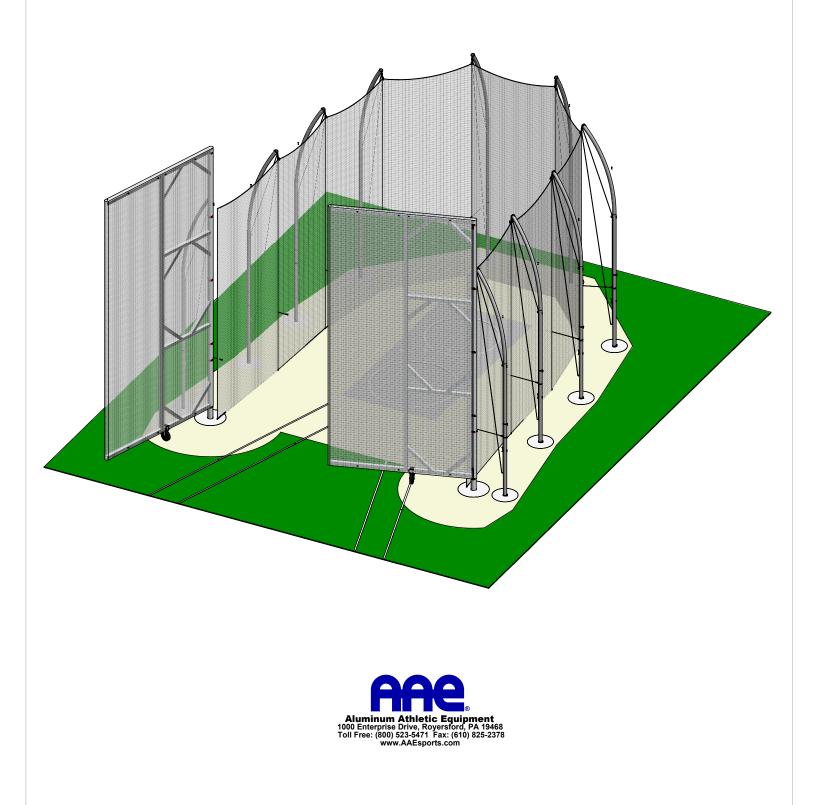
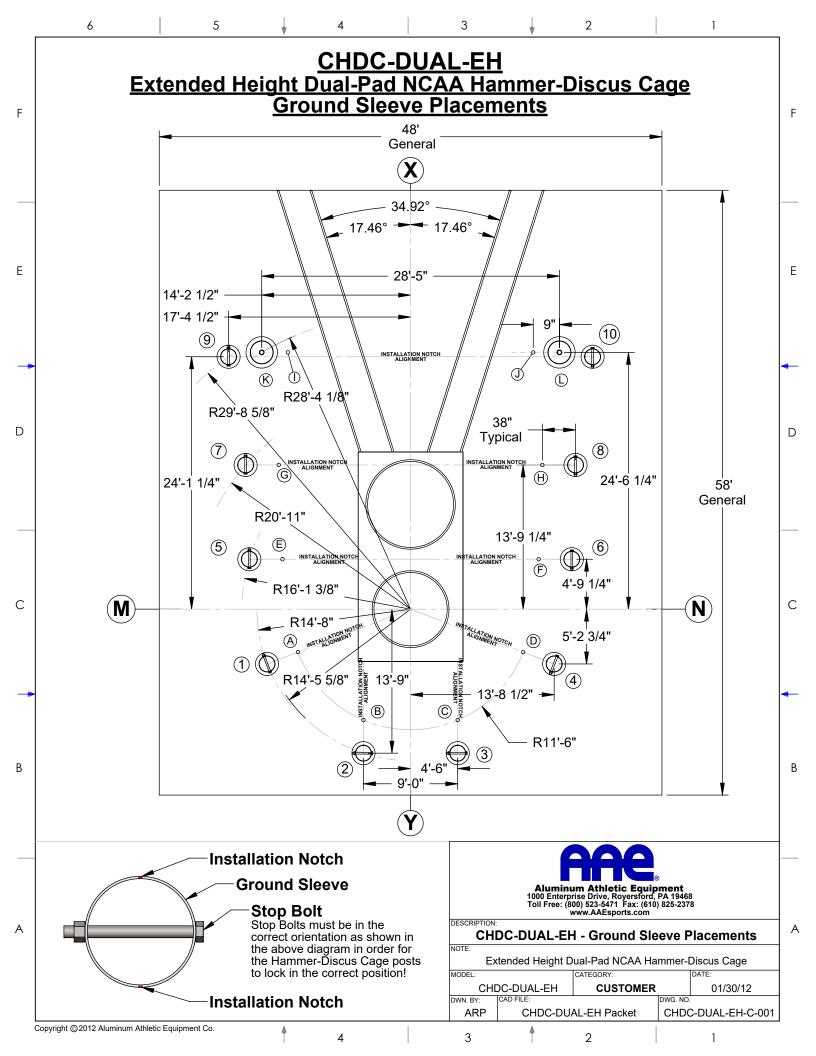
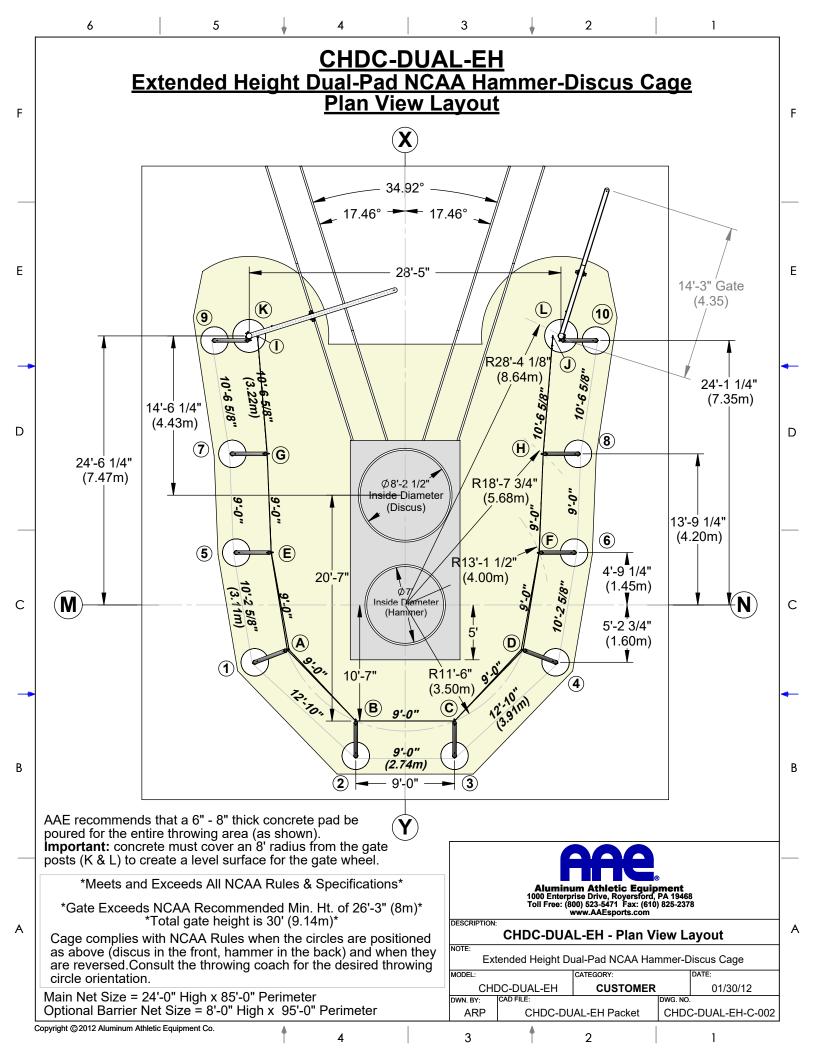
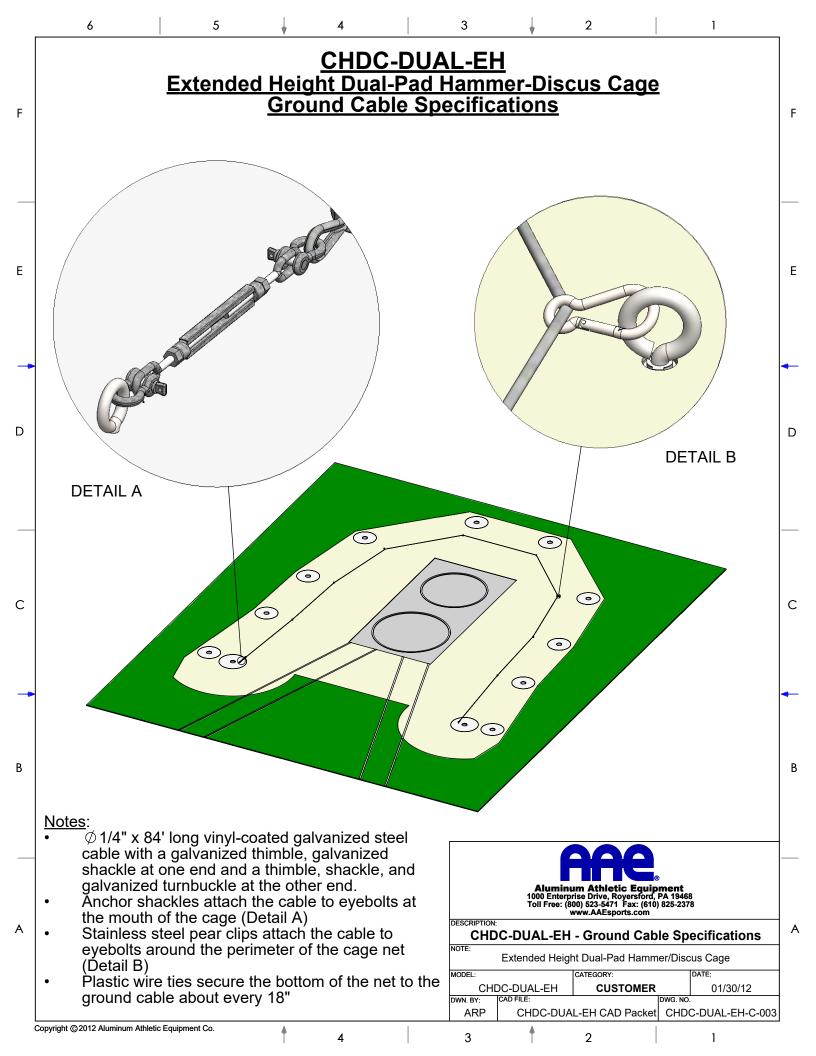
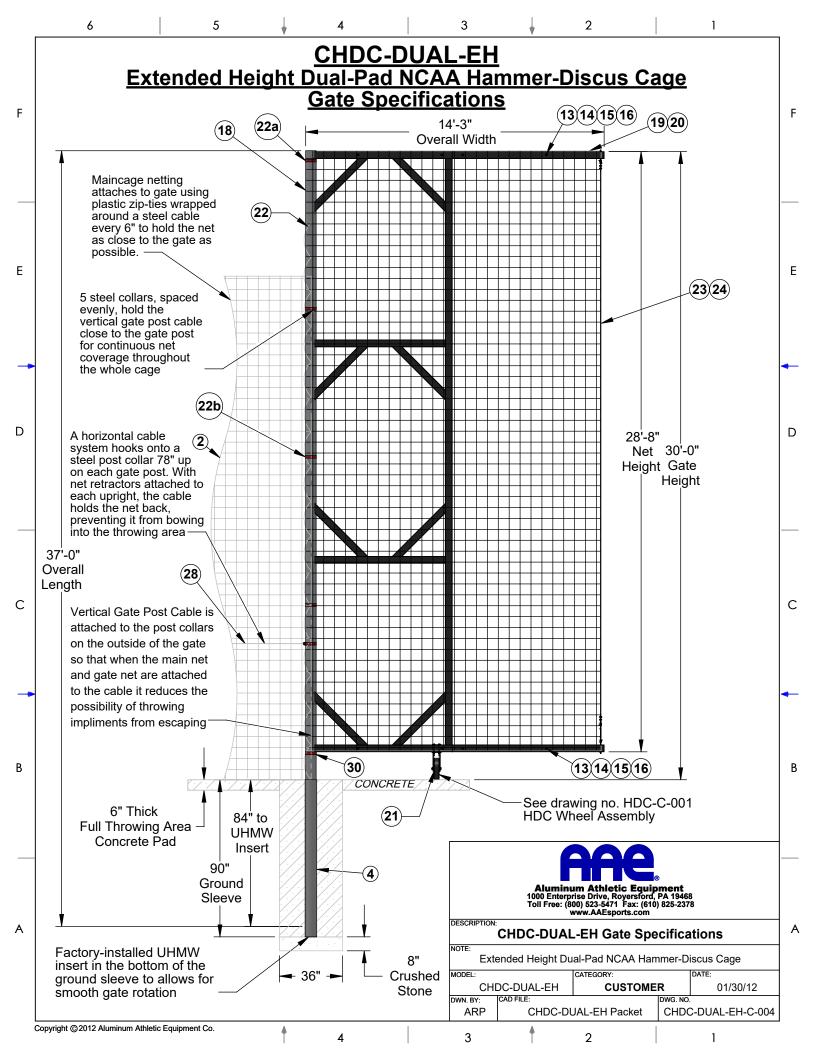
