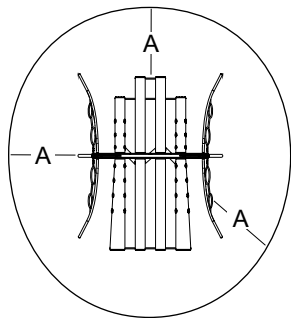




Assembly View (representative structure)



Equipment Use Zone
A - (ASTM) 72 in. (1830 mm)
(CSA) 1800 mm
(EN) 1500 mm

Installation Instructions

Playworld Systems[®]

Models XX0183 and XX0183S




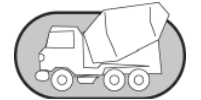
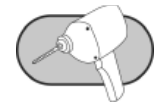


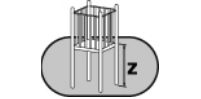
Independent Rushmore

In-Ground and Surface Mount

Installation Preparation

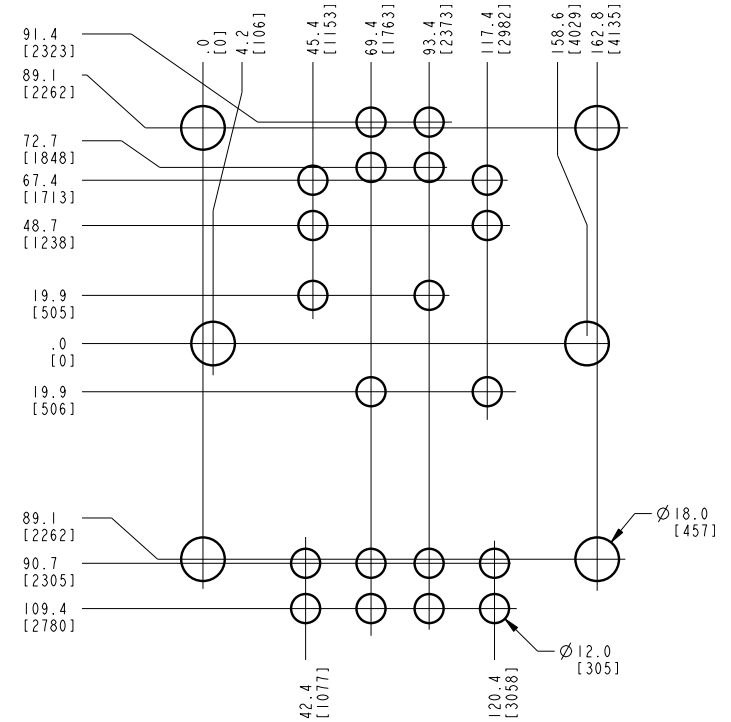
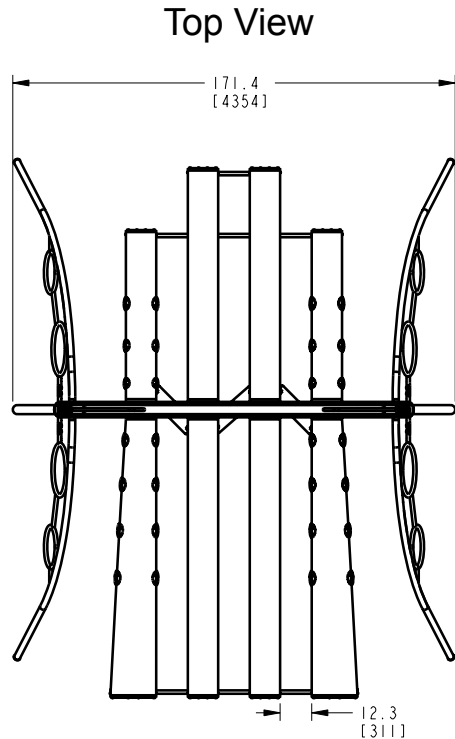
Recommended Crew: Four (4) adults
 Installation Time (In-ground): 28 man-hours
 Installation Time (Surface Mount): 14 man-hours
 Concrete Required: 1.32 cubic yard (0,96 cubic meters)
 Use Zone: Refer to the information below
 User Group Age (years): ASTM/CSA: 5-12, EN: 6-14

ICON KEY

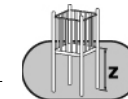
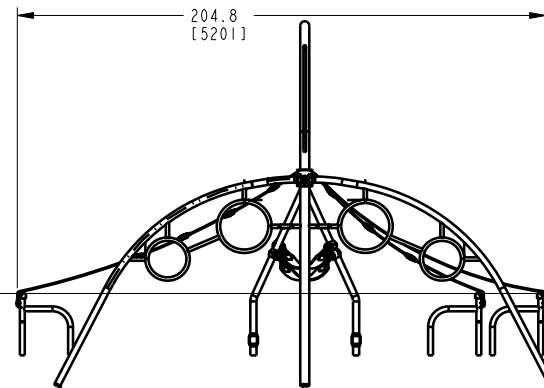
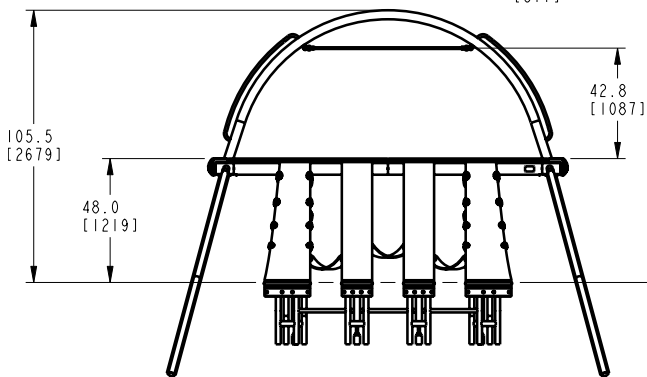
	Fully Tighten Hardware		Add 1 Drop of Thread Locking Adhesive
	Do Not Fully Tighten Hardware		Pour Concrete
	Drill		Dig Footing Holes
	Hammer		Critical Fall Height

Installation Instructions

KEY	
Position	Unit of Measurement
Top #	Inches
Bottom #	[Millimeters]



Footing Diagram

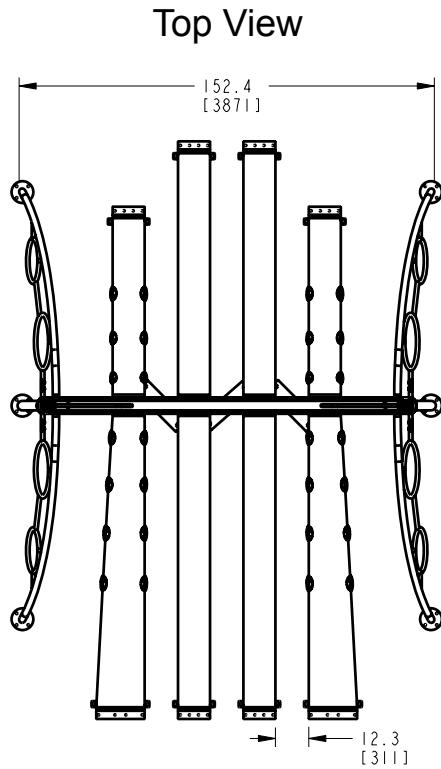


48" (1219 mm)

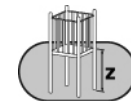
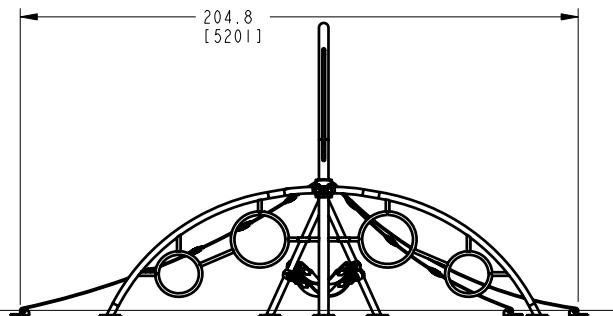
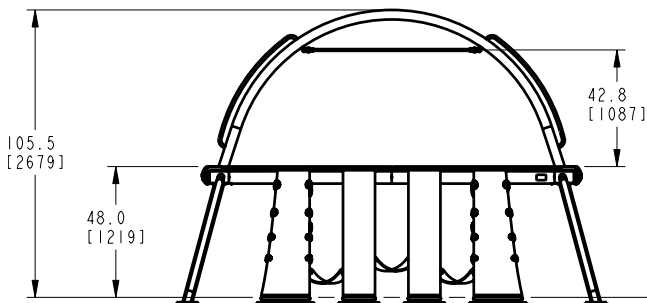
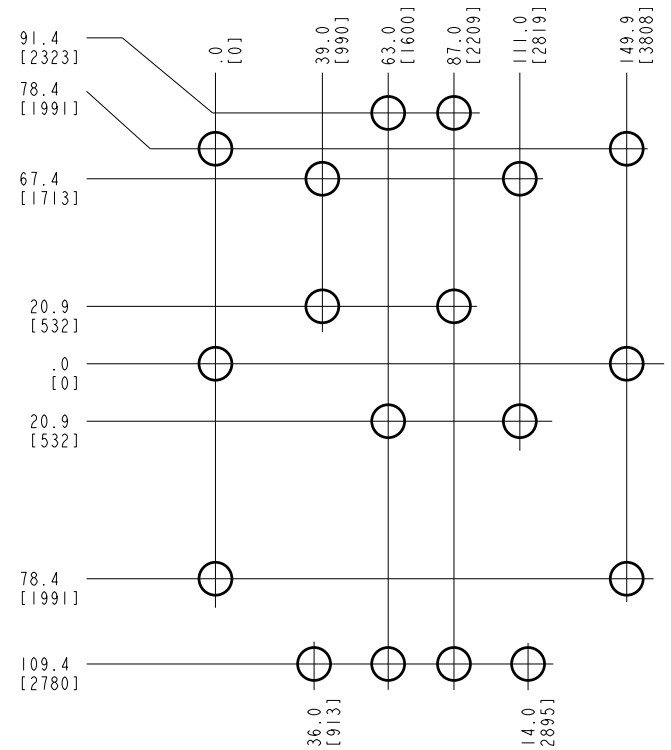
**Elevation Views
XX0183**



Installation Instructions



KEY	
Position	Unit of Measurement
Top #	Inches
Bottom #	[Millimeters]

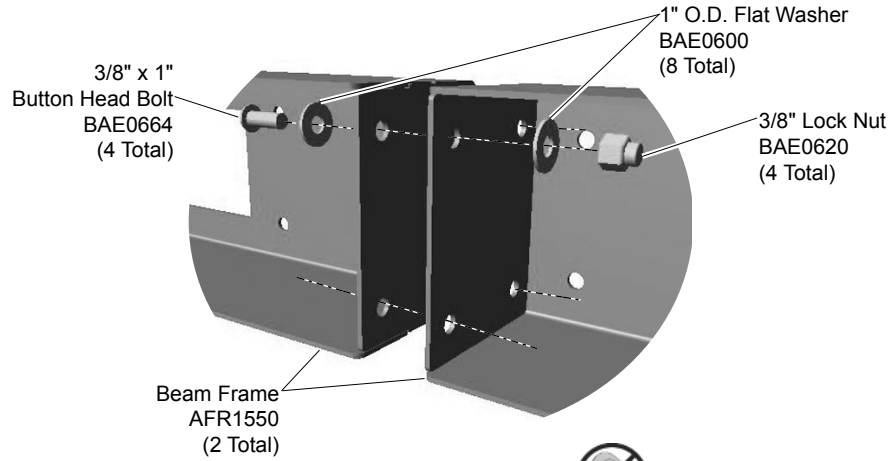


48" (1219 mm)

**Elevation Views
XX0183S**

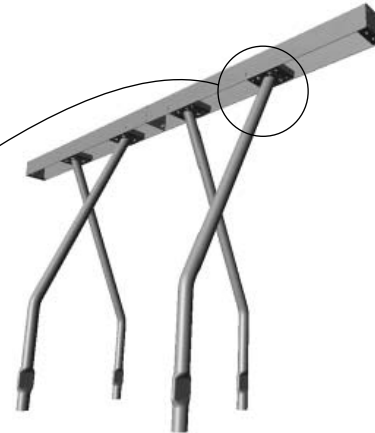
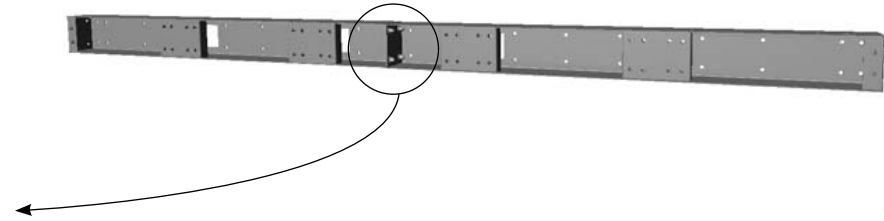
Installation Instructions

Follow the details in alphabetical order. For clarification, each detail references the step description. The step descriptions start on page 18.

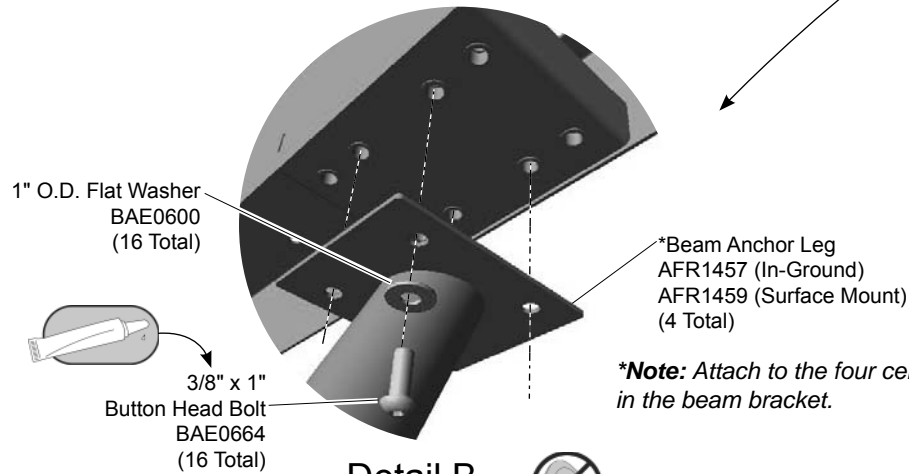


Detail A
Step 4

Attach the beam frames together.



