

Horse Shelter 12' x 15'

76110678

Hardware Kit
76900228

THANK YOU FOR PURCHASING THIS PRODUCT

Behlen Country has been in the business of providing quality products for more than 80 years. Our products will provide many years of service when maintained by the owner and used in accordance with the capabilities of the product. For questions about this product, or for parts inquiries, please contact our Customer Service Center listed below.



Check with local government authorities to determine if a building permit is required.

Sheeting used must conform to these or greater specifications as listed below:

Design Criteria

- Snow – 40 psf ground snow
- Wind – 90 MPH exposure C
- Loads calculated in accordance with the Uniform Building Code 94 Edition.

This shelter requires adequate anchoring to safely resist the design wind forces and to avoid injury to animals and others. **Behlen Mfg. Co. strongly recommends that you consult a qualified professional engineer to design the anchor for your specific application.**

Components for the Modular Shelter System as provided by Behlen Country, have been designed

for ground snow loads of up to 40 psf and winds up to 90 mph (Exposure "C"). The ability of these shelters to safely resist these conditions is dependant upon several factors beyond the manufacturer's control such as the uniformity of the soil bearing support and the adequacy of wind uplift anchorage.

These Modular Shelter Systems are not intended to serve as permanent building structures and should not be used as such. **(For these reasons, an engineering certification is not offered by Behlen Mfg. Co.)** Customers are responsible for verifying ground snow load and wind load requirements in the area in which the Modular Shelter Systems will be constructed.

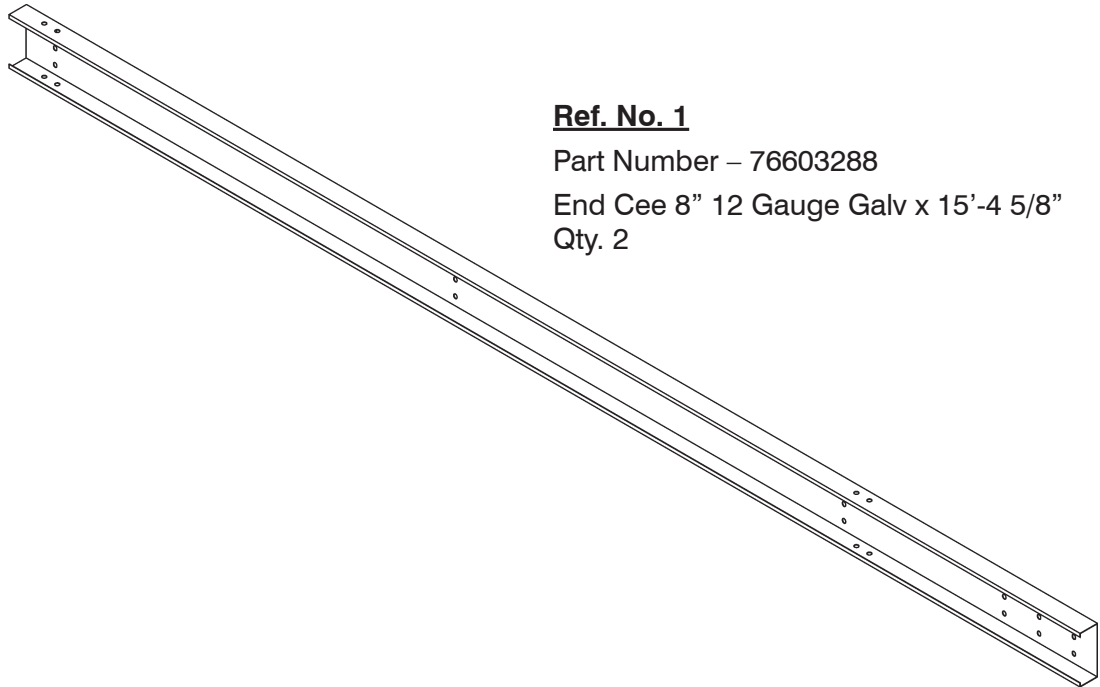
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Fax: (402) 563-7447
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Component List for 12' x 15' Horse Shelter

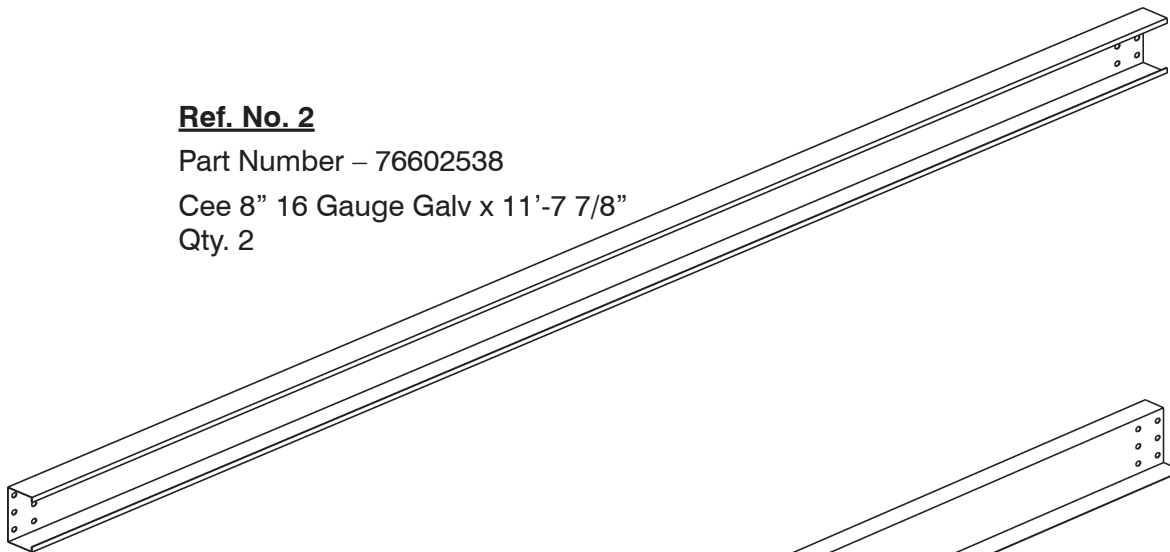


Ref. No. 1

Part Number – 76603288

End Cee 8" 12 Gauge Galv x 15'-4 5/8"

Qty. 2

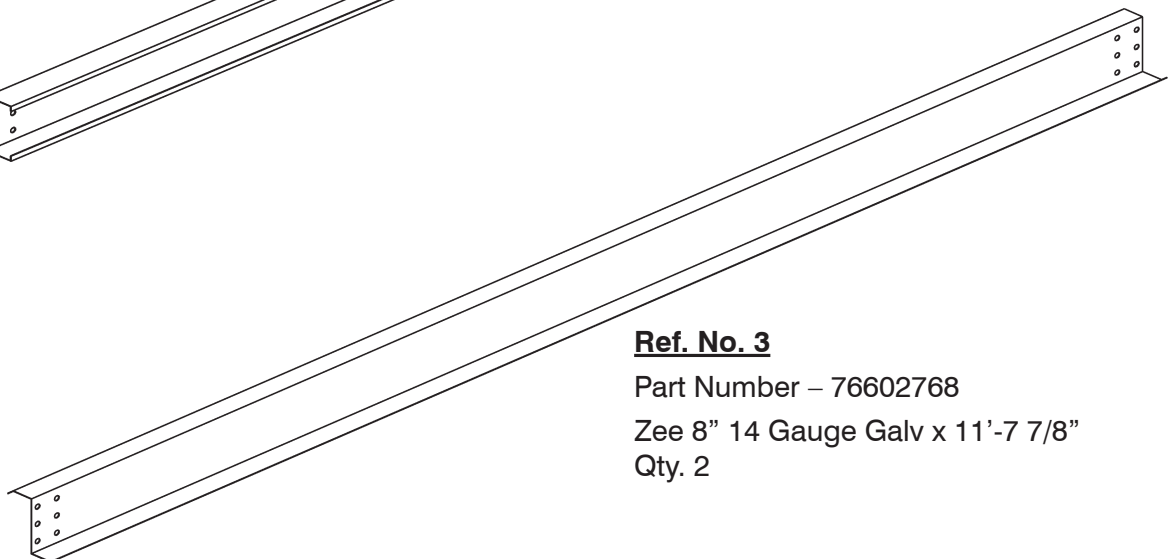


Ref. No. 2

Part Number – 76602538

Cee 8" 16 Gauge Galv x 11'-7 7/8"

Qty. 2



Ref. No. 3

Part Number – 76602768

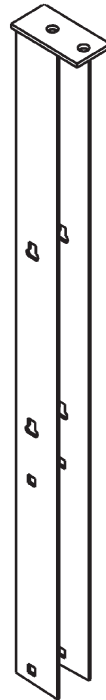
Zee 8" 14 Gauge Galv x 11'-7 7/8"

Qty. 2



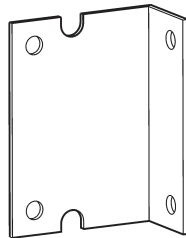
Ref. No. 4

Part Number –
76400349
Short Shelter Post –
Hot-dipped Galvanized



Ref. No. 5

Part Number –
76400359
Tall Shelter Post
– Hot-dipped
Galvanized

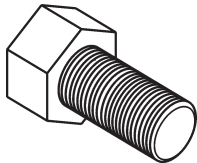


Ref. No. 6

Part Number – 76602558
Side Channel “L” Clip – Galv.
Qty. 8

Ref. No 7

Part Number – 76900228
Hardware Package for Horse Shelter



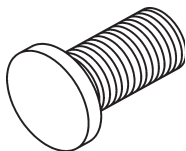
Ref. No 7a

Hex Head Cap Bolt
1/2” x 1” Plated
Qty. 24



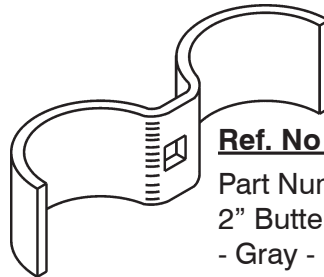
Ref. No 7e

Carriage Bolt
3/8” x 1” Plated
Qty. 8



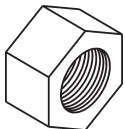
Ref. No 7b

Flat Round Head Bolt –
1/2” x 1” Plated - Qty. 16



Ref. No 7f

Part Number – 76602507
2” Butterfly Connector Half
- Gray - Qty. 8 pair



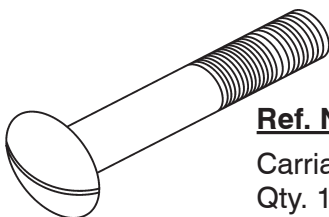
Ref. No 7c

Nut 1/2” Hex Grade A Plated
Qty. 52



Ref. No 7g

Nut 3/8” – Flanged
Whiz Lock – Plated
Qty. 8



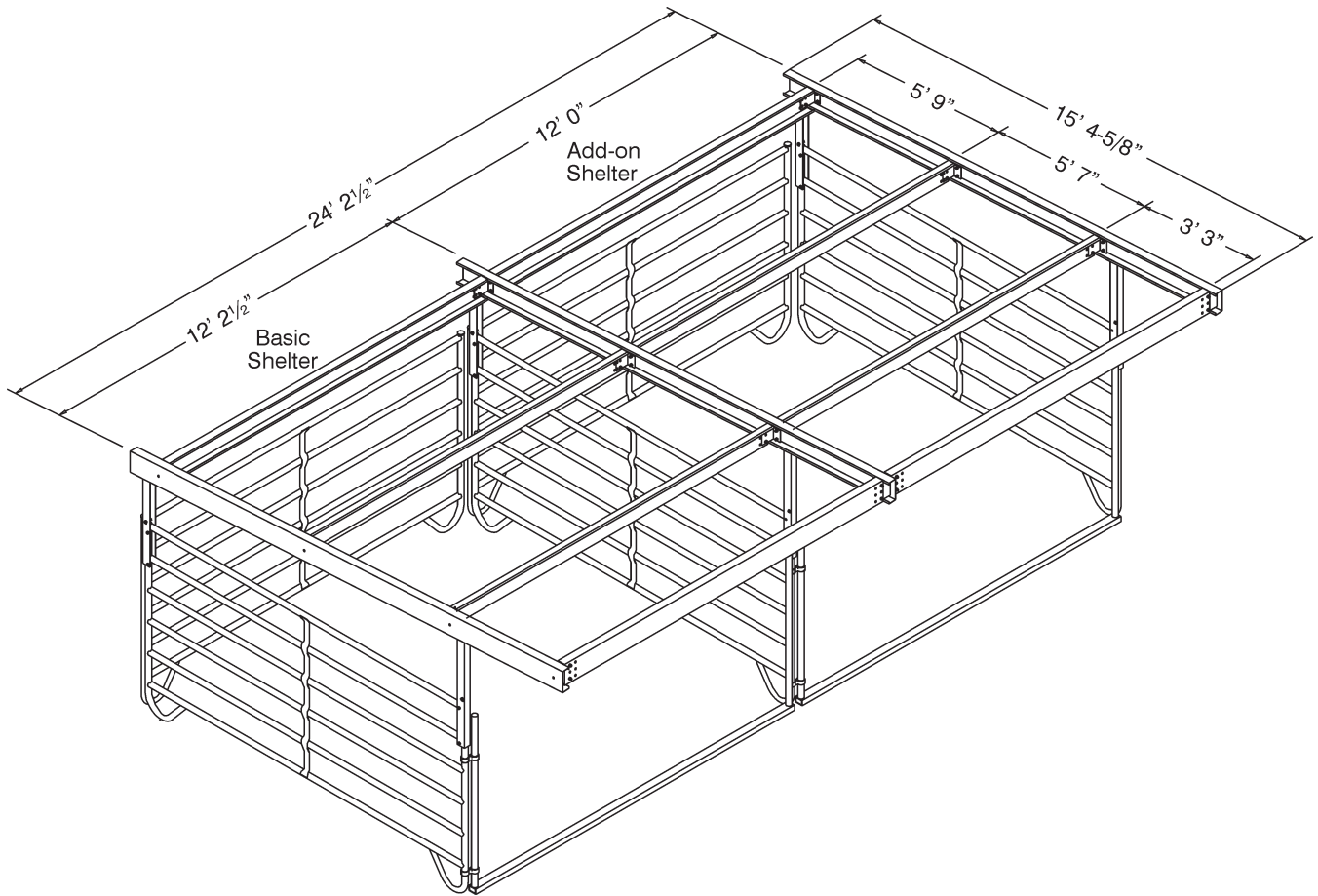
Ref. No 7d

Carriage Bolt 1/2” x 3” Plated
Qty. 12

Ref. No 7h

Part Number – 76602837 (8 pair)
Rubber Strip (Not Illustrated)
Qty. 2

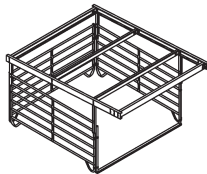
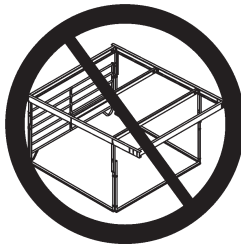
Roof Dimensions



