

Ladder System

Wide-Corr® Grain Bin Installation and Storage Instructions



Read this manual before using product. Failure to follow instructions and safety precautions can result in serious injury, death, or property damage. Keep manual for future reference.

Part Number: 198925 R36

Revised: February 2022

Original Instructions

New in this Manual

The following changes have been made in this revision of the manual:

Description	Section
Updated optional vertical support ladder details	Section 5.13.1 – Optional Vertical Support Ladder Details on page 51

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1. Introduction

Before assembling, please read this manual. Familiarize yourself with the process and the necessary precautions for efficient and safe assembly of this Westeel Ladder System.

Everyone present at the assembly site is required to be familiar with all safety precautions.

Keep this manual available for frequent reference and review it with new personnel. Call your local distributor or dealer if you need assistance or additional information.

2. Safety

2.1. Safety Alert Symbol and Signal Words



This safety alert symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of injury or death, carefully read the message that follows, and inform others.

Signal Words: Note the use of the signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTICE** with the safety messages. The appropriate signal word for each message has been selected using the definitions below as a guideline.



Indicates an imminently hazardous situation that, if not avoided, will result in serious injury or death.



Indicates a hazardous situation that, if not avoided, could result in serious injury or death.



Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.



Indicates a potentially hazardous situation that, if not avoided, may result in property damage.

2.2. General Safety Information

Read and understand all safety instructions, safety decals, and manuals and follow them when assembling the equipment.

- Only experienced personnel who are familiar with this type of assembly and installation should perform this work. Untrained assemblers/installers expose themselves and bystanders to possible serious injury or death.
- Do not modify the ladder in any way or deviate from the instructions in this manual without written permission from the manufacturer. Unauthorized modification or methods may impair the function and/or safety. Any unauthorized modification will void the warranty.
- Follow a health and safety program for your worksite. Contact your local occupational health and safety organization for information.
- Contact your local representative or Westeel if you need assistance or additional information.
- Always follow applicable local codes and regulations.



2.3. Personal Protective Equipment

The following Personal Protective Equipment (PPE) should be worn when installing the equipment.

Safety Glasses

- Wear safety glasses at all times to protect eyes from debris.



Coveralls

- Wear coveralls to protect skin.



Hard Hat

- Wear a hard hat to help protect your head.



Steel-Toe Boots

- Wear steel-toe boots to protect feet from falling debris.



Work Gloves

- Wear work gloves to protect your hands from sharp and rough edges.



2.4. Safety Decals

- Keep safety decals clean and legible at all times.
- Replace safety decals that are missing or have become illegible. See decal location figures that follow.
- Replaced parts must display the same decal(s) as the original part.
- Replacement safety decals are available **free of charge** from your distributor, dealer, or factory as applicable.

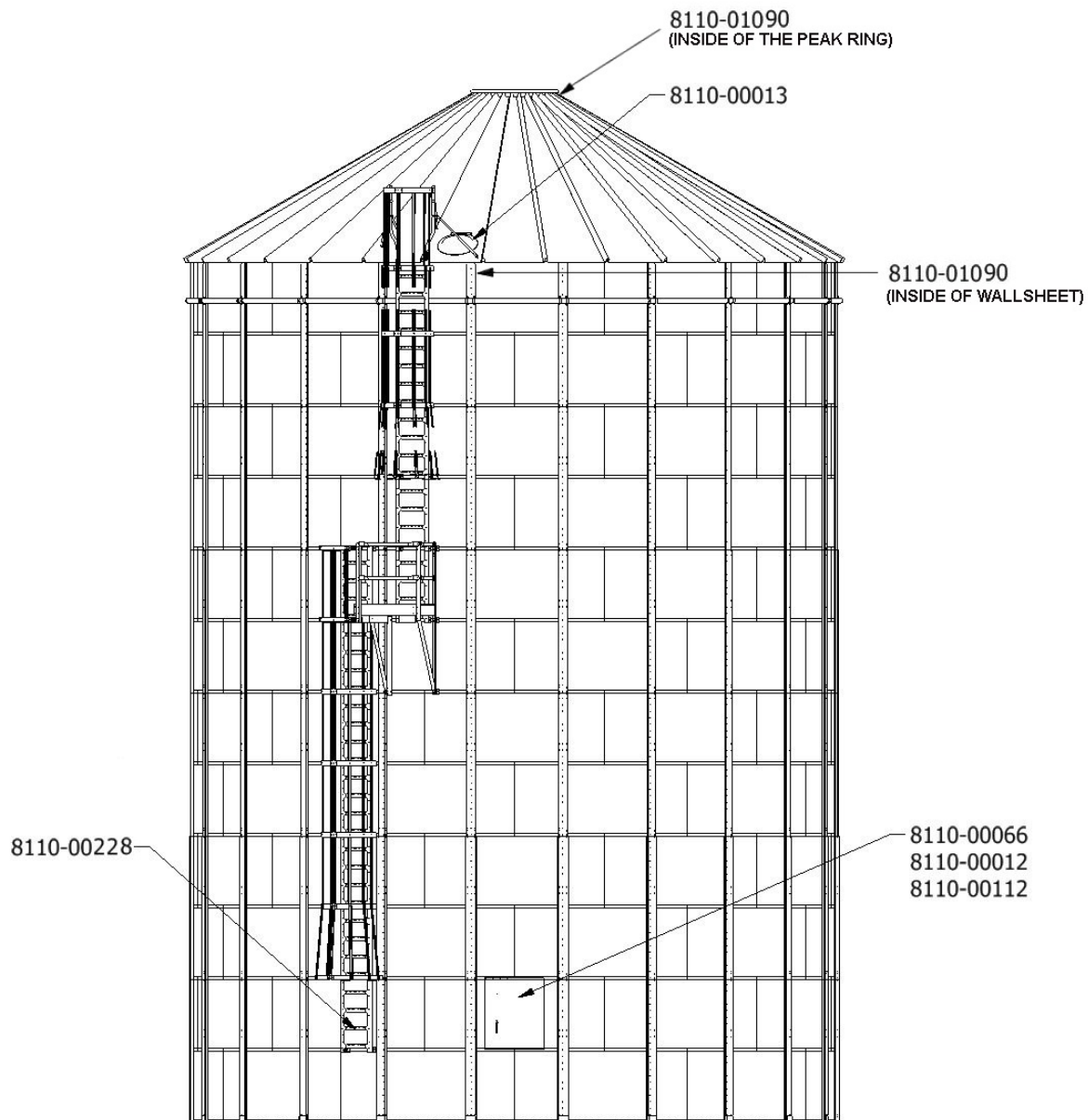
2.5. Decal Installation/Replacement

1. Decal area must be clean and dry, with a temperature above 50°F (10°C).
2. Decide on the exact position before you remove the backing paper.
3. Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
4. Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
5. Small air pockets can be pierced with a pin and smoothed out using the decal backing paper.

2.6. Safety Decal Locations and Details

Replicas of the safety decals that are attached to the ladder and their messages are shown in the figure(s) that follow. Safe operation and use of the ladder requires that you familiarize yourself with the various safety decals and the areas or particular functions that the decals apply to, as well as the safety precautions that must be taken to avoid serious injury, death, or damage.

Figure 1. Safety Decals






! WARNING	
	
SAFETY INSTRUCTIONS <ul style="list-style-type: none"> • Read operator's manual and all safety decals before assembling, using, or servicing bin. • Close/latch all access doors when not in use. • Do not alter or modify bin structure. • Replace any damaged components only with factory made components. • This bin should only be used to store free flowing, granular material, unless specifically designed and marked otherwise. • When filling, use top filler cap and direct material to center of bin. • Do not over-fill bin. Material should not be in contact with or place pressure on roof sheets. 	

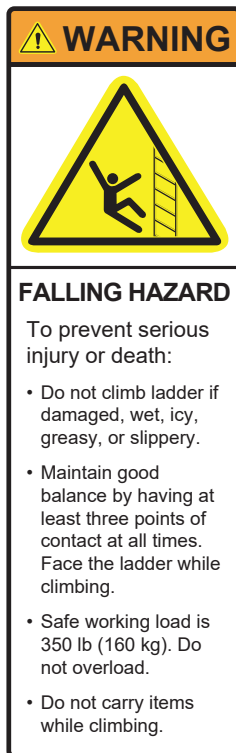
Part Number: 8110-00012

! WARNING	
	
ENTRAPMENT HAZARD <p>Never enter the bin when loading or unloading grain.</p> <p>If you must enter the bin:</p> <ol style="list-style-type: none"> 1. Shut off and lock out all power. 2. Use a lifeline, safety harness, and have an observer outside before entering the bin. 3. Wear proper breathing equipment or a respirator. 4. Avoid the center of the bin. <p>Failure to heed these warnings could result in serious injury or death.</p>	

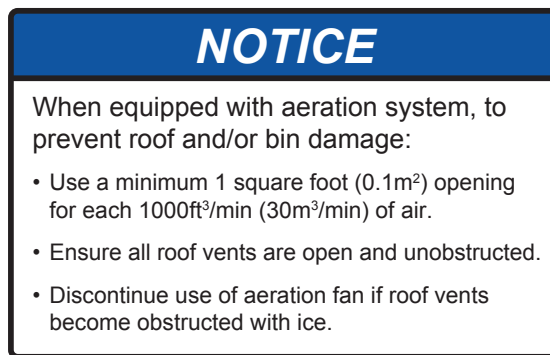
Part Number: 8110-00013

! WARNING		
		
Rotating flighting could kill or dismember.	Flowing material could trap and suffocate.	Crusted material could collapse and suffocate.
Keep clear of all augers. DO NOT ENTER this bin! <p>If you must enter the bin:</p> <ol style="list-style-type: none"> 1. Shut off and lock out all power. 2. Use a safety harness and safety line. 3. Station another person outside the bin. 4. Avoid the center of the bin. 5. Wear proper breathing equipment or respirator. <p>Failure to heed these warnings could result in serious injury or death.</p>		

Part Number: 8110-00112



Part Number: 8110-00228



Part Number: 8110-00066



Part Number: 8110-01090

3. Before You Begin

3.1. Site and Assembly

Unless otherwise specifically provided in writing, Westeel does not take responsibility for any defects or damages to any property, or injury to any persons, arising from or related to any site or assembly considerations, including but not limited to:

- Bin location and bin siting
- Soil conditions and corresponding foundation requirements
(Note that the examples provided in manuals are for specifically stated soil conditions.)
- Bin assembly (Westeel recommends the use of qualified bin installers).
Contact Westeel for information on installers in your area.
- Field modifications or equipment additions that affect the bin structure
- Interconnections with neighboring structures
- Compliance with all applicable safety standards, including but not limited to fall restraint systems (ladders or other systems). Local safety authorities should be contacted as standards vary between jurisdictions.

3.2. Critical Assembly Requirements

To ensure a successful, safe and reliable outcome you must comply with the following assembly techniques and practices:

1. Comply with all local code and jurisdictional requirements applicable to your ladder installation.
2. Make sure that the proper hardware is utilized for all bolted connections. If a shortage occurs, do not substitute. Take the necessary steps to obtain the proper hardware. Make sure nuts are tightened to the required torque values as specified in the appropriate assembly manual.
3. Comply with all assembly instructions provided in the appropriate assembly manual to make sure your whole ladder is constructed safely.

3.3. Product Storage

Rust on Galvanized Parts

1. White rust forms when moisture is allowed to collect on galvanized surfaces that have yet to develop the durable zinc oxide layer. This zinc oxide layer naturally occurs as the surface interacts with carbon dioxide, and is characterized over time by the dull grey appearance that weathered galvanized surfaces get.
2. Parts that are not well ventilated or well drained can collect water between surfaces and develop white rust.
3. White rust is not a structural concern if its development is stopped in the early stages. A light film or powdery residue can occur after a period of heavy rainfall or a short time of improper storage. If white rust has started to develop, separate parts and wipe off any moisture. Next, using a clean cloth, apply a thin layer of petroleum jelly or food-grade oil to the entire part.
4. If moisture is left on parts, this white rust can become more aggressive and turn into red rust. Red rust can cause degradation in the material and become a structural concern. Any parts that have red rust should be replaced immediately.

Storage Guidelines

- Start assembly as soon as possible.
- All ladder boxes and hardware boxes should be stored inside. These are not waterproof, and will deteriorate in normal weather conditions, allowing moisture to contact the parts inside.

If Parts Become Wet

Any boxed parts that become wet should be dried and stored in a new box that is free of moisture.

3.4. Important Notes

- Westeel does not provide a foundation design for this product, and is not liable for any damages or injuries related to inadequately designed or constructed foundations. Customers must contract professional services for all foundation design and construction work.
- Contact local power officials for minimum power line clearance.
- See [Section 3.2 – Critical Assembly Requirements on page 11](#) for mandatory siting and assembly requirements.
- Tighten all bolts to the recommended torque settings.

4. Preparation

4.1. Check Shipment

Unload the parts at the assembly site and compare the packing slip to the shipment. Ensure that all items have arrived and that none are damaged.

Report damaged parts or shortages immediately to your dealer. Your dealer will order replacement parts immediately to ensure that assembly will not be held up by missing parts. All parts will be charged for and credit will be issued by party at fault. No credit will be issued if freight bills are signed as received in good condition.

4.2. List of Tools and Equipment

Use quality tools and equipment. Use them safely, and correctly, for their intended use. Tools for this application should include:

Tools

- Electric or pneumatic (air) impact tools
- Power drill and drill bits
- Sockets (multiple 9/16" and 1/2" sockets recommended)
- Large-pocket carpenter pouch
- 8" (20 cm) metal punches (for aligning bolt holes)
- Step and extension ladders, construction grade
- 6-point wrenches (Imperial, box end)
- Metal-cutting saw suitable for cutting ladder sections
- Scaffolding

Minimum Recommended Safety Equipment

- A properly-stocked first-aid kit
- Eye, foot, head, and hand protection (safety glasses, steel-toed boots, hard hat, work gloves)
- Cable, chain, or rope to tie-off bin or jacks in case of wind
- Body harness and lifeline (for use where falling hazard exists)
- Ground fault interrupt protected electrical hook-ups

4.3. Order Optional Equipment

Optional equipment such as safety cages and platforms, etc., should all be on site and checked before assembly starts. Plan your installation in advance. For details, see assembly instruction supplied with optional equipment.

5. Assembly



Before continuing, ensure you have completely read and understood this manual's Safety section, in addition to the safety information in the section(s) below.

5.1. Assembly Safety

WARNING

- Do not take chances with safety. The components can be large, heavy, and hard to handle. Always use the proper tools, rated lifting equipment, and lifting points for the job.
- Carry out assembly in a large open area with a level surface.
- Always have two or more people assembling the ladder.
- Make sure you have sufficient lighting for the work area.
- Tighten all fasteners according to their specifications. Do not replace or substitute bolts, nuts, or other hardware that is of lesser quality than the hardware supplied by the manufacturer.
- Stay away from overhead power lines and other obstructions during assembly. Contact with power lines can cause electrocution.
- Do not work in high winds.
- The equipment shall be installed in accordance with applicable local codes and regulations.

5.2. ANSI (for North America) Suggested Ladders, Cages and Platform Layouts

The following layouts show platforms situated at the top-right of the first ladder segment. They can also be assembled in a mirror image configuration.

Figure 2. ANSI (for North America) Suggested Ladders, Cages and Platform Layouts

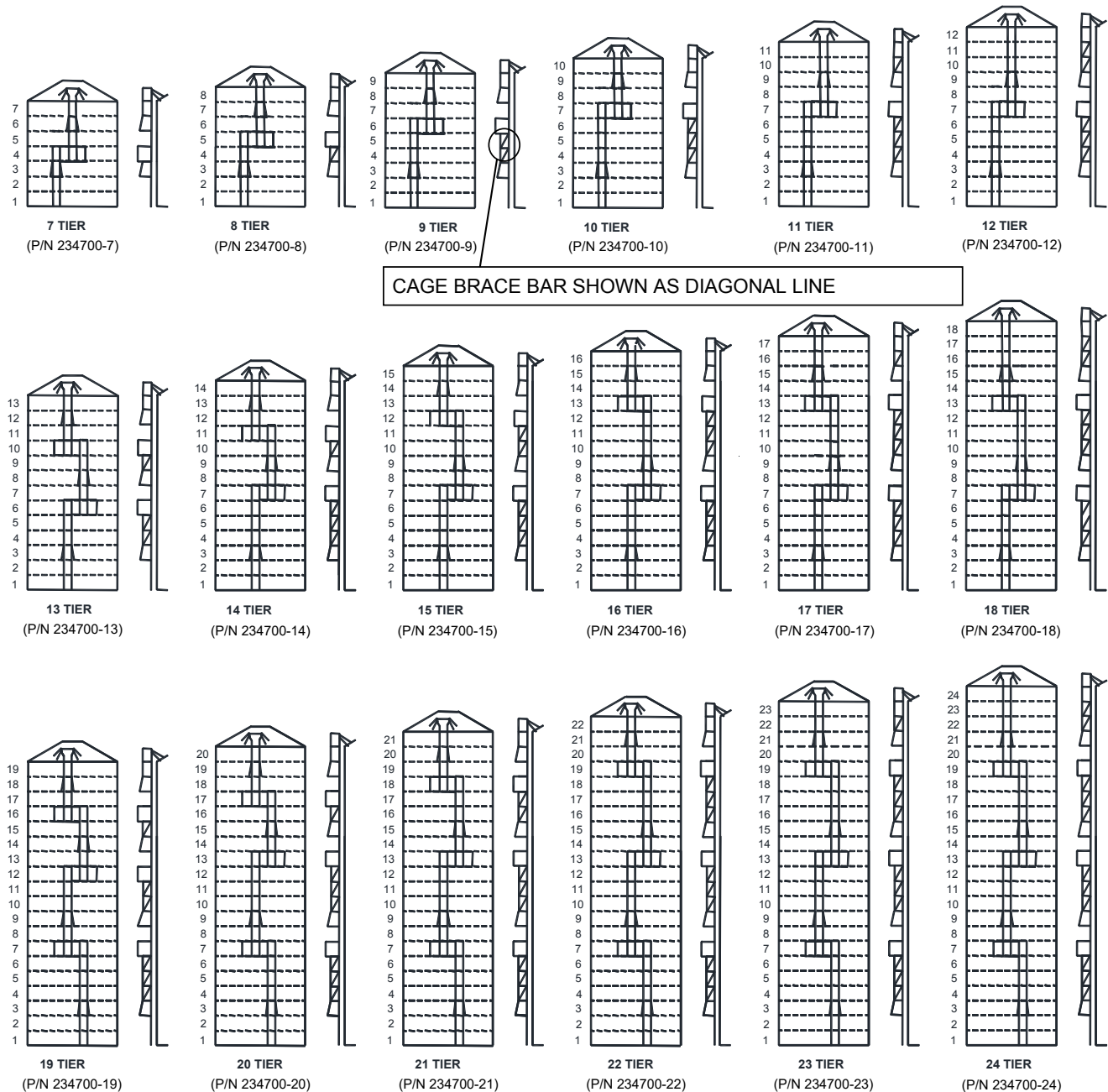
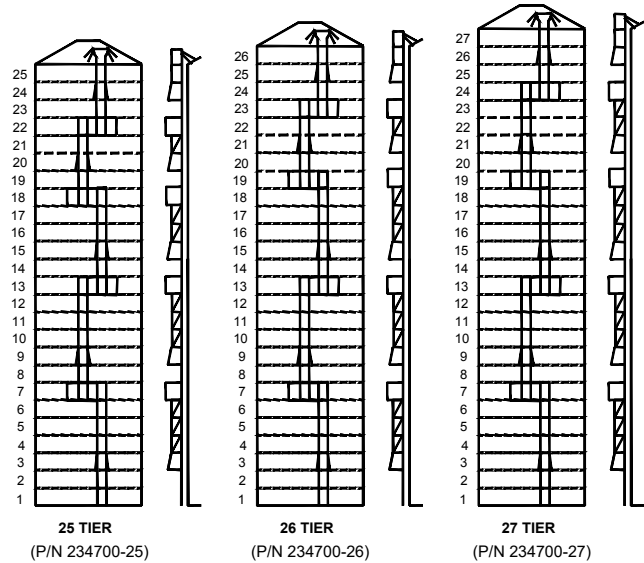


Figure 2 ANSI (for North America) Suggested Ladders, Cages and Platform Layouts (continued)



5.3. OSHA Compatible (for North America) Suggested Ladders, Cages and Platform Layouts

Westeel OSHA Compatible ladders are one component of the OSHA ladder system, which also requires a fall arrest system. When ordering these ladder kits for an OSHA system, it is the purchaser's responsibility to ensure that they have all the components required for an OSHA compliant system, including the fall arrest system. The following layouts show platforms situated at the top-right of the first ladder segment. They can also be assembled in a mirror image configuration.

Figure 3. OSHA Compatible (for North America) Suggested Ladders, Cages and Platform Layouts

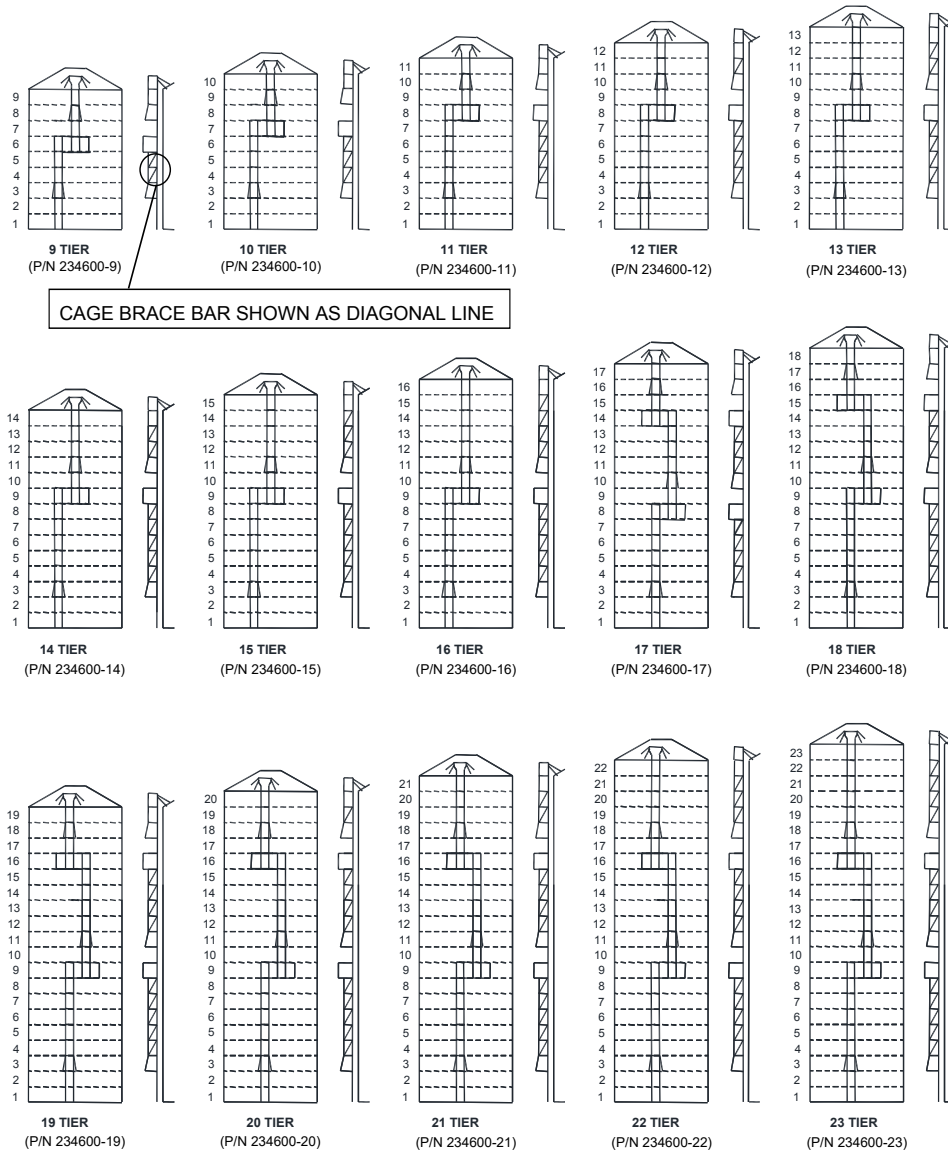
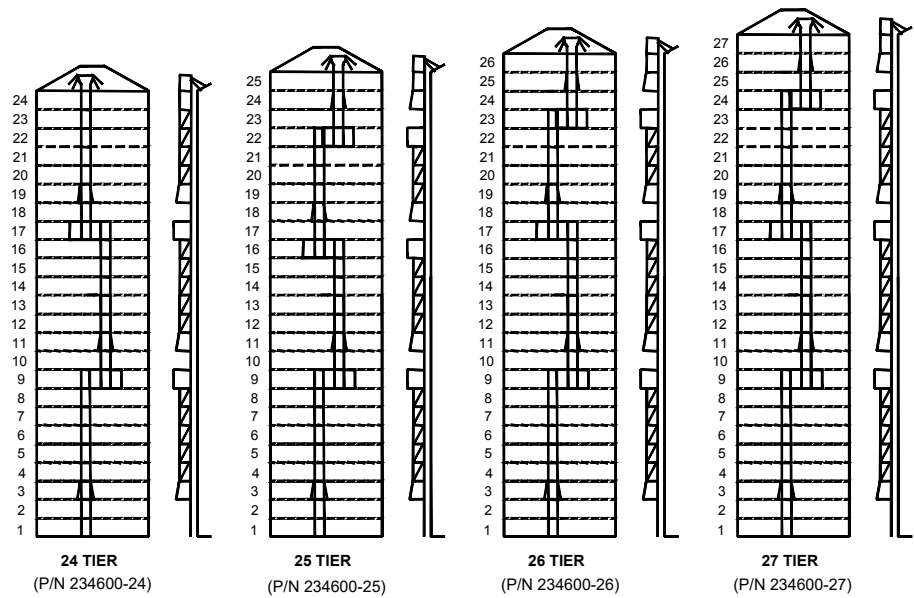


Figure 3 OSHA Compatible (for North America) Suggested Ladders, Cages and Platform Layouts (continued)



5.4. EN ISO 14122 (for Europe) Ladders, Cages and Platform Layouts

The following layouts show platforms situated at the top-right of the first ladder segment. They can also be assembled in a mirror image configuration.

