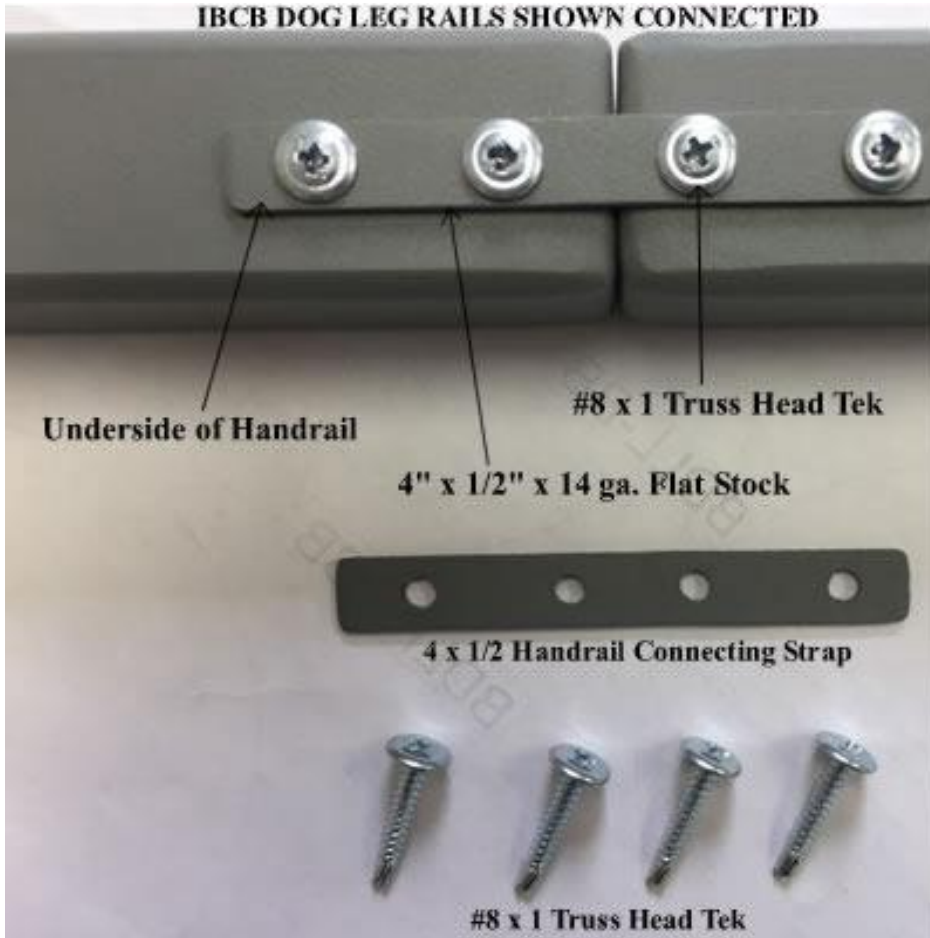
3. Finish installing all remaining treads if not already completed.
4. Square stair and tighten all tread hardware.
5. Install 2 pairs of cross braces on underside of stair stringers if provided (see sheet AI1000-4). Most stairs do not require them and are used only for very tall or wide designs.
NOTE: If stairs are part of a crossover, one pair of cross braces is provided for heights over 36".
6. Anchor the bottom of the stair using lag screws or concrete anchors (hardware not supplied). Bottom anchoring holes are 9/16".
7. Special Note: If your stair handrail connects to another stair handrail see sheets #AI1000-5 and #AI1000-6

Remaining Tread Assembly



***Note: Bevel washer not required on aluminum stairs.**

Cross Brace Assembly



Bottom View of ICB Dog Leg



Angled Strap TK100



90° Angle Strap TK104

For many stair tower installations, it is sometimes necessary to connect stair handrails using a “dog leg” design. The figure on left shows the connection method used for single handrail connections.

Clamp and align the connecting handrail pieces so that they provide a smooth and continuous transition from one rail to the next.

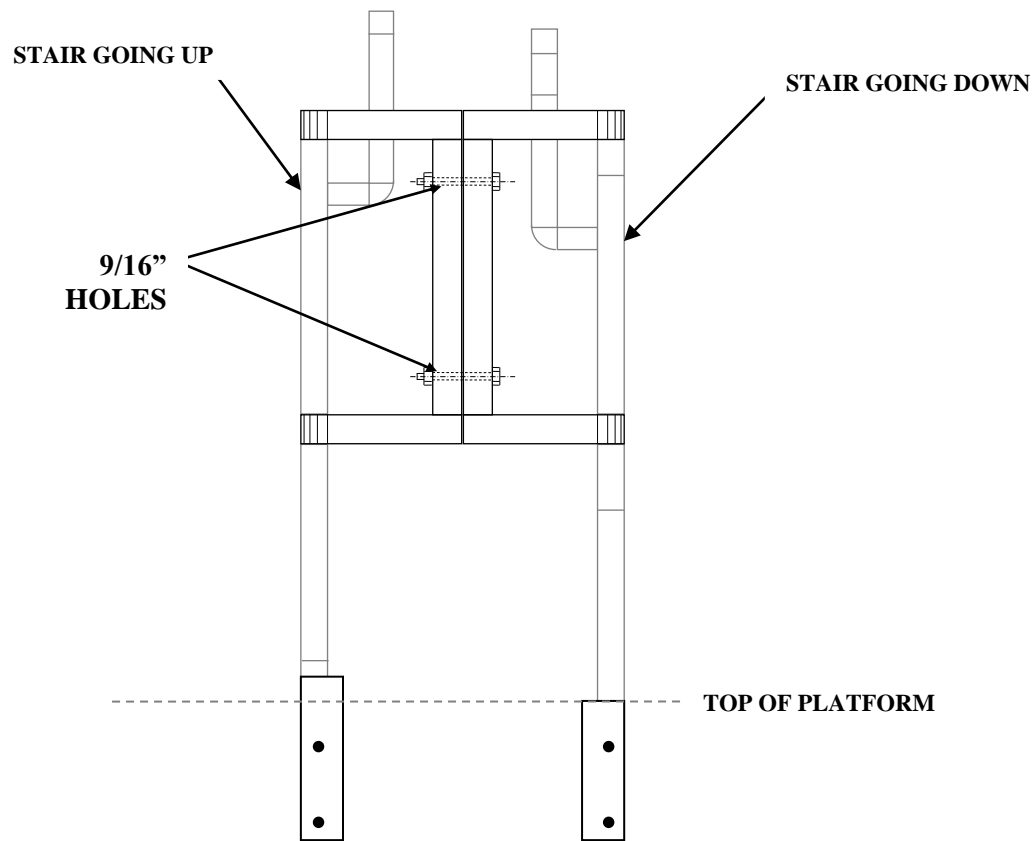
Join the underside of the butting handrails using a 4" x 1/2" flat strap (#T103) and #8 x 1 modified truss head tek screws. (#TK101) See Photo on the left. If the handrail sections are inclined or at 90° to one another use a 4" x 1/2" angled strap (#TK100) or a right angle strap (#TK104) to connect the rails. See photos above. Note: Connecting straps are always attached to underside center of handrail sections.

For right angle handrail connections use a 2" x 1/2" flat strap (#TK102) see photo below.



Angle Strap TK102 on underside of rails

For stairs made for IBC industrial conformance (outboard guard type IIOS)



Clamp and align the connecting handrail pieces so they provide a smooth and continuous transition from one stair to the next.

Attach the two sections of handrail together using:

- 1/2" – 13 x 4 1/2" Hex Head Cap Screws
- 1/2" Loc Washer
- 1/2" – 13 Hex Nut