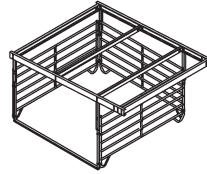
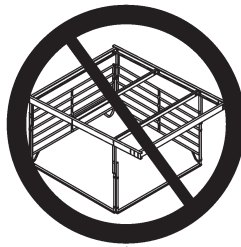
Proper Use of 12' Open Support Brace #76110697 & 76110699



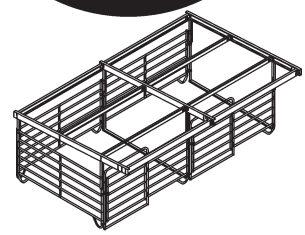
**CORRECT
USAGE**



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NOTE: If you are planning on erecting an add-on section onto the shelter, read through both the instructions. This will eliminate rework.

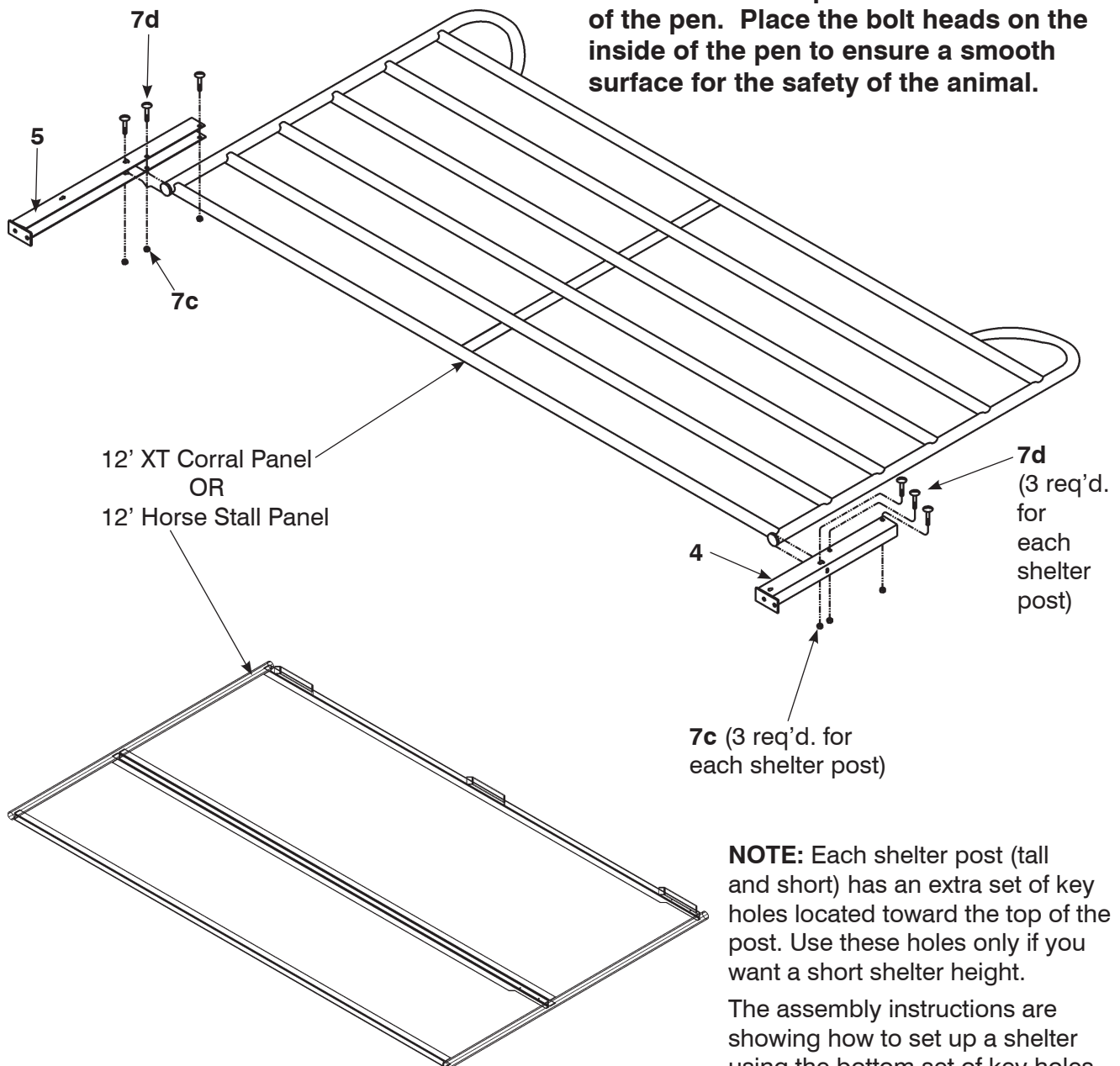
If sheeting will be installed, do not install it until all sections of the shelter are erected.

Step 1

- 1a For assembling ease, lay the panel down. Slide the tall shelter post (5) and the short shelter post (4) onto the vertical 2" tube. If assembling the shelter on a 12' XT Corral Panel, be sure the cap rests in the three slots provided on the shelter posts.
- 1b Fasten each shelter post (4 & 5) with three- $\frac{1}{2}$ " x 3" plated carriage bolts (7d) and three- $\frac{1}{2}$ " nuts (7c).

NOTE:

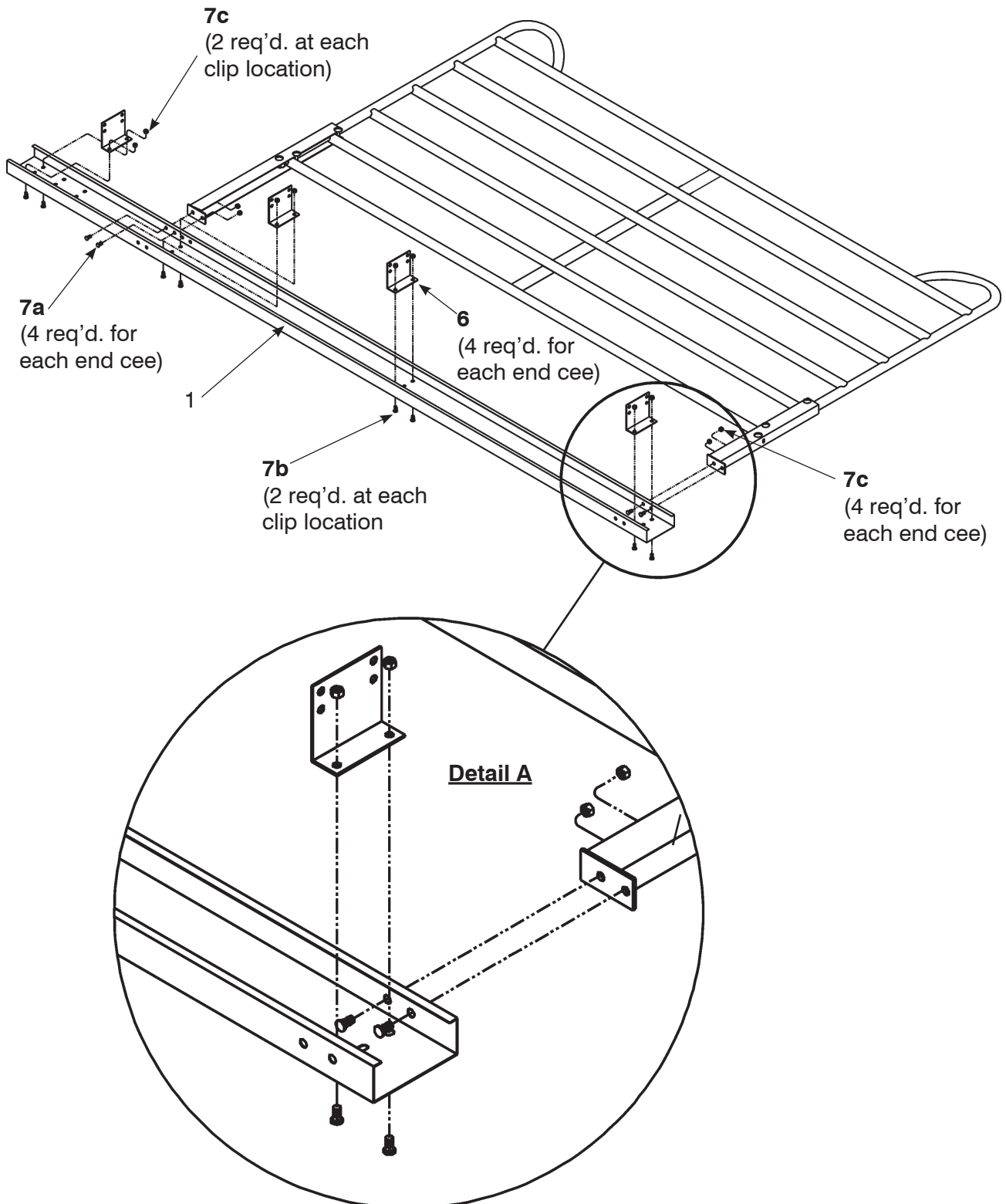
When fastening, keep in mind, which side of the corral panel will be the inside of the pen. Place the bolt heads on the inside of the pen to ensure a smooth surface for the safety of the animal.



NOTE: Each shelter post (tall and short) has an extra set of key holes located toward the top of the post. Use these holes only if you want a short shelter height. The assembly instructions are showing how to set up a shelter using the bottom set of key holes for the tall shelter height option.

Step 2

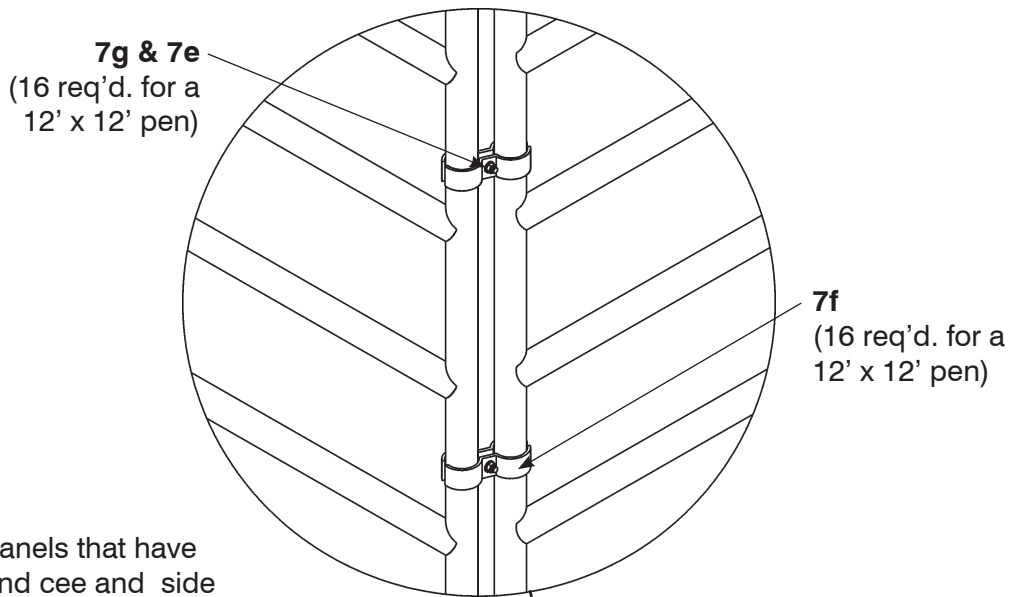
- 2a With the corral panel still lying down, assemble the end cee (1) to the shelter posts using four $\frac{1}{2}$ " x 1" hex head bolts (7a) and two $\frac{1}{2}$ " nuts (7c). Use the holes indicated on the illustration. When assembling end cee onto a horse stall, use the holes as indicated in Detail A.
- 2b Assemble the side channel clips (6) to the end cee using two $\frac{1}{2}$ " x 1" flat round head bolts (7b) and two $\frac{1}{2}$ " nuts (7c). Be sure to keep the bolt heads to the outside of the cee as shown. Position the clips in the direction as shown.