This product has been designed and tested according to EN ISO 14122.

Note

The EN version, shown here, has the ladder extending to the bottom of the bin. The bottom cage section utilizes a standard hoop configuration.

Figure 4. Ladders, Cages and Platform Layouts — 5 to 14 Tiers

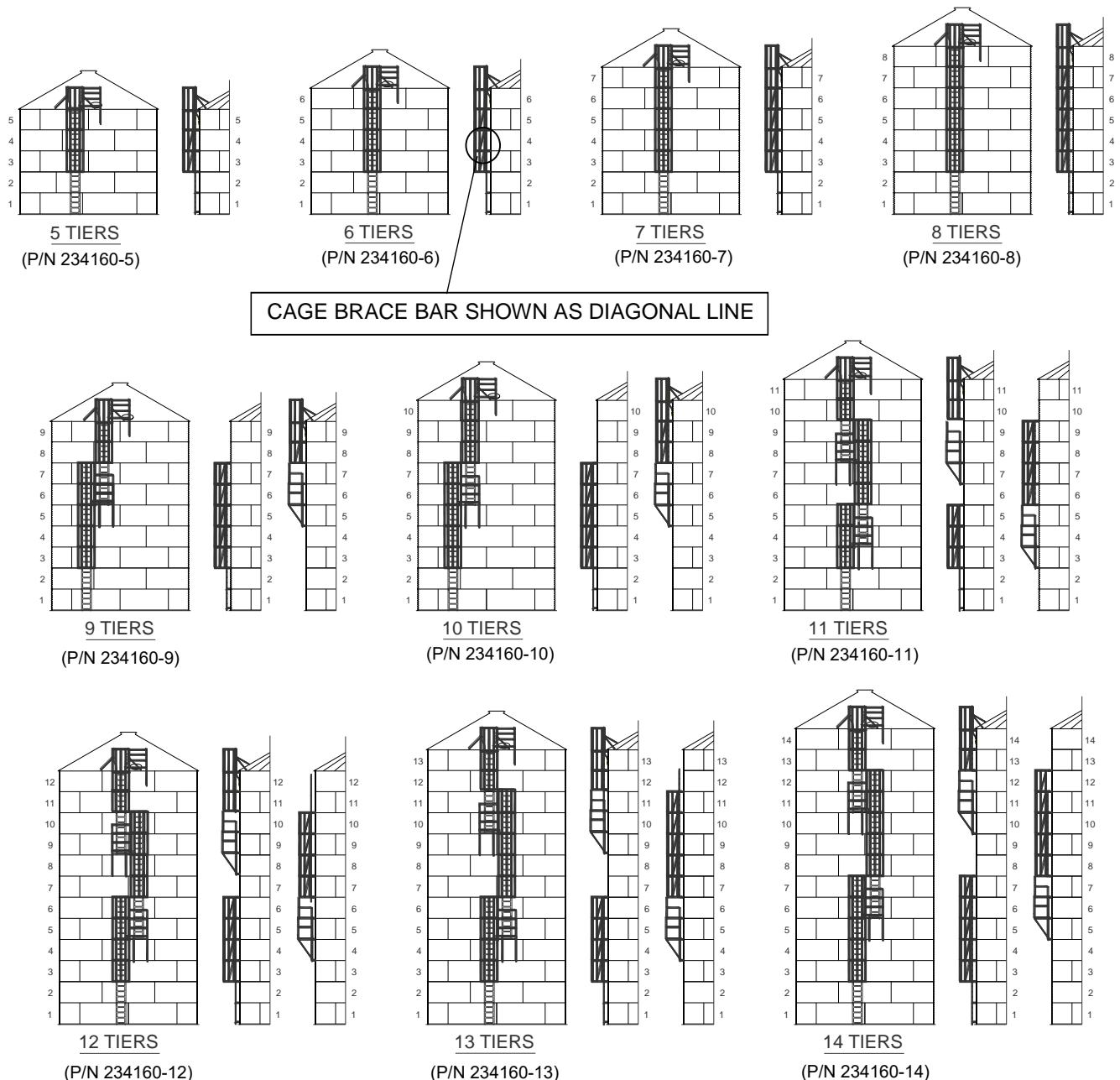


Figure 5. Ladders, Cages and Platform Layouts — 15 to 20 Tiers

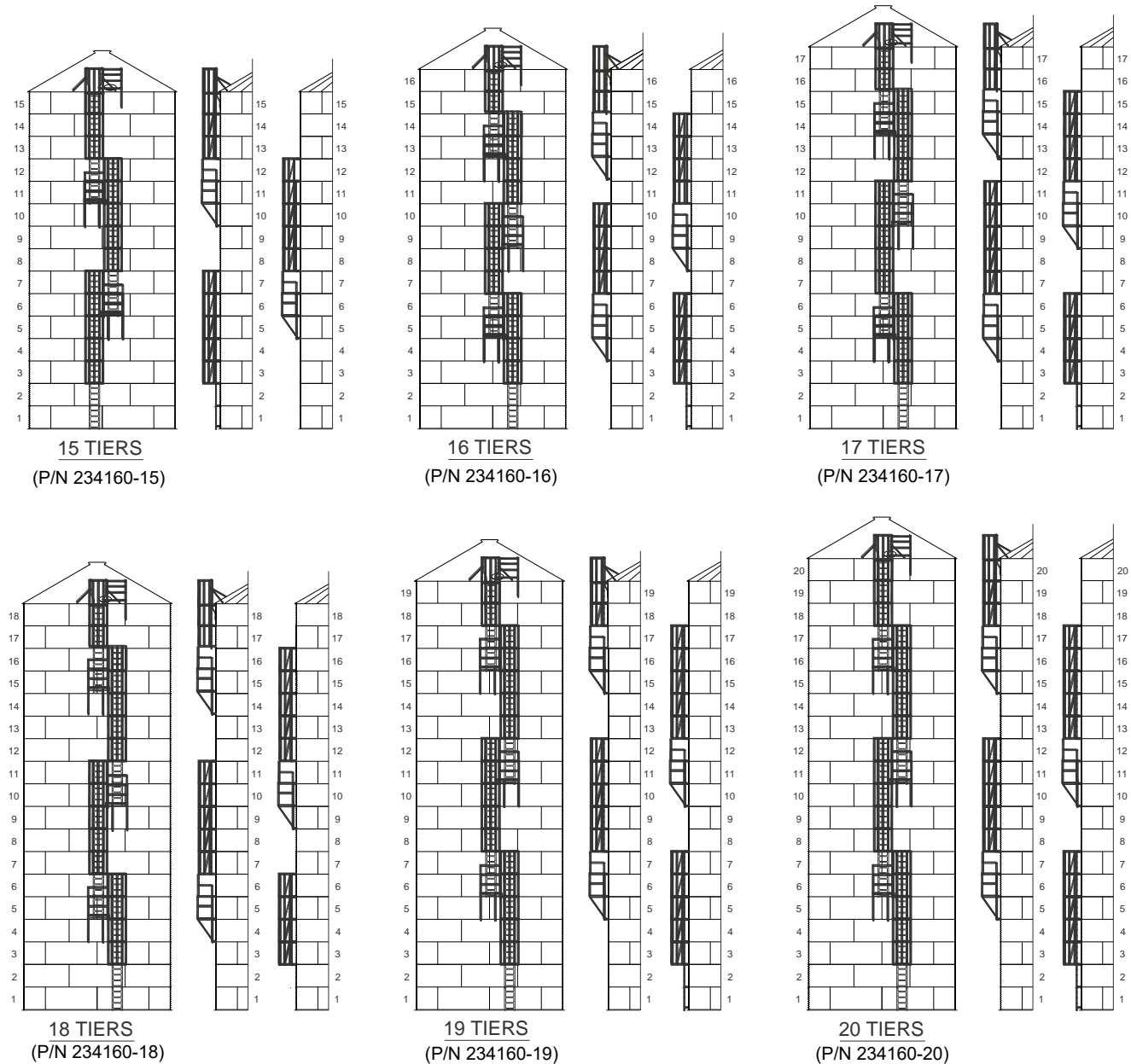


Figure 6. Ladders, Cages and Platform Layouts — 21 to 27 Tiers

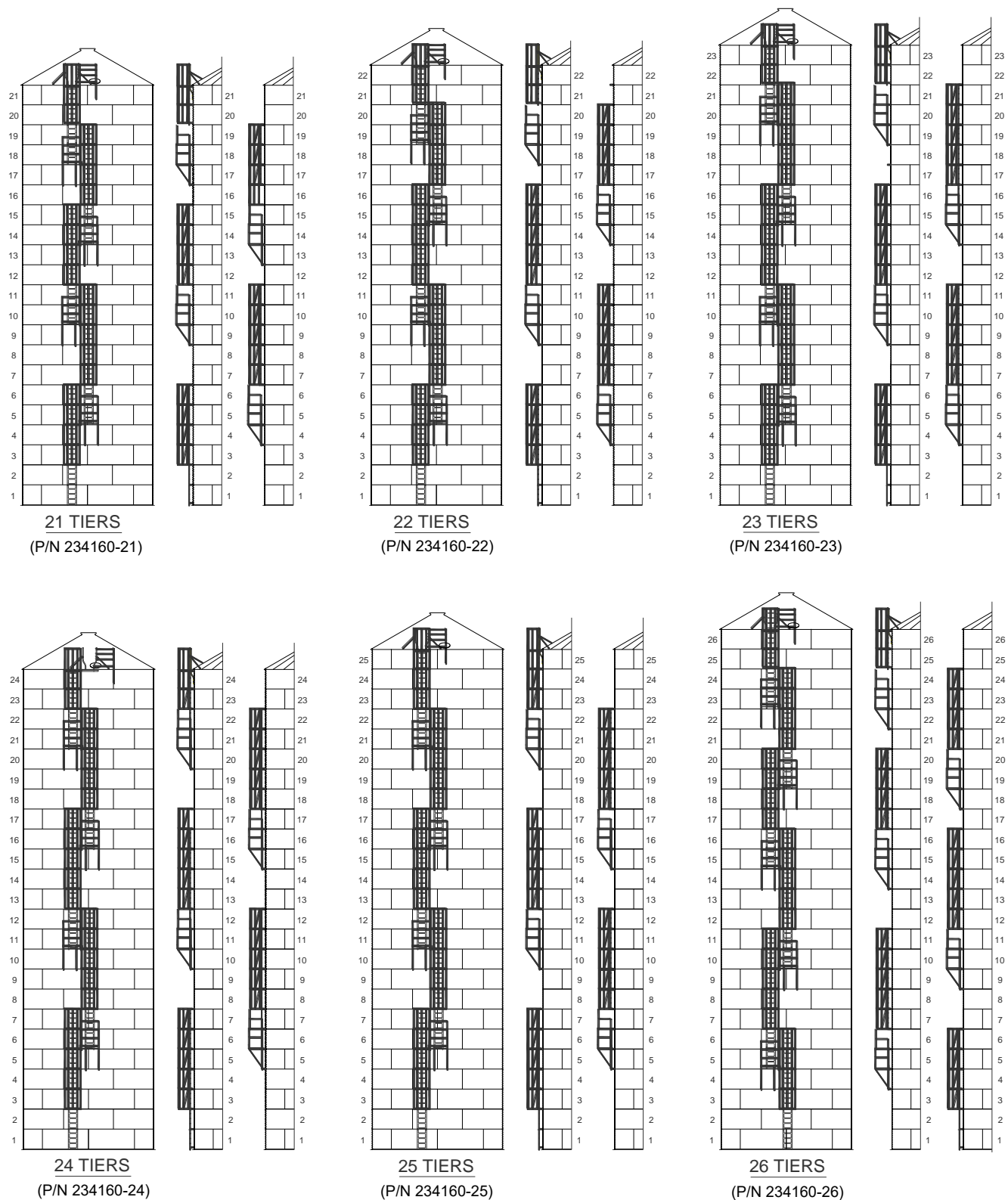
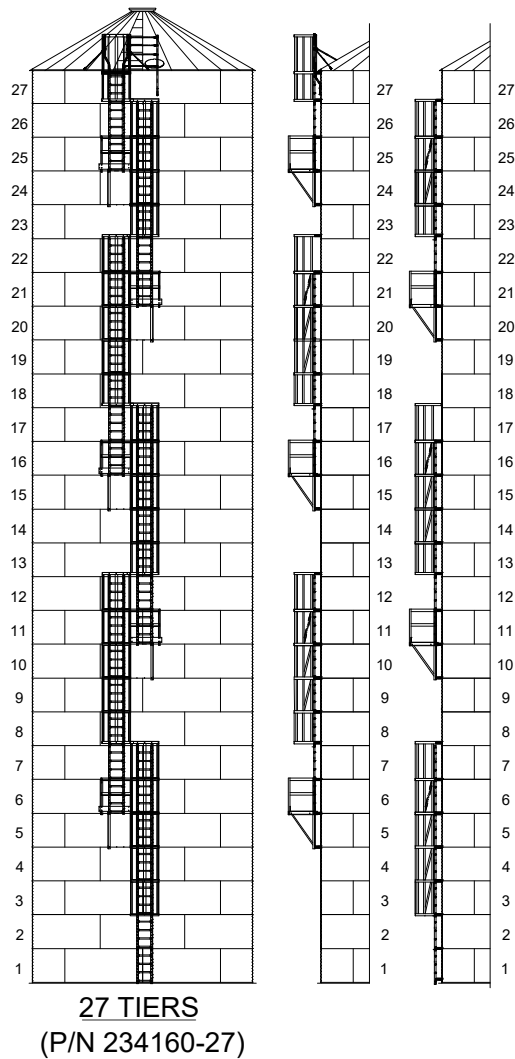


Figure 6 Ladders, Cages and Platform Layouts — 21 to 27 Tiers (continued)

5.5. Planning the Location of Ladder Components

Important

Timing (assembling components in the correct order and relative position) is very important when assembling ladders, eaves rails, roof stairs or roof ladders, platforms and inside ladders, and other bin components. Consideration must be given to this during the planning stages, before assembly of the bin is initiated.

Consider the following:

Inside Ladders

The inside ladder sections bolt to existing holes in the horizontal seams of the wall sheets, which are spaced at a consistent $9 \frac{3}{8}$ ". The inside ladders should also be centered on the roof panel that contains the inspection hatch opening. This roof panel should be centered on the horizontal wall sheet hole that will be the center of the inside ladder sections. Spinning the top ring angles and roof sheets relative to this location on the wall sheets may be required to achieve optimum fit-up.

Roof Stairs or Roof Ladders

The external ladder sections bolt to existing holes in the horizontal seams of the wall sheets. The roof stairs, or roof ladders, bolt to the ribs of roof panels, and are positioned to the right or left of the inspection hatch. The hatch should be centered on the inside ladders, if present. It may also be desirable to position the roof stairs, or roof ladders, relative to some external elements such as overhead conveyors, or catwalks.

The roof panel that the roof stairs / roof ladders are bolted to must be centered (as much as possible) to the center of the external ladder and eaves rails. To achieve optimum fit-up, it may be necessary to spin the top ring angles and roof sheets relative to the wall sheets, to align this roof panel relative to the intended location of the external ladder.

Uprights

Stiffened bins must be given additional consideration since the external ladder/platform combinations must be mounted on either side of a stiffener location. On a stiffened wall sheet the upright locations can be identified by the line of vertical holes set in from either end. (See [Figure 9 on page 25.](#))

Timing Considerations

For fully featured bins containing external ladders, eaves rails, platforms, roof stairs or roof ladders, and inside ladders, the following is an example of the timing considerations that should be undertaken prior to the construction of the bin.

1. Select the location of the various ladder components relative to external elements such as conveyors or catwalks.
2. Select the location of the various ladder components relative to other bin elements such as stencil sheets, door openings, remote vent opener, etc.
3. Determine the upright location that the external ladder sections and platforms will be centered on. During the initial assembly phases mark these locations on the top ring of wall sheets. For non-stiffened bins this is not a consideration.
4. Determine if the inspection hatch is located on the right or left side of the external ladder sections.
5. Locate the top ring angles and roof panels relative to this position such that the roof panel containing the inspection hatch is centered, as much as possible, on the hole in the wall sheet that is the center of the inside ladder sections. In general, the center of the inside ladder sections should be 37 ½" (or 4 horizontal wall sheet spaces @ 9 3/8") to the right or left of the center of the external ladder sections.
6. In the absence of an internal ladder, center the roof panel to which the roof stairs or roof ladders are being bolted to, on the center of the external ladder sections.

Note

North American layouts are shown throughout this document, unless otherwise noted.

Figure 7. Accessory Layout

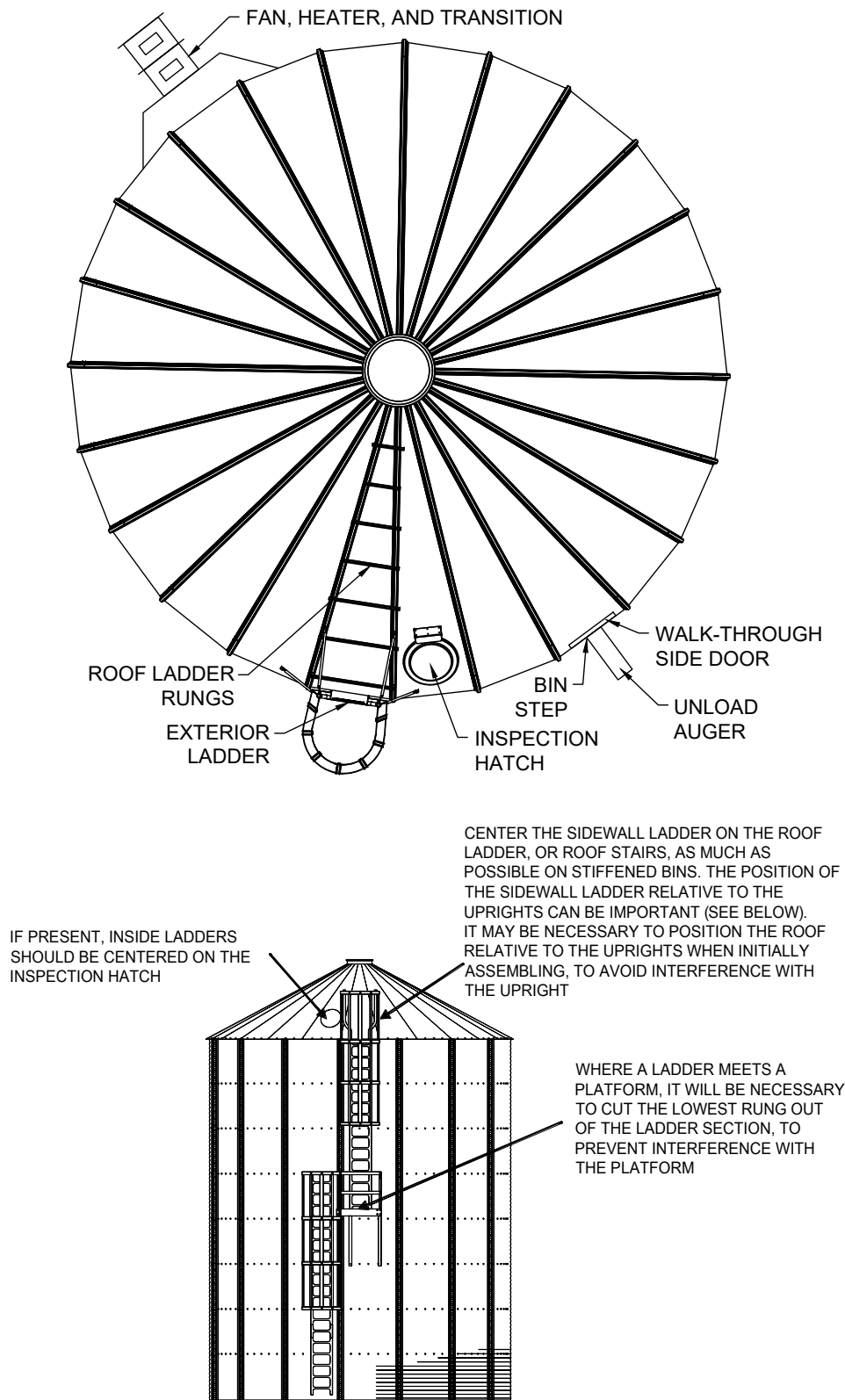
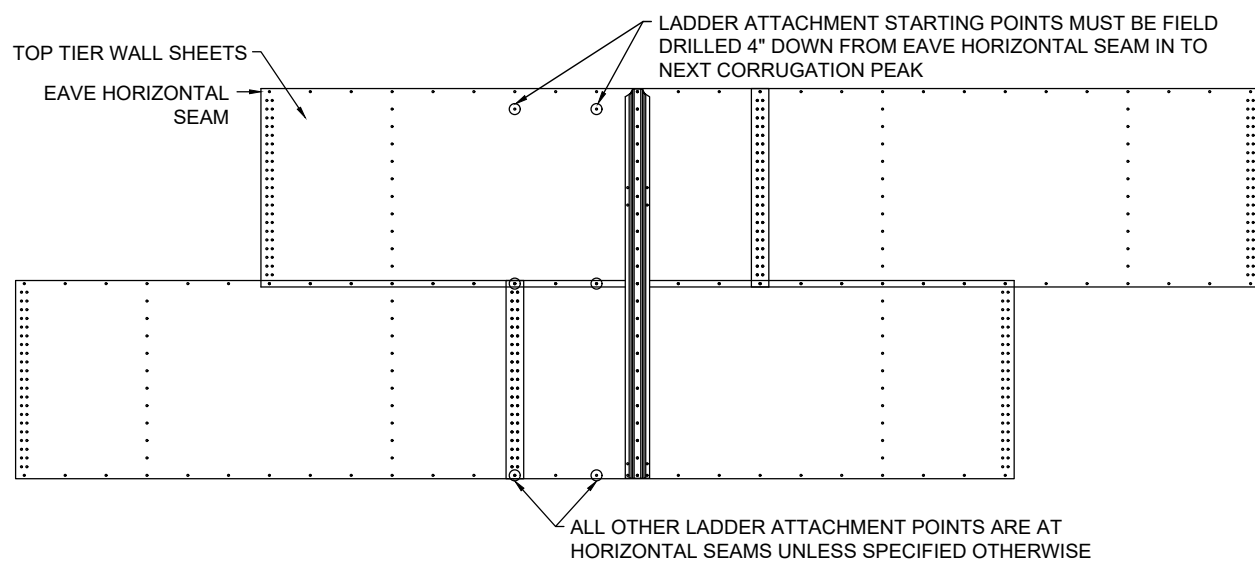
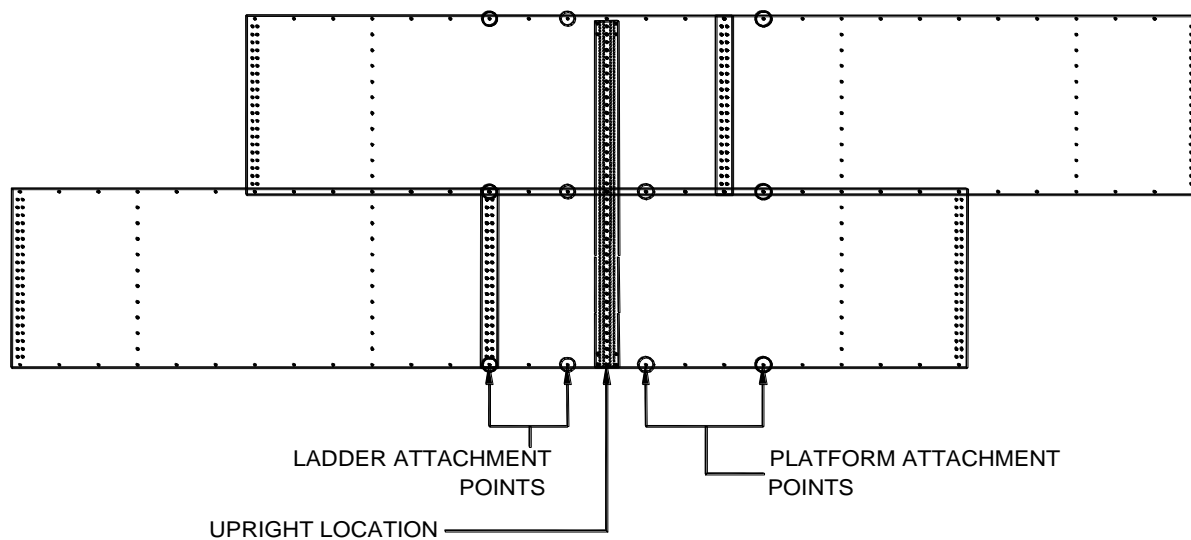


Figure 8. Ladder Attachment Starting Points**Figure 9. Intermediate Ladder Platform Attachment Points**

If there is a ladder/platform combination, it is necessary to position the consecutive sidewall ladder runs on either side of an upright. The proper side wall bolt holes are illustrated below for a ladder positioned to the left of the upright. The mirror image of these holes can be used if the ladder is on the right side of the upright.