Important Note: Ensure the legs are positioned correctly to match the footings.

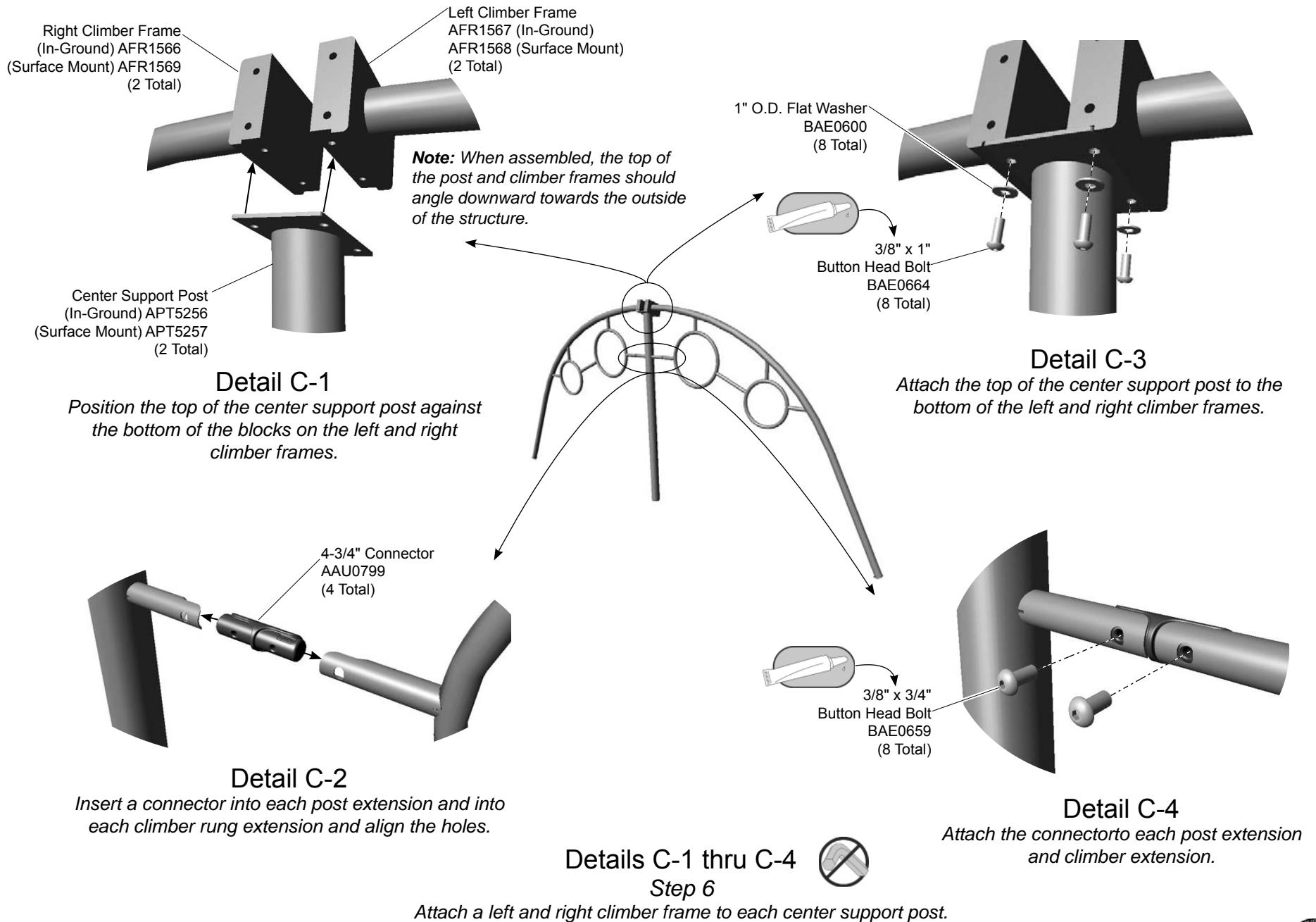


Detail B
Step 5

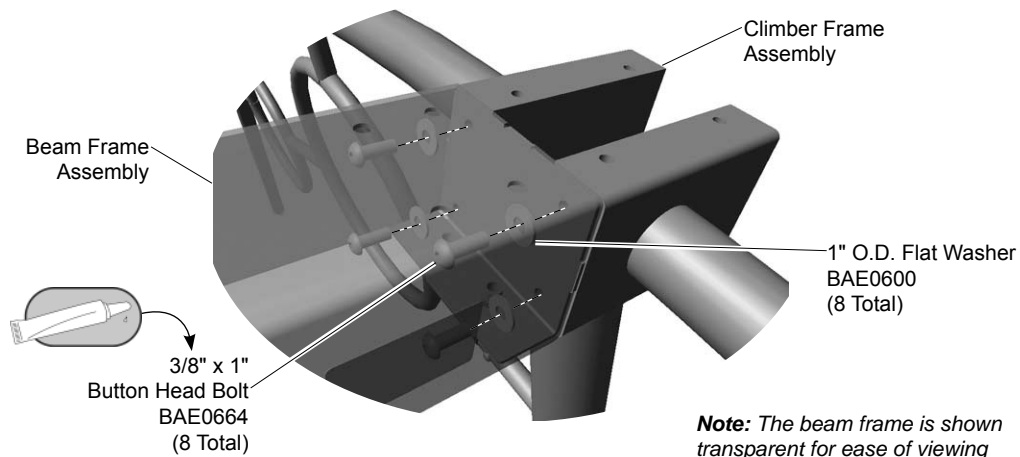
Attach the anchor legs to the beam frames.

***Note:** Attach to the four center holes in the beam bracket.

Installation Instructions

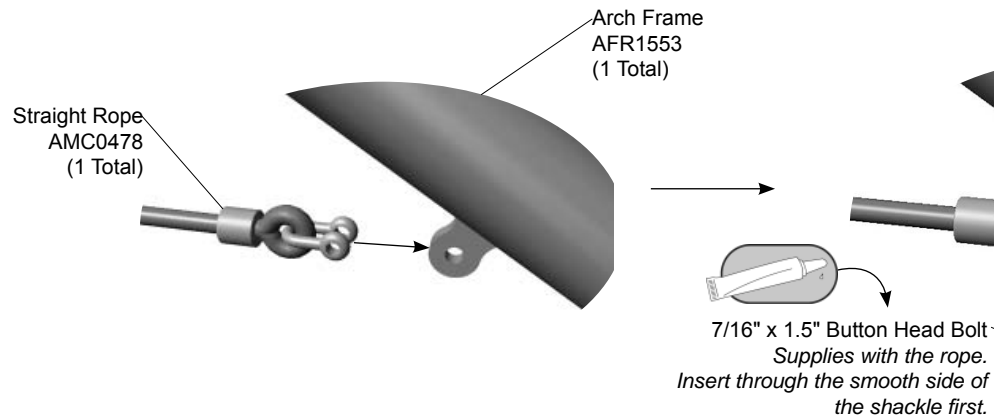


Installation Instructions



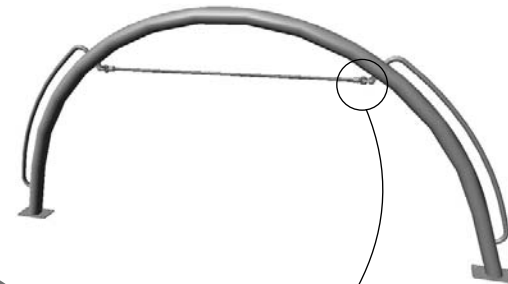
Detail D Step 7

Attach the climber frame assemblies to the beam frame assembly.

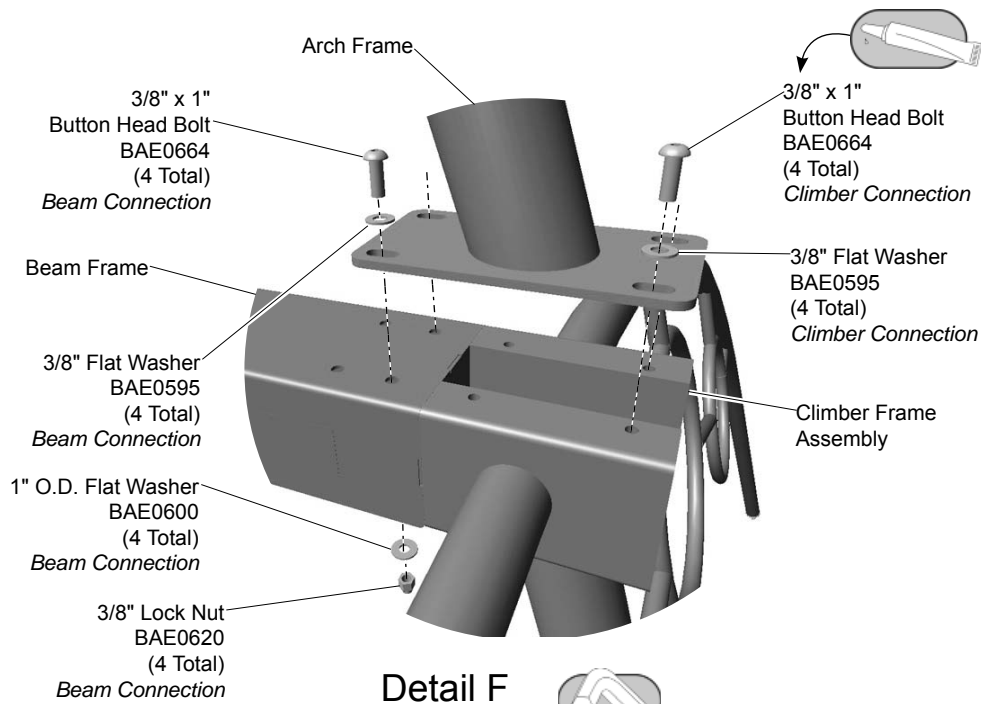


Detail E Step 8

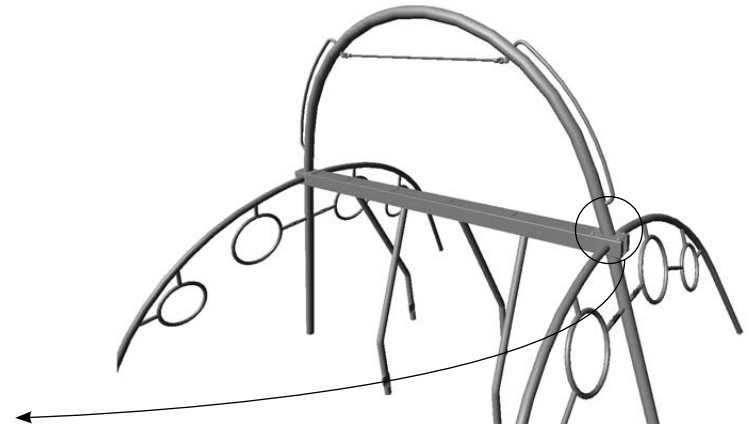
Attach the straight rope to each side of the arch frame.



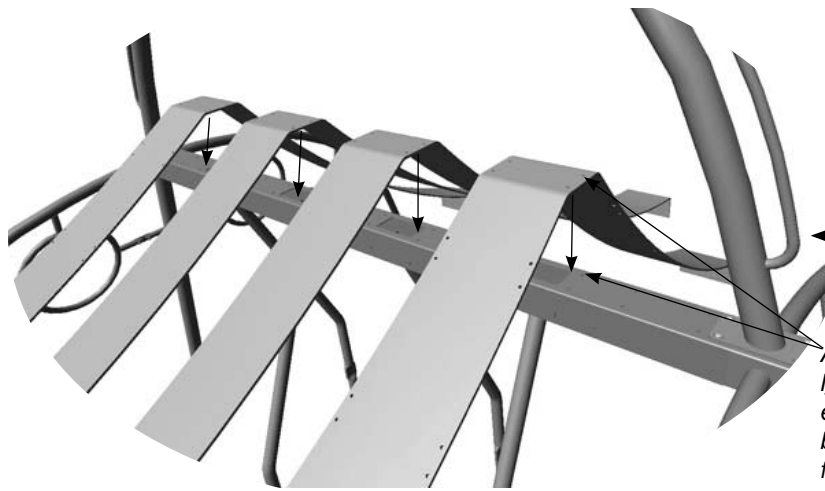
Installation Instructions



Attach the arch frame to the beam and climber posts.