Step 3

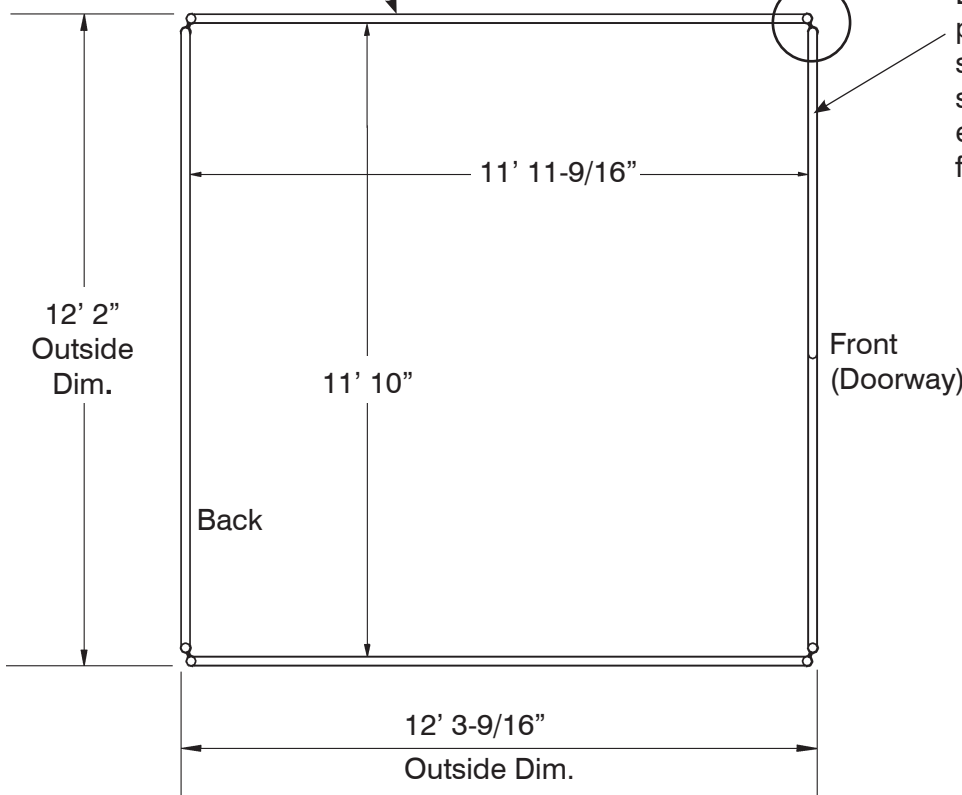
3a At this point, the structure can now be set in place. Two people are needed for this process for safety purposes. Place four 2" butterfly connector halves (7f) at each corner of the pen. Fasten the butterflies with one 3/8" x 1" carriage bolt (7e) and one 3/8" flanged whiz nut (7g). Make sure the bolt head is on the inside of the pen for a smooth edge near the animal. Do not fully tighten the butterflies. This will allow for adjustment of the pen. When attaching the butterflies, place one directly below the shelter post and one near the bottom of the panel.

3b Measure the pen to match the measurements provided in the illustration. After measuring and moving panels as necessary, tighten the butterflies in place.



The sides are the panels that have the shelter posts, end cee and side channel clips attached to it.

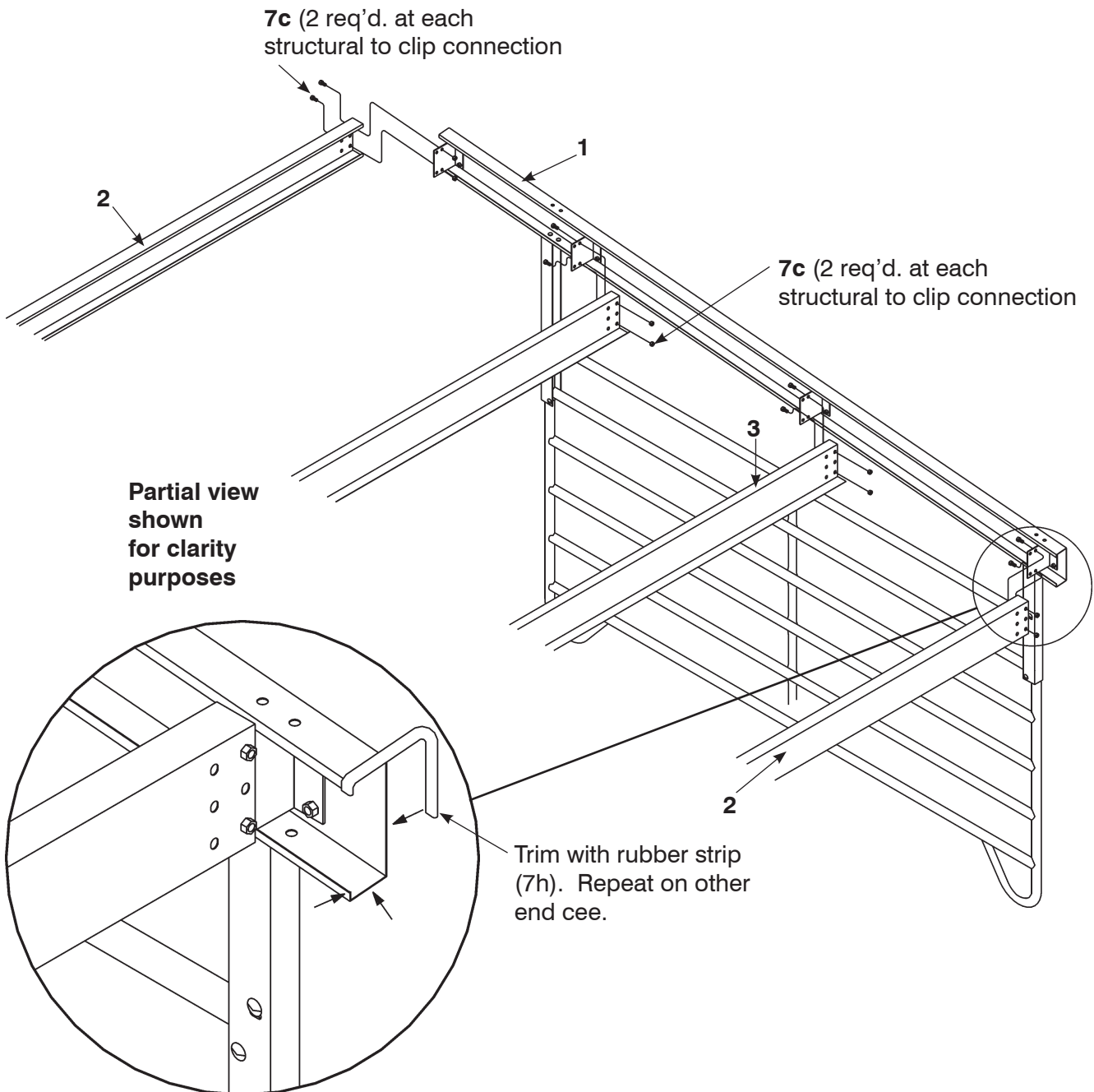
Be sure that the front panel is located on the side that contains the tall shelter posts. This will ensure enough clearance for you and the animal.



Step 4

Once the pen is set in place, it is now time to assemble the interior cees and zee. Two people are needed for this process for safety purposes.

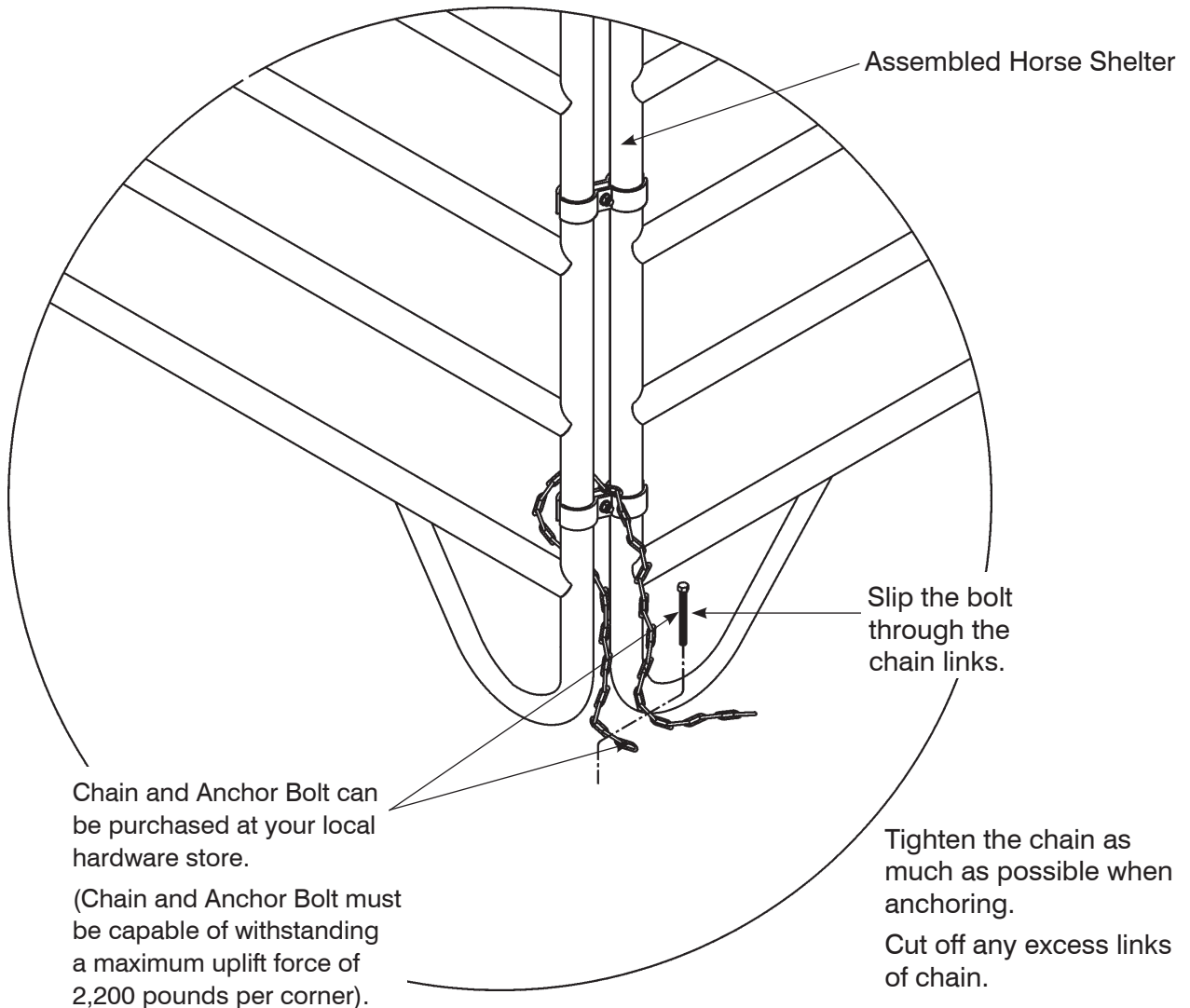
- 4a To begin, start on the low side. Lift the 8-inch cee (2) up to the bottom clips and rest on the side channel clips. Be sure that the 8-inch cee (2) is positioned as shown on the illustration. The open face of the 8-inch cees has to face into the pen. Fasten at each end with two-1/2" x 1" hex head bolts (7a) and two-1/2" nuts (7c).
- 4b Follow the same instructions for the 8-inch zee (3) and the high side 8-inch cee (2). Make note of the position to ensure proper assembly.
- 4c Insert the rubber strip (7h) around the entire end of the end cee on the low side. See Detail B. Cut any excess rubber strip off. Repeat this process for the other side. This will take away any sharp edge that could endanger your animal.



Anchoring the Assembled Horse Shelter

The assembled horse shelter **will** require anchoring. When anchoring into concrete, all materials will be supplied by the buyer and can be bought at any local hardware store. The shelter **must** be anchored at every corner. With a 90-MPH wind, an uplift force of 2,200 pounds per corner can be created.

Typical detail of installation in a concrete situation.



Modular Shelter Breezeway **Hardware Kit** **Assembly Instructions** **76900188**

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Check with local government authorities to determine if a building permit is required.

Sheeting used must conform to these or greater specifications as listed below:

Design Criteria

Snow – 40 psf ground snow

Wind – 90 MPH exposure C

Loads calculated in accordance with the Uniform Building Code 94 Edition.

This shelter requires adequate anchoring to safely resist the design wind forces and to avoid injury to animals and others. Behlen Mfg. Co. requires that an anchor package be installed at every corner in heavy, undisturbed soil. **Behlen Mfg. Co. strongly recommends that you consult a qualified professional engineer to design the anchor for your specific application.**

NOTE: • Before assembling, it is necessary the ground be level to less than 1” within the area the shelter is to cover.

• It will take two people to erect this shelter.

• Tools required: Ratchet wrench, 3/4” & 9/16” socket heads, straight edge, string line.

Table of Contents

NOTE: To assemble this Modular Shelter System, two 76110678 (12’ x 15’) Horse Shelter Framing kits must first be assembled.

Pages 1-6.Instructions for assembling two (12’ x 15’) Horse Shelters for set up into a 12’ x 36’ Modular Shelter System.

Pages 7-12.Instructions for assembling the 6’ Center Roof Connection for the Modular Shelter System.