5.6. Ladder Installation

(For flat bottom Wide-Corr® bin — EN version shown)

Figure 10. Side View of Bin with Ladder

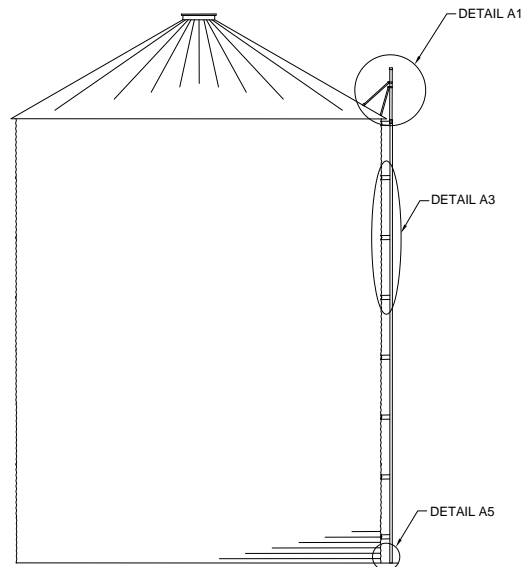
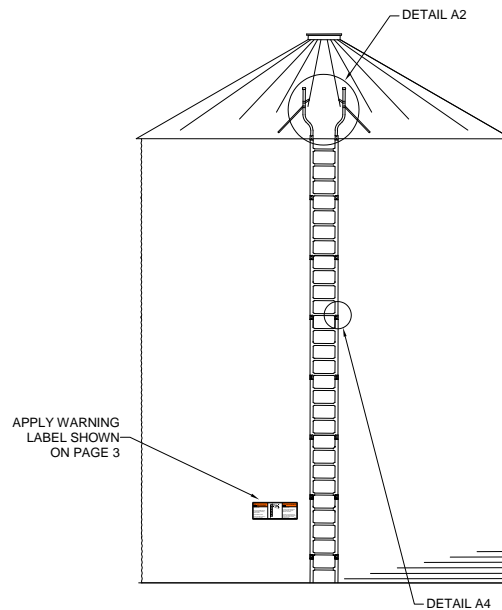


Figure 11. Front View of Bin with Ladder



Note

1. This eaves rail configuration is compatible with a cage system.
2. The first step is to install the top ladder clips 4" below the top horizontal wall sheet seam as shown in Detail A1.
3. If extending the ladder to the ground, the ladder block-off plate (P/N 234530) should be installed to prevent unauthorized usage.

Figure 12. Detail A1

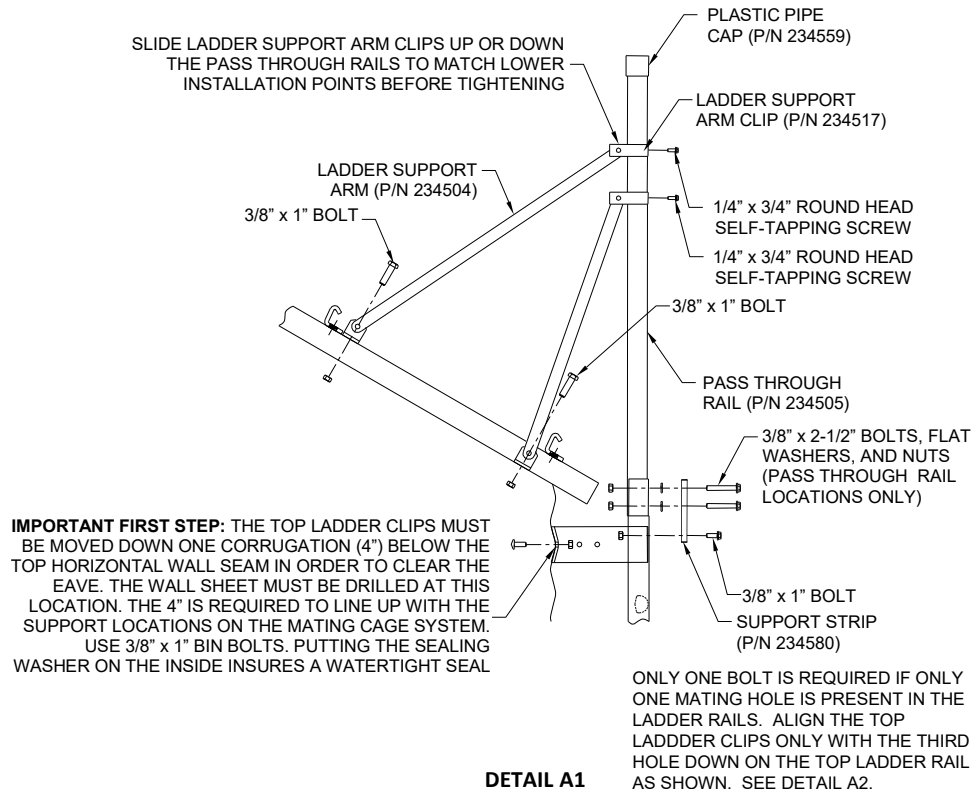


Figure 13. Top View

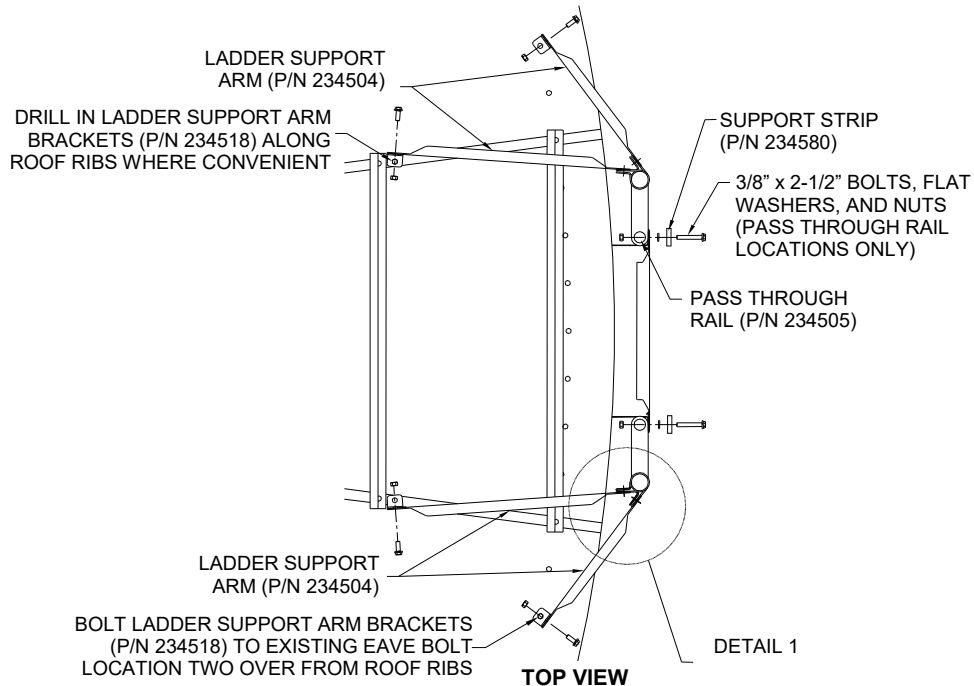


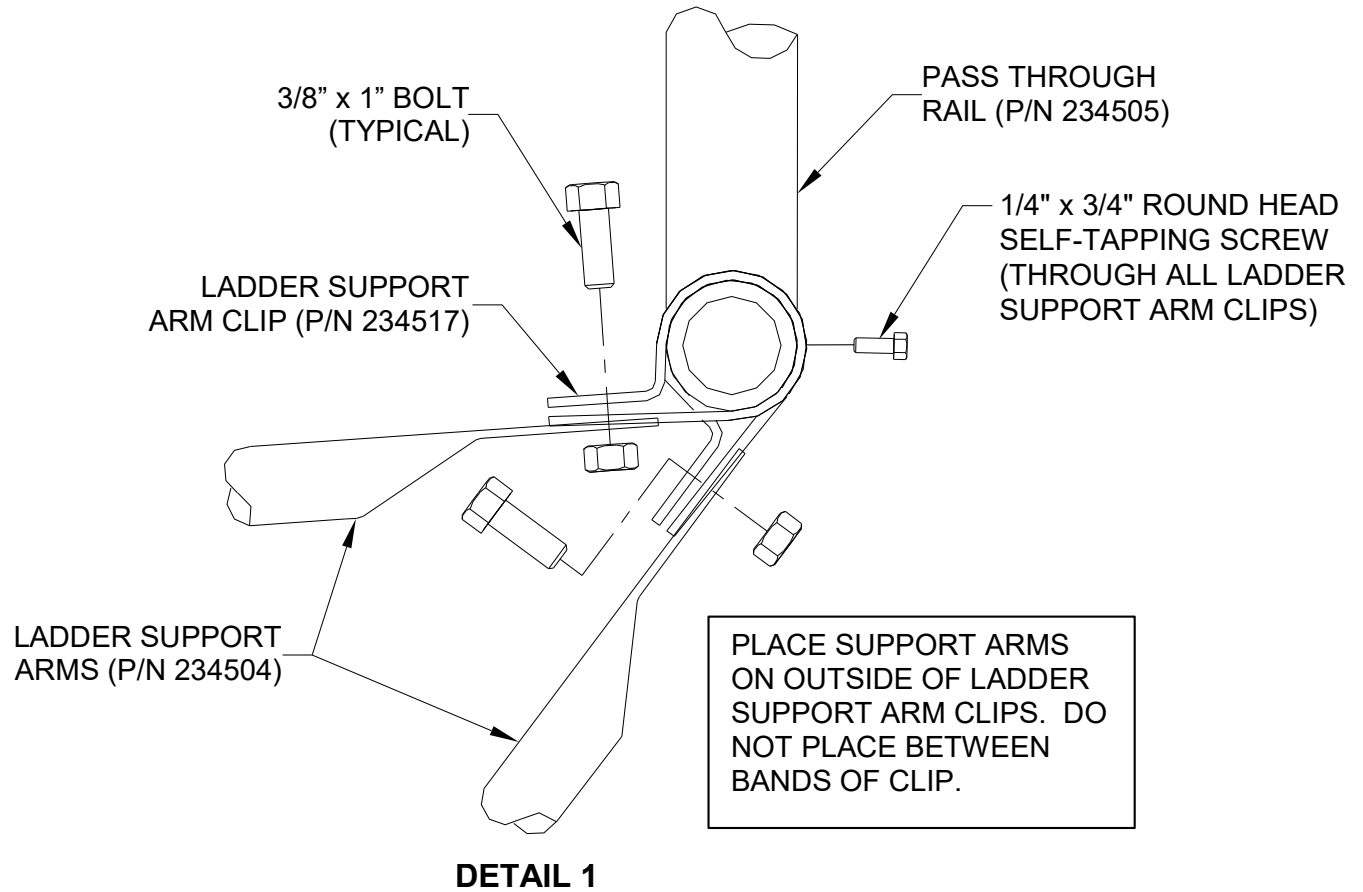
Figure 14. Detail 1

Figure 15. Section A2 and Section A-A

NOTE THE ORIENTATION OF THE PASS THROUGH RAILS

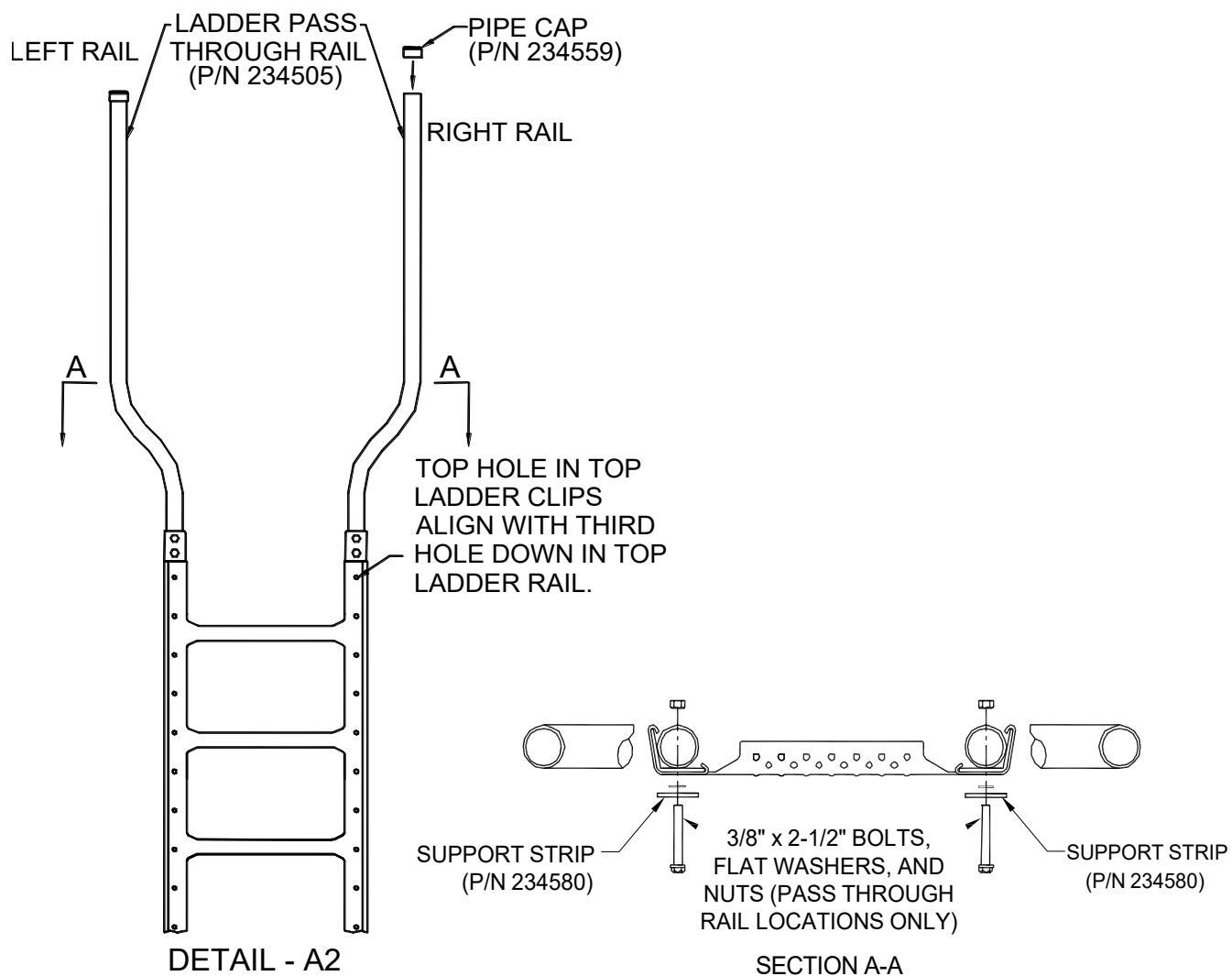
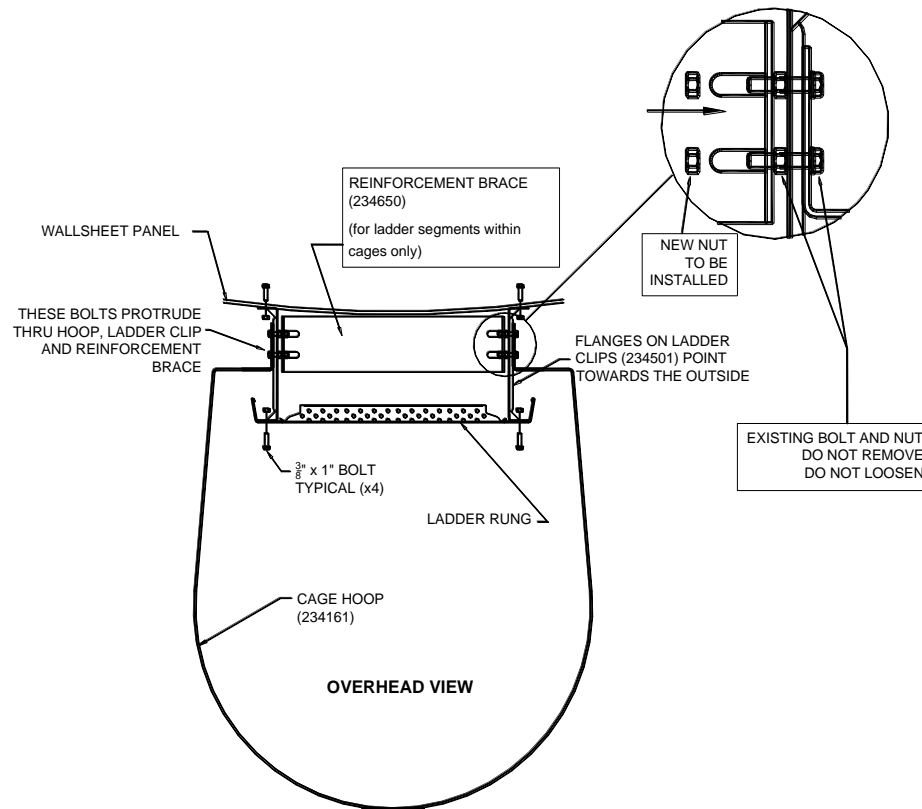


Figure 16. Reinforcement Brace

This reinforcement brace is designed to slip over pre-assembled ladder-clip-bolt assembly with no adjusting of the existing elements. When pressed fully into place, the brace will sit at an angle. This is normal and it is designed for shedding snow and water. You may slope the brace either inward or outward. Lastly, install and tighten the supplied nuts inside of the assembly.

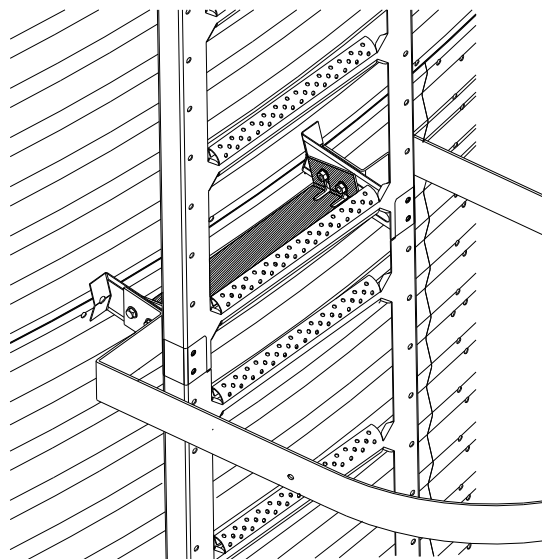
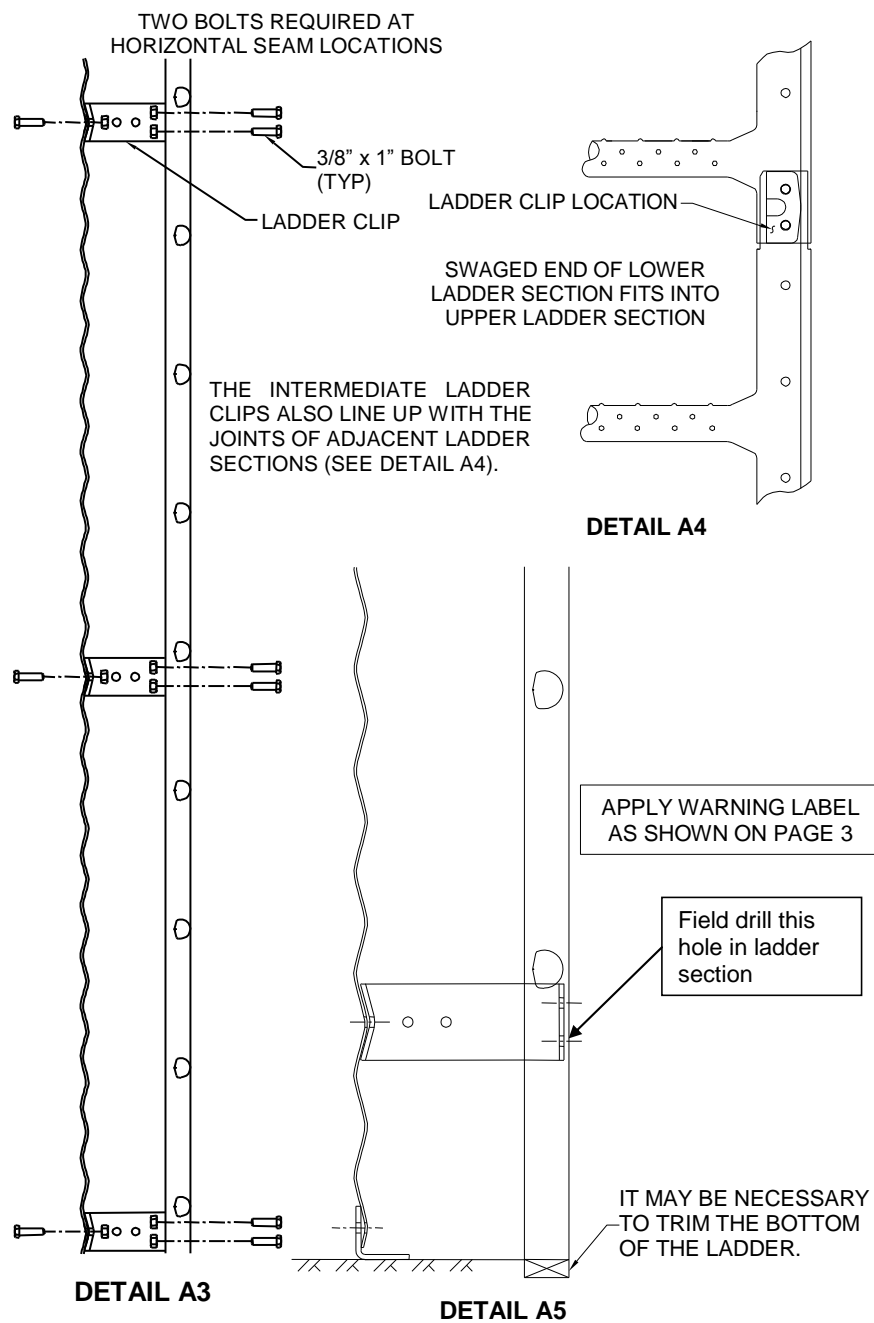
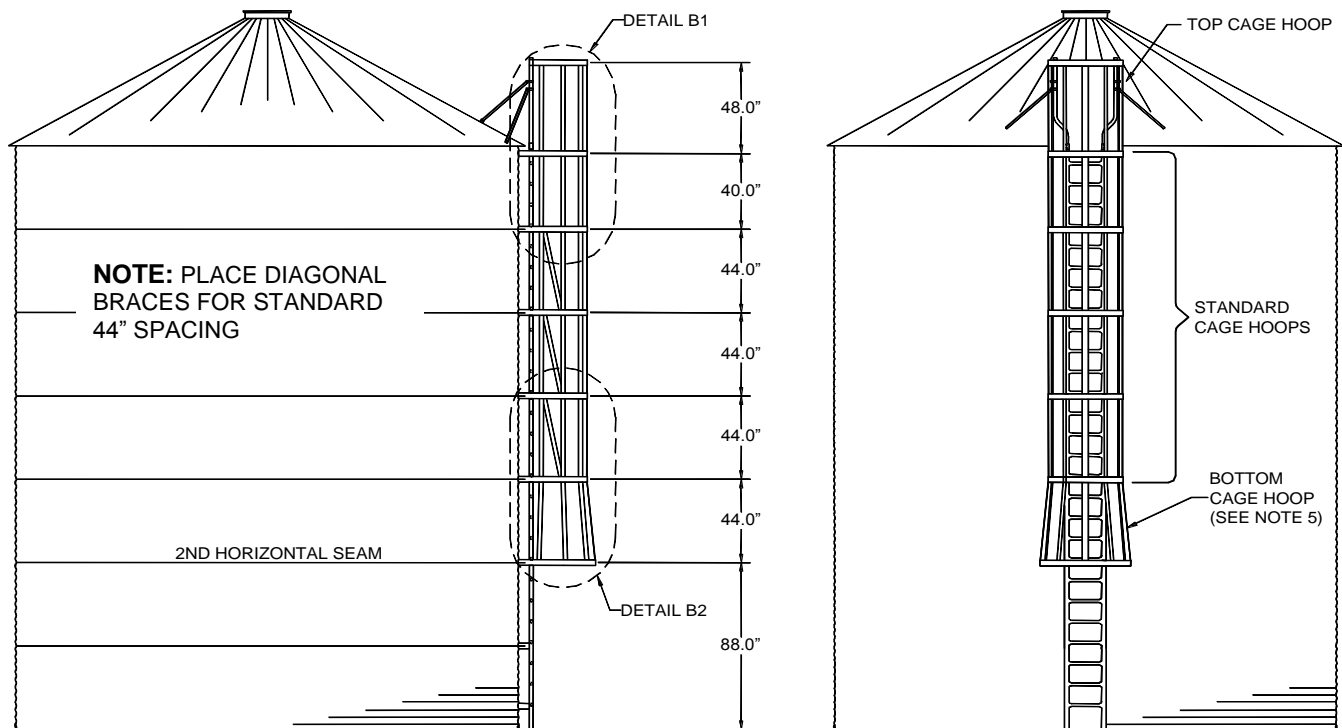
Figure 17. Reinforcement Brace