Installation Instructions

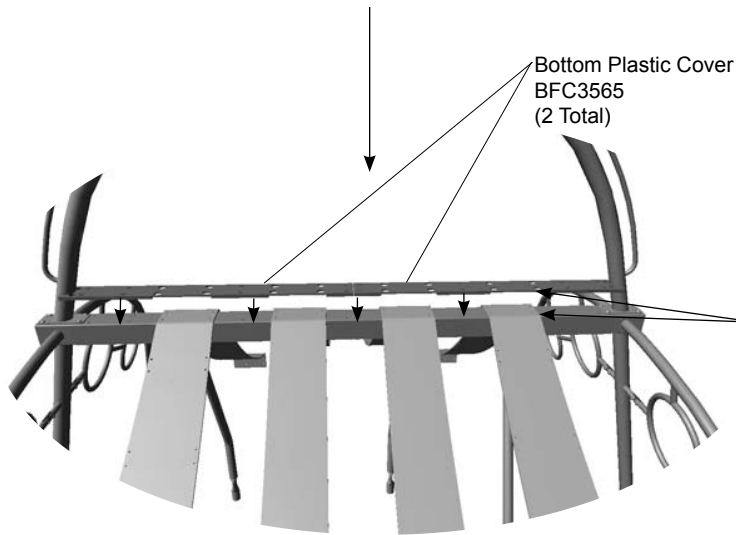
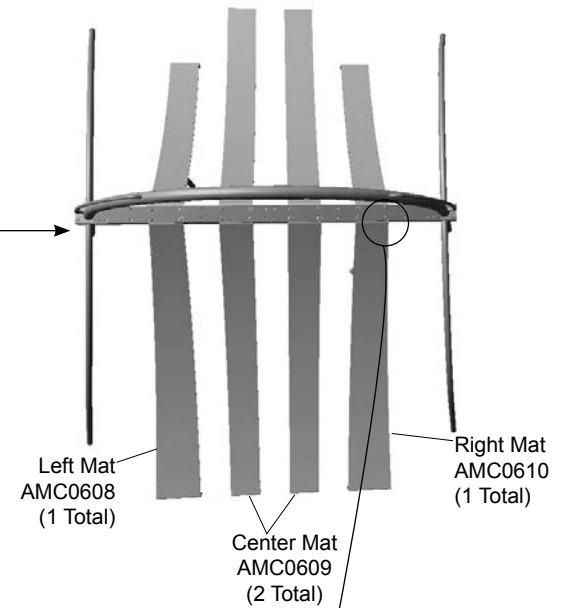


Position the mats, **textured side up**, over the beam assembly.

Important Note: Ensure the mats are positioned correctly to match the footings when attached to the anchors.

Align the slightly larger holes in the left and right mats with the holes on either side of the openings in the beam. With the center mats, align the four holes in the middle of the mat.

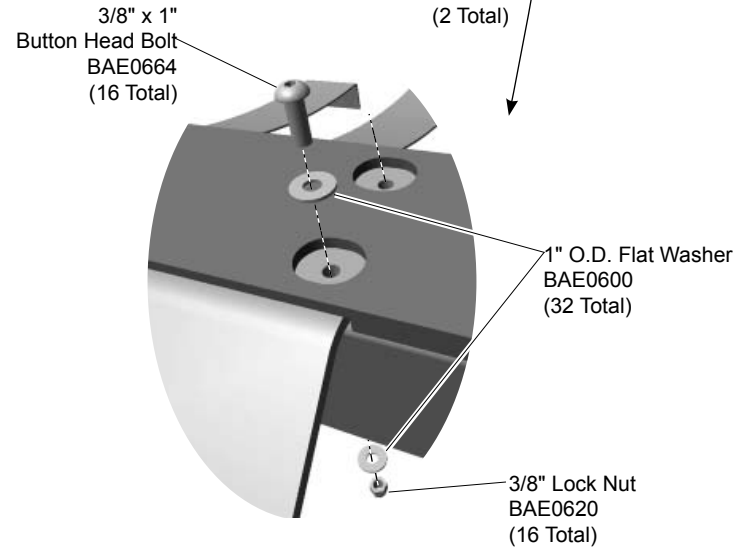
Top View



Position the bottom plastic covers over the mats.

Bottom Plastic Cover BFC3565 (2 Total)

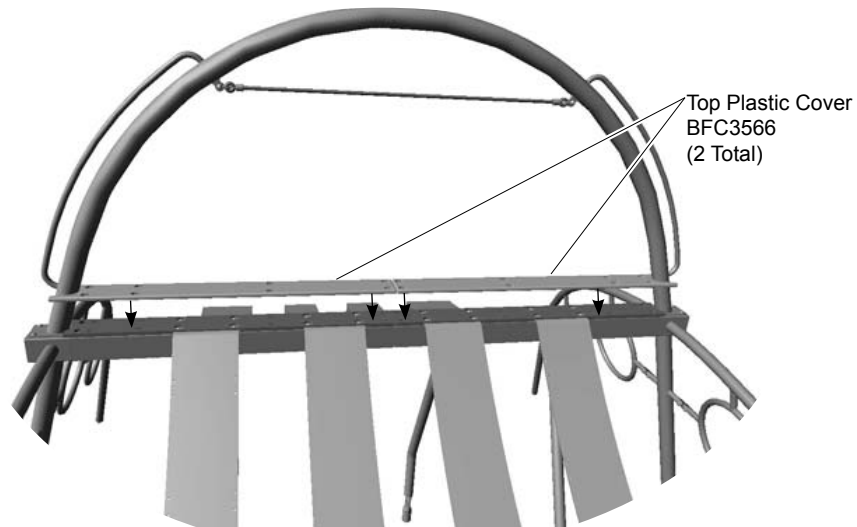
The cutouts in the plastic covers fit over the mats.



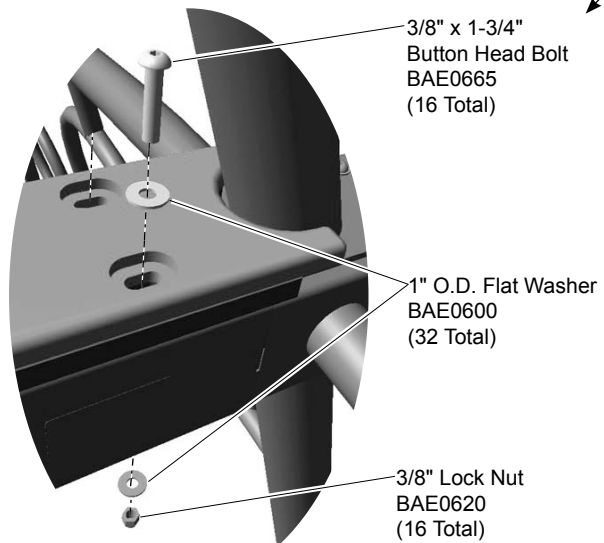
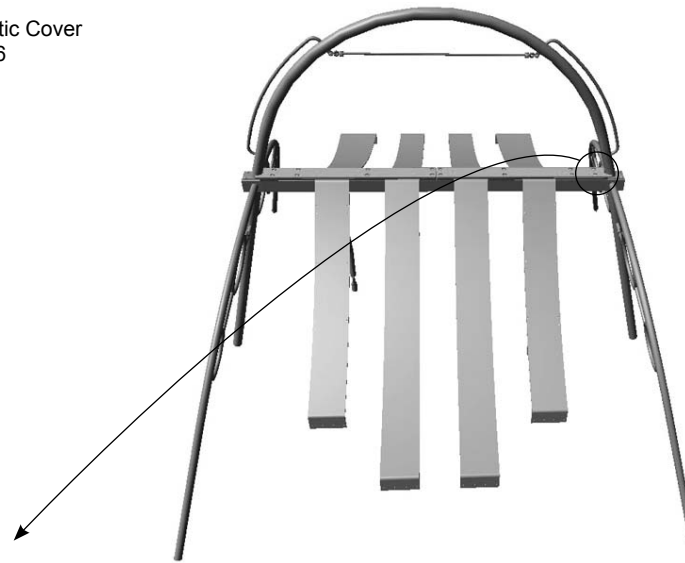
Detail G Step 10

Attach the mats to the beam assembly.

Installation Instructions



Position the top plastic covers over the bottom covers.

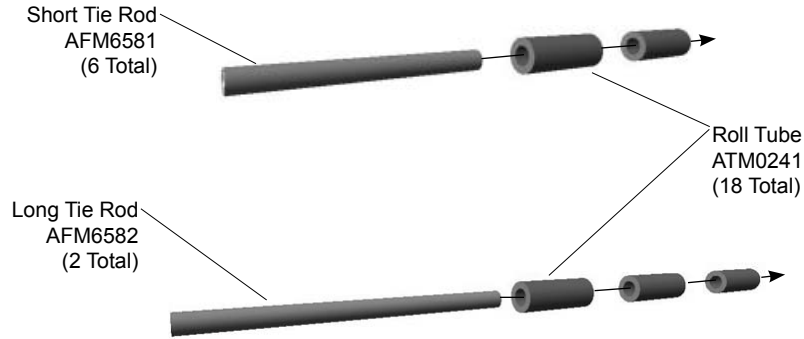


Detail H Step 11



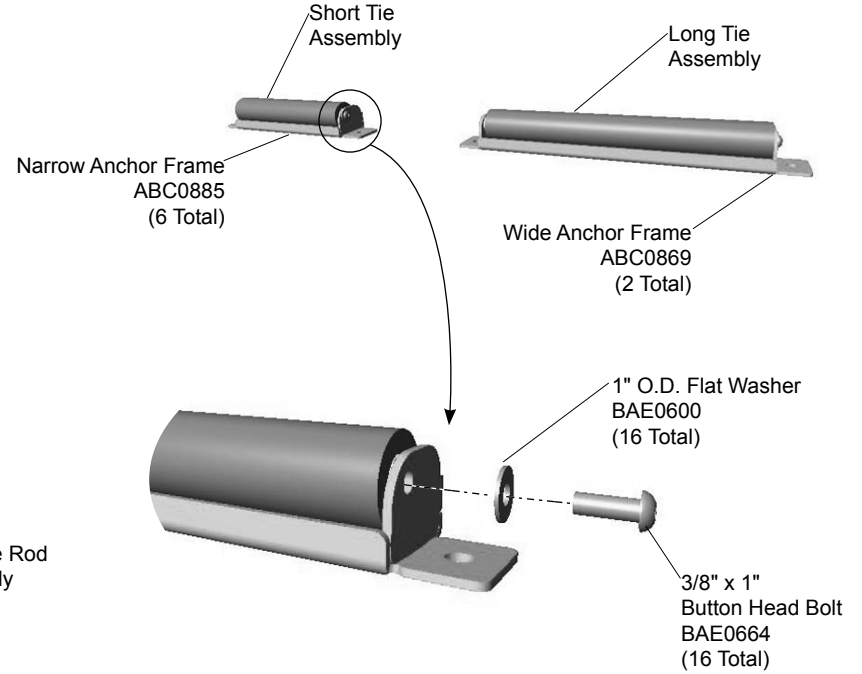
Attach the top plastic covers to the beam assembly.

Installation Instructions



Detail I-1

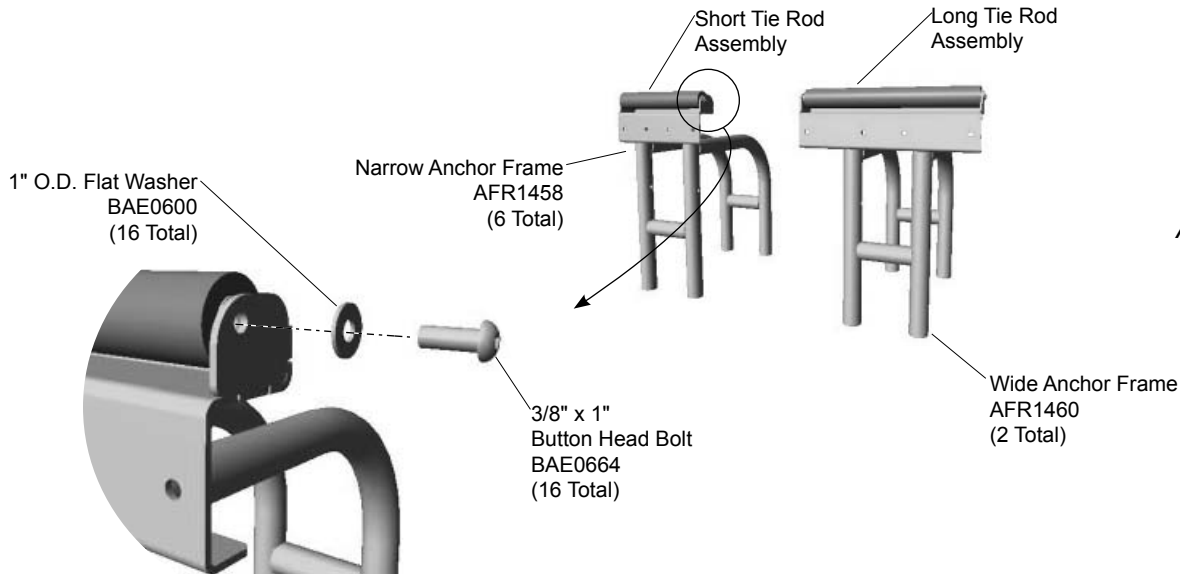
Insert and center each tie rod through the roll tubes, two for the short tie rods and three for the long.



Detail I-2

(Surface Mount Model)

Attach the tie rod assemblies to the anchors frames.



Detail I-2

(In-Ground Model)

Attach the tie rod assemblies to the anchors frames.