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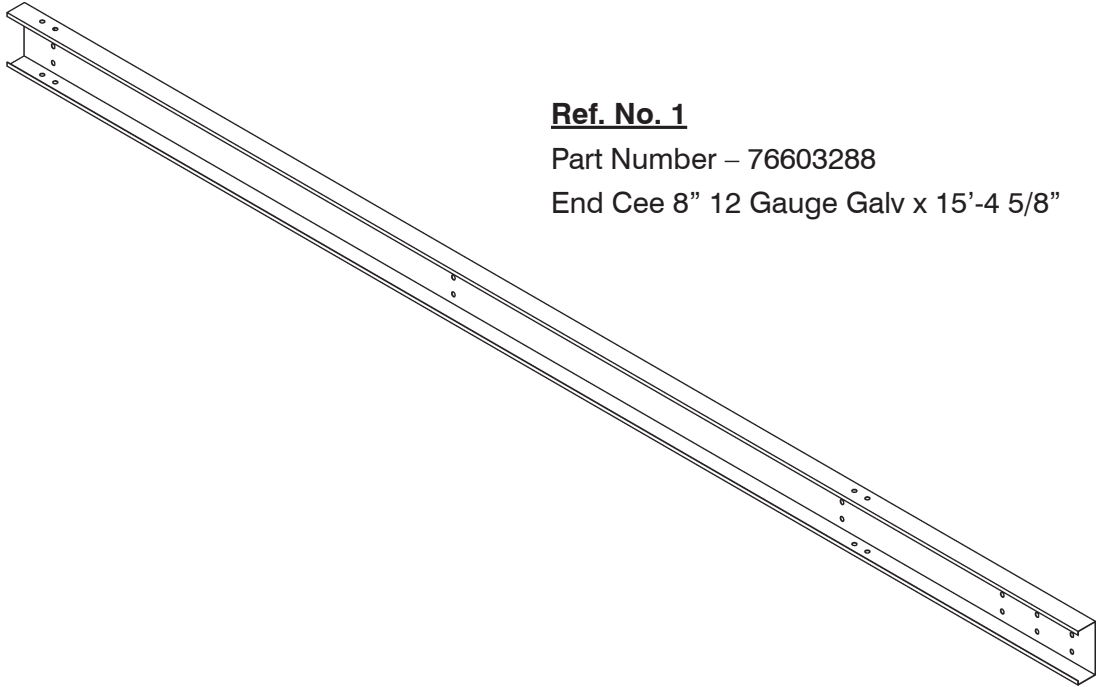
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The following six pages explains how to assemble a 12' x 15' Horse Shelter.

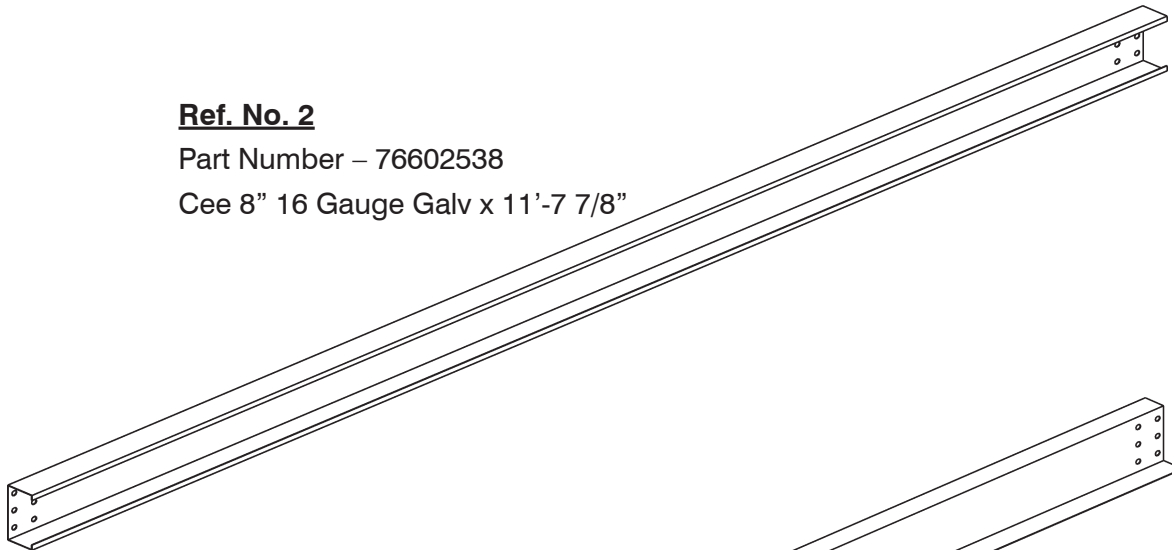
NOTE: To assemble a Modular Shelter System, two 76110678 (12' x 15') Horse Shelter Kits are necessary.



Ref. No. 1

Part Number – 76603288

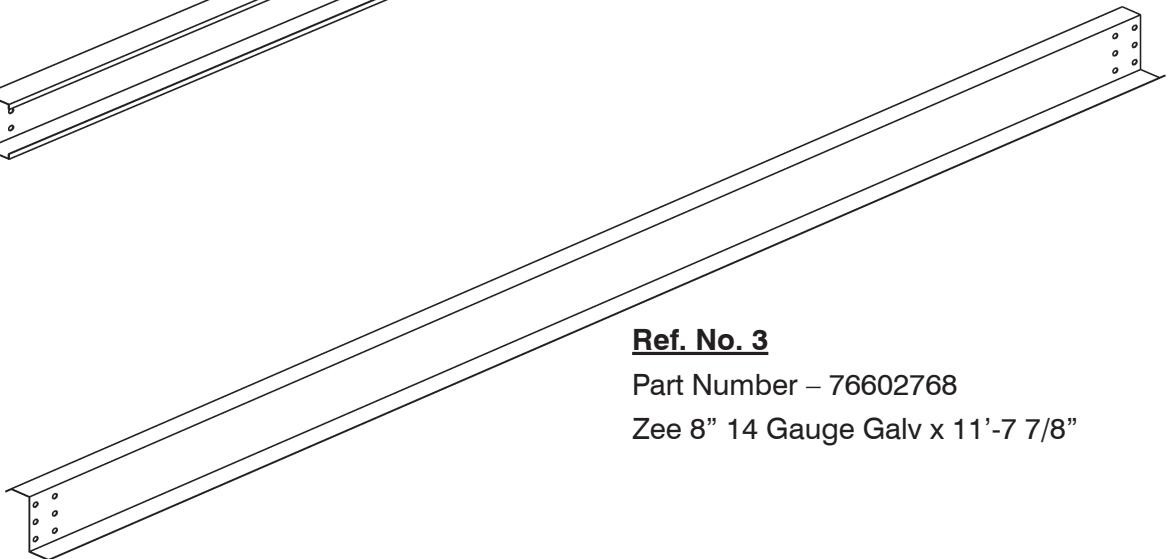
End Cee 8" 12 Gauge Galv x 15'-4 5/8"



Ref. No. 2

Part Number – 76602538

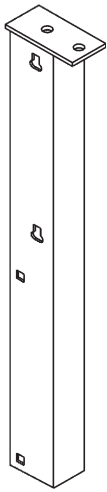
Cee 8" 16 Gauge Galv x 11'-7 7/8"



Ref. No. 3

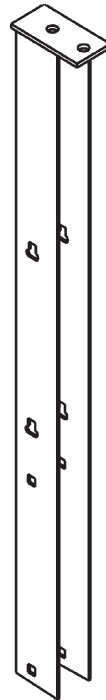
Part Number – 76602768

Zee 8" 14 Gauge Galv x 11'-7 7/8"



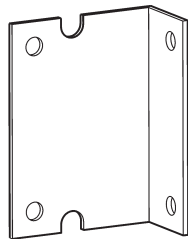
Ref. No. 4

Part Number –
76400349
Short Shelter Post –
Hot-dipped Galvanized



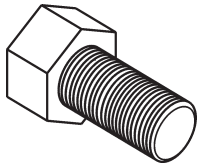
Ref. No. 5

Part Number –
76400359
Tall Shelter Post
– Hot-dipped
Galvanized



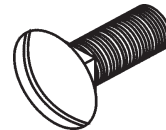
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Part Number – 76602558
Side Channel “L” Clip – Galv.



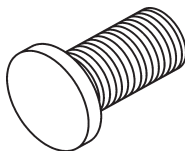
Ref. No 7a

Hex Head Cap Bolt
1/2” x 1” Plated



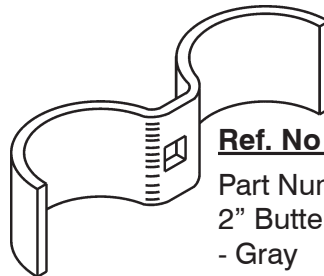
Ref. No 7e

Carriage Bolt
3/8” x 1” Plated



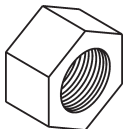
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Flat Round Head Bolt –
1/2” x 1” Plated



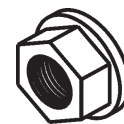
Ref. No 7f

Part Number – 76602507
2” Butterfly Connector Half
- Gray



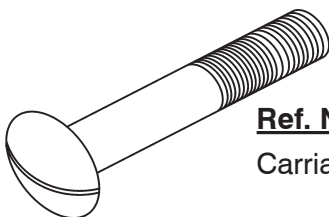
Ref. No 7c

Nut 1/2” Hex
Grade A Plated



Ref. No 7g

Nut 3/8” –
Flanged Whiz
Lock – Plated



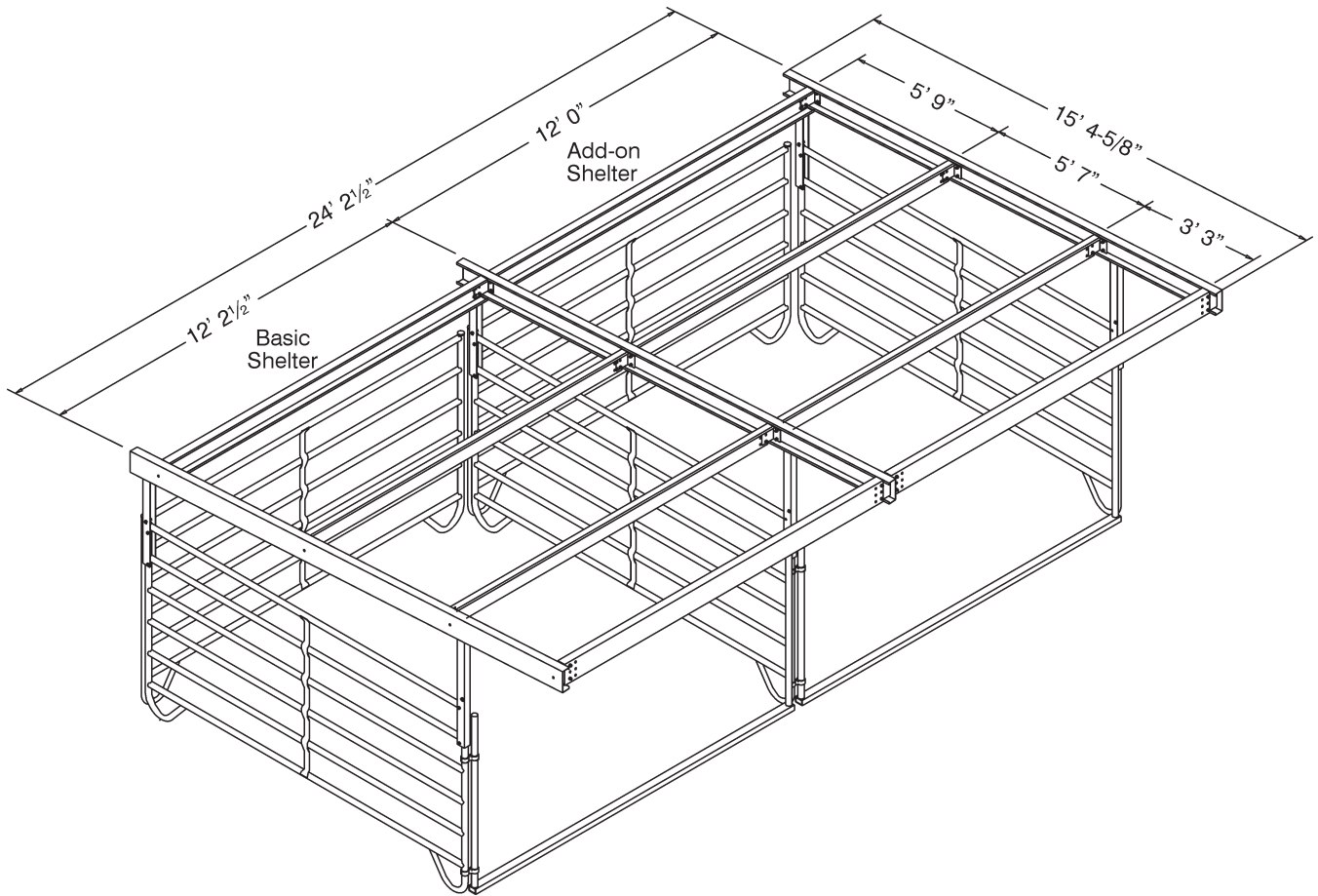
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Carriage Bolt 1/2” x 3” Plated

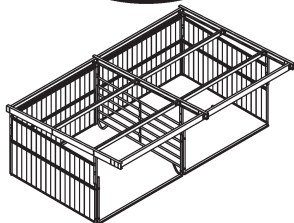
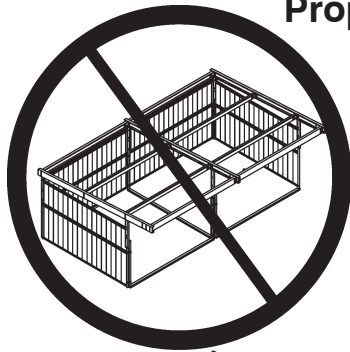
Ref. No 7h

Part Number – 76602837 (8 pair)
Rubber Strip (Not Illustrated)

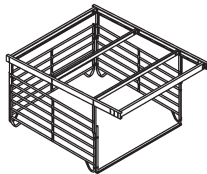
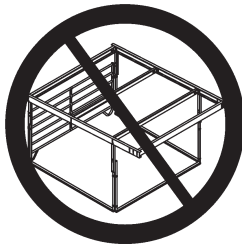
Roof Dimensions



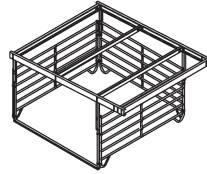
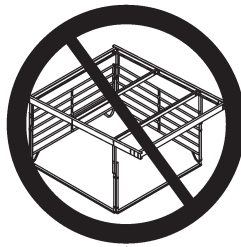
Proper Use of 12' Open Support Brace #76110697 & 76110699



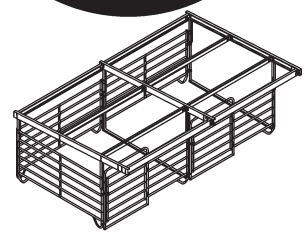
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NOTE:

If you are planning on erecting an add-on section onto the shelter, read through both the Single and Add-on instructions. This will eliminate rework.