Figure 18. Details A3, A4 and A5

5.7. Ladder Cage Installation

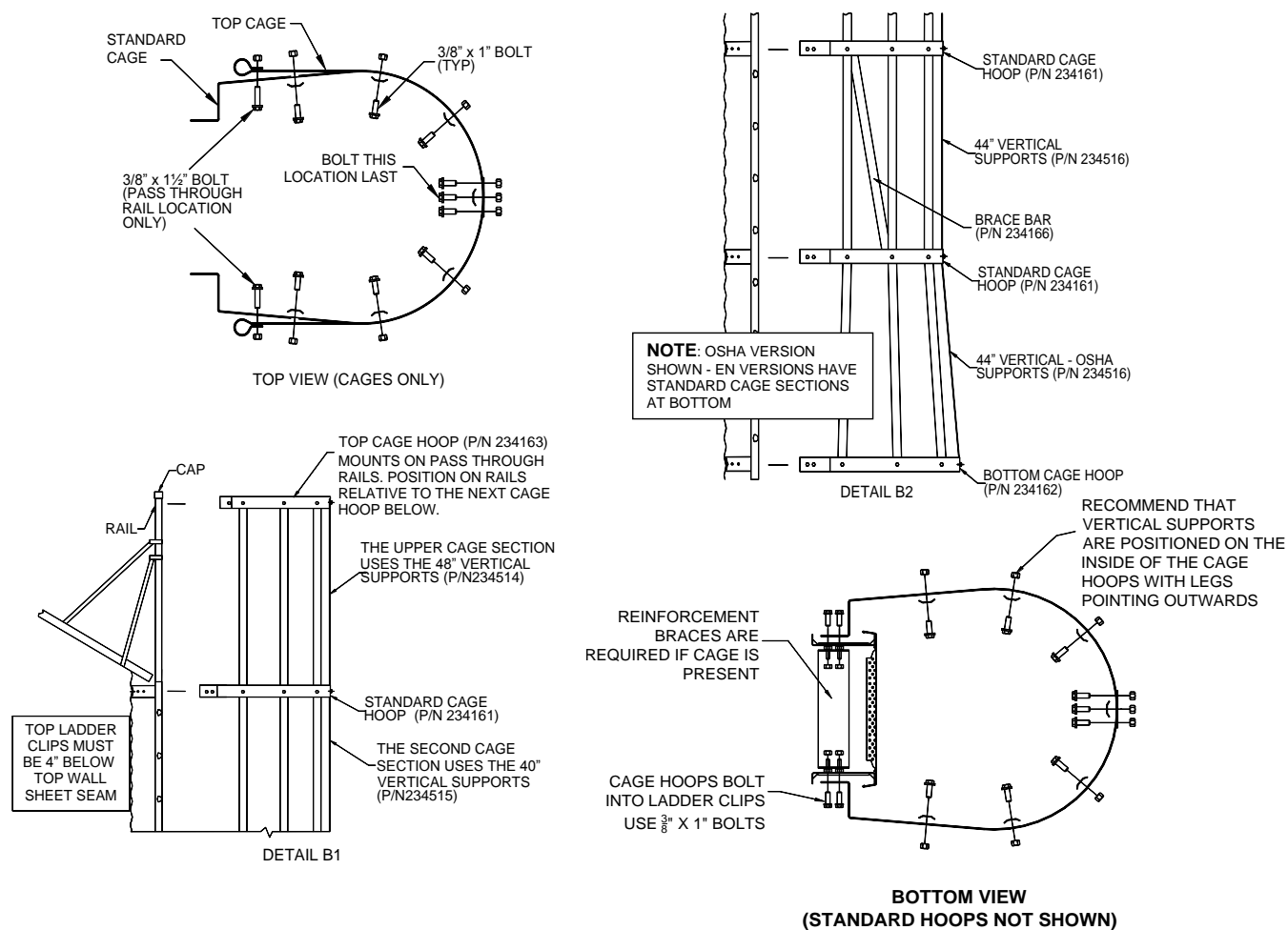
(for flat bottom Wide-Corr® Bin)

Figure 19. Ladder Cage Installation



Note

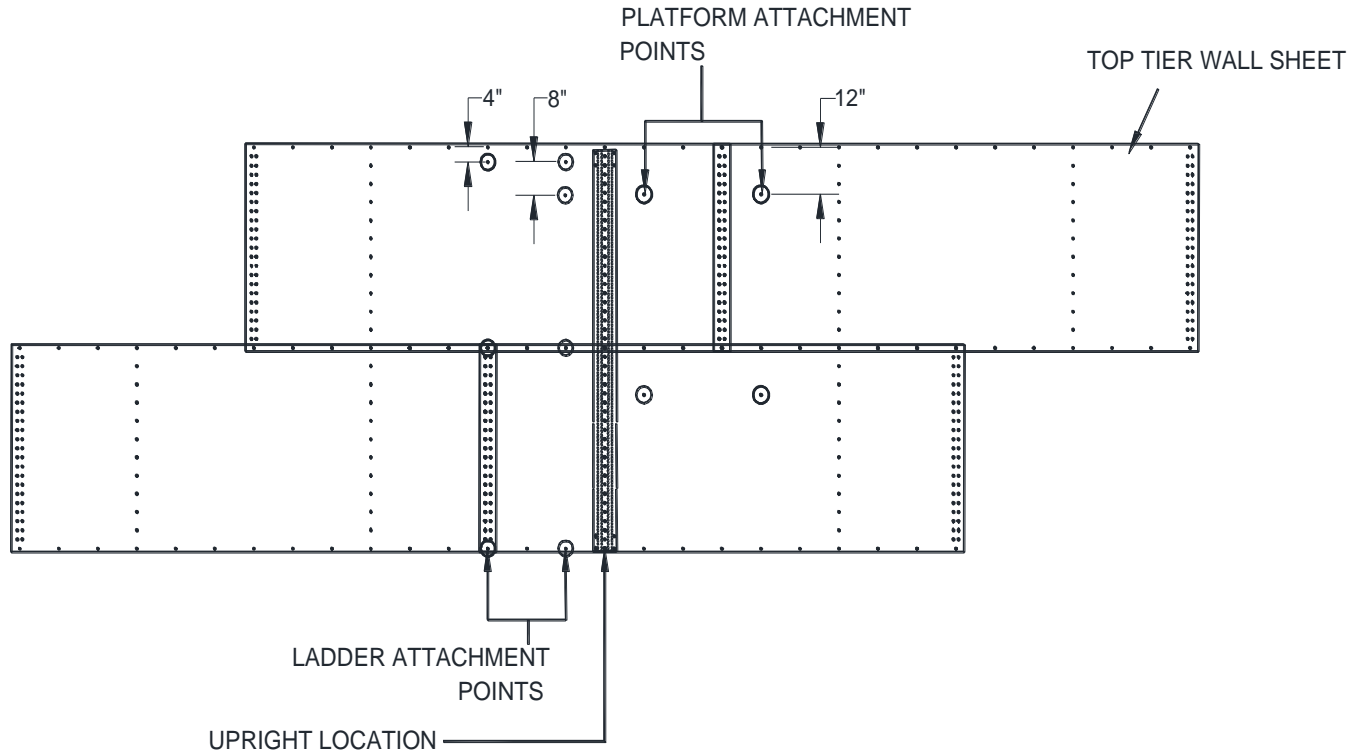
1. This cage system is compatible with "pass through rail" version of ladder system.
2. The top cage section uses 48" vertical cage bars, the second section uses 40" vertical bars, and all remaining sections use 44" vertical bars (as shown above). The top ladder clips must be moved down 4" below the top wall sheet seam.
3. Bottom cage hoop aligns with 2nd horizontal seam from bottom – (i.e. 88" from the bottom seam).
4. Assemble ladder as indicated in the flat bottom bin section "A".
5. For EN versions, the standard hoop sections are also used at the bottom cage hoop location.

Figure 20. Ladder Cage Details

5.8. Top Platform Installation

The top platform will be at the eave of the bin and can be accessed using the wall ladders. Planning the location of the ladder and the top platform is important for easier assembly and to avoid interference. The position of the sidewall ladder relative to the uprights is important. The attachment points of the ladder and the top platform to the bin are shown in the layout. The attachment points that do not lie on the wall sheet seams will be field drilled.

Figure 21. Top platform attachment points

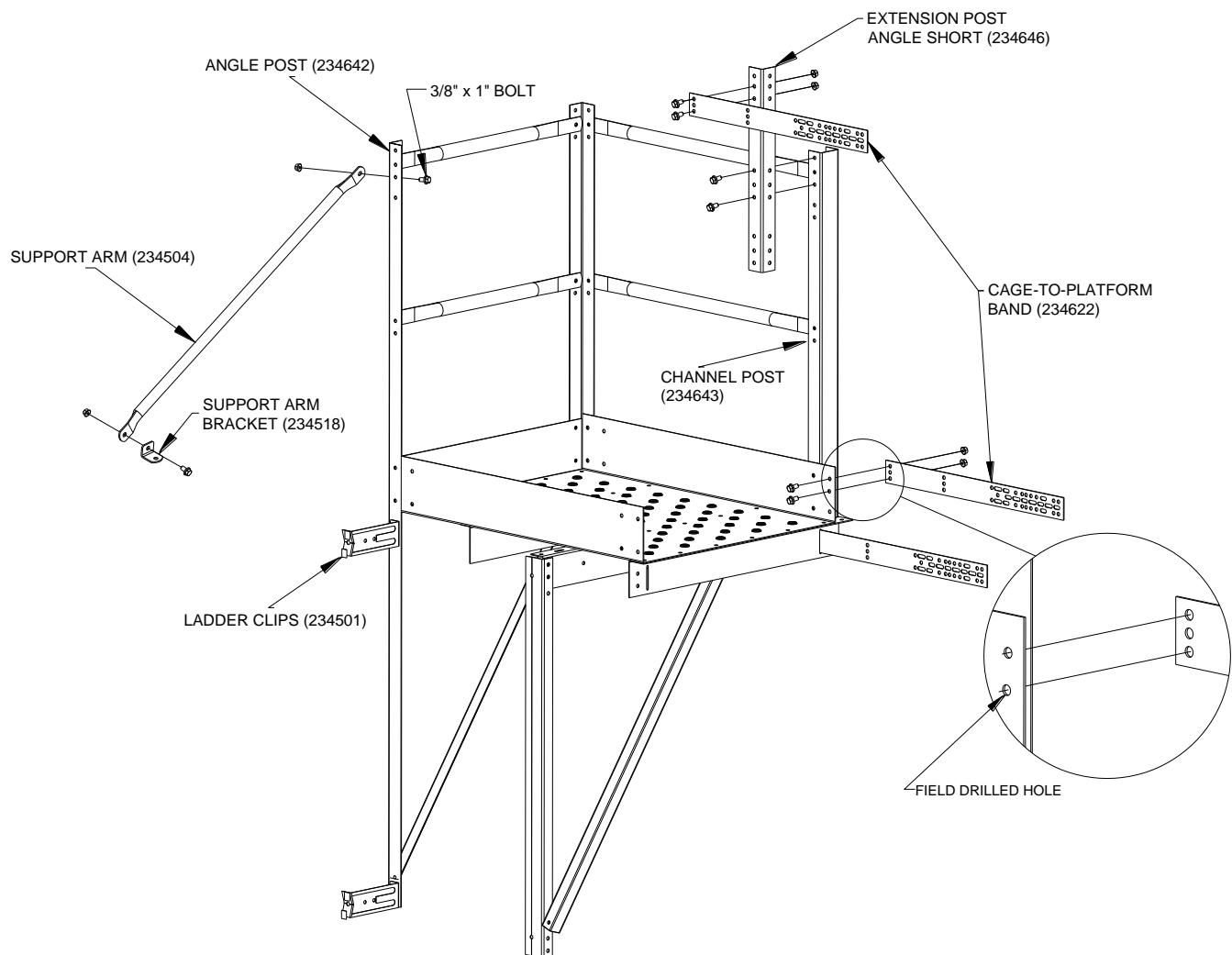


5.8.1 Top Platform Assembly

1. Follow the instructions in [Section 5.9 – Intermediate Platform Installation on page 38](#) up to the assembly of handrail and mid-rails. On the angle post (234642) there will be only two ladder clips (234501) bolted 44" apart. The third ladder clip will be used on the cage hoop assembly for the top platform.
2. The extension post angle short (234646) will be bolted to the channel post (234643) and the cage-to-platform band (234622) bolted to the extension post angle.
3. The third cage-to-platform band will be bolted onto the platform plank (234611) using 3/8" x 1" bolts and equivalent nuts. An additional bolt hole is required to be field drilled as shown.
4. A support arm (234504) will be bolted onto the angle post (234642) and a support arm bracket (234518) is attached to the support arm that will bolt onto the roof sheet rib.

See [Section 5.8.2 – Cage Assembly for Top Platform on page 36](#) for top platform cage assembly details

Figure 22. Top platform assembly

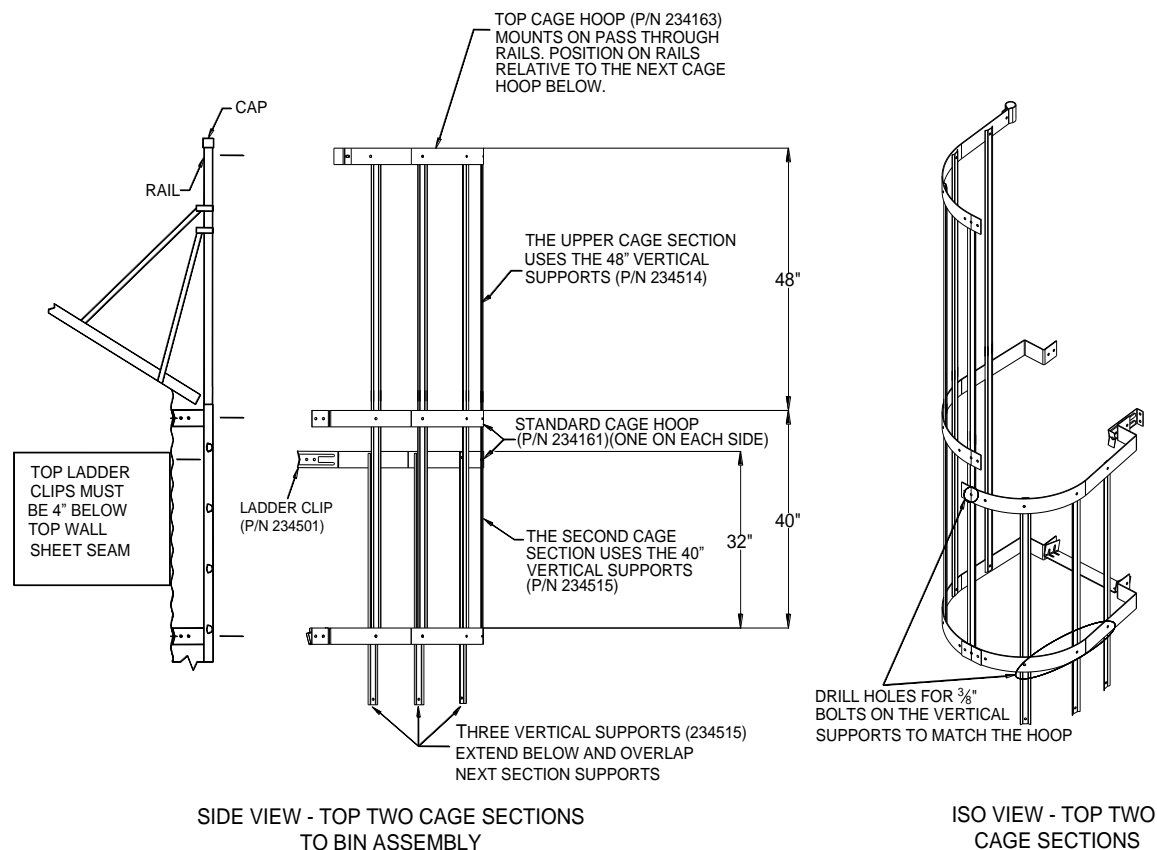


5.8.2 Cage Assembly for Top Platform

The top platform will require a special ladder cage assembly. The top two cage sections will be assembled differently compared to the standard cage sections to accommodate installation of the top platform. Once the top two sections are assembled, the standard installation instructions can be followed to complete rest of the cage assembly.

1. The top cage section uses 48" vertical cage supports, the second section uses 40" vertical supports, and all remaining sections use 44" vertical supports.
2. The cage hoop (234161) adjacent to the top platform base is installed approximately 8" below the standard position of the hoop as shown. A ladder clip (234501) is bolted onto that cage hoop which connects it to the bin wall.
3. The top ladder clips must be moved down 4" below the top wall sheet seam.
4. Three of the vertical supports extend to the cage section below and overlap with the next set of vertical supports. In case the next cage section has a larger cage hoop (234162) at the bottom, the next set of vertical supports must be installed on the inside i.e. behind the extended vertical supports. The lower end of the vertical supports must be pulled out and bolted to the inside of the larger bottom cage hoop.

Figure 23. Side and ISO views of top two cage sections to bin assembly

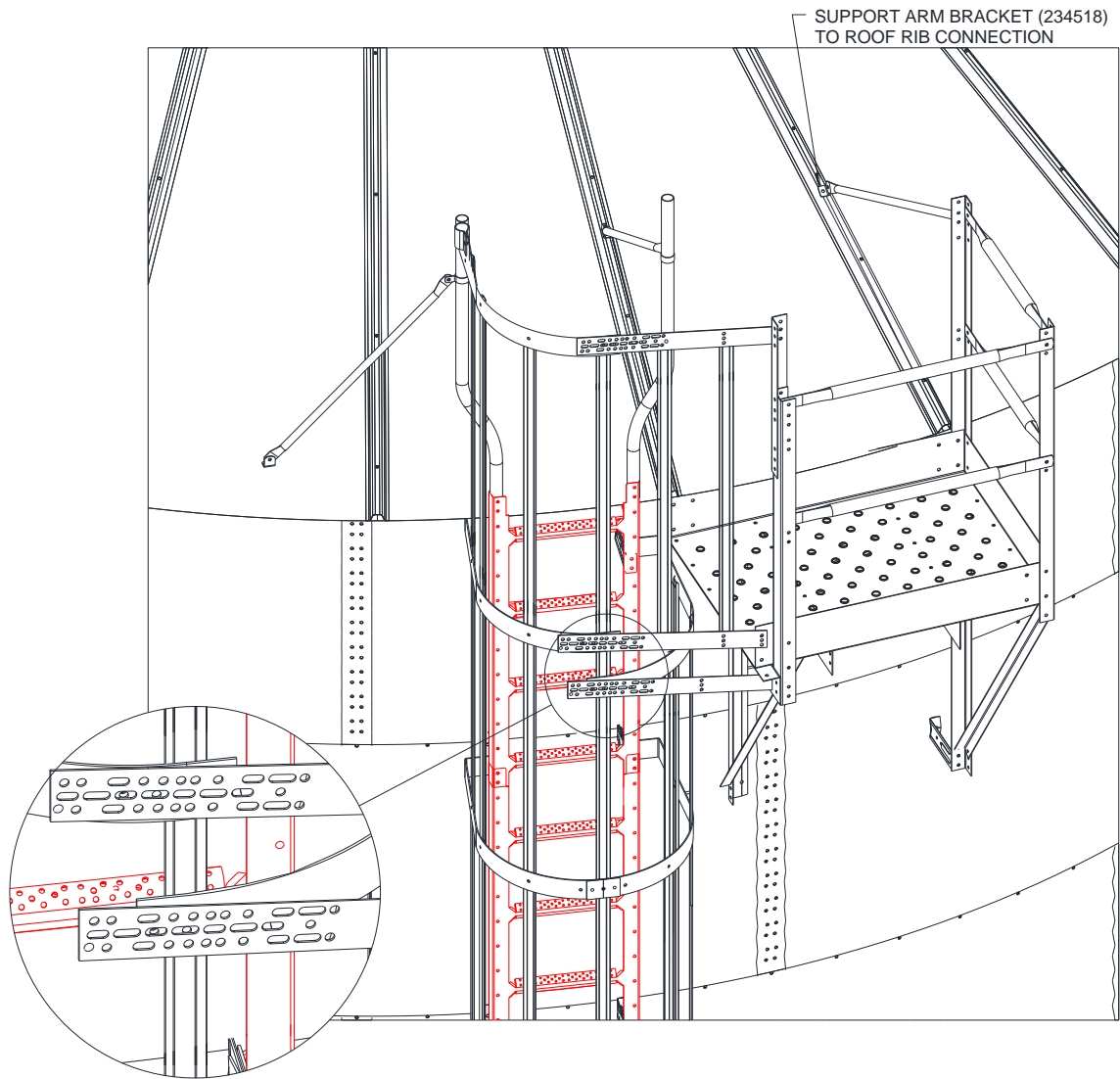


Note

The cage assembly and the top platform assembly are connected using the cage-to-platform bands (234622). These bands have a number of slots and holes for easy assembly with the cage hoop (234161). When securing the platform support arms to the roof make sure the support arm brackets (234518) are bolted to the ribs of the roof.