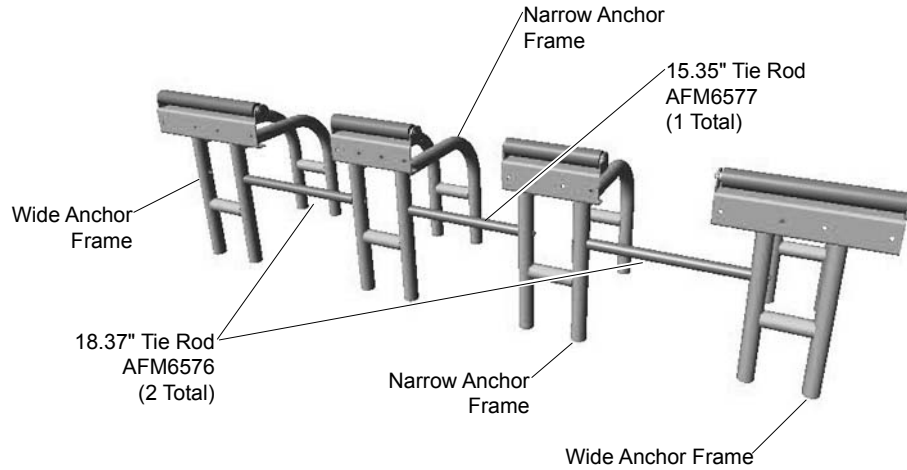
Details I-1 and I-2

Step 12

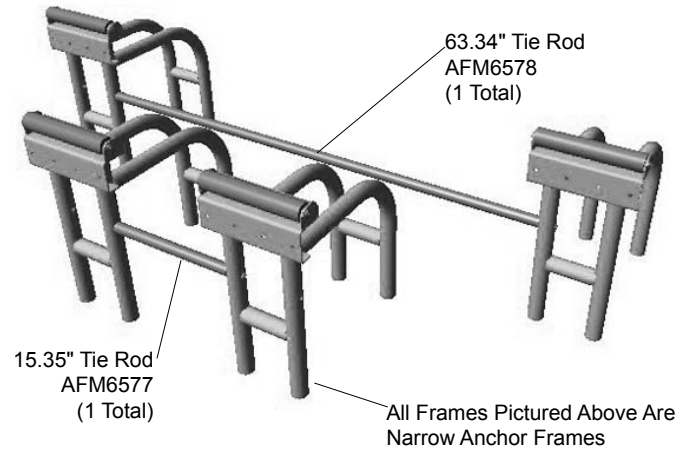
Assemble and attach the tie rod assemblies to the anchors frames.



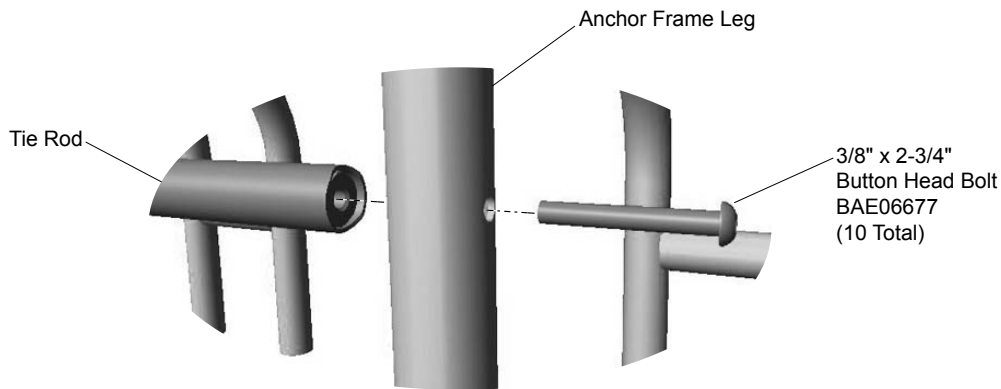
Installation Instructions



Straight Line Footing Configuration



Staggered Footing Configuration

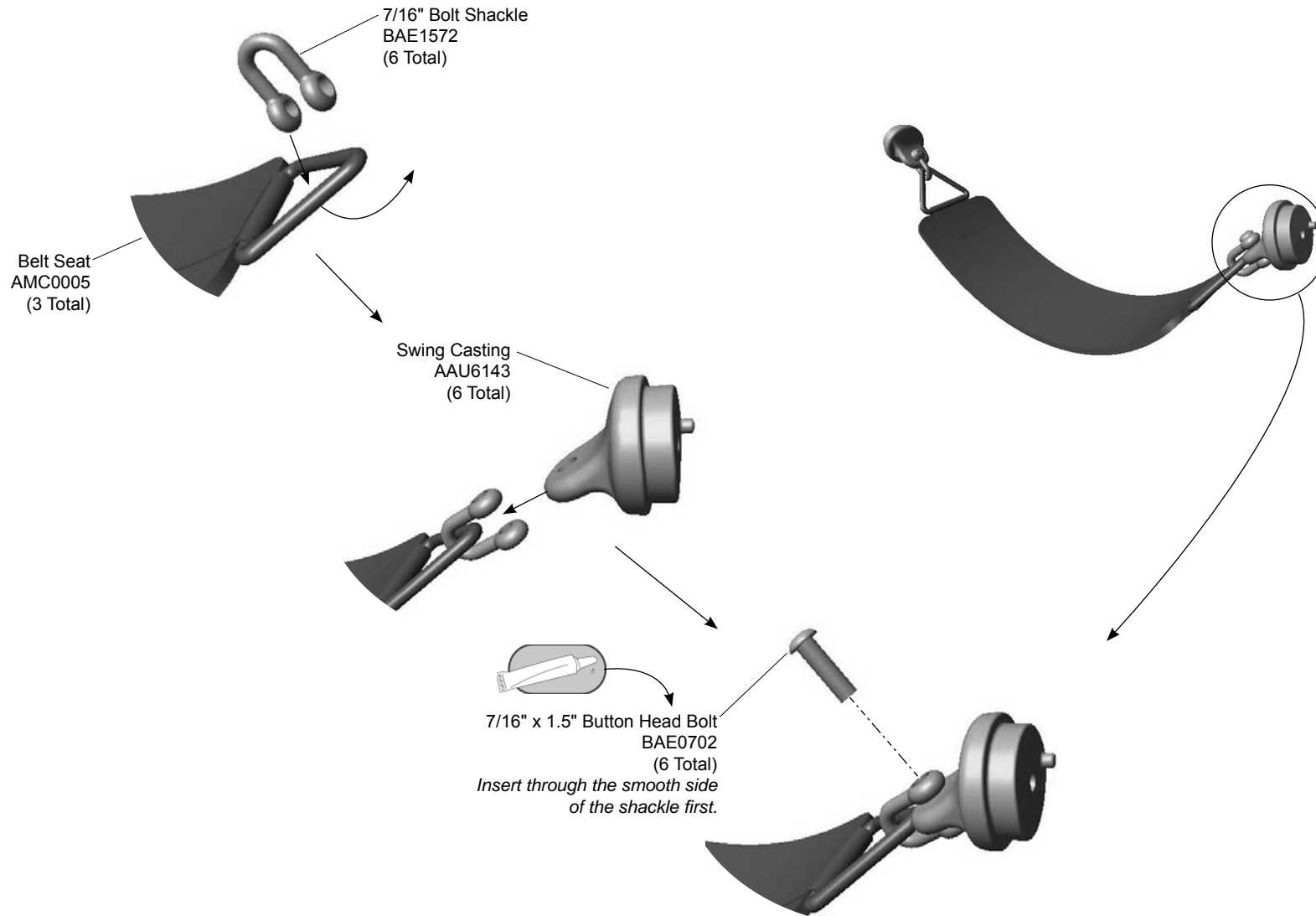


Detail J
Step 13



(In-Ground Model Only)
Attach the anchor frames together.

Installation Instructions

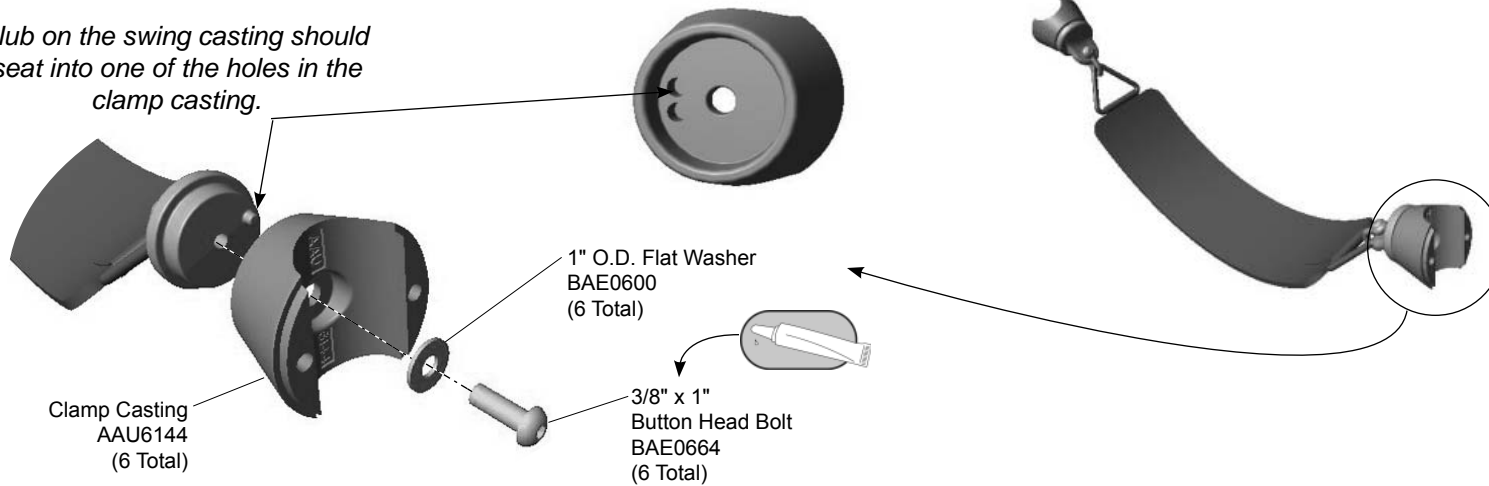


Detail K 
Step 14
Assemble the belt seats.



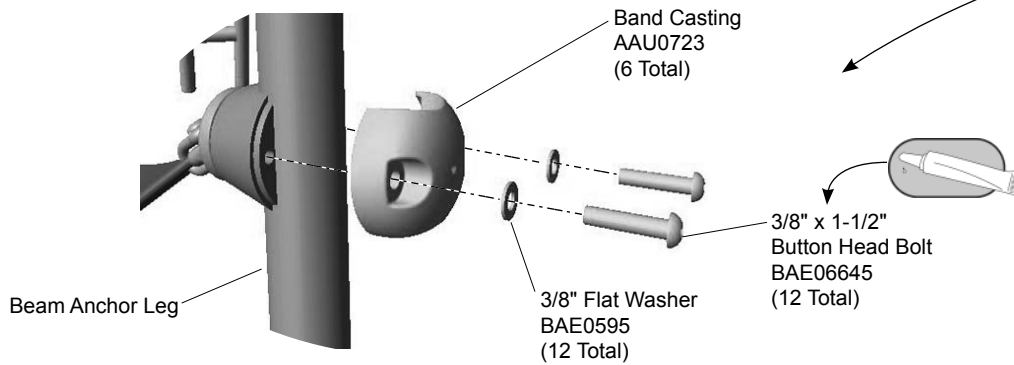
Installation Instructions

Nub on the swing casting should seat into one of the holes in the clamp casting.



Detail L Step 15

Attach a clamp casting to each swing casting.



Detail M Step 16

Attach the belt seats to the beam anchor legs.

Installation Instructions

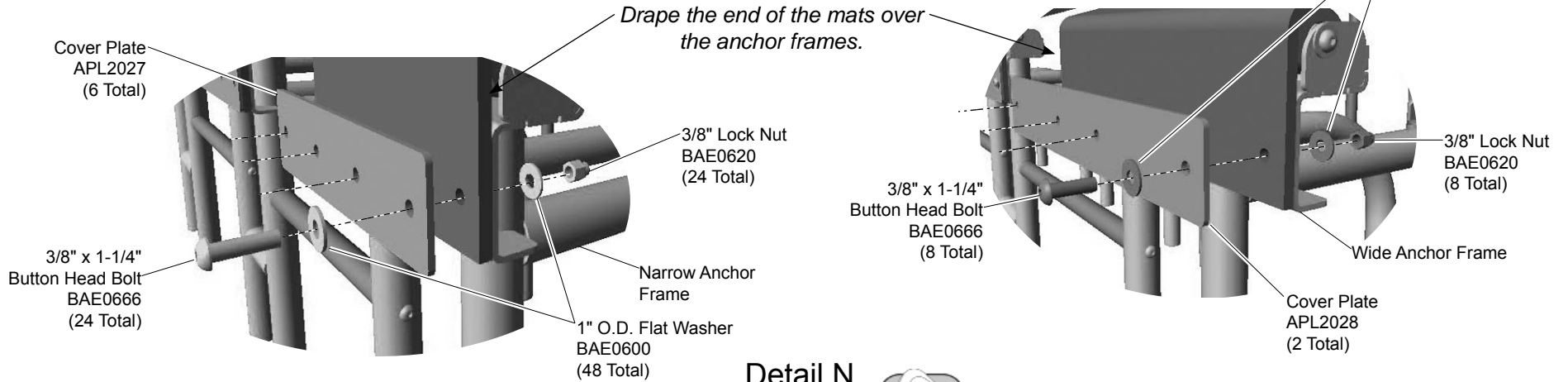
Staggered Footing

Top View



Straight Line Footing

Place the anchor frames in their footing holes
(See **Detail J** for frame configuration).