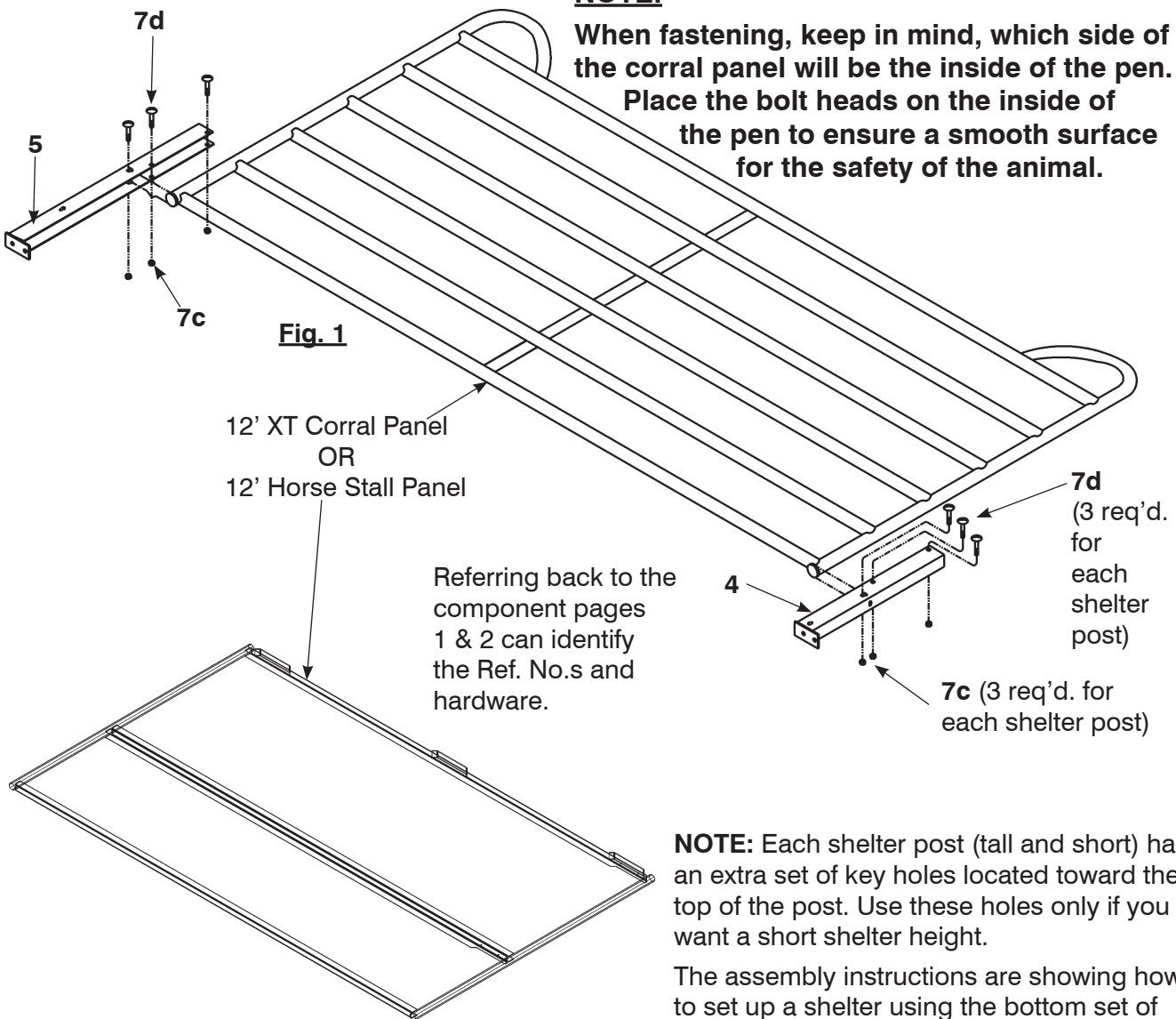
If sheeting will be installed, do not install it until all sections of the shelter are erected. (Behlen does not supply sheeting)

Step 1

- 1a The ground on which the shelter sets must be level to about 1" from one end to the other.
- 1b Assemble the shelter in an area which is 12' x 36'. Assemble the first shelter structure and then assemble the next shelter on the opposite side facing the first shelter.
- 1c For a more accurate layout, dimensions are given on page 6, but at this point they are not necessary. For assembling ease, lay the panel down. Slide the tall shelter post (5) and the short shelter post (4) onto the vertical 2" tube. If assembling the shelter on a 12' XT Corral Panel, be sure the cap rests in the three slots provided on the shelter posts.
- 1d Fasten each shelter post (4 & 5) with three 1/2" x 3" plated carriage bolts (7d) and three 1/2" nuts (7c).

NOTE:

When fastening, keep in mind, which side of the corral panel will be the inside of the pen. Place the bolt heads on the inside of the pen to ensure a smooth surface for the safety of the animal.

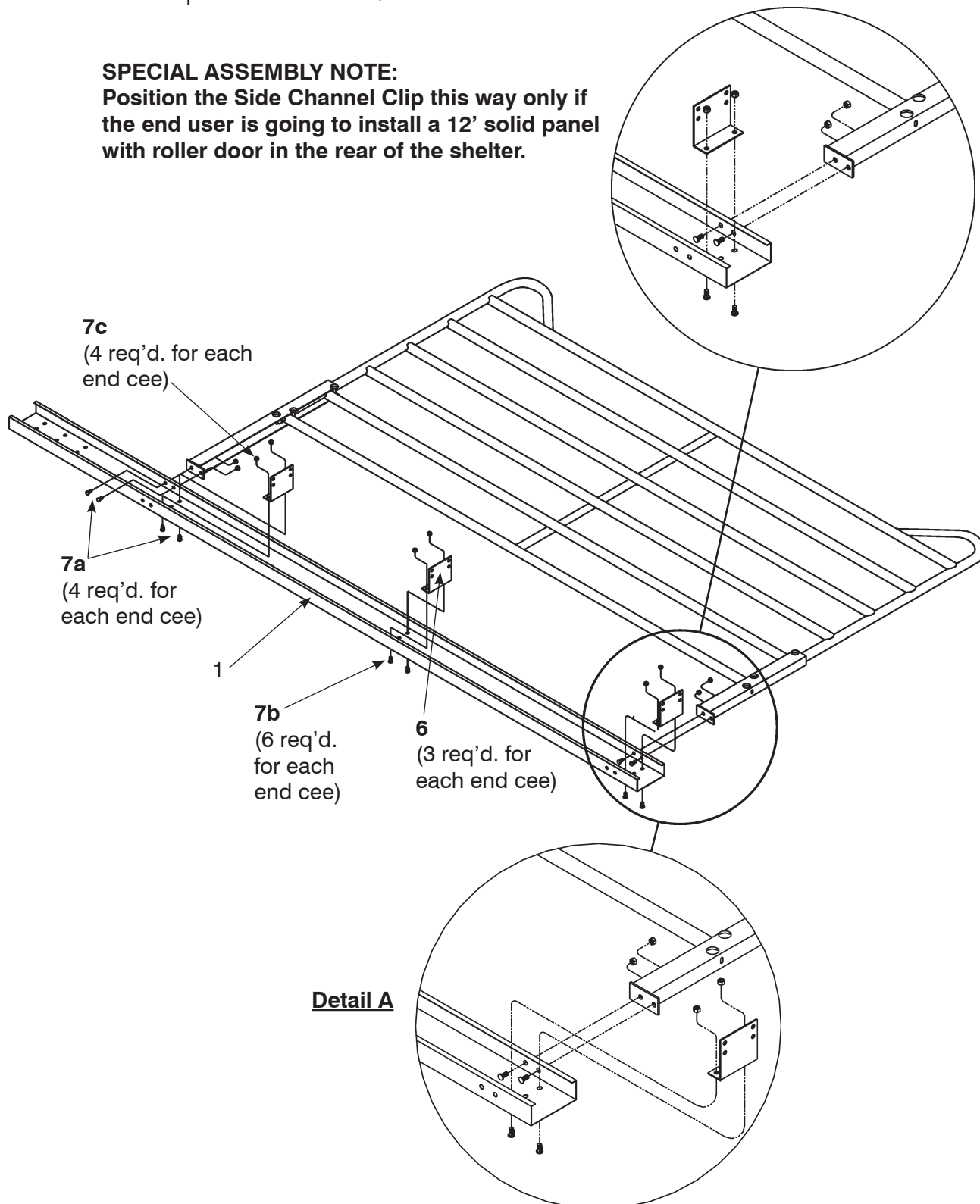


Step 2

- 2a** With the corral panel still lying down, bolt the end cee (1) to the shelter posts using two $\frac{1}{2}$ " x 1" hex head bolts (7a) and two $\frac{1}{2}$ " nuts (7c). Use the holes indicated on the illustration. When assembling end cee onto a horse stall, use the middle set of holes as indicated in Detail A.
- 2b** Assemble the side channel clips (6) to the end cee using two $\frac{1}{2}$ " x 1" flat round head bolts (7b) and two $\frac{1}{2}$ " nuts (7c). Be sure to keep the bolt heads to the outside of the cee as shown. Position the clips in the direction as shown.

SPECIAL ASSEMBLY NOTE:

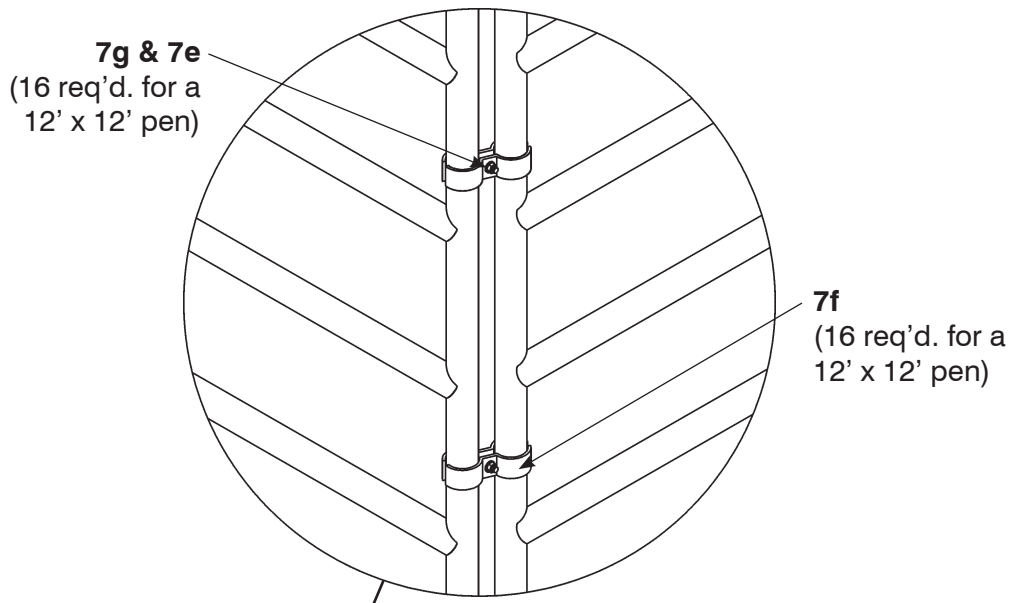
Position the Side Channel Clip this way only if the end user is going to install a 12' solid panel with roller door in the rear of the shelter.



Step 3

3a At this point, the structure can now be set in place. Two people are needed for this process for safety purposes. Place four 2" butterfly connector halves (7f) at each corner of the pen. Fasten the butterflies with one 3/8" x 1" carriage bolt (7e) and one 3/8" flanged whiz nut (7g). Make sure the bolt head is on the inside of the pen for a smooth edge near the animal. Do not fully tighten the butterflies. This will allow for adjustment of the pen. When attaching the butterflies, place one directly below the shelter post and one near the bottom of the panel.