5.8.3 Top Platform to Ladder Cage Connection

Figure 24. Top Platform to Ladder Cage Connection



5.9. Intermediate Platform Installation

5.9.1 Platform Structure to Bin Wall Connection

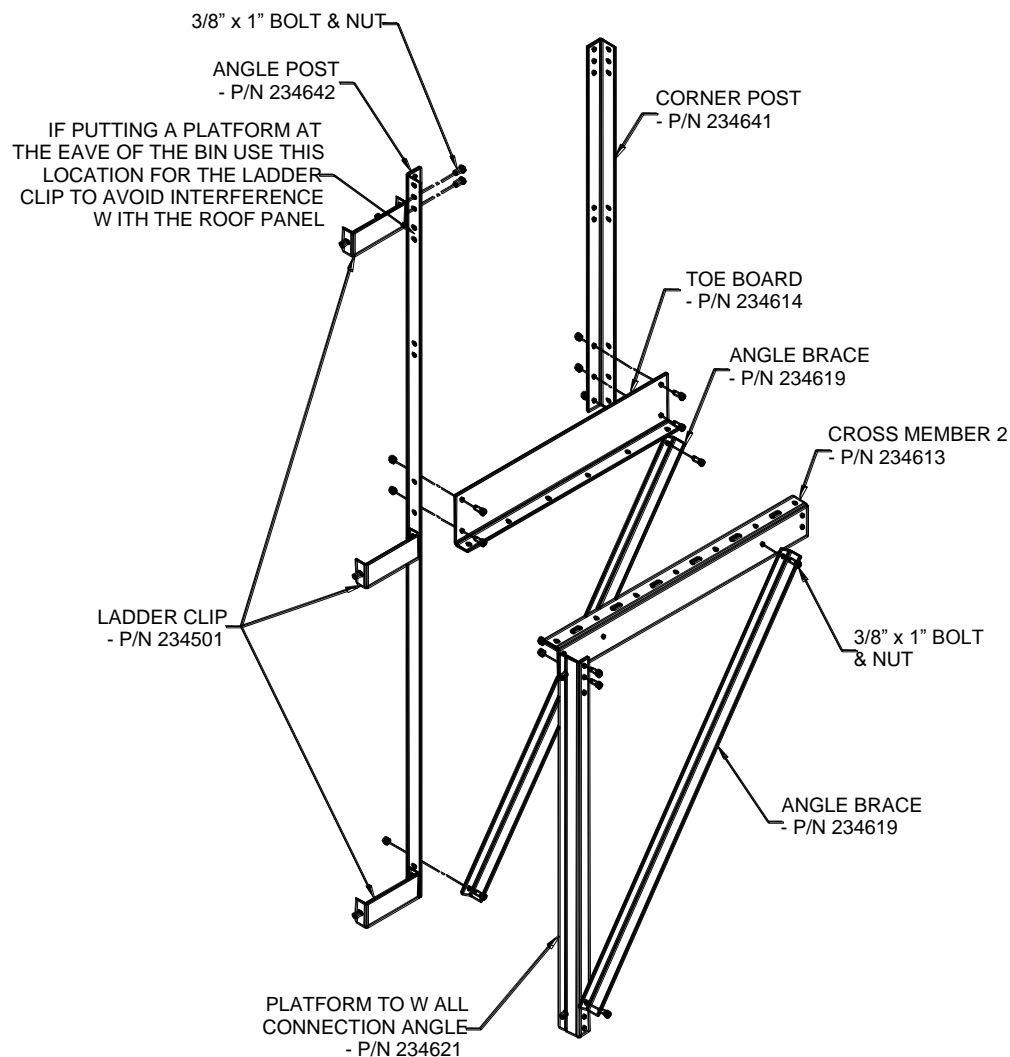
Important

Platform can be installed on either side of the ladder. Illustrations show platform on the right side of ladder when facing the bin.

Note

It is advisable to bolt the platform to the bin wall before attaching the bottom ladder section that continues upward. It will be necessary to cut about 11" off of the bottom of this ladder section to fit. The two lower ladder clips will also need to be moved up 12" to a higher corrugation and drilled in.

Figure 25. Platform Installation



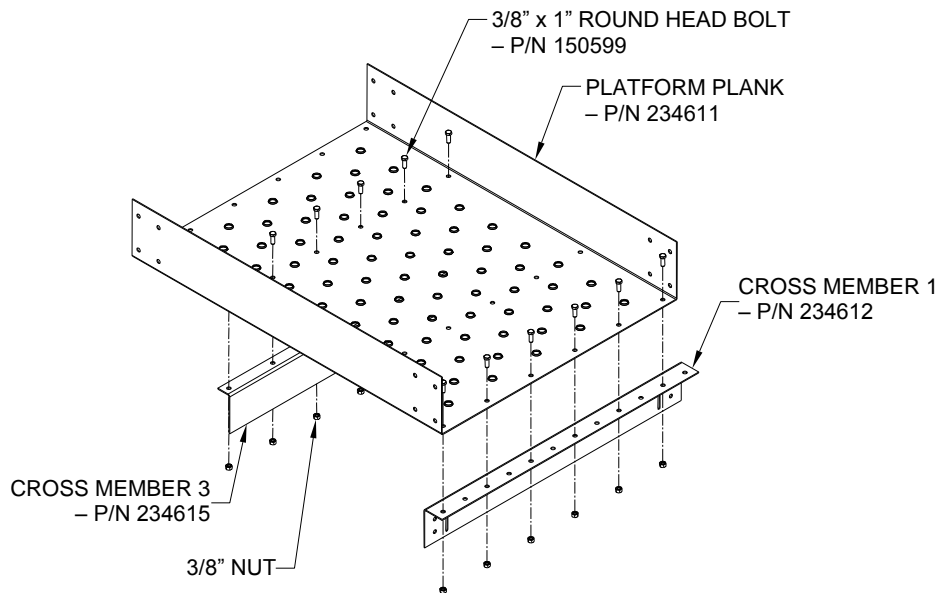
1. Bolt three ladder clips (234501) to the bin at the locations as shown on the wall sheet in [Figure 9 on page 25](#).
2. Bolt the angle post (234642) to the ladder clips with 3/8" x 1" bolts.

3. The platform to wall connection angle (234621) bolts to the bin 3 horizontal hole spacings away from the angle post with two 3/8" x 1" bolts.
4. Bolt cross member 2 (234613) to the platform to wall connection angle.
5. Bolt the angle brace (234619) to cross member 2 and platform to wall connection angle.
6. Attach the toe board (234614) to the angle post.
7. Bolt the corner post to the toe board.
8. Bolt the angle brace (234619) to the corner post and angle brace.

5.9.2 Platform Plank to Platform Structure

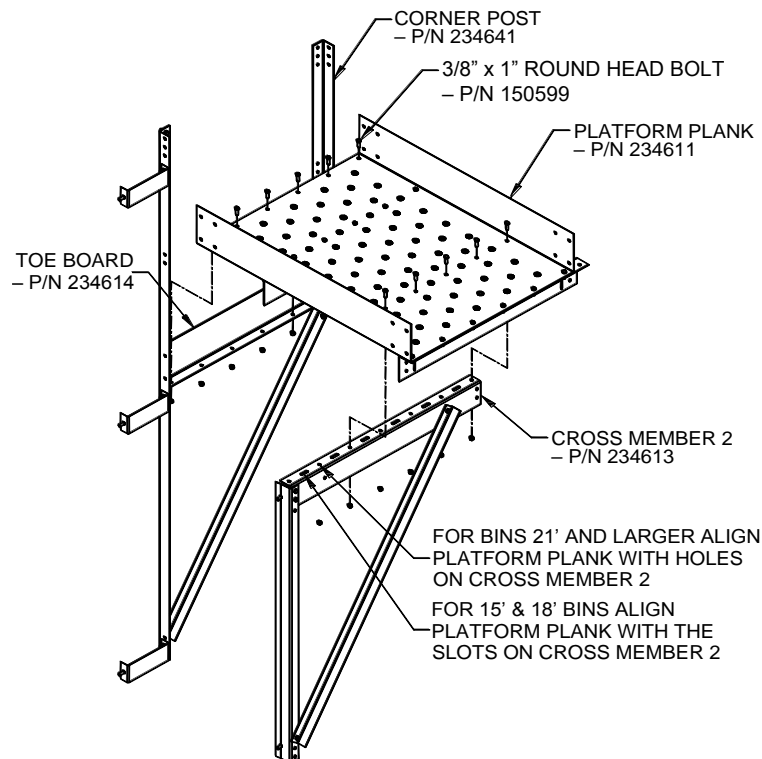
1. Attach cross member 1 (234612) and cross member 3 (234615) to the platform plank (234611) using 3/8" x 1" round head bolts (150599).

Figure 26. Platform Plank and Cross Members



2. Bolt the platform plank and cross members to the toe board and cross member 2.

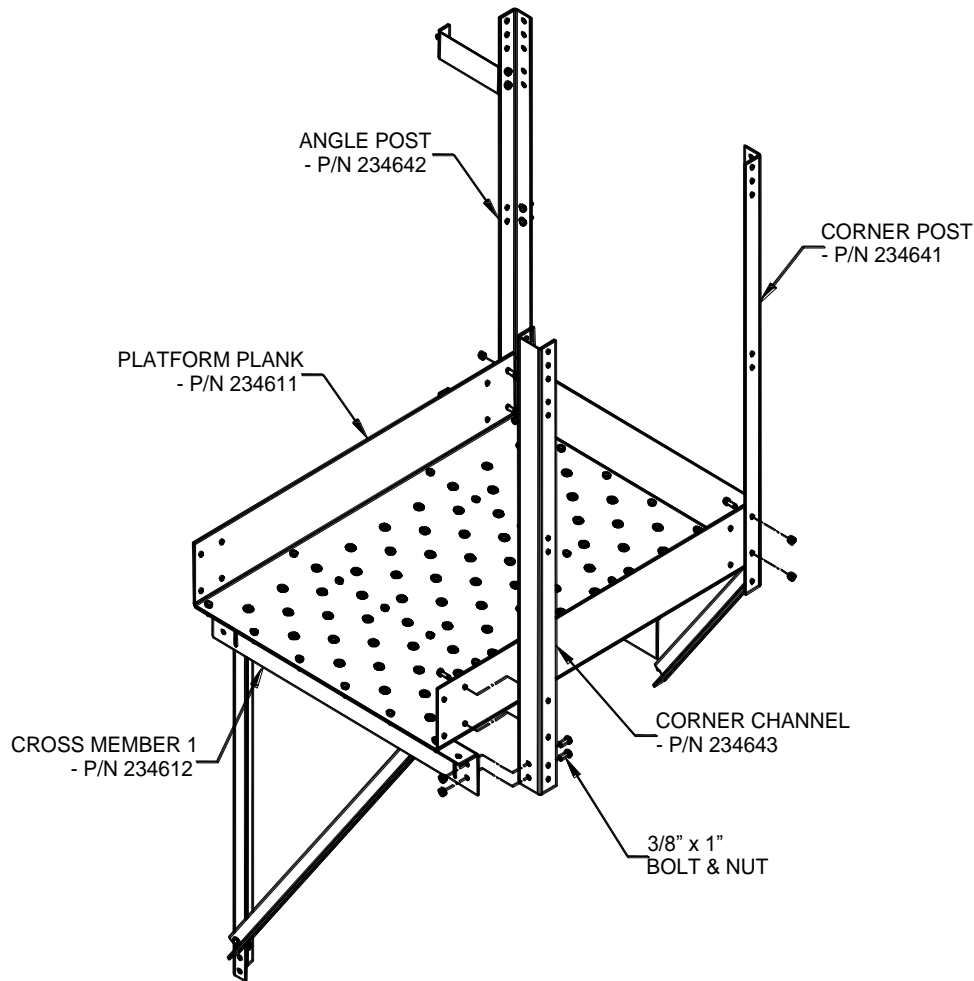
Figure 27. Bolting Together the Platform



5.9.3 Corner Channel to Platform

1. Bolt the corner channel (234643) to the platform plank and cross member 1.
2. Attach the platform plank to the corner post and angle post using 3/8" x 1" bolts.

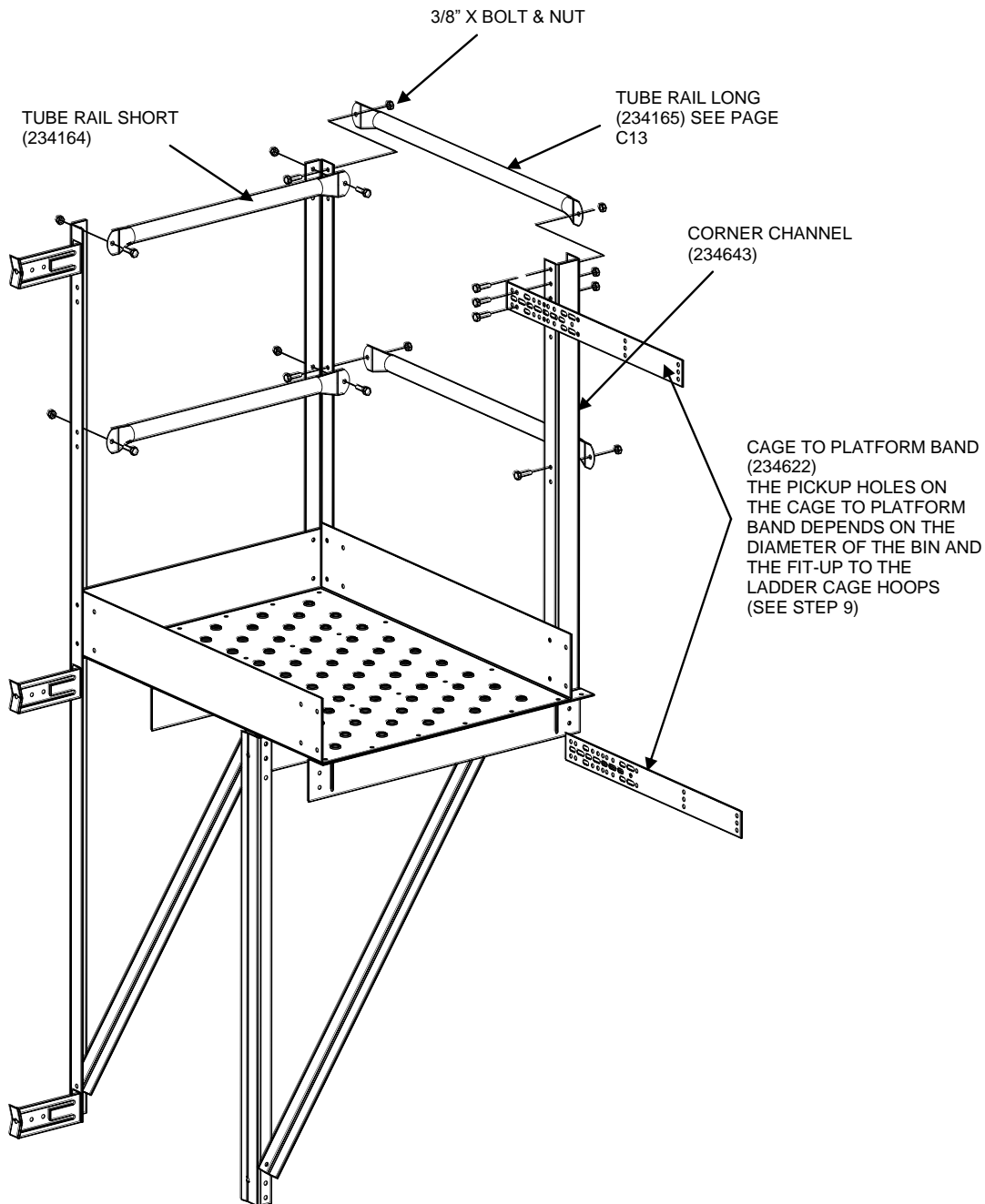
Figure 28. Bolting the corner channel to the platform



5.9.4 Hand Rails and MidRails to Platform

1. Bolt on the two tube rails – long (234165) to the corner channel and corner post at the hand rail and mid rail hole locations. Use 3/8" x 1" bolts for these connections, as illustrated.
2. Repeat this process with the two tube rails – short (234164) between the corner post and the angle post.
3. On the side of the platform that tie into the ladder safety cages the upper cage to platform band (234622) bolts to the corner channel using two 3/8" x 1" bolts.
4. The lower cage to platform band goes into the slot located on cross member 1 and bolts to the corner channel.

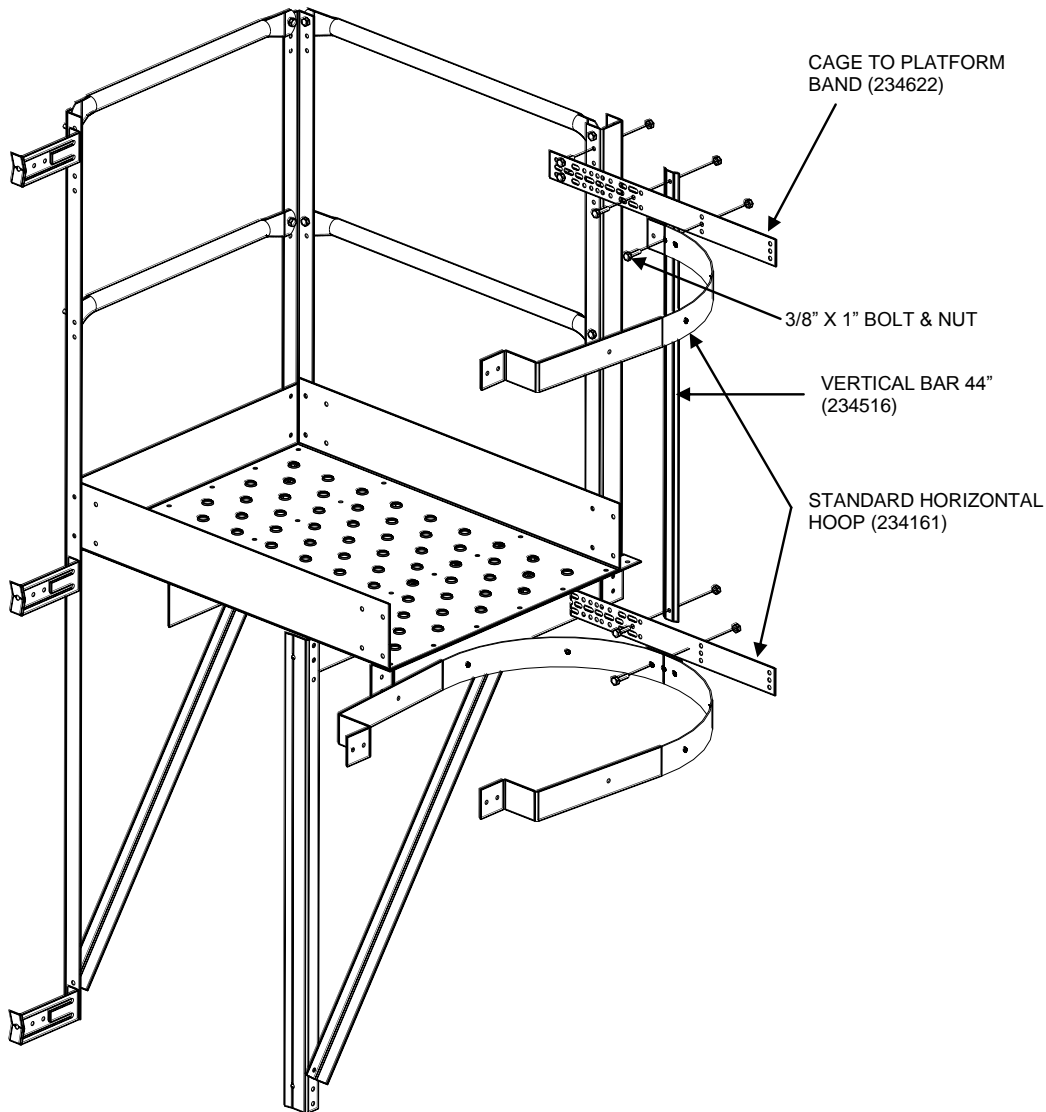
Figure 29. Hand Rails and Mid Rails to Platform Detail



5.9.5 Platform to Safety Cage

1. The cage to platform band bolts to the ladder safety cage hoops (234161). The cage to platform band is punched for various bin diameters. Use the holes or slots that fit best.
2. Use 44" vertical bars (234516) to enclose the space between the safety cage and platform.

Figure 30. Bolt the cage to the platform



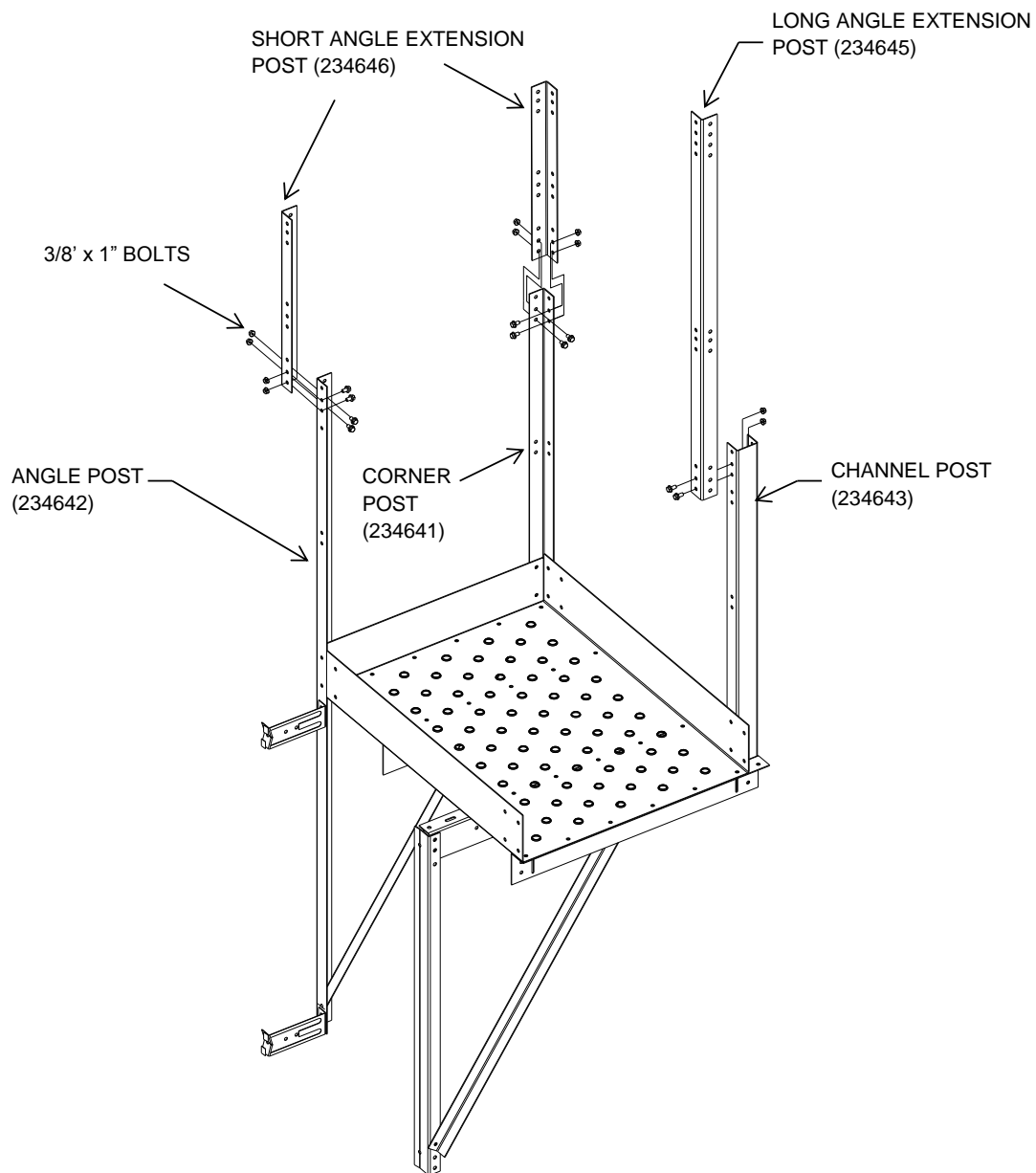
5.10. EU Intermediate Platform Installation

In order to assemble the European version of the ladder platform, the standard platform assembly given should be followed until the channel post (234643) and corner post (234641) are assembled. The top most ladder clip (234501) should be left unbolted (bolt later). Follow the instructions given from there on for the assembly of the European version.