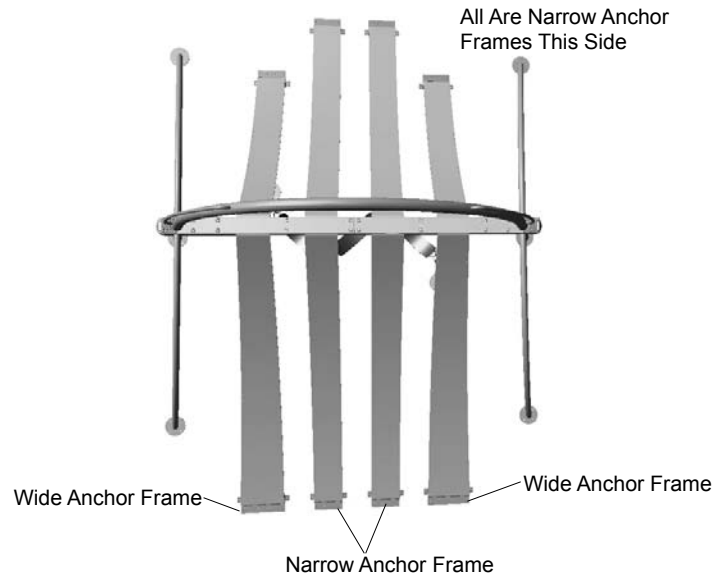
Detail N Step 17



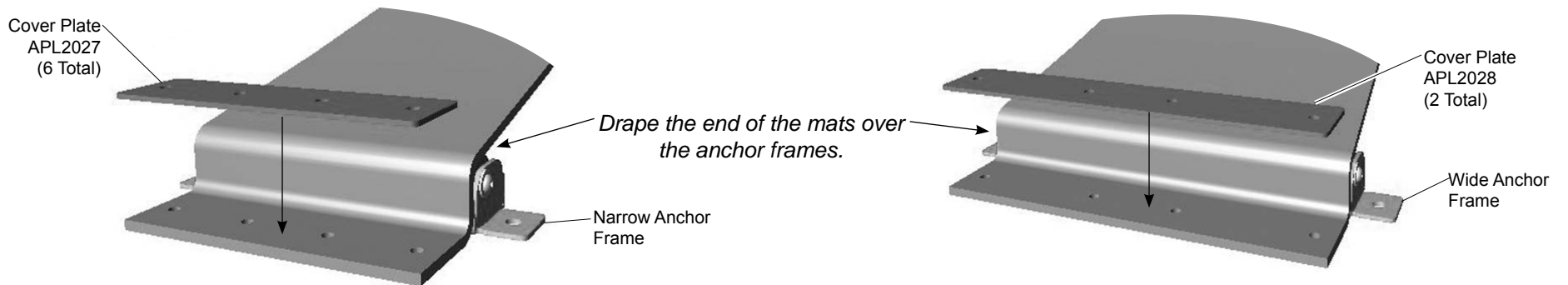
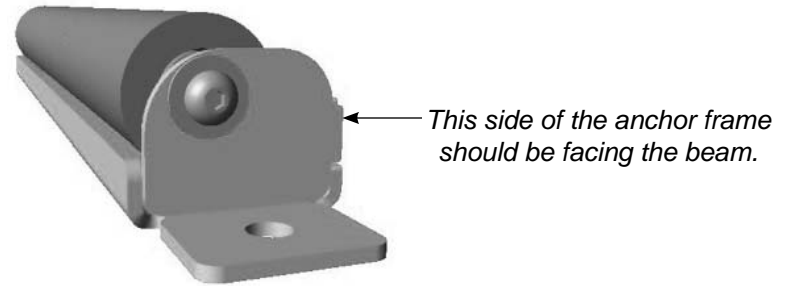
(In-Ground Model)

Attach the mats to the anchor frames.

Installation Instructions



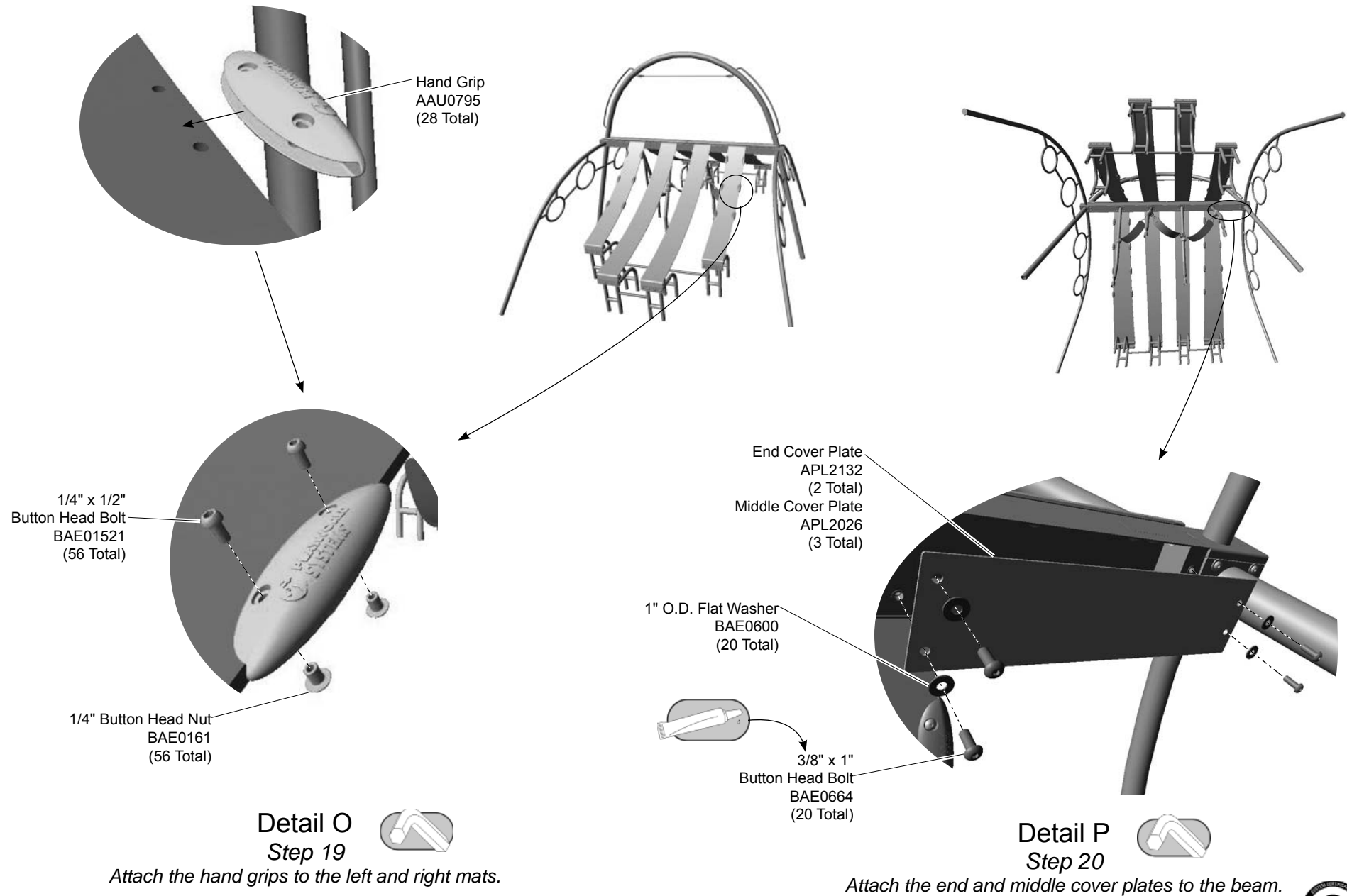
Place the anchor frames on their footings.



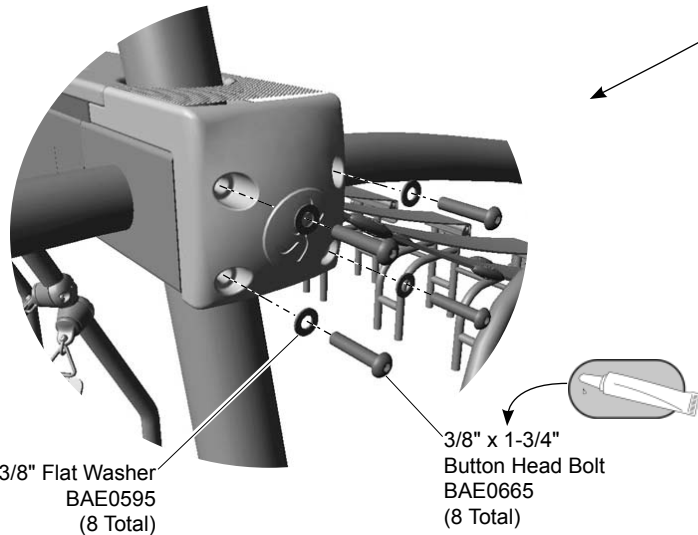
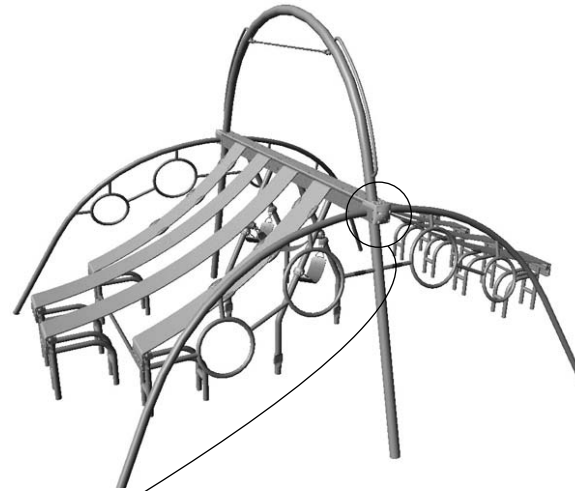
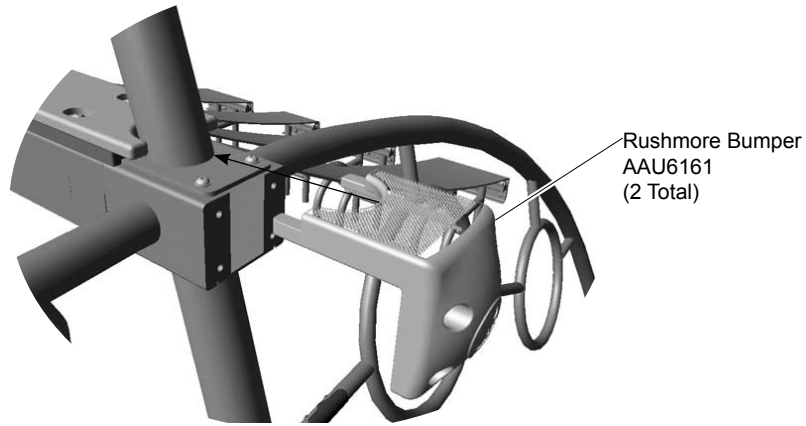
Detail N
 Step 17
 (Surface Mount Model)
 Prepare the mats to the anchored.

Important Note: Hardware to bolt the mat and anchor frame to the surface is provided by the customer.

Installation Instructions

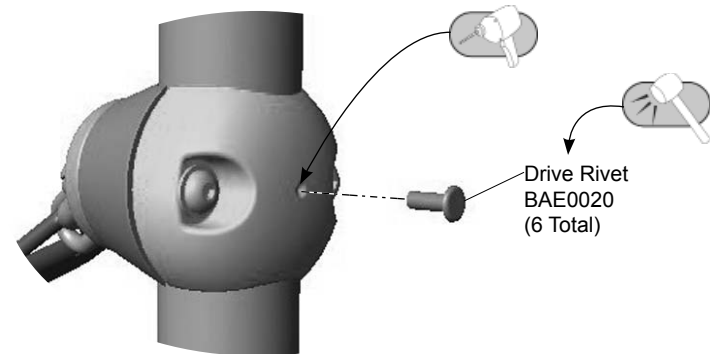


Installation Instructions



Detail Q
Step 21

Attach the Rushmore bumper to the climber frames.



Detail R

Step 22

Secure the band castings to the anchor legs.

Installation Instructions

Notes Before You Begin: Do not over tighten bolts during assembly, only snug tighten them until assembly is complete.

Carefully read and understand these installation instructions before you begin.

Step 1: Before attempting to assemble your equipment, please review all installation information carefully. Should you experience any difficulty during the installation process, please call us at the phone number shown on the last page of these instructions.

Step 2: Separate and identify all components and hardware.

Step 3: Excavate, or prepare, the footings as shown in the **Footing Details** in the *Annex* at the end of this installation instruction. For the in-ground model, use the **Component Footing Detail** for the 12 inch diameter holes and the **Support Post Footing Detail** for the 18 inch diameter holes (See **Footing Diagram** on page 2).

Step 4: Attach the beam frames together. See **Detail A**. Position the end of each beam without a mounting bracket on the bottom against each other and attach as shown.

Step 5: Attach the anchor legs to the beam frames. See **Detail B**. Position the mounting plate on the top of each leg against a beam bracket and align the holes in the plate with the *middle four (4) holes* in the bracket and attach as shown.

Important Note: Ensure the legs are positioned correctly to match the footings.

Step 6: Attach a left and right climber frame to each center support post. See **Details C-1 thru C-4**. Position the top of the center support post against the bottom of the blocks on the left and right climber frames. Insert a connector into each post extension and into each climber rung extension and align the holes. Apply a drop of thread locking adhesive to the bolt threads and make the connections as shown.

Note: When assembled, the top of the post and climber frames should angle downward towards the outside of the structure.

Step 7: Attach the climber frame assemblies to the beam frame assembly. See **Detail D**. Place the assemblies in, or on, their footings and align the holes in the end of each beam with the holes in the blocks on the climber frames. Apply a drop of thread locking adhesive to the bolt threads and attach as shown.

Step 8: Attach the straight rope to each side of the arch frame. See **Detail E**. Remove the bolt from each shackle on the rope, position each shackle over a tab on the arch frame, apply a drop of thread locking adhesive to the bolt threads and attach as shown. Make sure to insert the bolt through the *smooth side* of the shackle first. Fully tighten the connections according to tightening torque specifications.

Torque Specifications:

Bolts and nuts - Snug tighten and then tighten an additional one half turn.

Step 9: Attach the arch frame to the beam and climber posts. See **Detail F**. Position the ends of the arch frame on top of the beams and climber posts and attach as shown. Apply a drop of thread locking adhesive to the bolt threads for the climber connection. Fully tighten the connections according to tightening torque specifications.

Step 10: Attach the mats to the beam assembly. See **Detail G and Top View**. Place each mat, *textured side up*, over the beam assembly as shown in the **Top View**. Align the *slightly larger holes* in the *left and right mats* with the holes on either side of the openings in the beam. With the *center mats*, align the four (4) holes in the middle of the mat. Position the bottom plastic covers over the mats with the cutouts in the covers fitting over the mats and attach as shown to the beam. Fully tighten the connections according to tightening torque specifications (see **Final Details**).