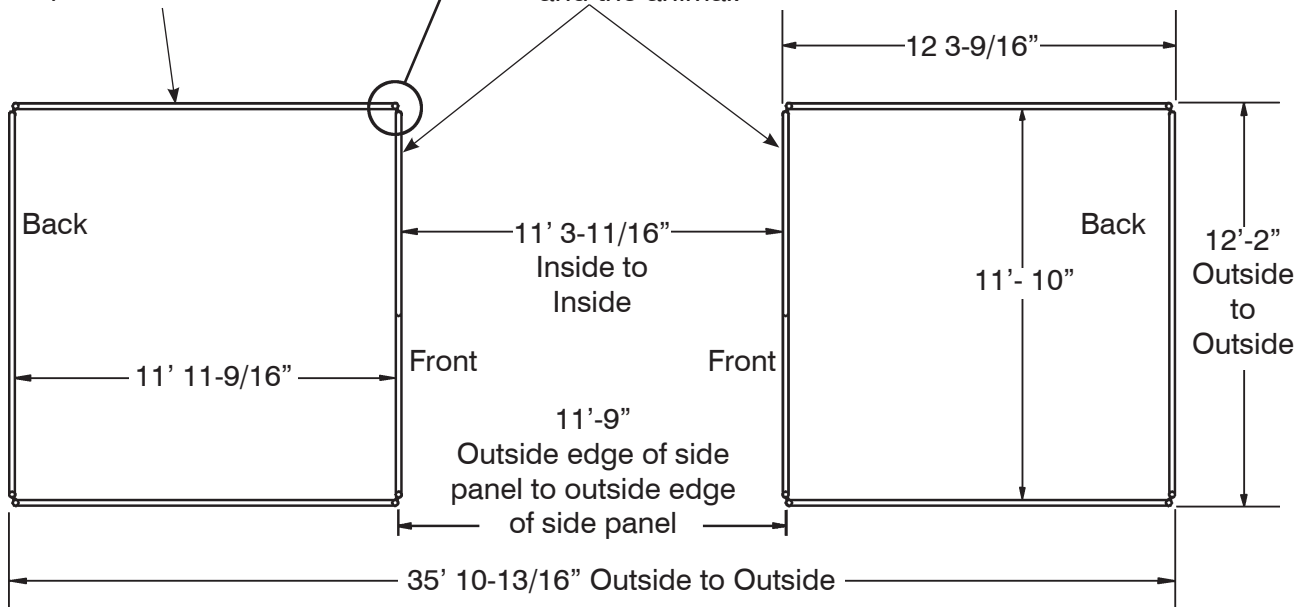
3b Measure the pen to match the measurements provided in the illustration. After measuring and moving panels as necessary, tighten the butterflies in place.



NOTE: Use a straightline and run the string down the side of the corrals or horse stalls to insure the panels are in line.

The sides are the panels that have the shelter posts, end cee and side channel clips attached to it.

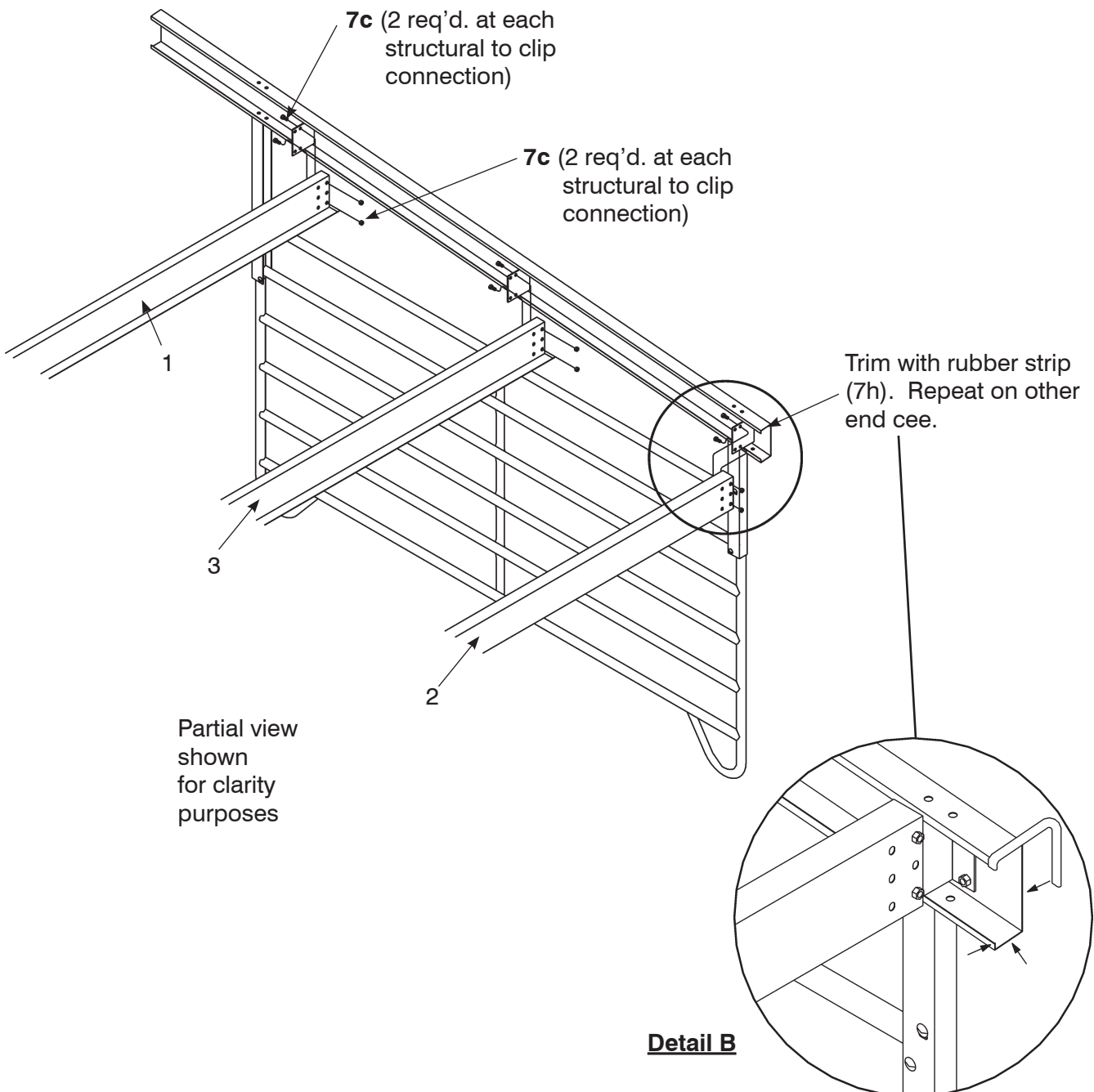
Be sure that the front panel is located on the side that contains the tall shelter posts. This will ensure enough clearance for you and the animal.



Step 4

Once the pen is set in place, it is now time to assemble the interior cees and zee. Two people are needed for this process for safety purposes.

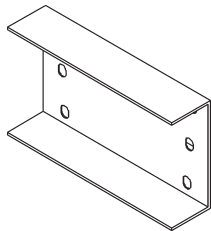
- 4a** To begin, start on the low side. Lift the 8-inch cee (2) up to the bottom clips and rest on the side channel clips. Be sure that the 8-inch cee (2) is positioned as shown on the illustration. The open face of the 8-inch cees has to face into the pen. Fasten at each end with two 1/2" x 1" hex head bolts and two 1/2" nuts.
- 4b** Follow the same instructions for the 8-inch zee (3). Make note of the position to ensure proper assembly.
- 4c** Insert the rubber strip (7h) around the entire end of the end cee on the low side. See Detail B. Cut any excess rubber strip off. Repeat this process for the other side. This will take away any sharp edge that could endanger your animal.



Component List for 6' Center Roof Connector (76110688) (Center Roof Section of Modular Shelter System)

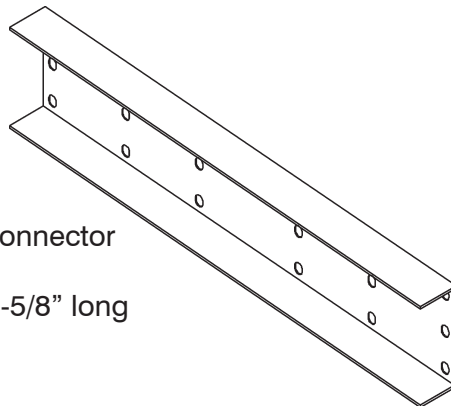
NOTE: For a 12' x 36' or Single Modular Shelter System, two (76110688) 6' Center Roof Connector Kits are necessary.

If more add-on sections will be added, only (1)76110688 6' Center Roof Connector Kit is necessary for each additional 12' add-on section.



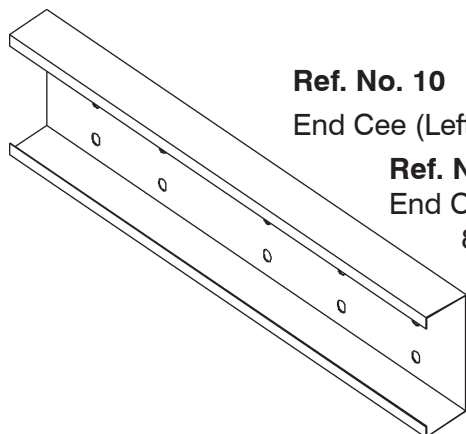
Ref. No. 8

Channel, Ridge Connector
76602948



Ref. No. 9

Channel, Roof Connector
76602958
Heavy 8 ga. x 33-5/8" long



Ref. No. 10

End Cee (Left) 76603438

Ref. No. 11

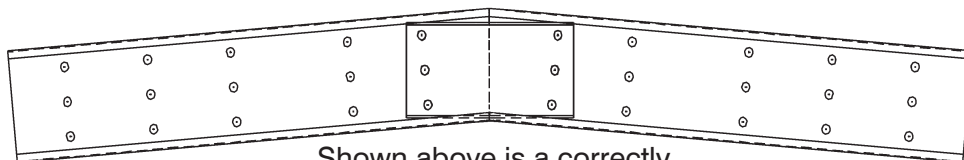
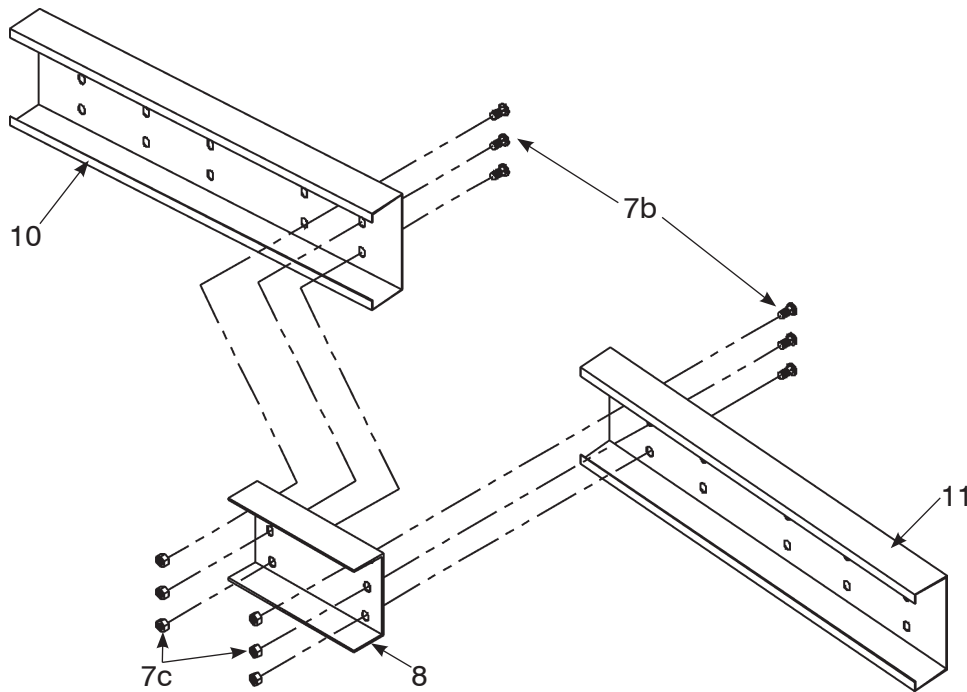
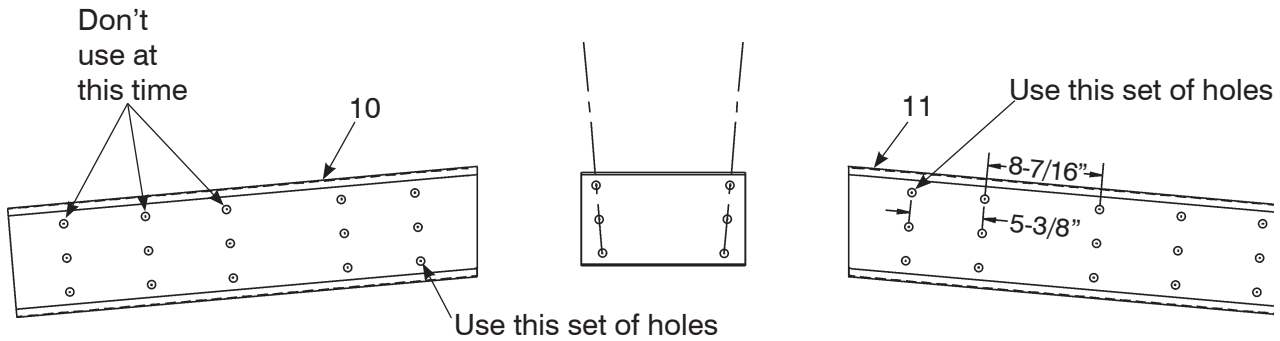
End Cee (Right) 76603458
8" x 33-13/16" x 16 ga.

Step 1

1a Assemble the 6' Center Roof Connector using the components and hardware in pkg. 76110688. The Ridge Connector (Ref. No. 8) is the starting point. Position the plate so that the open face of the plate is facing up. Next, install the short End Cee Channels (Ref. No's. 10 & 11). Follow the diagram below on how to position the Cees leaving all bolts loose at this time.