5.10.1 Extension Posts to Angle and Channel Post

1. Bolt on the short angle extension posts (234646) on the corner post (234641) and angle post (234642).
2. Attach the long angle extension post (234645) to the channel post (234643). Use 3/8" x 1" bolts for all connections.

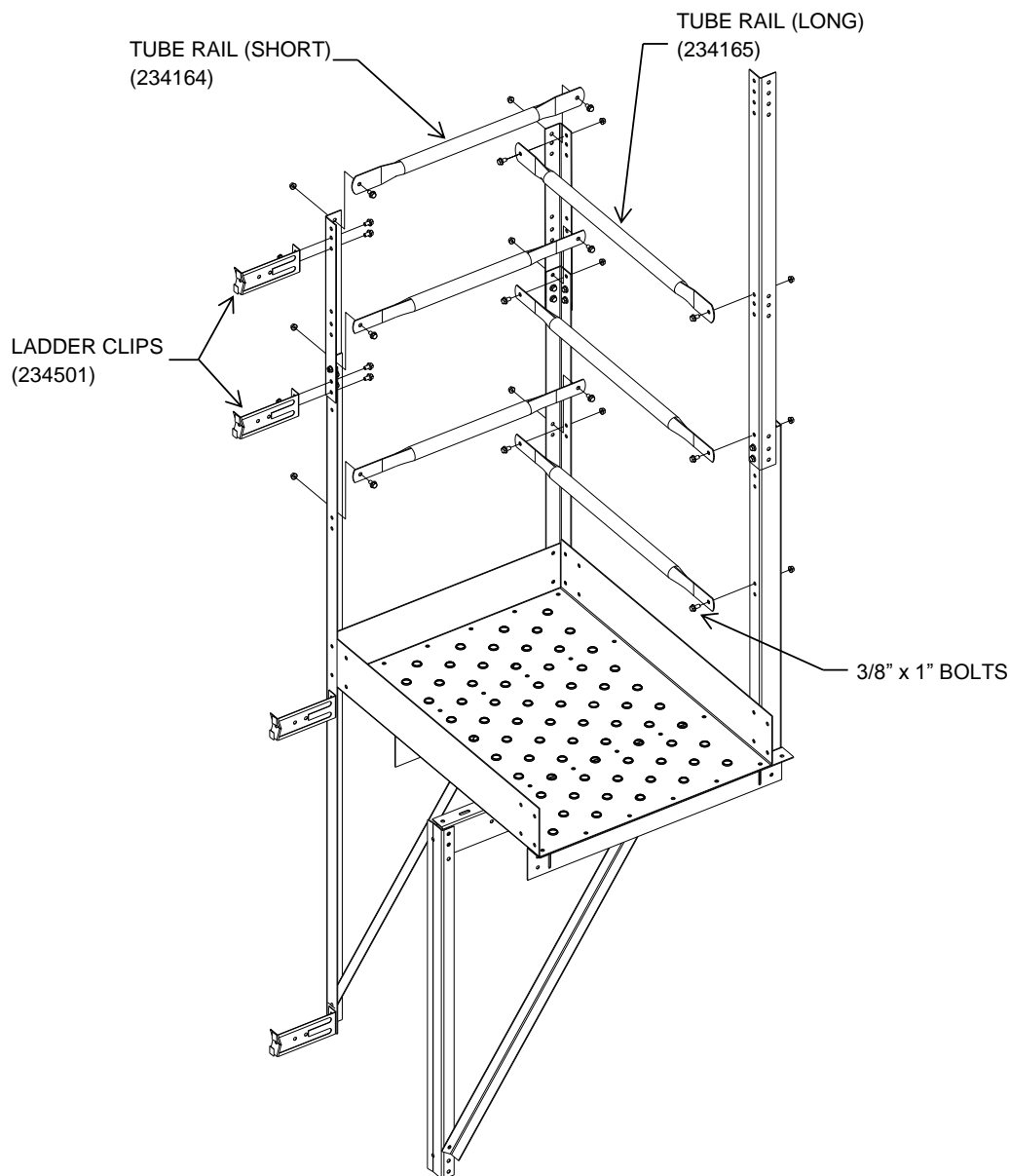
Figure 31. Bolting on extension posts



5.10.2 Tube Rails to Platform

1. Bolt on the tube rail – long (234165) and tube rail – short (234164) to the corner channel and to the corner posts and extension angles using 3/8" x 1" bolts.
2. Bolt on a ladder clip (234501) at the connection point between the extension post and angle post. Bolt another ladder clip above it on the extension post. The top ladder clip will require a hole to be drilled in the bin wall sheet where it will be attached.

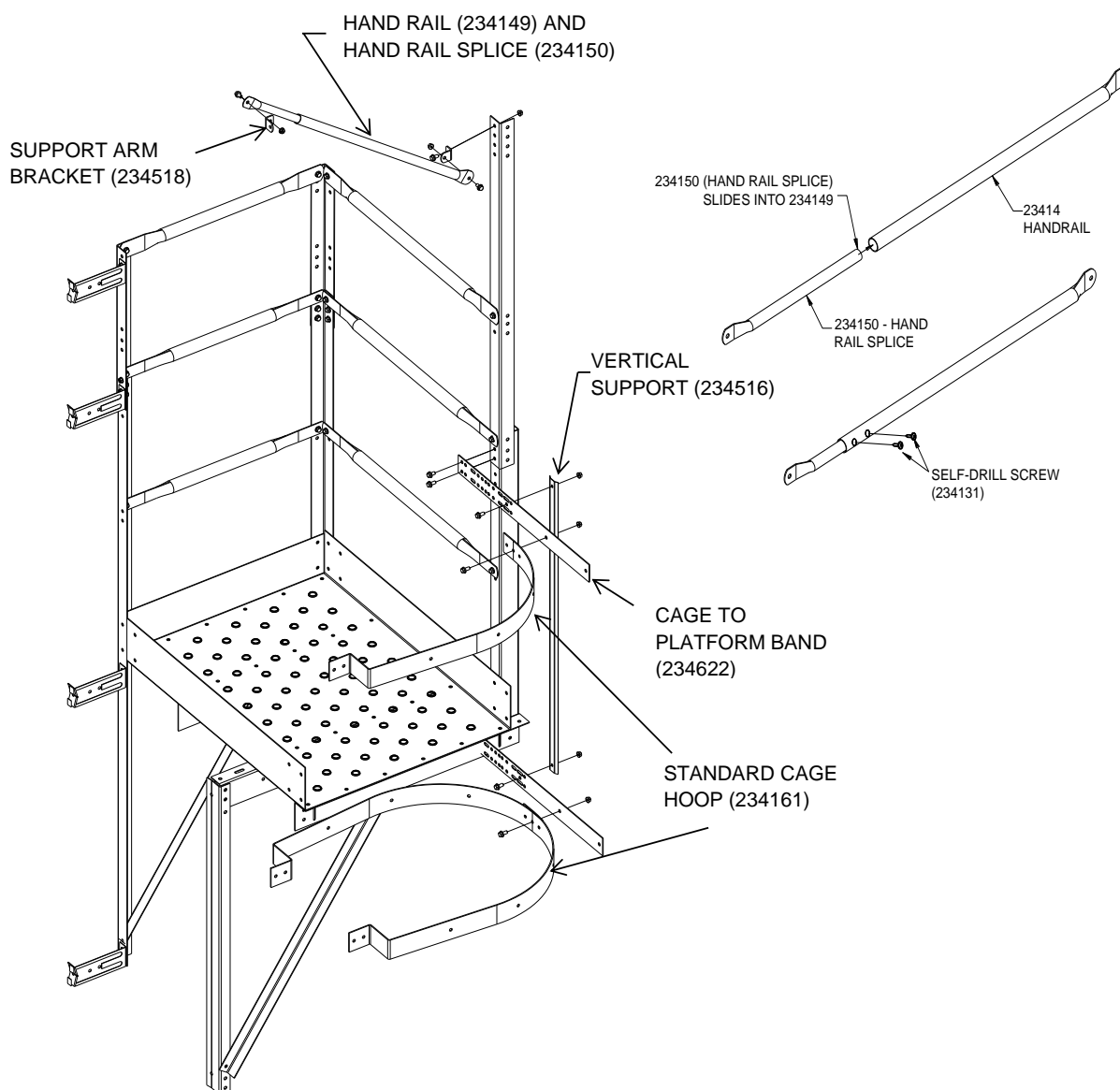
Figure 32. Bolting the tube rails to the platform



5.10.3 Safety Cage and Support Arm to Platform

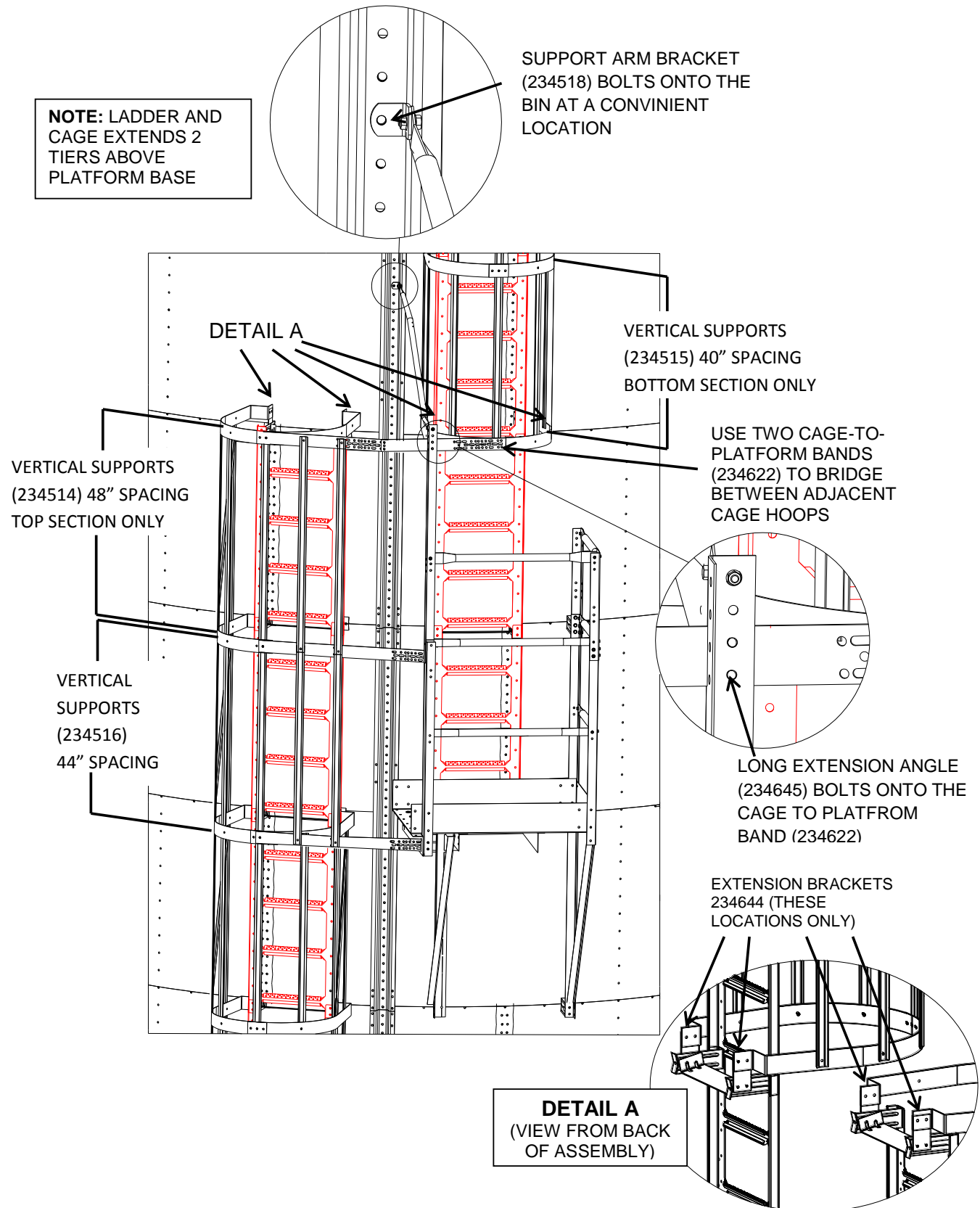
1. On the side of the platform that ties into the ladder safety cages, the upper cage to platform band (234622) bolts to the extension post bolted to the corner channel. The lower cage to platform band goes into the slot located on cross member 1 (234612) and bolts to the corner channel.
2. The cage to platform band bolts to the ladder safety cage hoops (234161). The cage to platform band is punched for various bin diameters. Use the holes or slots that fit best.
3. Use a 44" vertical support (234516) to enclose the space between the safety cage and platform. The cage hoop and vertical support are not part of the platform package.
4. The hand rail (234149) and hand rail splice (234150) are joined using self-drill screw to form a support arm. One end of the support arm will attach to the long angle extension post (234645) and the other to the bin wall via support arm brackets (234518). The length of the support arm must be adjusted according to varying bin diameters to provide optimal support.

Figure 33. Bolting the safety cage and support arm to the platform



5.10.4 Ladder to Platform Connection - EN Version

Figure 34. Ladder to platform connection



5.11. Ladder Platform — Self Close Gate Installation

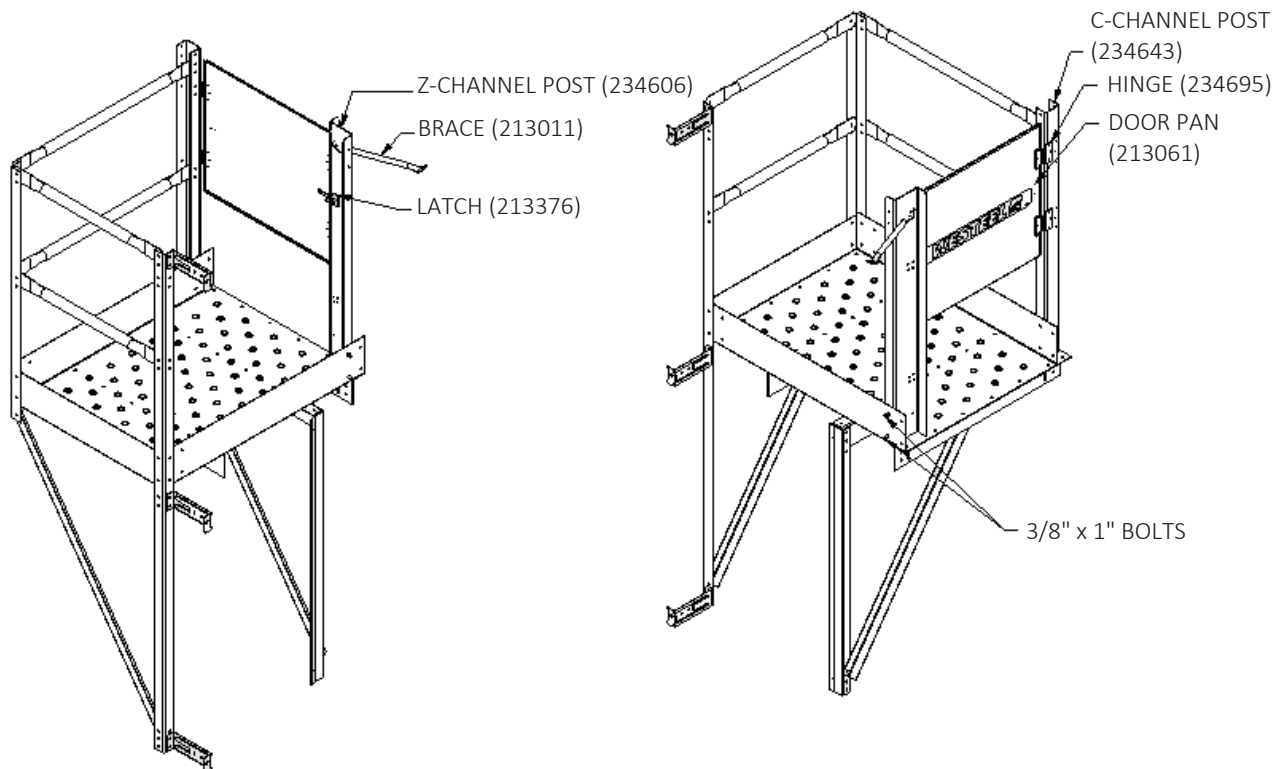
1. Bolt two spring hinges (234695) on the flat surface of the door pan (213061) with the 1/4" hardware (bolt PN: 235901 and nut PN: 154156).
2. Position the door pan so that the flanged side is facing toward the inside platform. Bolt the two spring hinges (234695) on the C-channel post (234643).
3. Bolt the latch handle to the door pan on the flanged side (facing inside the platform) with two 3/16" bolts (154005) and nuts (150008).

Note

The latch (213376) includes both the latch lock and latch handle.

4. Bolt the flange of the Z-channel post (234606) to the inside surface of platform toe board using two 3/8" x 1" bolts as shown in [Figure 35 on page 48](#).
5. Bolt the latch lock (213376, part 2 of latch) on the Z-channel web surface (face toward platform) with four 3/16" bolts and nuts through the four 1/4" x 1/2" slots. Put one washer (193774) between the Z-channel and the latch lock for four bolts. The location of latch lock can be adjusted, so the best match location between latch lock and latch handle can be found.
6. Put one brace (213011) between bin wall sheet and top of Z-channel web, attaching with a 3/8" x 1" bolt and nut in the Z-channel web and a 1/4" self tapping screw (157042) through the wall sheet. Make sure that the brace is horizontal and toward the outside of the platform.
7. Attach one end of the rope to the latch lock and attach the other end to the brace (213011).
8. Adjust the spring hinge strength to your requirement.

Figure 35. Installing the Platform Self Closing Gate



5.12. Block-Off Plate Installation

Figure 36. Block-Off Plate Installation

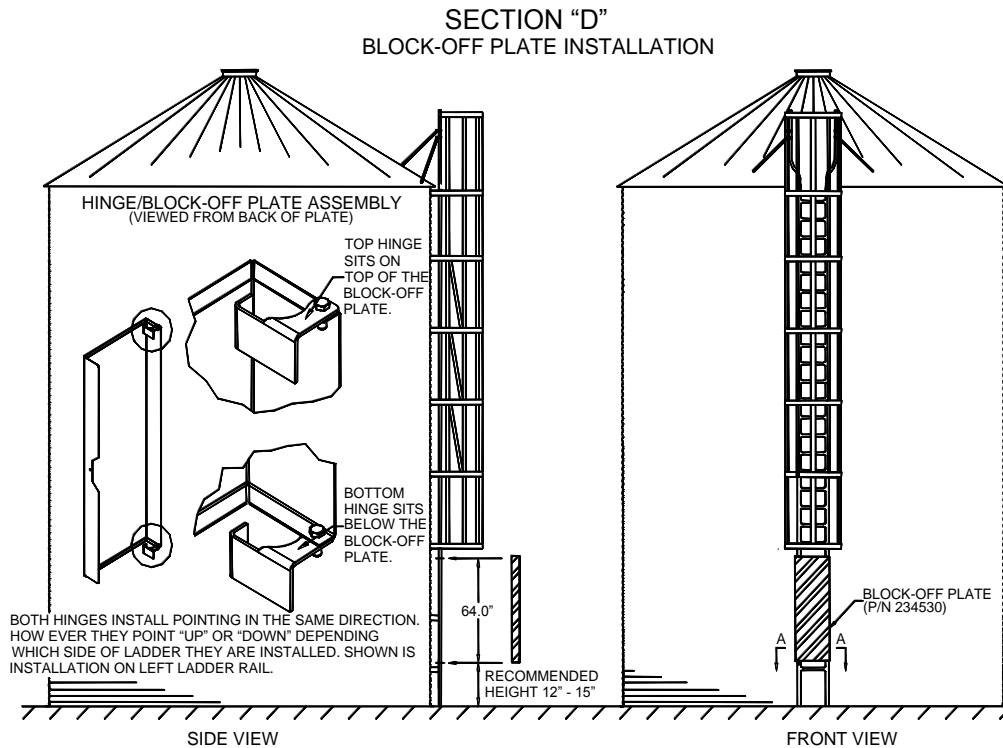
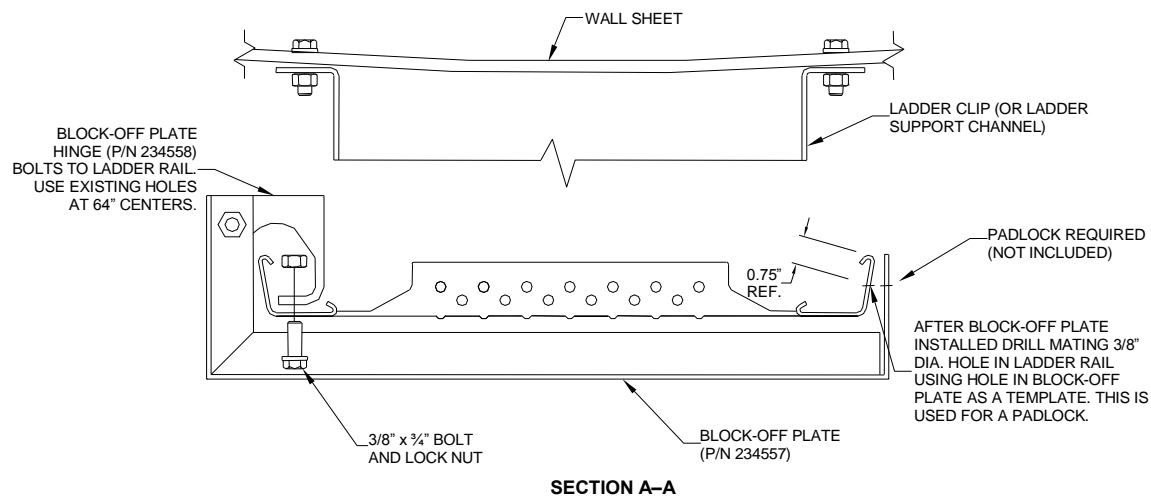


Figure 37. Section A-A

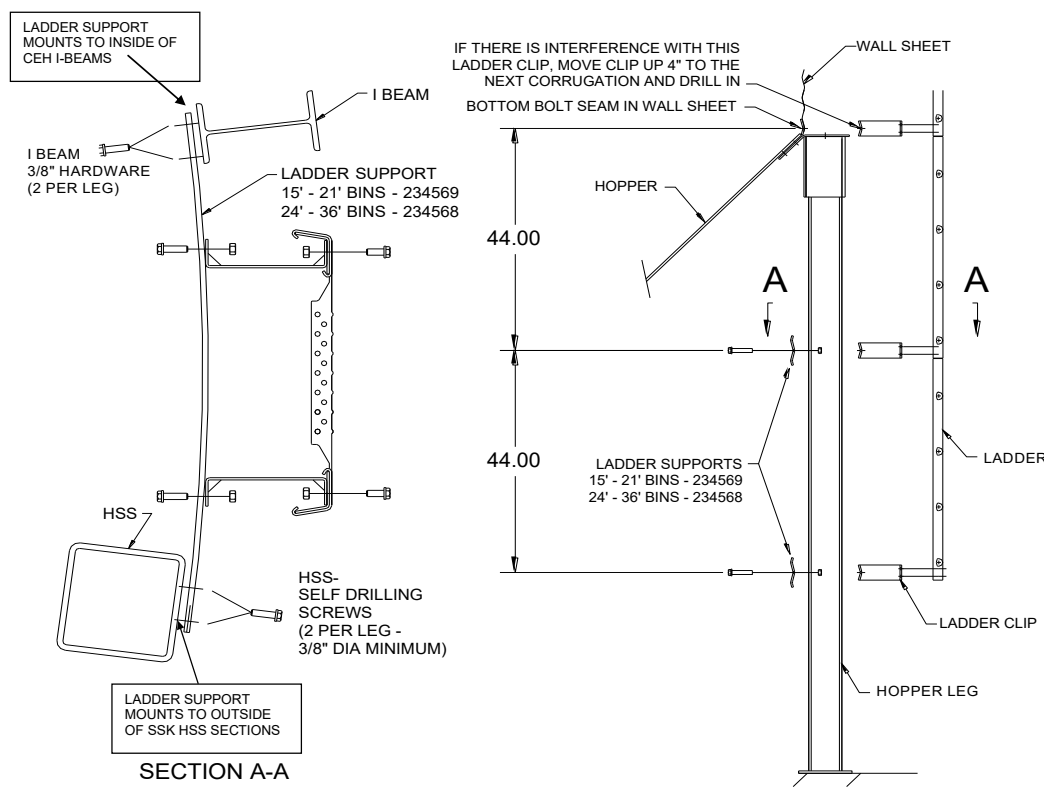


Note

1. Align holes on block-off plate hinges with existing holes in ladder rail (64" apart).
2. Do not line up hinges with ladder clips on flat bin models.
3. On hopper bin models, it is necessary to drill into ladder support channels to mount hinges.
4. Block-off plates can be mounted to swing either way. (Figure 36 on page 49 shows the block-off plate mounted on the left ladder rail.)