Step 11: Attach the top plastic covers to the beam assembly. See **Detail H**. Place the top plastic covers on top of the bottom covers, align the holes, and attach as shown. The side of the top covers with the routed holes must be facing up. Fully tighten the connections according to tightening torque specifications.

Step 12: Assemble and attach the tie rod assemblies to the anchors frames. See **Details I-1 and I-2**. Insert and center each tie rod through the roll tubes, two for the short tie rods and three for the long. Insert each tie rod assembly into the top of the appropriate frame (wide and narrow frames, both in-ground and surface mount) and attach as shown. Fully tighten the connections according to tightening torque specifications.

Step 13: (In-Ground Model Only) Attach the anchor frames together. See **Detail J, Straight Line Footing Configuration and Staggered Footing Configuration**. Position the frames as shown with the appropriate tie rod in between and attach as shown. Fully tighten the connections according to tightening torque specifications.

Installation Instructions

Step 14: Assemble the belt seats. See **Detail K**. Insert a shackle through the end of each belt seat, insert a swing casting between the prongs on the shackle, apply a drop of thread locking adhesive to the bolt threads, and attach as shown. Insert the bolt through the *smooth* side of the shackle first. Fully tighten the connections according to tightening torque specifications.

Step 15: Attach a clamp casting to each swing casting. See **Detail L**. Position each clamp casting against a swing casting, with the nub on swing casting seating in one of the holes in the clamp casting. Apply a drop of thread locking adhesive to the bolt threads and attach as shown. Fully tighten the connections according to tightening torque specifications.

Step 16: Attach the belt seats to the beam anchor legs. See **Detail M**. Position each belt seat between a pair of anchor legs at a desired height, apply drop of thread locking adhesive to the bolt threads, and attach as shown. Fully tighten the connections according to tightening torque specifications.

Step 17: *In-Ground Model* - Attach the mats to the anchor frames. See **Detail N (page 14)**. Position the anchor frames from each footing configuration in their designated holes and attach the mats as shown. Fully tighten the connections according to tightening torque specifications. *Surface Mount Model* - Place the footing frames on their designated footing, drape the end of the mats over top and place the cover plate on top of the mat with the holes aligned. See **Detail N (page 15)**.

Important Note: Hardware to bolt the mat and anchor frame to the surface is provided by the customer.

Final Details.

Step 18: Plumb and level the component. Tighten **all** fasteners. Fully tighten all fasteners according to tightening torque specifications.

Torque Specifications:

Bolts and nuts - Snug tighten and then tighten an additional one half turn.

Set Screws - Snug tighten and tighten an additional full turn.

In-Ground: Block and brace for concrete. Pour concrete after all equipment has been assembled. Allow 72 hours for concrete to completely cure.

Surface Mount: Bolt down all surface mount supports in accordance with specifications provided by your registered structural engineer.

Important Note: Surface mount hardware is not supplied. Customer is responsible for concrete base and for providing surface mount hardware as specified by a registered structural engineer for each specific project application.

Step 19: Attach the hand grips to the left and right mats. See **Detail O**. Place the hand grips over the holes along the inside and outside edge of the left and right mats and attach as shown. Fully tighten the connections according to tightening torque specifications.

Step 20: Attach the end and middle cover plates to the beam. See **Detail P**. Place the cover plates over the bottom of the beam, apply a drop of thread locking adhesive to the bolt threads, and attach as shown. Fully tighten the connections according to tightening torque specifications.

Step 21: Attach the Rushmore bumper to the climber frames. See **Detail Q**. Insert each bumper over the ends of the climber frames, apply a drop of thread locking adhesive to the bolt threads and attach as shown. Fully tighten the connections according to tightening torque specifications.

Step 22: Install drive rivets to secure the band castings to the anchor legs. See **Detail R**. After the equipment assembly is complete, install a drive rivet in each band casting to permanently secure it to the anchor leg. Using a 1/4" drill bit, drill through the band casting and anchor leg. Insert the drive rivet into drilled hole until the head of the rivet is against the surface of the clamp. Using a hammer, drive the pin of the rivet until it is flush with the surface of the rivet head.

Note: This step should be executed after structure has been assembled and properly footed.

Step 23: For areas complying with ASTM standard F1487 or the CSA Z-614, apply the age appropriate label to the component at eye level.

XX0183 - INDEPENDENT RUSHMORE

PART NO.	DESCRIPTION	QTY.	PART NO.	DESCRIPTION	QTY.
AAU0723	CASTING - 2.38" DIA BAND	6	BAE0666	BOLT - 3/8"-16 x 1-1/4" BUTTON HEAD - SS	32
AAU0795	RUSHMORE HANDLE	28	BAE06677	BOLT - 3/8"-16 x 2-3/4" BUTTON HEAD - SS	10
AAU0799	CONNECTOR - 1.375" O.D. x 4.75" THREADED HOLES	4	BAE0702	BOLT - 7/16-14 x 1.50" - BUTTON HEAD	6
AAU6143	SWING CASTING	6	BAE0900	WRENCH - 5/32" SHORT HEX KEY	1
AAU6144	CASTING - 2.38" DIA CLAMP w/HOLES	6	BAE0902	TOOL - 7/32" SHORT HEX KEY WRENCH	1
AAU6161	RUSHMORE BUMPER	2	BAE0922	TOOL - TT 45 L WRENCH	2
AFM6576	FAB METAL - 1.315" O.D. x 18.37" w/INSERTS	2	BAE1572	7/16" BOLT SHACKLE	6
AFM6577	FAB METAL - 1.315" O.D. x 15.35" w/INSERTS	2	BFC3565	SHEET - RUSHMORE (BOTTOM)	2
AFM6578	FAB METAL - 1.315" O.D. x 63.34" w/INSERTS	1	BFC3566	SHEET - RUSHMORE (TOP)	2
AFM6581	FAB METAL - 1.029" O.D. x 11.00" w/INSERTS	6	ALB0025	LABEL - AGE APPROPRIATE SHEET	1
AFM6582	FAB METAL - 1.029" O.D. x 17.00" w/INSERTS	2			
AFR1457	FRAME - RUSHMORE LEG	4			
AFR1458	FRAME - RUSHMORE FOOTING (CENTER)	6			
AFR1460	FRAME - RUSHMORE FOOTING (OUTSIDE)	2			
AFR1550	FRAME - RUSHMORE BEAM w/RIVNUTS	2			
AFR1553	FRAME - RUSHMORE ARCH	1			
AFR1566	FRAME - RUSHMORE CLIMBER - RIGHT	2			
AFR1567	FRAME - RUSHMORE CLIMBER - LEFT	2			
AMC0005	SEAT - SLASH PROOF BELT	3			
AMC0478	64.30" STRAIGHT ROPE w/2 SHACKLES	1			
AMC0608	RUSHMORE MAT (LEFT)	1			
AMC0609	RUSHMORE MAT (CENTER)	2			
AMC0610	RUSHMORE MAT (RIGHT)	1			
APL2026	PLATE - 19.38" x 5.69" x 11 GA	3			
APL2027	PLATE - 11.75" x 3.00" x 7 GA	6			
APL2028	PLATE - 17.75" x 3.00" x 7 GA	2			
APL2132	PLATE - 21.19" x 5.69" x 11 GA	2			
APT5256	FRAME - RUSHMORE CENTER SUPPORT	2			
ATM0241	2.00" O.D. x 5.66" TUBE	18			
BAD0085	THREAD LOCKING ADHESIVE	2			
BAE0020	RIVET - 1/4" x 11/16" DRIVE	6			
BAE01521	BOLT - 1/4"-20 x 1/2" BUTTON HEAD - SS	56			
BAE0161	NUT - 1/4"-20 x 7/16" BUTTON HEAD	56			
BAE0595	WASHER - 3/8" SAE FLAT	28			
BAE0600	WASHER - 1" O.D. FLAT	214			
BAE0620	NUT - 3/8"-16 LOCK w/NYLON CAP	72			
BAE0659	BOLT - 3/8"-16 x 3/4" BUTTON HEAD - SS	8			
BAE0664	BOLT - 3/8"-16 x 1" BUTTON HEAD - SS	102			
BAE06645	BOLT - 3/8"-16 x 1-1/2" BUTTON HEAD - SS	12			
BAE0665	BOLT - 3/8"-16 x 1-3/4" BUTTON HEAD - SS	24			



XX0183S - INDEPENDENT RUSHMORE SURFACE MOUNT

PART NO.	DESCRIPTION	QTY.	PART NO.	DESCRIPTION	QTY.
AAU0723	CASTING - 2.38" DIA BAND	6	BAE1572	7/16" BOLT SHACKLE	6
AAU0795	RUSHMORE HANDLE	28	BFC3565	SHEET - RUSHMORE (BOTTOM)	2
AAU0799	CONNECTOR - 1.375" O.D. x 4.75" THREADED HOLES	4	BFC3566	SHEET - RUSHMORE (TOP)	2
AAU6143	SWING CASTING	6	ALB0025	LABEL - AGE APPROPRIATE SHEET	1
AAU6144	CASTING - 2.38" DIA CLAMP w/HOLES	6			
AAU6161	RUSHMORE BUMPER	2			
ABC0869	BRACKET - RUSHMORE ANCHOR (LONG)	2			
ABC0885	BRACKET - RUSHMORE ANCHOR (SHORT)	6			
AFM6581	FAB METAL - 1.029" O.D. x 11.00" w/INSERTS	6			
AFM6582	FAB METAL - 1.029" O.D. x 17.00" w/INSERTS	2			
AFR1459	FRAME - RUSHMORE LEG (SM)	4			
AFR1550	FRAME - RUSHMORE BEAM w/RIVNUTS	2			
AFR1553	FRAME - RUSHMORE ARCH	1			
AFR1568	FRAME - RUSHMORE CLIMBER - LEFT (SM)	2			
AFR1569	FRAME - RUSHMORE CLIMBER - RIGHT (SM)	2			
AMC0005	SEAT - SLASH PROOF BELT	3			
AMC0478	64.30" STRAIGHT ROPE w/2 SHACKLES	1			
AMC0608	RUSHMORE MAT (LEFT)	1			
AMC0609	RUSHMORE MAT (CENTER)	2			
AMC0610	RUSHMORE MAT (RIGHT)	1			
APL2026	PLATE - 19.38" x 5.69" x 11 GA	3			
APL2027	PLATE - 11.75" x 3.00" x 7 GA	6			
APL2028	PLATE - 17.75" x 3.00" x 7 GA	2			
APL2132	PLATE - 21.19" x 5.69" x 11 GA	2			
APT5257	FRAME - RUSHMORE CENTER SUPPORT (SM)	2			
ATM0241	2.00" O.D. x 5.66" TUBE	18			
BAD0085	THREAD LOCKING ADHESIVE	2			
BAE0020	RIVET - 1/4" x 11/16" DRIVE	6			
BAE01521	BOLT - 1/4"-20 x 1/2" BUTTON HEAD - SS	56			
BAE0161	NUT - 1/4"-20 x 7/16" BUTTON HEAD	56			
BAE0595	WASHER - 3/8" SAE FLAT	28			
BAE0600	WASHER - 1" O.D. FLAT	150			
BAE0620	NUT - 3/8"-16 LOCK w/NYLON CAP	40			
BAE0659	BOLT - 3/8"-16 x 3/4" BUTTON HEAD - SS	8			
BAE0664	BOLT - 3/8"-16 x 1" BUTTON HEAD - SS	102			
BAE06645	BOLT - 3/8"-16 x 1-1/2" BUTTON HEAD - SS	12			
BAE0665	BOLT - 3/8"-16 x 1-3/4" BUTTON HEAD - SS	24			
BAE0702	BOLT - 7/16-14 x 1.50" - BUTTON HEAD	6			
BAE0900	WRENCH - 5/32" SHORT HEX KEY	1			
BAE0902	TOOL - 7/32" SHORT HEX KEY WRENCH	1			
BAE0922	TOOL - TT 45 L WRENCH	2			



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Fasteners

- Inspect for loose fasteners.
Tightening torque specifications are:
Bolts and Nuts: Snug tighten and tighten an additional one-half turn.
Set Screws: Snug tighten and tighten an additional full turn.
- If during the maintenance process a bolt needs to be removed from a part or parts, it will be necessary to apply a drop of liquid thread lock / loctite to the bolt before reinstallation.
- Inspect for missing, worn or broken fasteners. If any missing, worn or broken fasteners are found, refer to the installation instructions for proper replacement fastener. If any damage is detected, barricade equipment to prevent use until repair is completed. Contact your sales representative immediately for a replacement part.

Rope

- Inspect the rope for any fraying, wear or loose connectors.

Plastic Parts

- Inspect all plastic surfaces for sharp points, cracks or jagged edges. If any damage is detected and is determined to be unsafe, barricade equipment to prevent use until repair is completed. Minor burrs or sharp edges may be removed by using a sharp utility knife or block plane to remove sharp burr.

Mats

- Inspect the mats for any tears or loose connectors.

Castings

- Inspect the aluminum castings to insure they are properly secured to the component.
- Visually inspect the castings for cracks or breakage. If any damage is detected, barricade the equipment to prevent use until repair is completed. Contact your sales representative immediately for a replacement part.

Welds

- Inspect all welded joints. If any broken welds are detected, barricade equipment to prevent use until repair is completed. Contact your sales representative immediately for a replacement part.

Finish

- Inspect metal parts for finish damage.
To repair painted surfaces, sand damaged area with sandpaper and wipe clean. Mask area and paint with primer and allow to dry. Paint primed area with color-matching paint and allow to dry. Recoat area with color-matching paint if required. Drying time is approximately 8 hours between coats.

Footings

- Inspect component to be solid in footing and secure. If any damage is detected, barricade equipment to prevent use until repair is completed.