Connect the two End Cees using the set of holes shown. Note the hole grouping.

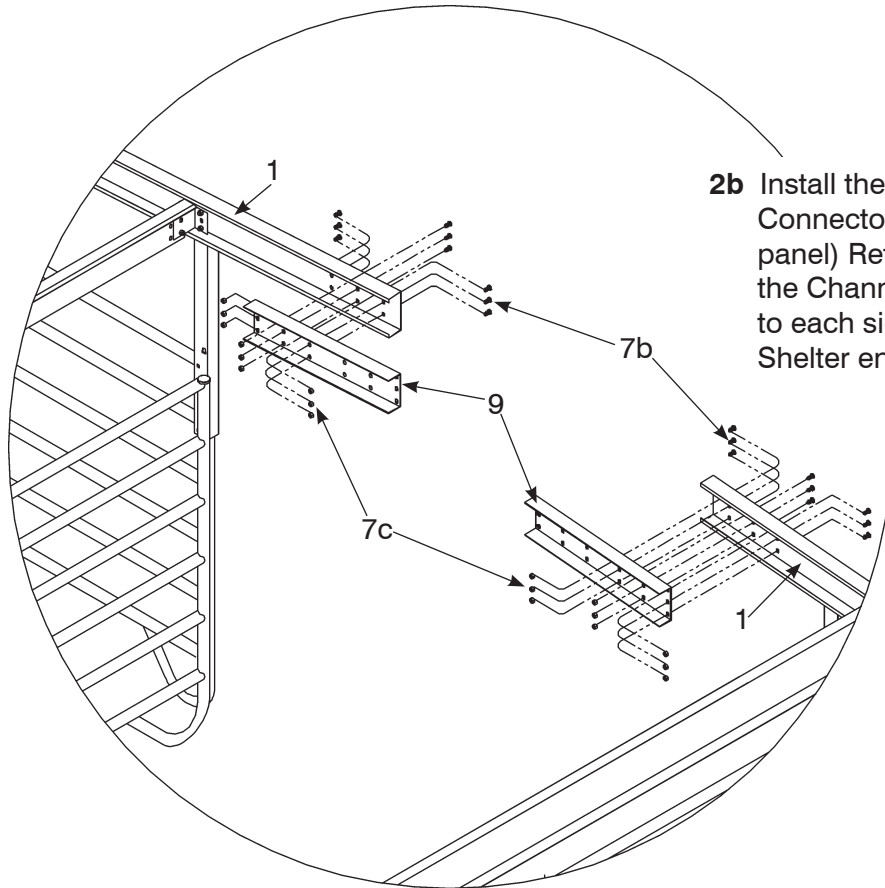
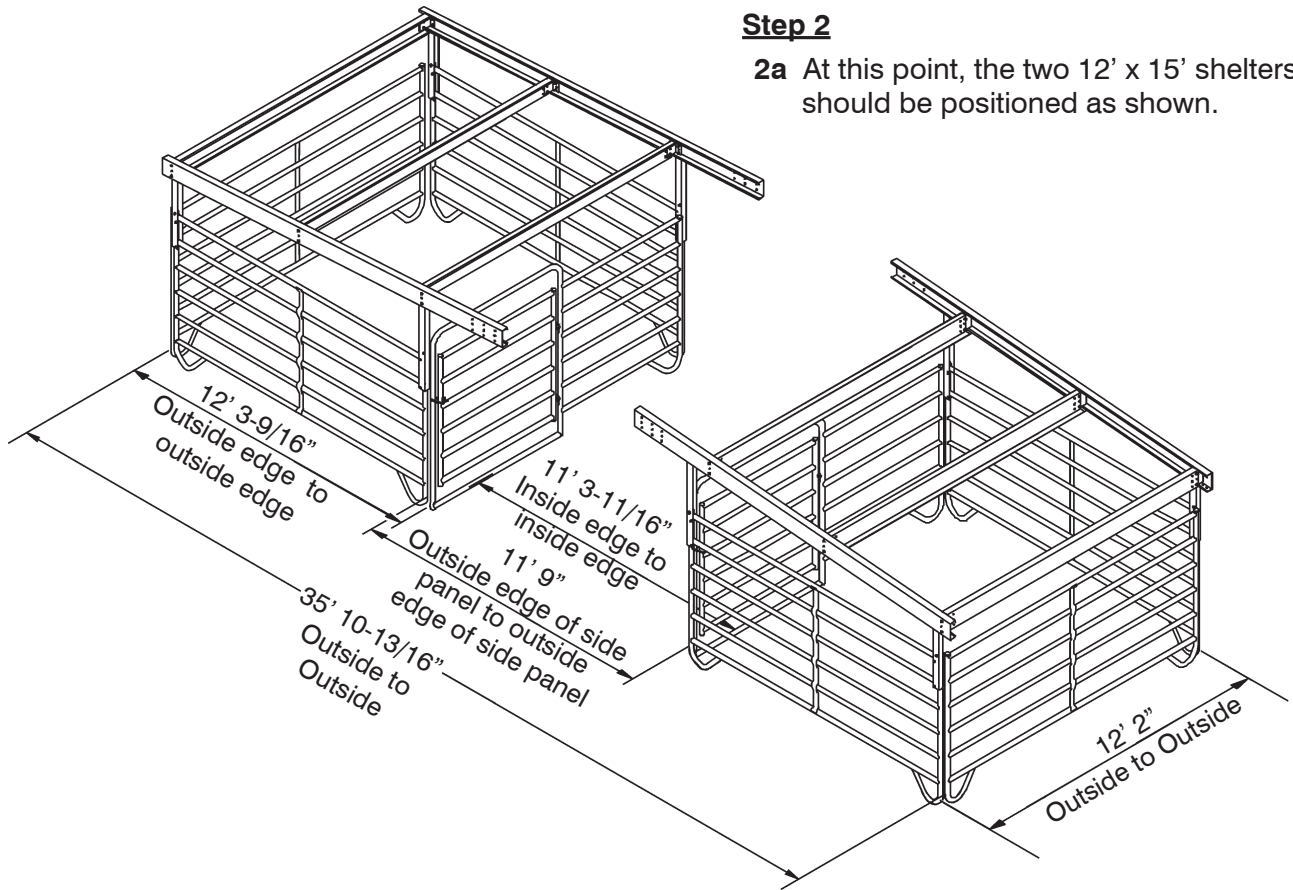
Lay the Center Ridge Connector (8) out so that the holes are positioned as shown angling outward.



Shown above is a correctly assembled Center Ridge Connector

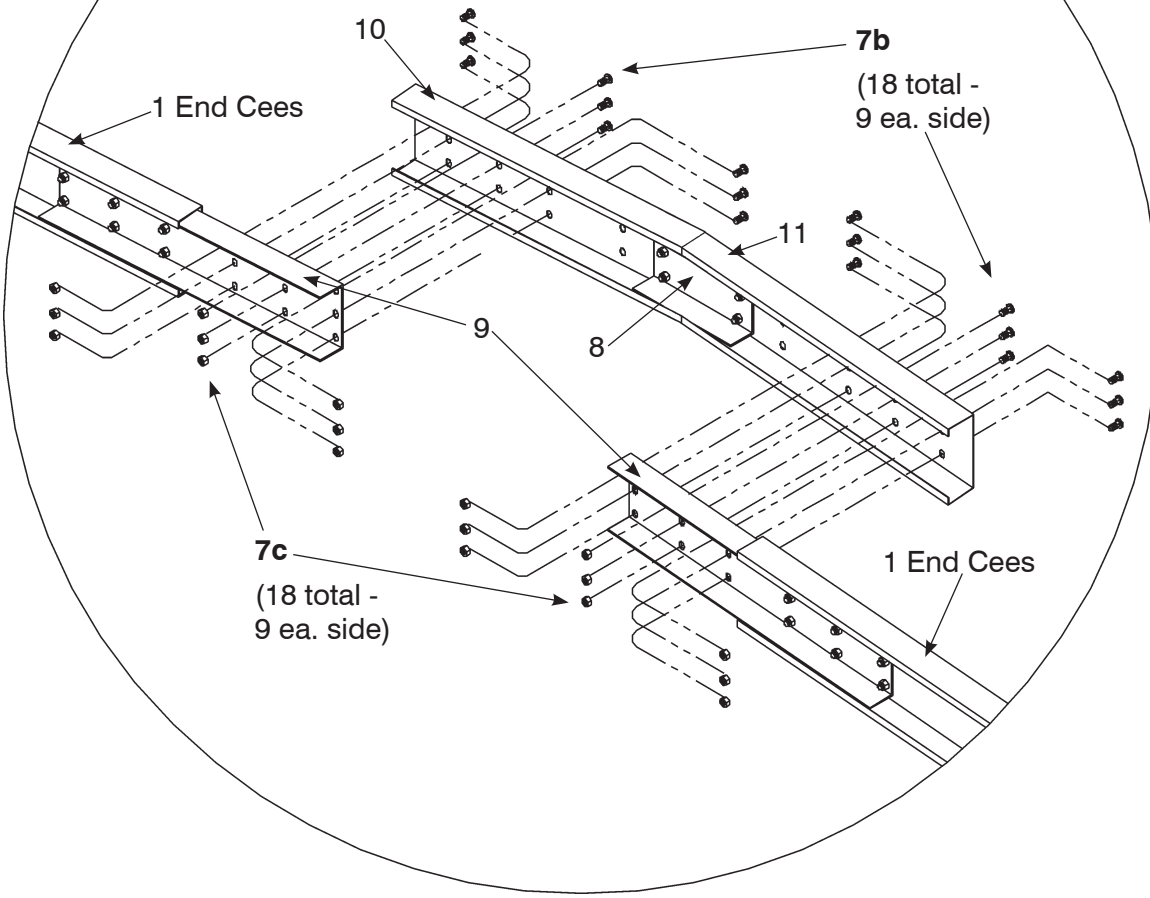
Step 2

2a At this point, the two 12' x 15' shelters should be positioned as shown.

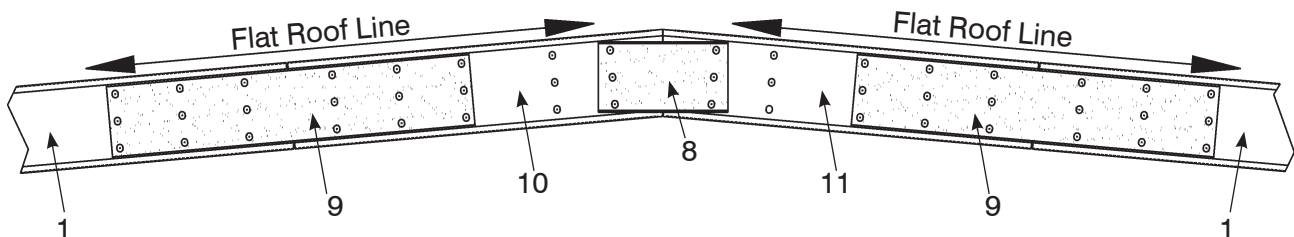


2b Install the Channel Roof Connector (the heavy gauge panel) Ref. No. 9. Attach the Channel Roof Connector to each side of the 12' x 15 Shelter ends (See diagram).

2c Attach the 6' Center Ridge Connector assembly to the Channel Connector (Ref. No. 9) with eighteen (7b) bolts and (7c) nuts as shown. All bolts should be loose.



2d After the Center Ridge Connector (Ref No. 8) is attached, adjust the angles (Ref. Nos. 10, 11 & 1) so that they produce a flat roof line as shown in the detail. A straight edgel will help in achieving this. Bolts can now be tightened to hold the roofline shape as it is being adjusted.