5.13. Hopper Ladder Support Installation

Figure 38. Top and side views of the ladder support



1. Pre-assemble ladder clips to the ladder segments.
2. Mount the ladder supports on the inside of the hopper legs as shown for hopper bottom (HBB) bins. For SSK bins, the ladder support mounts on the outside of the HSS beams.
3. Space the ladder supports at 44" or one per ladder segment and position the ladder support relative to the holes in the ladder clips.
4. Drill into I-beam webs and attach with 3/8" hardware.
5. If securing the ladder support to a HSS leg (square tube), use at least two self-drilling screws (3/8" minimum diameter) at every leg connection.
6. Drill holes in the ladder supports to align with ladder clips where required.
7. Use 3/8" hardware.

5.13.1 Optional Vertical Support Ladder Details

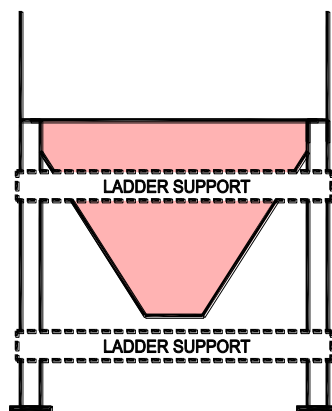
Table 1. 234569 Vertical Ladder Support Chart For 21' Diameters or Less

Hopper Size	# of Legs	Hopper Ht (ft)	Rows of Supports	Needed For Ladder Configuration	Needed For Span Between 2 Legs
Stiffened SSK					
15' Dia	10	9.2	3	3	1
18' Dia	12	10.6	3	3	1
21' Dia	14	12.1	4	4	1
Westeel Welded					
14' Dia	6	6.6	2	4	2
15' Dia	6	7.2	2	4	2
15' Dia	7	7.2	2	4	2
16' Dia	8	7.8	2	4	2
18' Dia	9	8.0	3	6	2
19' Dia	9	8.4	3	6	2
19' Dia	11	8.4	3	6	2
21' Dia	11	9.1	3	6	2
21' Dia	13	9.1	3	6	2
Westeel Commercial Hoppers					
15' Dia	10	9.9	3	3	1
18' Dia	12	11.4	3	3	1
21' Dia	14	13.0	4	4	1

Table 2. 234568 Vertical Ladder Support Chart For 24' Diameters or Greater

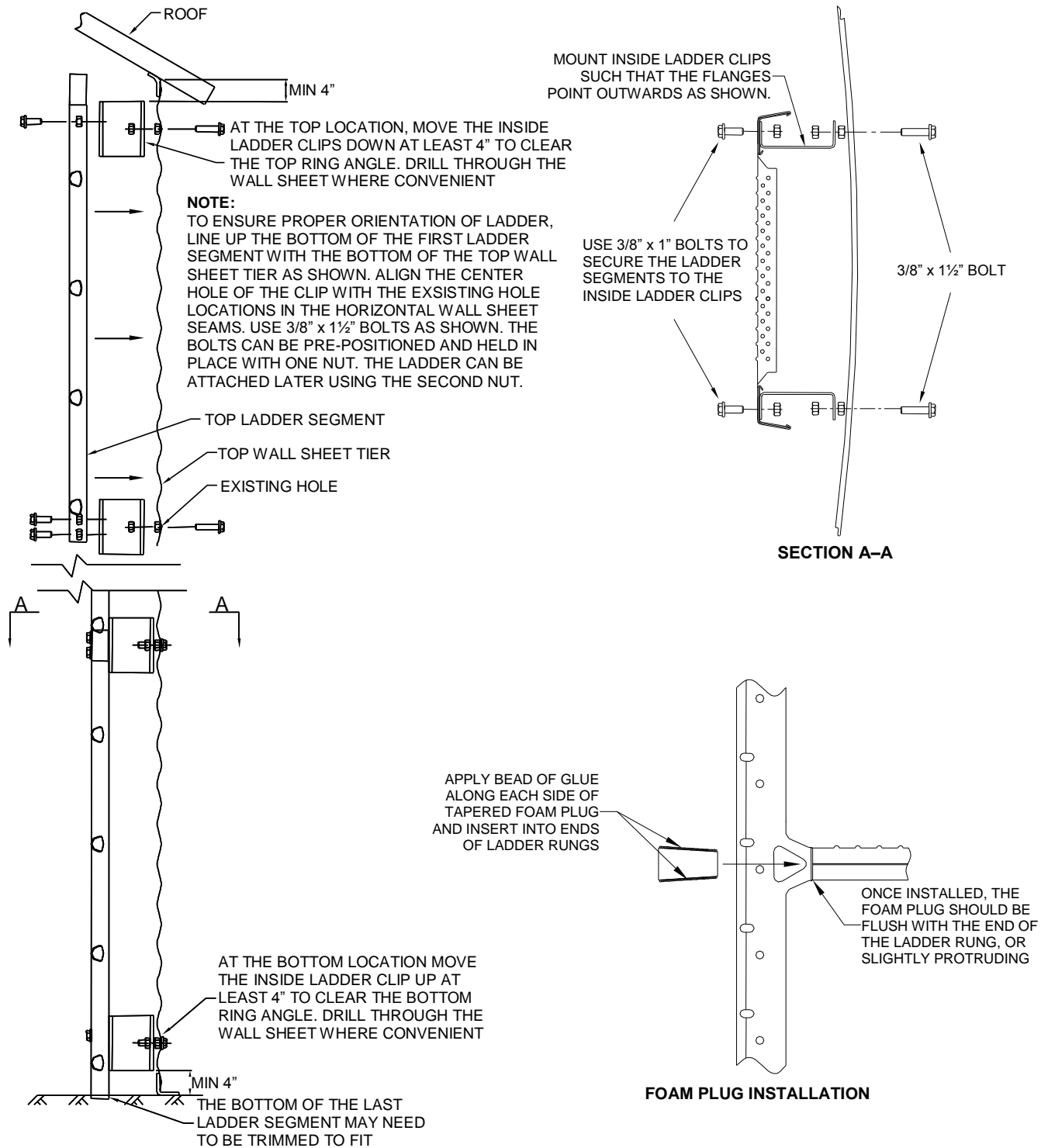
Hopper Size	# of Legs	Hopper Ht (ft)	Rows of Supports	Needed For Ladder Configuration	Needed For Span Between 2 Legs
Stiffened SSK					
24' Dia	16	11.9	4	4	1
27' Dia	18	13.2	4	4	1
Westeel Welded					
24' Dia	12	10.4	3	6	2
27' Dia	16	11.8	4	8	2
Westeel Commercial Hoppers					
24' Dia	16	14.5	4	4	1
27' Dia	18	13.9	4	4	1
30' Dia	20	15.1	4	4	1
33' Dia	22	15.2	5	5	1
36' Dia	24	16.4	5	5	1

- Hoppers with diameters of 21' or smaller use the 234569 ladder support
- Hoppers with diameters of 24' or larger use the 234568 ladder support
- Use the vertical ladder charts to identify the quantity of ladder supports needed to span between hopper legs
- Two ladder supports need to be overlapped and connected together with at least two self drilling screws, 3/8" dia. min., for spans greater than 60"
- For every one of 234568 or 234569 purchased, you will also need to purchase four of 297418, 3/8" self-tapping screws.

Figure 39. Ladder Configuration

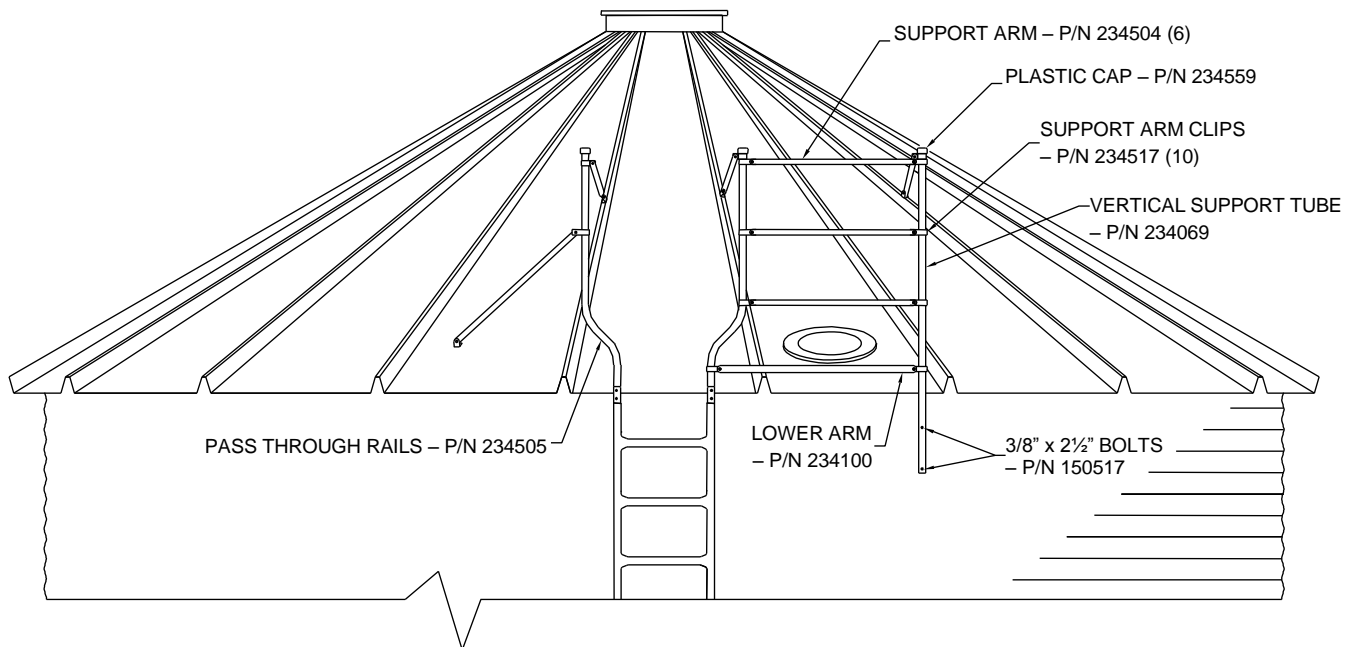
5.14. Inside Ladder Installation Instructions

Figure 40. Inside Ladder Details



5.15. Inspection Hatch Cage Installation

Figure 41. Inspection Hatch Cage Details



1. Install the pass through rails (234505) and support arms (234504) supplied with the bin as per previous instructions, with the one following exception. On the side closest to the inspection hatch, the one support arm that would normally secure to the eave bolt location, is utilized as one of the three support arms referred to in #2. The other support arm on the inspection hatch side, that attaches inward to the roof rib, as well as the two support arms on the non-inspection hatch side, are installed as per previous instructions.
2. Attach three support arms (234504) to the pass through rail adjacent to the inspection hatch as illustrated, using support arm clips (234517). Position the lowest support arm just above the bend in the pass through rail, position the top support arm as high as possible and position the center support arm midway between the other two.
3. Using these support arms as guides, position the vertical support tube (234069) such that it attaches to the other ends of the support arms using the support arm clips, bridges the eave of the roof panel, and aligns alongside the wall sheet. Using the holes in the vertical support tube as a guide, drill 3/8" holes through the crest of the mating wall sheet corrugations and attach using 3/8" x 2 1/2" bolts (150517). Putting the sealing washer on the inside insures a water tight seal. Attach the plastic cap (234559) to the vertical support tube.
4. Also bolt on the 1 1/4" diameter, longer, lower support rail (234100) between the pass through rail and the vertical support tube, again using support arm clips. Position this lower rail further down on the pass through rail, below the bend as shown.
5. Prevent the support arm clips from sliding down the pass through rail tube and the vertical support tube by securing with the self drilling screws provided (900461).
6. Attach the final support arm (234504) to the vertical support arm, and to the nearest roof rib, as shown, utilizing the support arm clip and support arm bracket, as shown. Drill into, and secure to the roof rib as required.

5.16. Wide-Corr® Ladder Packages c/w Pass Through Rail

Table 3. Wide-Corr® Ladder Packages c/w Pass Through Rail

LADDER PACKAGES	Ladder Section (44")	Ladder Clips - WC	Ladder Support Arm	Ladder Passthrough Rail	Hardware Package	Carton 51 x 27 x 7
	234500	234501	234504	234505	234507	185011
234520-2	2	6	4	2	1	1
234520-3	3	8	4	2	1	1
234520-4	4	10	4	2	1	1
234520-5	5	12	4	2	1	1
234520-6	6	14	4	2	1	1
234520-7	7	16	4	2	1	1
234520-8	8	18	4	2	1	1
234520-9	9	20	4	2	1	1
234520-10	10	22	4	2	1	2
234520-11	11	24	4	2	1	2
234520-12	12	26	4	2	1	2
234520-13	13	28	4	2	2	2
234520-14	14	30	4	2	2	2
234520-15	15	32	4	2	2	2
234520-16	16	34	4	2	2	2
234520-17	17	36	4	2	2	2
234520-18	18	38	4	2	2	2
234520-19	19	40	4	2	2	3
234520-20	20	42	4	2	2	3
234520-21	21	44	4	2	2	3
234520-22	22	46	4	2	2	3
234520-23	23	48	4	2	2	3
234520-24	24	50	4	2	2	3
234520-25	25	52	4	2	2	3
234520-26	26	54	4	2	3	3
234520-27	27	56	4	2	3	3

5.17. Wide-Corr® Cage Packages

Table 4. Wide-Corr® Cage Packages

CAGE PACKAGES	TOP CAGE HOOP	STANDARD CAGE HOOP	BOTTOM CAGE HOOP	CAGE -48" VERTICAL BAR BUNDLE	CAGE -40" VERTICAL BAR BUNDLE	CAGE -44" VERTICAL BAR BUNDLE	3/8" X 1" BOLT (Bag of 50)	3/8" NUT (Bag of 100)	BRACE BAR	BRACE ¹
	234163	234161	234162	234514BDL	234515BDL	234516BDL	235943	235951	234166	234650
234521B-3	2	6	2	1	1	2	2	1	4	4
234521B-4	2	8	2	1	1	3	2	1	6	5
234521B-5	2	10	2	1	1	4	2	1	8	6
234521B-6	2	12	2	1	1	5	3	2	10	7
234521B-7	2	14	2	1	1	6	3	2	12	8
234521B-8	2	16	2	1	1	7	3	2	14	9
234521B-9	2	18	2	1	1	8	3	2	16	10
234521B-10	2	20	2	1	1	9	4	2	18	11
234521B-11	2	22	2	1	1	10	4	2	20	12
234521B-12	2	24	2	1	1	11	4	2	22	13
234521B-13	2	26	2	1	1	12	4	2	24	14
234521B-14	2	28	2	1	1	13	5	3	26	15

1. Reinforcement brace

5.18. Wide-Corr® Ladder Hardware Package - 234507

Table 5. Wide-Corr® Ladder Hardware Package — 234507

PART NUMBER	DESCRIPTION	QTY
235943	3/8" x 1" BOLT (Bag of 50)	1
193797	3/8" x 1½" HEX BOLT	5
150517	3/8" x 2½" HEX BOLT	5
235951	3/8" NUT (Bag of 100)	1
154977	3/8" FLAT WASHER	4
234131	1/4" x 3/4" SELF-DRILL BOLT (Bag of 12)	1
234517	SUPPORT ARM CLIP	4
234518	SUPPORT ARM BRACKET	4
234559	PIPE CAP	2
234580	LADDER PASS THRU RAIL SUPPORT STRIP	2
8110-00228	WARNING LABEL - FALLING HAZARD 350LB	1
198925	MANUAL	1

6. Appendix

6.1. ANSI Commercial Ladder Packages

Table 6. ANSI Commercial Ladder Packages (7 — 16 Tiers)

PART NUMBER	DESCRIPTION	234700-7	234700-8	234700-9	234700-10	234700-11	234700-12	234700-13	234700-14	234700-15	234700-16
234500	WC LADDER SECTION	8	9	10	11	12	13	15	16	17	18
234161	CAGE HOOP-STANDARD	7	9	11	13	15	17	16	18	20	22
234162	CAGE HOOP-BOTTOM	4	4	4	4	4	4	6	6	6	6
234163	CAGE HOOP-TOP	2	2	2	2	2	2	2	2	2	2
234515BDL	CAGE VERTICAL SUPPORT BUNDLE - 40"	1	1	1	1	1	1	1	1	1	1
234516BDL	CAGE VERTICAL SUPPORT BUNDLE - 44"	3	4	5	6	7	8	8	9	10	11
234514BDL	CAGE VERTICAL SUPPORT BUNDLE - 48"	1	1	1	1	1	1	1	1	1	1
234166	BRACE BAR (45.44")	1	3	5	7	9	11	8	10	12	14
234566	PASS THROUGH RAIL PACKAGE	1	1	1	1	1	1	1	1	1	1
234501	WC EXTERNAL LADDER CLIP	20	22	24	26	28	30	36	38	40	42
234650	REINFORCEMENT BRACE	6	7	8	9	10	11	12	13	14	15
234507	LADDER HARDWARE PACKAGE	1	1	1	1	1	1	1	1	1	1
235943	BOLT HEX FLANGE .375x1.0 GR8.2 ZJS500 (Bag of 50)	3	3	4	4	4	4	5	5	6	6
235951	NUT HEX .375 GR5 ZJS500 (Bag of 100)	2	2	2	2	2	2	3	3	3	3
234169	PLATFORM SELF CLOSE GATE	1	1	1	1	1	1	2	2	2	2
234610	WC LADDER PLATFORM PACKAGE	1	1	1	1	1	1	2	2	2	2

Table 7. ANSI Commercial Ladder Packages (17 — 27 Tiers)

PART NUMBER	DESCRIPTION	234700-17	234700-18	234700-19	234700-20	234700-21	234700-22	234700-23	234700-24	234700-25	234700-26	234700-27
234500	WC LADDER SECTION	19	20	22	23	24	25	26	27	29	30	31
234161	CAGE HOOP-STANDARD	24	26	25	27	29	31	33	35	34	36	38
234162	CAGE HOOP-BOTTOM	6	6	8	8	8	8	8	8	10	10	10
234163	CAGE HOOP-TOP	2	2	2	2	2	2	2	2	2	2	2
234515BDL	CAGE VERTICAL SUPPORT BUNDLE - 40"	1	1	1	1	1	1	1	1	1	1	1
234516BDL	CAGE VERTICAL SUPPORT BUNDLE - 44"	12	13	13	14	15	16	17	18	18	19	20
234514BDL	CAGE VERTICAL SUPPORT BUNDLE - 48"	1	1	1	1	1	1	1	1	1	1	1
234166	BRACE BAR (45.44")	16	18	15	17	19	21	23	25	22	24	26
234566	PASS THROUGH RAIL PACKAGE	1	1	1	1	1	1	1	1	1	1	1
234501	WC EXTERNAL LADDER CLIP	44	46	52	54	56	58	60	62	68	70	72
234650	REINFORCEMENT BRACE	16	17	18	19	20	21	22	23	24	25	26
234507	LADDER HARDWARE PACKAGE	1	1	1	1	1	1	1	1	1	1	1
235943	BOLT HEX FLANGE .375x1.0 GR8.2 ZJS500 (Bag of 50)	6	7	7	8	8	8	9	9	10	10	11
235951	NUT HEX .375 GR5 ZJS500 (Bag of 100)	3	4	4	4	4	4	5	5	5	5	6
234169	PLATFORM SELF CLOSE GATE	2	2	3	3	3	3	3	3	4	4	4
234610	WC LADDER PLATFORM PACKAGE	2	2	3	3	3	3	3	3	4	4	4

6.2. OSHA Compatible Ladder Packages

Table 8. OSHA Compatible Ladder Packages (9 — 16 Tiers)

PART NUMBER	DESCRIPTION	234600-9	234600-10	234600-11	234600-12	234600-13	234600-14	234600-15	234600-16
234500	WC LADDER SECTION	10	11	12	13	14	15	16	17
234161	CAGE HOOP-STANDARD	11	13	15	17	19	21	23	25
234162	CAGE HOOP-BOTTOM	4	4	4	4	4	4	4	4
234163	CAGE HOOP-TOP	2	2	2	2	2	2	2	2
234515BDL	CAGE VERTICAL SUPPORT BUNDLE - 40"	1	1	1	1	1	1	1	1
234516BDL	CAGE VERTICAL SUPPORT BUNDLE - 44"	5	6	7	8	9	10	11	12
234514BDL	CAGE VERTICAL SUPPORT BUNDLE - 48"	1	1	1	1	1	1	1	1
234166	BRACE BAR (45.44")	5	7	9	11	13	15	17	19
234566	PASS THROUGH RAIL PACKAGE	1	1	1	1	1	1	1	1
234501	WC EXTERNAL LADDER CLIP	24	26	28	30	32	34	36	38
234650	REINFORCEMENT BRACE	8	9	10	11	12	13	14	15
234507	LADDER HARDWARE PACKAGE	1	1	1	1	1	1	1	1
235943	BOLT HEX FLANGE .375x1.0 GR8.2 ZJS500 (Bag of 50)	3	4	4	4	5	5	6	6
235951	NUT HEX .375 GR5 ZJS500 (Bag of 100)	2	2	2	2	3	3	3	3
234169	PLATFORM SELF CLOSE GATE	1	1	1	1	1	1	1	1
234610	WC LADDER PLATFORM PACKAGE	1	1	1	1	1	1	1	1

Table 9. OSHA Compatible Ladder Packages (17 — 27 Tiers)

PART NUMBER	DESCRIPTION	234600 -17	234600 -18	234600 -19	234600 -20	234600 -21	234600 -22	234600 -23	234600 -24	234600 -25	234600 -26	234600 -27
234500	WC LADDER SECTION	19	20	21	22	23	24	25	26	28	29	30
234161	CAGE HOOP-STANDARD	24	26	28	30	32	34	36	38	37	39	41
234162	CAGE HOOP-BOTTOM	6	6	6	6	6	6	6	6	8	8	8
234163	CAGE HOOP-TOP	2	2	2	2	2	2	2	2	2	2	2
234515BDL	CAGE VERTICAL SUPPORT BUNDLE - 40"	1	1	1	1	1	1	1	1	1	1	1
234516BDL	CAGE VERTICAL SUPPORT BUNDLE - 44"	12	13	14	15	16	17	18	19	19	20	21
234514BDL	CAGE VERTICAL SUPPORT BUNDLE - 48"	1	1	1	1	1	1	1	1	1	1	1
234166	BRACE BAR (45.44")	16	18	20	22	24	26	28	30	27	29	31
234566	PASS THROUGH RAIL PACKAGE	1	1	1	1	1	1	1	1	1	1	1
234501	WC EXTERNAL LADDER CLIP	44	46	48	50	52	54	56	58	64	66	68
234650	REINFORCEMENT BRACE	16	17	18	19	20	21	22	23	24	25	26
234507	LADDER HARDWARE PACKAGE	1	1	1	1	1	1	1	1	1	1	1
235943	BOLT HEX FLANGE .375x1.0 GR8.2 ZJS500 (Bag of 50)	6	7	7	8	8	8	9	9	10	10	11
235951	NUT HEX .375 GR5 ZJS500 (Bag of 100)	3	4	4	4	4	4	5	5	5	5	6
234169	PLATFORM SELF CLOSE GATE	2	2	2	2	2	2	2	2	3	3	3
234610	WC LADDER PLATFORM PACKAGE	2	2	2	2	2	2	2	2	3	3	3