Surfacing

- Refer to the specific surfacing maintenance detail sheet for additional information.

Replacement Parts

- Refer to your installation instructions to obtain replacement part number.
- Contact your sales representative or call Playworld Systems' Customer Service for a replacement part.

Equipment Maintenance Playworld Systems® Models XX0183 and XX0183S Independent Rushmore In-Ground and Surface Mount



Inspection Form

Preventive Maintenance

... for Safety's Sake!

- Be sure that you are using a copy of this Inspection Form and not your original.
- Use the Inspection Codes listed below and record condition of equipment at time of examination on the Inspection Checklist.
- Document any item from the Inspection Checklist that will require maintenance along with any corrective action on the Maintenance Schedule.
- Be sure to include appropriate dates and signatures on each section to properly document maintenance procedure.

INSPECTION CHECKLIST

	Frequency	Inspection Code	Date	Date Repairs Completed
Inspect plastic parts for damage.	Medium			
Inspect metal parts for structural and finish damage.	Medium			
Inspect the mats for damage.	High			
Inspect for loose, missing, worn, or broken fasteners.	High			
Inspect footing to insure support is secure and footing is not damaged.	Low			
Inspect surfacing to insure proper depth and distribution.	High			
Inspect the rope for damage.	Medium			

Inspection Codes
P = Pass F = Fail
NA = Not Applicable

Inspector: Name (Please Print) _____ Signature: _____ Date: ___ / ___ / ___

MAINTENANCE SCHEDULE

Item in Question	Description of Problem	Corrective Action	Date

Repairer: Name (Please Print) _____ Signature: _____ Date: ___ / ___ / ___



Important ! Please Read Completely Before Beginning Installation. According to a report published by the U. S. Consumer Product Safety Commission (C.P.S.C.) 72% of all playground injuries result from accidental falls. With this in mind, this equipment is designed to fill the need for safe yet challenging play. In conjunction with design efforts to reduce the possibilities of injuries, this equipment **must** be installed "Step by Step" per our installation instructions. As a new owner you are responsible for the correct installation, safe use, and maintenance of your equipment.

Installation Guidelines

- Identify all parts and thoroughly read the assembly instructions before beginning construction.
- Refer to your playground equipment plan and footing diagram to assure the equipment purchased will fit into your selected site area. The use and no-encroachment zones around the play equipment shall be obstacle-free areas designated for unrestricted circulation.
- **ASTM compliance:** The overall use zone measurements for stationary play equipment should extend a minimum of 72 inches (1829 mm) from its perimeter; dimensions and configuration of the use zone are dependent upon the types of included play equipment. The use zone of stationary play equipment may be overlapped by the use zone of adjacent stationary play equipment if the adjacent designated play surfaces are no greater than 30 inches (762 mm) above the protective surfacing level. They should be a minimum of 72 inches (1829 mm) apart. If the adjacent designated play surfaces are greater than 30 inches (762 mm) above the protective surfacing level, the pieces of equipment should be a minimum of 108 inches (2743 mm) apart.
- **CSA compliance:** The overall use zone measurements for stationary play equipment should extend a minimum of 1800 mm from its perimeter; dimensions and configuration of the use zone are dependent upon the types of included play equipment. The use zone of stationary play equipment may be overlapped by the use zone of adjacent stationary play equipment if the adjacent designated play surfaces are no greater than 700 mm above the protective surfacing level. They should be a minimum of 1800 mm apart.

- **EN compliance:** The overall use zone measurements for stationary play equipment are dependent upon the fall height of the equipment. For a fall height exceeding 1500 mm a formula is applied to determine the use zone (impact zone) of the equipment. There is a minimum of 1500 mm from its perimeter; dimensions and configuration of the use zone are dependent upon the types of included play equipment. Refer to the Use Zone diagram or master structure drawing.
- Site layout is a critical part of the overall installation. Footings must be measured and marked accurately according to the footing diagram. A level and clear installation site is ideal.
- Good drainage around the structure and its supports is important. Inquire with local contractors for appropriate recommendations.
- After laying out all footings and before digging holes, be sure to inquire about underground utilities that may exist.
- Do not leave the job site unattended without making sure that all fastening hardware on all components are tightened according to tightening torque specifications listed on every installation guide. We also recommend roping off construction area and covering all holes that do not contain a piece of equipment with plywood or other suitable material.
- Excavate holes as shown in the footing detail. If a level and clear site cannot be obtained, adjust the depth of footing to maintain a level footing base. If soil conditions are loose or unstable, a larger diameter footing may be required. Inquire with local contractors for appropriate recommendations. Be sure concrete that might have splashed onto the unit is washed off before it dries. Allow concrete to harden 72 hours before allowing your structure to be used. **Assemble the entire structure before pouring concrete unless specifically instructed to do so in the installation instructions.**
- Insure that Age Appropriate and Hard Surface Warning/Playworld Systems identification labels are properly affixed to the play equipment. Labels are to be plainly visible according to current playground equipment guidelines.

Guidelines

- **IMPORTANT!** Because accidental falls around your playground equipment can occur, Playworld Systems recommends that the area under and around the structure be covered with a resilient material such as sand, bark mulch, or wood chips. If loose fill surfacing materials are used, Playworld Systems recommends a depth of 12 in. (305 mm). An approved rubber safety matting can also be used. **Many protective surfacing materials can become compacted due to weather and use, which reduces their shock absorbency. It is strongly recommended that the surfacing be checked weekly and material added or replaced as necessary. Hard surfaces, such as asphalt, concrete and packed earth are not acceptable for use under playground equipment.**

- The entire area, under and around the playground equipment, must be covered with protective surfacing material. The impact attenuation of the protective surfacing under and around playground equipment should be rated to have a critical height value of at least the height of the highest accessible part of the equipment. The critical height for surfacing is to be rated in accordance with A.S.T.M. standard, designated F1292, A Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment. Critical fall heights for Europe and Canadian compliance shall be listed on the elevation page or master structure drawing if they differ from the ASTM standard. Contact the manufacturer of unitary surfacing materials (rubber matting) for the critical height rating for their products.

Tools Required: Playworld Systems supplies a service kit that contains commonly used hex key wrenches required to assemble your equipment. You may also need: shovel, digging iron, post hole digger, steel rake, wheelbarrow, garden hoe, water hose, tape measure, level, alignment tool, 3/8" ratchet with 9/16" socket, and 9/16" combination wrench.

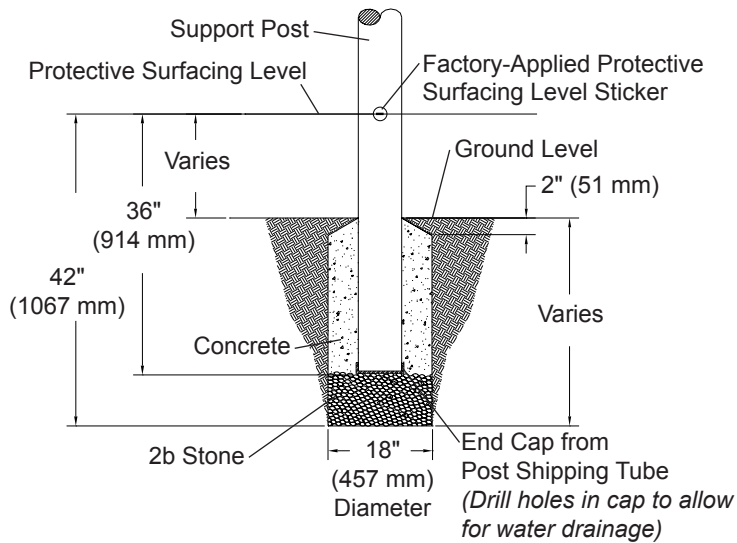
Maintenance

- Inadequate maintenance of equipment has resulted in injuries on the playground. Because the safety of playground equipment and its stability depends on good inspection and maintenance, **a comprehensive maintenance program must be developed for each playground and strictly followed.** All equipment must be inspected frequently for any potential hazards. Special attention must be given to moving parts and other components that can be expected to wear. Inspections must to be carried out in a systematic manner by trained personnel. Any damaged or worn parts, or any other hazards identified during inspections must be repaired or replaced immediately. Complete documentation of all maintenance inspections and repairs must be retained.

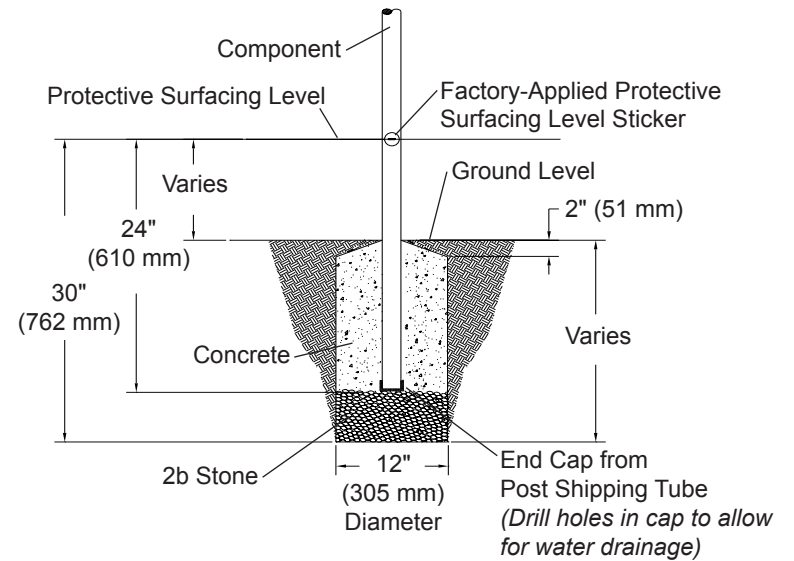
Supervision Guidelines

- Playworld Systems strongly recommends close supervision of the children as they play as well as intensive classroom and home instruction about safe behavior on playground equipment.
- Playground supervisors should be aware that not all playground equipment is appropriate for all children who may use the playground. Signs should be posted near the equipment indicating the recommended age of the users. Supervisors should direct children to equipment appropriate for their age.
- It is important that playground supervisors recognize that preschool-age children require more attentive supervision on playgrounds than older children.
- Do not permit the use of wet playground equipment. Wet equipment will inhibit necessary traction and gripping capabilities. Slips or falls could occur.
- Do not permit too many children on the same piece of equipment at the same time. It is suggested that children take turns.
- Constantly observe play patterns to discover possible hazardous play and suggest changes in equipment use or play patterns.

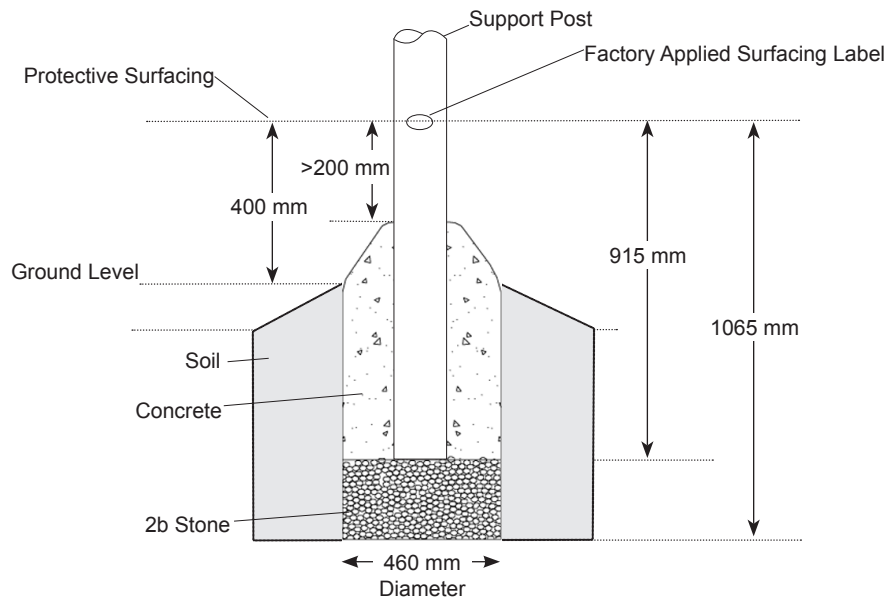
Footings Details (in ground)



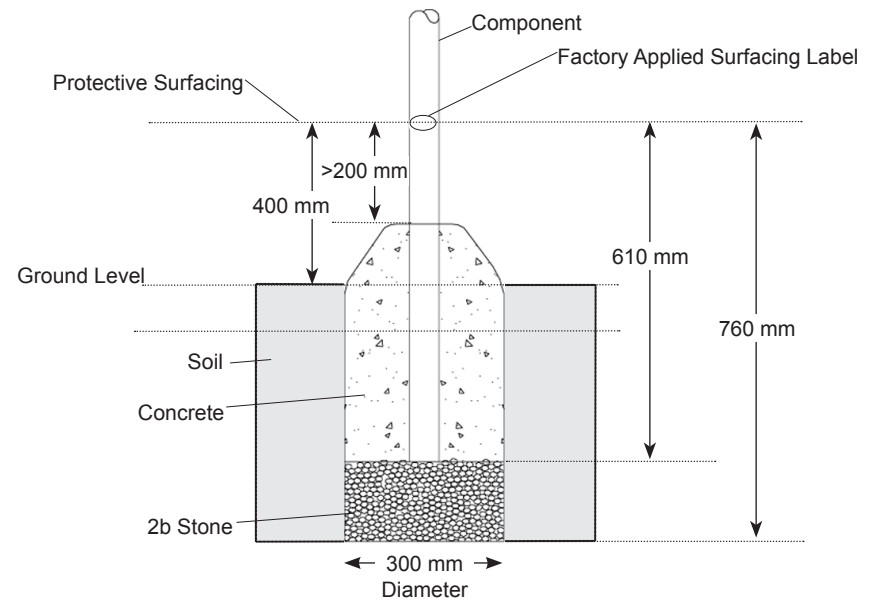
Support Post Footing Detail (ASTM/CSA)