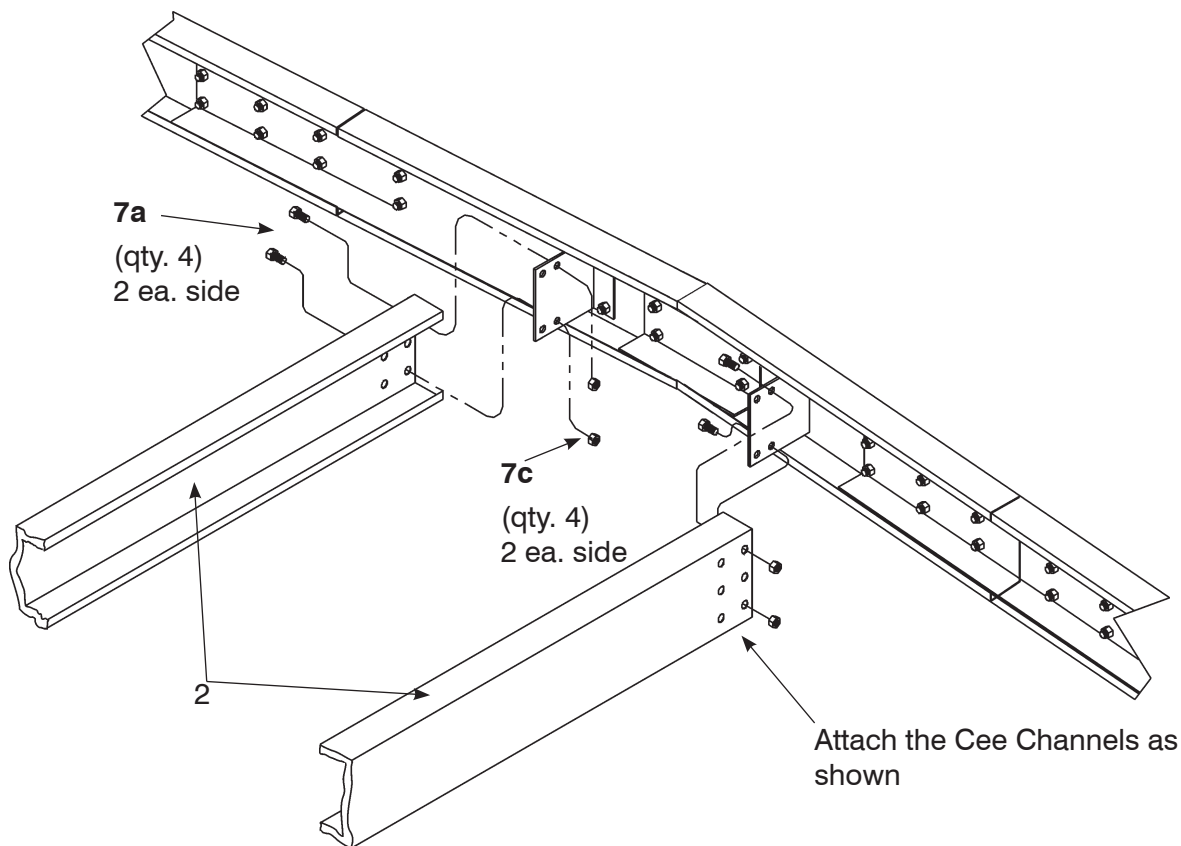
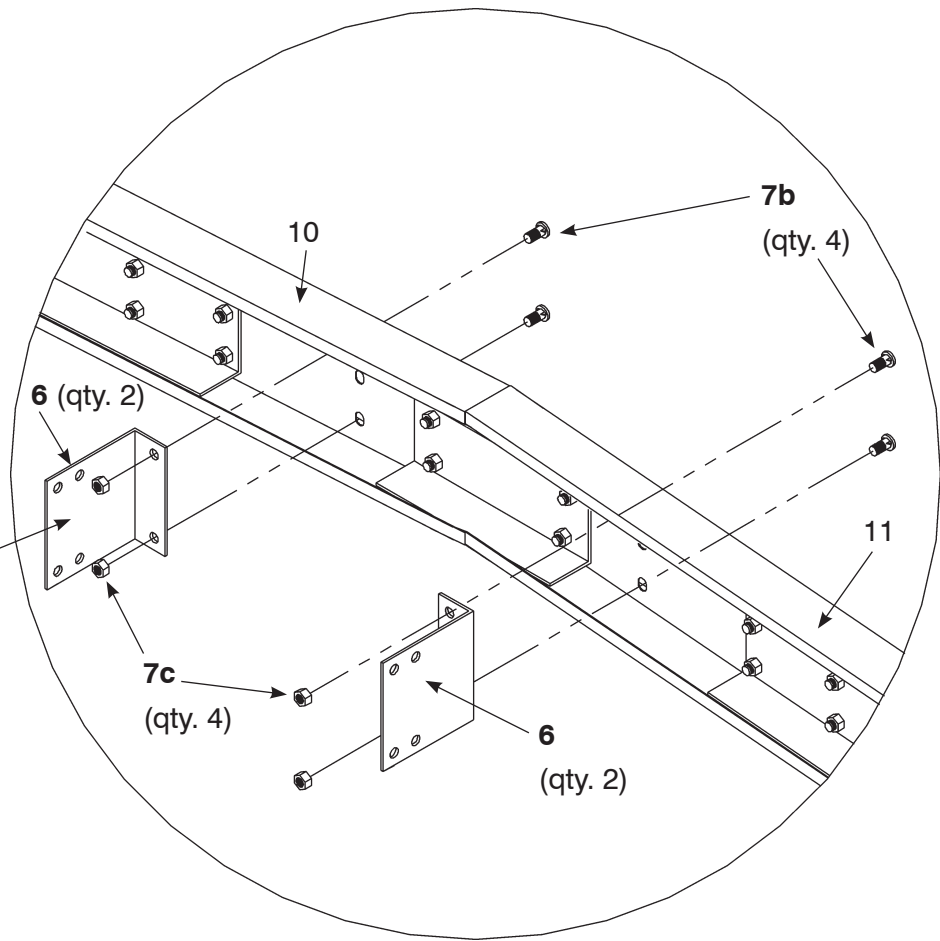


Step 3

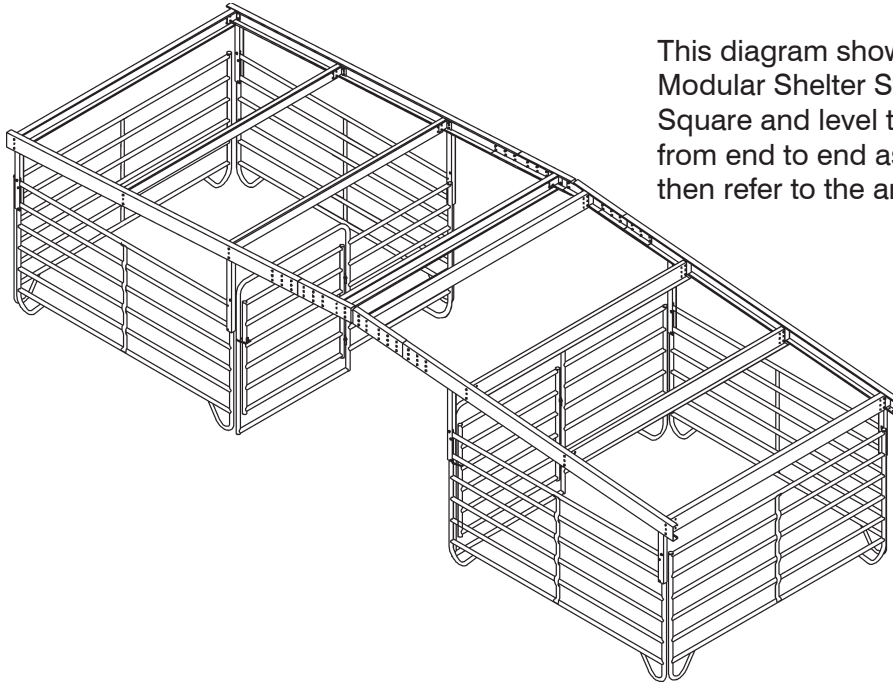
3a Attach the two Side Channel Clips (Ref. No. 6) to the two End Cees (Ref. No. 10 & 11) as shown.

3b Attach the remaining two C-channels (Ref. No. 2) to the Side Channel Clips (Ref. No. 6) using four (7a) bolts and (7c) nuts as shown in detail.

Attach Side Clips as shown



Attach the Cee Channels as shown

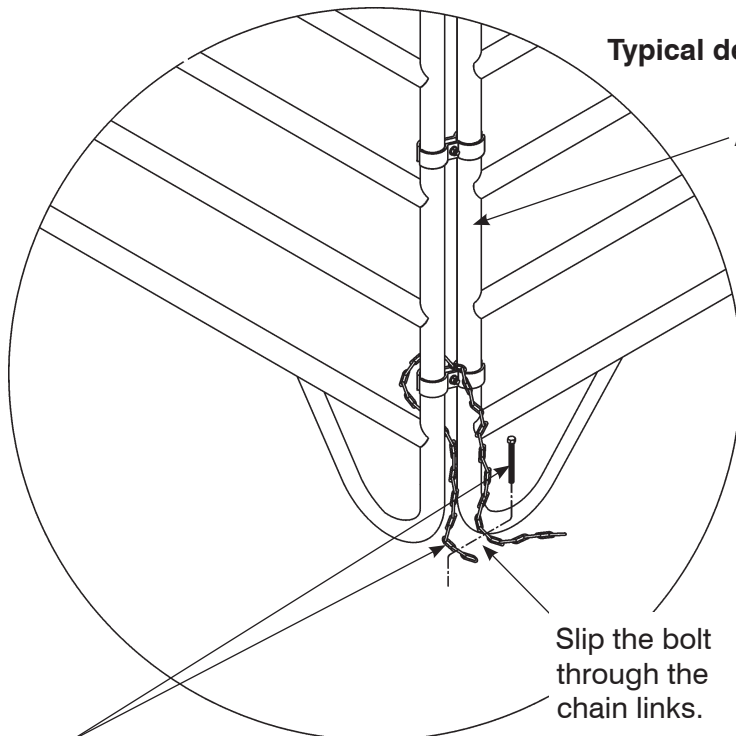


This diagram shows a finished 12' x 36' Modular Shelter System with a 12' breezeway. Square and level the assembly to within 1" from end to end as previously instructed and then refer to the anchoring instructions below.

Anchoring the Assembled Horse Shelter

The assembled horse shelter **will** require anchoring. When anchoring into concrete, all materials will be supplied by the buyer and can be bought at any local hardware store. The

shelter **must** be anchored at every corner. With a 90-MPH wind, an uplift force of 2,200 pounds per corner can be created.



Typical detail of installation in a concrete situation.

Assembled Horse Shelter

Slip the bolt through the chain links.

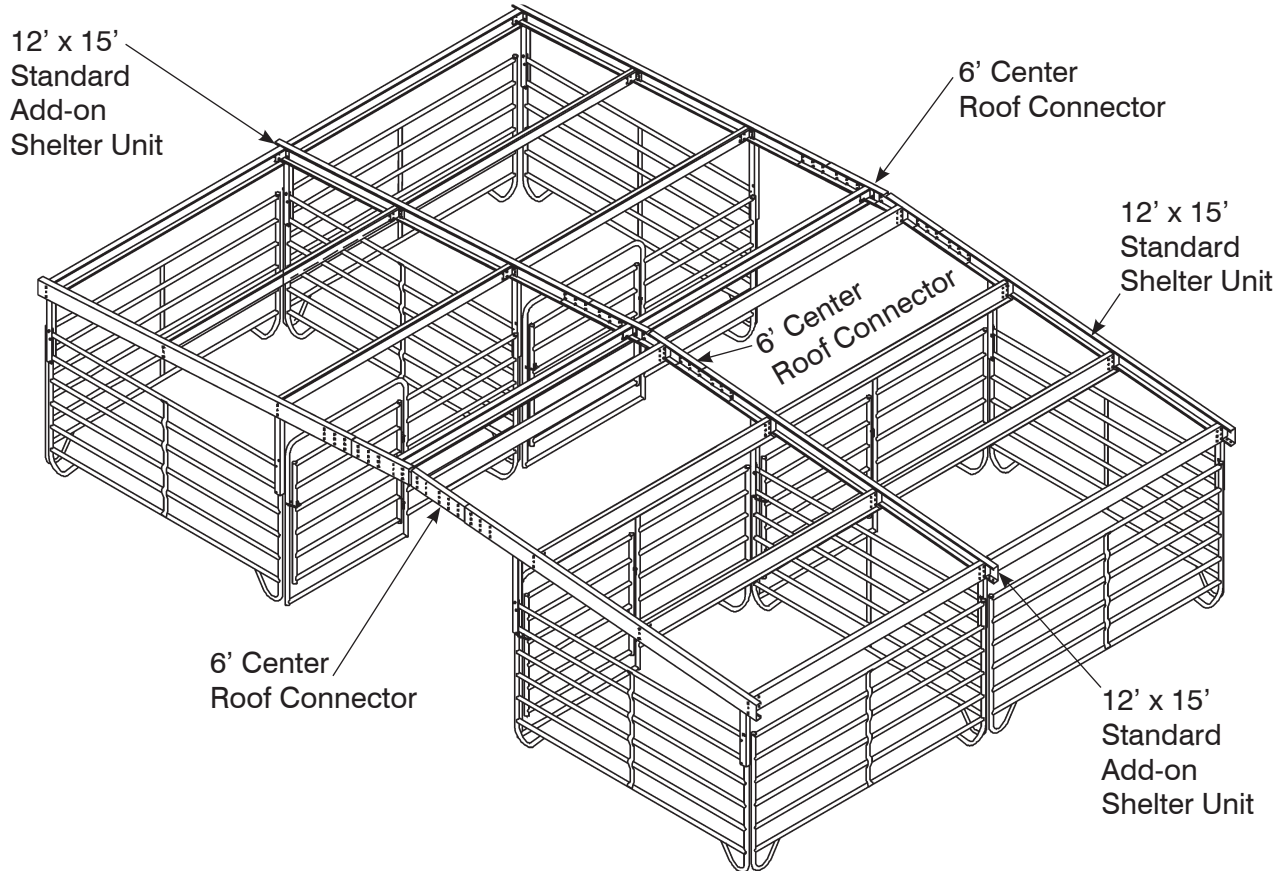
Tighten the chain as much as possible when anchoring.
Cut off any excess links of chain.

Chain and anchor bolt can be purchased at your local hardware store.

(Chain and anchor bolt must be capable of withstanding a maximum uplift force of 2,200 pounds per corner).

To assemble the Add-on kits, follow the same instructions as for the 12' x 15' Add-on unit. It will take two people to assemble this unit.

The original 12'x 15' units will always be placed on the ends.



Use Parts Identification shown on pages 2 & 7.

NOTE: Add-on parts are always made of heavier gauge material which distinguishes them from the lighter gauge standard parts.

After the unit is assembled, sheeting can be added.

Behlen does **not** provide sheeting. It can be purchased at most lumberyards, home supply stores, farm and ranch stores and co-ops.

A 12' x 36' shelter with center breezeway will require 36" x 18' (18'-6" sheets will give the shelter a 6" overhang) high-ribbed sheets made of 29 ga. or heavier material. The ribbing should overlap which will keep water from leaking in. Most dealers will cut sheeting to the desired length.