6.3. EN Commercial Ladder Packages

Table 10. EN Commercial Ladder Packages (5 — 12 Tiers)

PART NUMBER	DESCRIPTION	234160-5	234160-6	234160-7	234160-8	234160-9	234160-10	234160-11	234160-12
234500	LADDER SECTION	5	6	7	8	11	12	15	16
234161	HOOP-STANDARD	8	10	12	14	17	19	22	24
234162	HOOP-BOTTOM	0	0	0	0	0	0	0	0
234163	HOOP-TOP	2	2	2	2	2	2	2	2
234515BDL	VERTICAL SUPPORT BUNDLE– 40"	1	1	1	1	2	2	2	2
234516BDL	VERTICAL SUPPORT BUNDLE– 44"	2	3	4	5	4	5	5	6
234514BDL	VERTICAL SUPPORT BUNDLE– 48"	1	1	1	1	2	2	3	3
234166	BRACE BAR	4	6	8	10	7	9	8	10
234566	PASS THROUGH RAIL PACKAGE	1	1	1	1	1	1	1	1
234501	WC EXTERNAL LADDER CLIP	12	14	16	18	26	28	36	38
234650	REINFORCEMENT BRACE	4	5	6	7	9	10	12	13
234507	LADDER HARDWARE PKG	1	1	1	1	1	1	1	1
234941	3/8" x 1.0 HEX FL BOLT (Bag of 325)	0	0	0	0	0	0	0	0
235943	3/8" x 1.0" HEX BOLT (Bag of 50)	2	3	3	4	4	4	5	5
235950	3/8" NUT (Bag of 300)	0	0	0	0	0	1	1	0
235951	3/8" NUT (Bag of 100)	1	2	2	2	2	0	0	3
234608	WC PLATFORM PACKAGE	0	0	0	0	1	1	2	2
234625	INSP. HATCH CAGE PACKAGE	1	1	1	1	1	1	1	1
234622	CAGE TO PLATFORM BAND	0	0	0	0	2	2	4	4
234644	EXTENSION PLATE	0	0	0	0	4	4	8	8
234169	PLATFORM SELF CLOSE GATE	0	0	0	0	1	1	2	2

Table 11. EN Commercial Ladder Packages (13 — 20 Tiers)

PART NUMBER	DESCRIPTION	234160-13	234160-14	234160-15	234160-16	234160-17	234160-18	234160-19	234160-20
234500	LADDER SECTION	17	18	19	22	23	24	25	26
234161	HOOP-STANDARD	26	28	30	33	35	37	39	41
234162	HOOP-BOTTOM	0	0	0	0	0	0	0	0
234163	HOOP-TOP	2	2	2	2	2	2	2	2
234515BDL	VERTICAL SUPPORT BUNDLE– 40"	2	3	3	3	3	3	4	4
234516BDL	VERTICAL SUPPORT BUNDLE– 44"	7	7	8	8	9	10	10	11
234514BDL	VERTICAL SUPPORT BUNDLE– 48"	3	3	3	4	4	4	4	4
234166	BRACE BAR	12	12	14	13	15	17	17	19
234566	PASS THROUGH RAIL PACKAGE	1	1	1	1	1	1	1	1
234501	WC EXTERNAL LADDER CLIP	40	42	44	52	54	56	58	60
234650	REINFORCEMENT BRACE	14	15	16	18	19	20	21	22
234507	LADDER HARDWARE PKG	1	1	1	1	1	1	1	1
234941	3/8" x 1.0 HEX FL BOLT (Bag of 325)	0	0	1	0	1	1	1	1
235943	3/8" x 1.0" HEX BOLT (Bag of 50)	6	6	1	7	1	1	1	2
235950	3/8" NUT (Bag of 300)	1	1	1	1	1	1	1	1
235951	3/8" NUT (Bag of 100)	0	0	1	1	1	1	1	2
234608	WC PLATFORM PACKAGE	2	2	2	3	3	3	3	3
234625	INSP. HATCH CAGE PACKAGE	1	1	1	1	1	1	1	1
234622	CAGE TO PLATFORM BAND	4	4	4	6	6	6	6	6
234644	EXTENSION PLATE	8	8	8	12	12	12	12	12
234169	PLATFORM SELF CLOSE GATE	2	2	2	3	3	3	3	3

Table 12. EN Commercial Ladder Packages (21 — 27 Tiers)

PART NUMBER	DESCRIPTION	234160-21	234160-22	234160-23	234160-24	234160-25	234160-26	234160-27
234500	LADDER SECTION	29	30	31	32	33	36	37
234161	HOOP-STANDARD	44	46	48	50	52	55	57
234162	HOOP-BOTTOM	0	0	0	0	0	0	0
234163	HOOP-TOP	2	2	2	2	2	2	2
234515BDL	VERTICAL SUPPORT BUNDLE– 40"	4	4	4	5	5	5	5
234516BDL	VERTICAL SUPPORT BUNDLE– 44"	11	12	13	13	14	14	15
234514BDL	VERTICAL SUPPORT BUNDLE– 48"	5	5	5	5	5	6	6
234166	BRACE BAR	18	20	22	22	24	23	25
234566	PASS THROUGH RAIL PACKAGE	1	1	1	1	1	1	1
234501	WC EXTERNAL LADDER CLIP	68	70	72	74	76	84	86
234650	REINFORCEMENT BRACE	24	25	26	27	28	30	31
234507	LADDER HARDWARE PKG	1	1	1	1	1	1	1
234941	3/8" x 1.0 HEX FL BOLT (Bag of 325)	1	1	1	1	1	1	1
235943	3/8" x 1.0" HEX BOLT (Bag of 50)	2	3	3	3	4	4	5
235950	3/8" NUT (Bag of 300)	1	2	2	2	2	2	2
235951	3/8" NUT (Bag of 100)	2	0	0	0	0	0	0
234608	WC PLATFORM PACKAGE	4	4	4	4	4	5	5
234625	INSP. HATCH CAGE PACKAGE	1	1	1	1	1	1	1
234622	CAGE TO PLATFORM BAND	8	8	8	8	8	10	10
234644	EXTENSION PLATE	16	16	16	16	16	20	20
234169	PLATFORM SELF CLOSE GATE	4	4	4	4	4	5	5

6.4. Platform Package - 234610

Table 13. Platform Package - 234610

Intended as part of OSHA/ANSI package or as a standoff to access a hatch or door.

PART NUMBER	DESCRIPTION	QTY
234611	PLATFORM PLANK	1
234612	CROSS MEMBER 1	1
234613	CROSS MEMBER 2	1
234614	TOE BOARD	1
234615	CROSS MEMBER 3	1
234641	CORNER POST	1
234164	TUBE RAIL (SHORT)	2
234165	TUBE RAIL (LONG)	2
234619	ANGLE BRACE	2
234642	ANGLE POST	1
234621	PLATFORM-TO-WALL CONNECTION	1
234622	CAGE-TO-PLATFORM BAND	2
234643	CHANNEL POST	1
234501	WC LADDER CLIP (EXTERIOR)	3
234609	LADDER PLATFORM HARDWARE BAG	1

6.5. Platform Insert Package — 234565

Table 14. Platform Insert Package — 234565

Intended ladder and cage packages where a rest platform and an offset in the ladder is required. The package includes all parts from platform package 234610 plus the parts in the following table.

PART NUMBER	DESCRIPTION	QTY
234500	LADDER SECTION	1
234501	LADDER CLIP	4
234513	HOOP-BOTTOM	2

6.6. Ladder Platform - EU – 234608

Table 15. Ladder Platform - EU – 234608

Intended to be used with ladder and cage packages for the European version of the ladder platform.

PART NUMBER	DESCRIPTION	QTY
234610	WC LADDER PLATFORM PACKAGE	1
234645	EXTENSION POST ANGLE LONG	1
234646	EXTENSION POST ANGLE SHORT	2
234501	LADDER WALL CLIP	1
234164	TUBING RAIL (SHORT)	1
234165	TUBING RAIL (LONG)	1
234149	HAND RAIL	1
234150	HAND RAIL SPLICE	1
234518	SUPPORT ARM BRACKET	2
234131	SLFDRILL SCREW 12-14 x .75 ZN (12)	1

6.7. Top Platform for Use with Wall Ladders - 234607

Intended to be used with ladder and cage packages for a platform at the eave to access inspection hatch or roof stair or ladder.

Table 16. Top Platform for Use with Wall Ladders - 234607 Parts

Intended to be used with ladder and cage packages for a platform at the eave to access inspection hatch or roof stair or ladder.

PART NUMBER	DESCRIPTION	QTY
234610	WC LADDER PLATFORM PACKAGE	1
234646	EXTENSION POST ANGLE SHORT	1
234622	CAGE-TO-PLATFORM BAND	1
234504	SUPPORT ARM	1
234518	SUPPORT ARM BRACKET	2

6.8. Inside Ladder Packages

Table 17. Inside Ladder Packages

PART NUMBER	DESCRIPTION	LADDER SEGMENT	INSIDE LADDER CLIP	FOAM PLUG	GLUE	INSIDE LADDER HARDWARE
		234500	234519	234529	234556	234548
234560-4	INSIDE LADDER PACKAGE - 4 TIER	4	10	32	1	1
234560-5	INSIDE LADDER PACKAGE - 5 TIER	5	12	40	2	1
234560-6	INSIDE LADDER PACKAGE - 6 TIER	6	14	48	2	1
234560-7	INSIDE LADDER PACKAGE - 7 TIER	7	16	56	2	1
234560-8	INSIDE LADDER PACKAGE - 8 TIER	8	18	64	2	1
234560-9	INSIDE LADDER PACKAGE - 9 TIER	9	20	72	3	1
234560-10	INSIDE LADDER PACKAGE - 10 TIER	10	22	80	3	1
234560-11	INSIDE LADDER PACKAGE - 11 TIER	11	24	88	3	1
234560-12	INSIDE LADDER PACKAGE - 12 TIER	12	26	96	3	2
234560-13	INSIDE LADDER PACKAGE - 13 TIER	13	28	104	4	2
234560-14	INSIDE LADDER PACKAGE - 14 TIER	14	30	112	4	2
234560-15	INSIDE LADDER PACKAGE - 15 TIER	15	32	120	4	2
234560-16	INSIDE LADDER PACKAGE - 16 TIER	16	34	128	4	2
234560-17	INSIDE LADDER PACKAGE - 17 TIER	17	36	136	5	2
234560-18	INSIDE LADDER PACKAGE - 18 TIER	18	38	144	5	2
234560-19	INSIDE LADDER PACKAGE - 19 TIER	19	40	152	5	2
234560-20	INSIDE LADDER PACKAGE - 20 TIER	20	42	160	5	2
234560-21	INSIDE LADDER PACKAGE - 21 TIER	21	44	168	6	2
234560-22	INSIDE LADDER PACKAGE - 22 TIER	22	46	176	6	2
234560-23	INSIDE LADDER PACKAGE - 23 TIER	23	48	184	6	2
234560-24	INSIDE LADDER PACKAGE - 24 TIER	24	50	192	6	2
234560-25	INSIDE LADDER PACKAGE - 25 TIER	25	52	200	7	3
234560-26	INSIDE LADDER PACKAGE - 26 TIER	26	54	208	7	3
234560-27	INSIDE LADDER PACKAGE - 27 TIER	27	56	216	7	3

6.9. Inside Ladder Hardware Package - 234548

Table 18. Inside Ladder Hardware Package - 234548

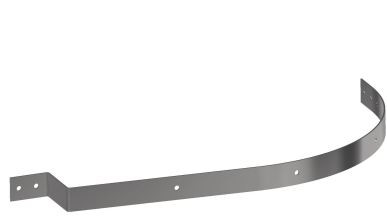
PART NUMBER	DESCRIPTION	QTY
193797	3/8" x 1 1/2" Hex bolt c/w sealing washer	25
235943	3/8" x 1" Hex bolt c/w sealing washer (Bag of 50)	1
235951	3/8" Nut (Bag of 100)	1
198932	Inside Ladder Instructions	1

6.10. Self Close Gate Package - 234169

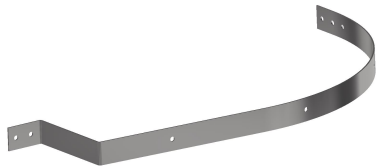
Table 19. Self Close Gate Package — 234169

PART NUMBER	DESCRIPTION	QTY
213061	Door Pan for Catwalk	1
234606	Z-Channel Post	1
213011	Lateral Brace	1
234695	Spring Hinge	2
213376	Latch	1
235901	1/4" x 3/4" Bolt	0.2 (bags = 15 pcs)
154156	1/4" Nuts	15
154005	BLT #10-24 x 3/4" Zn	8
150008	Nut #10-24 Zn	8
157042	BLT SLF Drill 1/4"-14 x 1.0 JS500	8
193774	WSHR Sealing 5/16" STL/NEO	8
185011	Carton	1

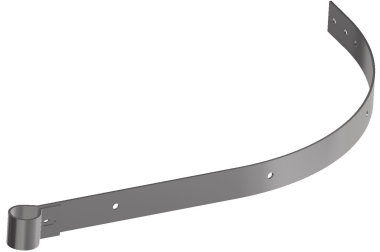
6.11. Ladder Parts Identification



234161 - Standard Ladder Cage Hoop



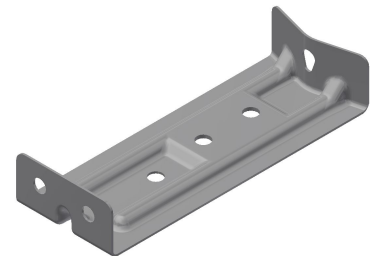
234162 - Bottom Ladder Cage Hoop



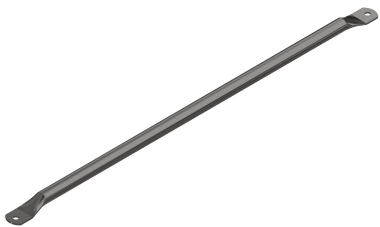
234163 - Top Ladder Cage Hoop



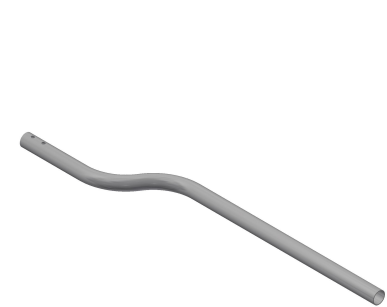
234166 - Ladder Cage Brace
(45-3/16" Long)



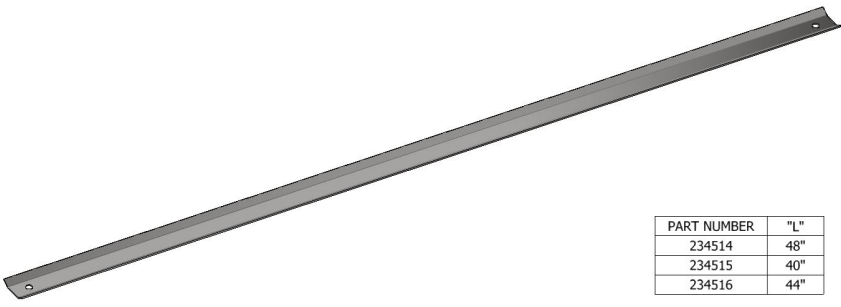
234501 - Ladder to Wall Clip



234504 - Ladder Support Arm
(1" Dia x 34-3/4" Long)



234505 - Ladder Pass Thru Rail



234514-16 - Ladder Cage Support

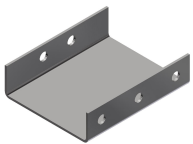
PART NUMBER	"L"
234514	48"
234515	40"
234516	44"



234517 - Ladder Support Arm Clip



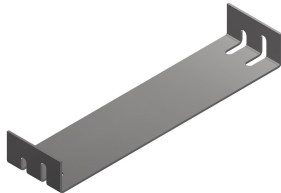
234518 - Ladder Support Arm Bracket



234519 - Interior Ladder to Wall Clip



234558 - Ladder Block-off Hinge



234650 - Reinforcement Brace



234580 - Ladder Pass Thru Rail Support Strip

6.12. Platform Part Identification



234149 - Platform Handrail
(1-1/4" Dia x 34" Long)



234150 - Platform Handrail
(1" Dia x 17" Long)

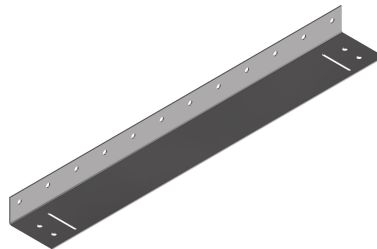


234164 - Platform Tube Rail
(30" Long)

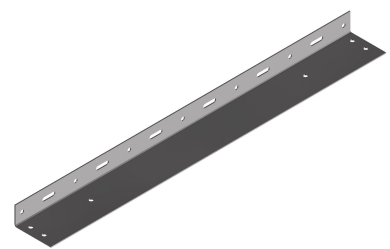
234165 - Platform Tube Rail
(37-3/4" Long)



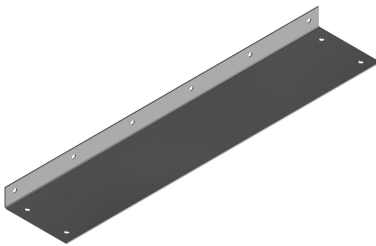
234559 - Tube Cap



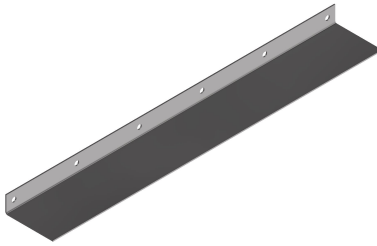
234612 - Platform Cross Member 1



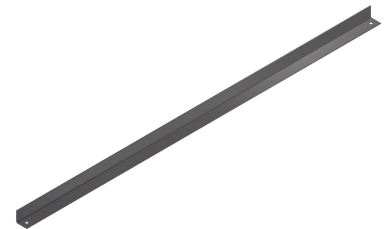
234613 - Platform Cross Member 2



234614 - Platform Toe Board



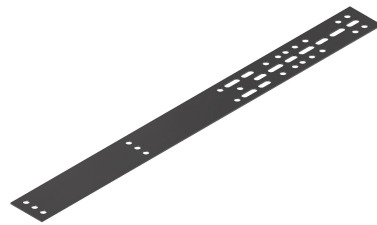
234615 - Platform Cross Member 3



234619 - Platform Angle Brace



234621 - Platform to Wall
Connection



234622 - Platform to Ladder Cage
Band



234641 - Platform Corner Post



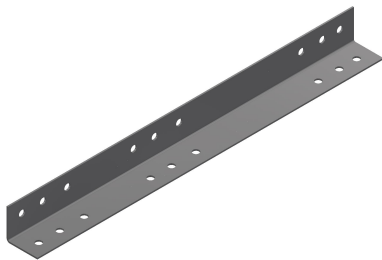
234642 - Platform Angle Post



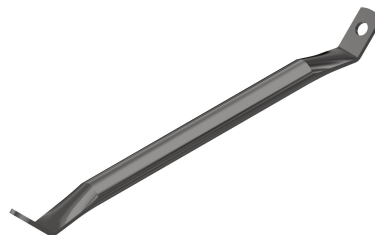
234643 - Platform Channel Post



234645 - Extension Post Angle Long (54-1/2" Long)



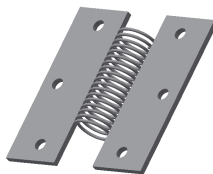
234646 - Extension Post Angle Short (24-3/4" Long)

213011 – Lateral Brace
(0.815" Dia x 15-3/4" Long)

234606 – Platform Gate Z-Channel Post



213061 – Self Closing Gate Door



234695 – Self Closing Gate Hinge



213376 – Self Closing Gate Latch

7. Limited Warranty: Westeel Grain Bin Products

Westeel – Ag Growth International ("Westeel") warrants products that it has manufactured and/or that are branded with its name (the "goods") subject to the following terms and limitations, (the "warranty"):

Duration of Warranty

This warranty will run from the date of purchase from the dealer or distributor, authorized by Westeel. The duration of the warranty is limited as follows:

Galvanized Bins	5 years
EasyFlow2	24 months
Westeel Fans	36 months
Floors	12 months
Catwalk	12 months
Bulk Feed Tanks	24 months
SeedStor-K Cones	
Paint	12 months
Structural	30 months
Elite Cones	
Paint	30 months
Structural	10 years
WESTEEL cones	
Paint	No Warranty
Structural	12 months
Smooth Wall Bins	
Paint	60 months
Structural	10 years
Commercial Smooth Wall Bins	
Paint	12 months
Structural	10 years

Limitation of Remedies Replacement

Within the warranty period, Westeel will replace the goods and/or original manufactured components thereof which are found, to Westeel's satisfaction, to be defective. Westeel is not responsible for direct, indirect, special, consequential, or any other damages of any kind, including personal injury to any individual, howsoever caused, including caused by transportation of the goods for repair or replacement.

Procedure for Obtaining Service

In the event of a warranty claim, the purchaser must complete any and all information required by Westeel in order to properly assess or investigate the claim. Westeel will not be responsible for the removal of any of the goods found to be defective, or transportation charges to and from Westeel's authorized dealer or distributor, or for installation of any replacement goods and/or parts furnished under the warranty.

Limitations as to Scope of Warranty

The warranty does not extend to defects or damage caused, in whole or in part, by:

1. use of a kind and/or to a degree not reasonably expected to be made of the goods;
2. improper storage of the goods both prior to and after purchase;
3. damage caused by, or in the course of, installation or assembly;
4. any use of the goods which is not an intended use as specified in Westeel's published product literature, or otherwise specified by Westeel in writing;
5. any equipment attached to or used in conjunction with the goods;
6. any field modifications or substitutions to original bin components;
7. inadequate ventilation or any other circumstance not in keeping with proper maintenance and/or use of the goods;
8. Acts of God, accident, neglect or abuse of the goods by the purchaser and/or any other individual or entity; or
9. Any use or installation inconsistent with Westeel's Standard Disclaimers.

Limitations as to Manufacturer

The warranty does not cover products sold by Westeel that are not manufactured by Westeel. In those circumstances, the purchaser is referred to the manufacturer of those products.

Limitation of Implied Warranties and Other Remedies

To the extent allowed by law, neither Westeel nor its dealers, nor any company affiliated with Westeel makes any warranties, representations, or promises as to the quality, performance, or freedom from defect of any Product covered by this Warranty.

WESTEEL HEREBY DISCLAIMS, TO THE EXTENT APPLICABLE, ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. A PURCHASER'S ONLY REMEDIES IN CONNECTION WITH THIS WARRANTY ARE THOSE SET FORTH IN THIS WARRANTY. IN NO EVENT WILL WESTEEL, ITS DEALERS, OR ANY COMPANY AFFILIATED WITH WESTEEL BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES.

Some jurisdictions do not allow waivers of certain warranties, so the above waivers may not apply to you. In that event, any implied warranties are limited in duration to ninety (90) days from delivery of the products. You may also have other rights which vary from jurisdiction to jurisdiction.

Exclusive Warranty

This warranty is the only warranty provided by Westeel and all other warranties and/or commitments, whether express or implied and no matter by whom made, statutory or otherwise, are subsumed and replaced by it and are of no legal effect. If any provision of the warranty is held by a court of

competent jurisdiction to be void or unenforceable, in whole or in part, such provision shall be deemed severable and will not affect or impair the legal validity of any other provision of the warranty.






Westeel is an AGI Brand.

AGI is a leading provider of equipment solutions for agriculture bulk commodities including seed, fertilizer, grain, and feed systems with a growing platform in providing equipment and solutions for food processing facilities. AGI has manufacturing facilities in Canada, the United States, the United Kingdom, Brazil, South Africa, India and Italy and distributes its products globally.



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Please include the part number listed on the cover page in your message.