Component Footing Detail (ASTM/CSA)

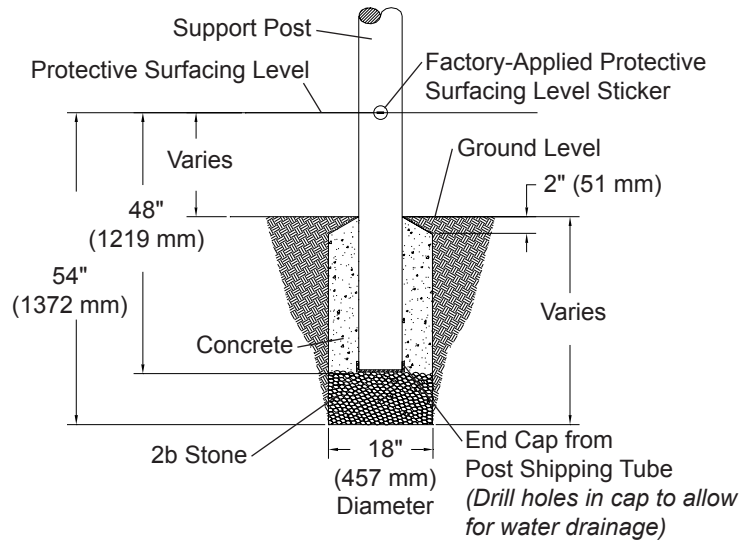


Footing Detail Support Post (EN)

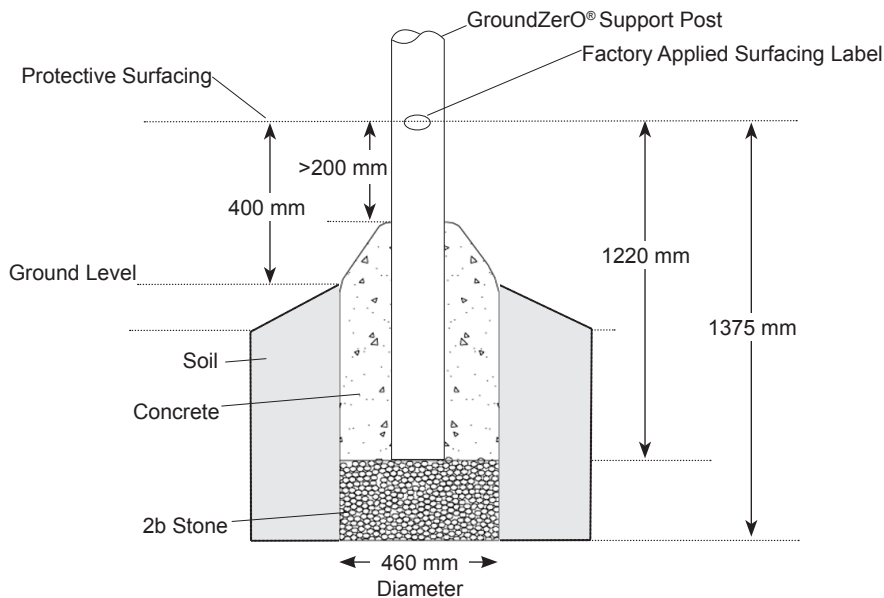


Footing Detail Component Post (EN)

Footings Notes (in ground)

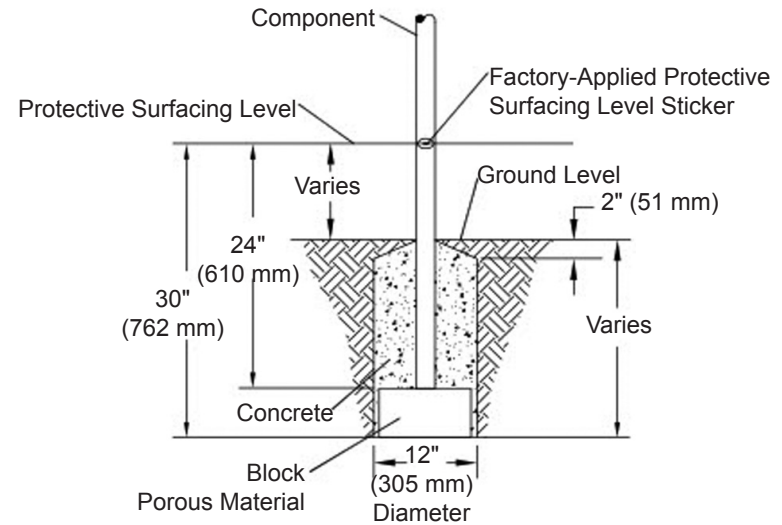


GroundZero® Support Post Footing Detail ASTM/CSA

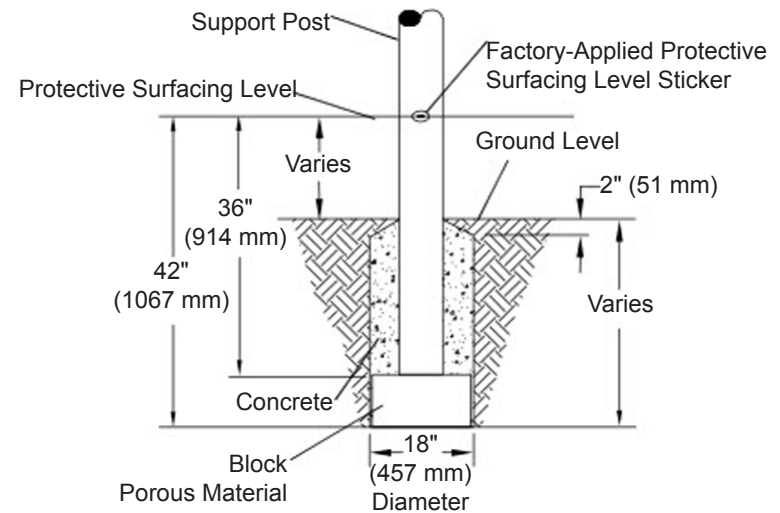


Footing Detail GroundZero® Support Post (EN)

IN GROUND FOOTING DIAGRAMS-BLOCK OPTION



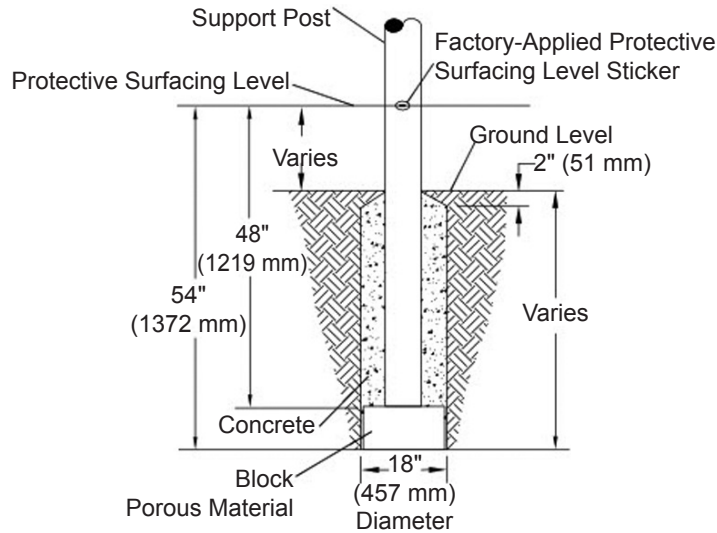
Component Footing Detail (ASTM/CSA) Block Option



Support Post Footing Detail (ASTM/CSA) Block Option

Footings Notes & Details (in ground)

IN GROUND FOOTING DIAGRAMS-BLOCK OPTION

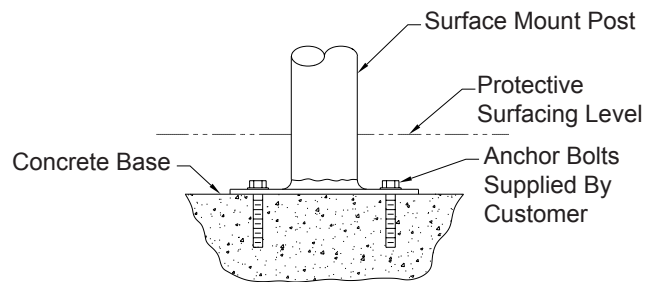


GroundZero® Support Post Footing Detail ASTM/CSA
Block Option

FOOTING NOTES (IN GROUND)

- Support post footing depth equals 42 in. (1067 mm) minus the depth of the protective surfacing material. The posts are designed to have 24" (610 mm) in concrete.
Example: If 12 in. (305 mm) of wood mulch is used for surfacing, the footing depth would be 30 in. (762 mm).
GroundZero® posts are footed 12 in. (305 mm) deeper than the regular support posts, and will be marked as such on the master footing diagram.
- Component footing depth equals 30 in. (762 mm) minus the depth of the protective surfacing material. The posts are designed to have 12" (305 mm) in concrete.
Example: If 12 in. (305 mm) of wood mulch is used for surfacing, the footing depth would be 18 in. (457 mm).
- Most support posts and component support legs will have either a factory-applied sticker with a line, or factory-applied mark designating the level of protective surfacing on a clear and level installation site. The footing depth measurements are based on this line/mark.
- If the play equipment is installed on uneven terrain, maintain support post mark for the protective surfacing level at the lowest grade. Adjust other footings accordingly. Support posts and all attaching decks and play components must be plumb and level.
- Do not encase the bottom of the support post in concrete. Place the post directly on packed stone or other porous material.
- The footings shown on Playworld Systems' documentation are recommendations based on historical performance in average soil conditions. Footing dimensions may be modified by the owner based on actual soil conditions.
For example:
 - If local soil is loose or unstable, a larger footing may be required.
 - If local soil is considered stable, such as bedrock, clay or hard packed earth, a smaller footing may be used. Before changing footing dimensions, we strongly recommend that the footings be reviewed and approved by a registered engineer.
- The base of the footing must be below the frost line.
- Assemble the entire structure before pouring concrete unless specifically instructed to do so in the installation instructions.

Footings Notes & Details (surface mount)



Surface Mount Footing Detail

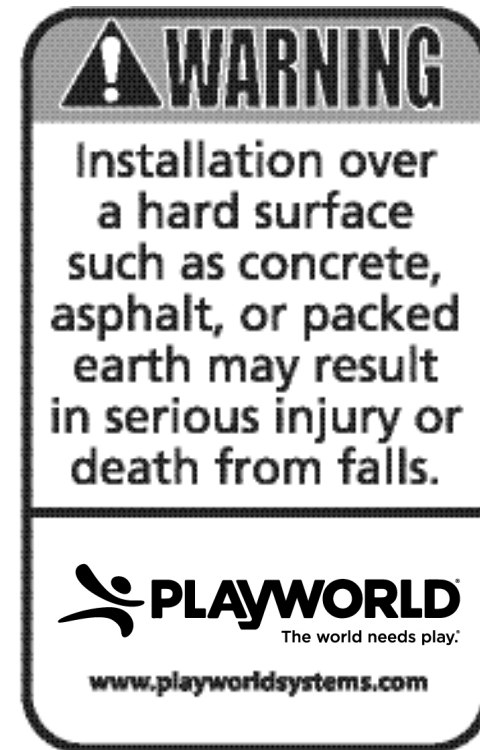
FOOTING NOTES (SURFACE MOUNT)

- Most support posts and component support legs will have either a factory-applied sticker with line, or factory-applied mark designating protective surfacing level on a clear and level installation site.
- If the play equipment is installed on uneven terrain, maintain support post mark for the protective surfacing level at the lowest grade. Adjust other footings accordingly. Support posts and all attaching decks and play components must be plumb and level.
- The footing size may vary due to local soil and weather conditions.
- Base of footing must be below frost line.

Surface mount hardware is not supplied. Customer is responsible for concrete base and providing surface mount hardware as specified by a registered structural engineer for each specific project application.

FINAL INSPECTION

- Playworld Systems® insists on the installation of protective surfacing within the use zone of each play structure in accordance with the applicable standard or specifications appropriate for the fall height of each structure.
- Playworld Systems® strongly recommends close supervision of children as they play. The owners of playground equipment and the parents or guardians of children are responsible for this proper supervision.
- As the owner of playground equipment, you are responsible for the maintenance of the equipment and surrounding play area. A comprehensive maintenance and inspection schedule must be developed and all equipment inspected frequently. Refer to the inspection and maintenance schedule in the back of this booklet.
- Perform a thorough final check on the installed equipment to insure all equipment is installed as specified by manufacturer's installation instructions.
 - Review all Installation Instructions for specified dimensions. Make sure dimensions called for in instructions agree with actual installation.
 - Double check height dimensions. Height measurements are taken from the top of the protective surfacing material.
 - Insure all fasteners are tightened according to tightening torque specifications listed on your installation instructions.
 - Insure all exposed pipe ends have properly installed end caps. Insure that drive rivets are secure.
 - Clean dried concrete off of components and any other affected surface.
 - Touch-up any scratches or installation damage to powder coated finish with color-matched spray paint.
 - Allow adequate time for proper curing, both for concrete and urethane cement if rubber safety surfacing tiles have been installed.
 - Insure that protective surfacing is properly installed according to C.P.S.C. (or other appropriate body) recommendations. Footings must not be exposed.
- Insure that hard surface warning/Playworld Systems® identification labels are properly affixed to the play equipment. Labels are to be plainly visible according to current playground equipment guidelines. For locations complying with ASTM F1487 or CSA Z-614, Age Appropriate labels must also be applied in a visible location.
- Dispose of all packaging material properly. These materials which include large plastic bags and sheets can be a suffocation hazard. Dispose of these materials out of reach or contact of small children.



Surfacing Warning Label