# **CHDC-DUAL-EH**Extended Height Dual-Pad NCAA Hammer-Discus Cage

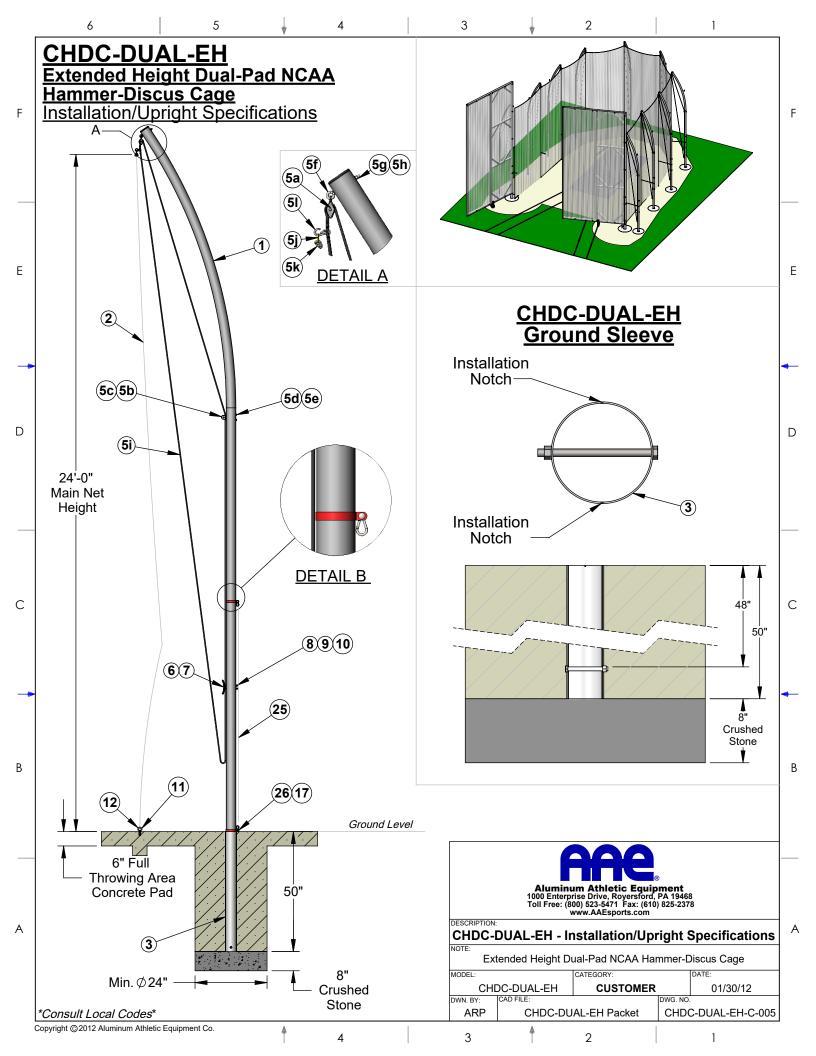












#### CHDC-DUAL-EH NCAA EXTENDED HEIGHT DUAL-PAD HAMMER-DISCUS CAGE PARTS LIST

Pt#	Item	Description	Qty.
1	Upright	6.00" O.D. x .188 x 29'-2" aluminum tube, 36" arc offset, 6061T6	10
2	Main Net	#820H - 24' x 85', framed with 3/8" rope, B-treated, 1 3/4" square w/ integrated anti-sag cable	
		Includes: 1 ea. (2a.) Ground Cable, 85'-0" lg. 1/4" vinyl coated galvanized cable with 1 made up end. 1 ea. 1/4" galvanized thimble 2 ea. 1/4" crimp sleeve 1 ea. (2b.) Horizontal Pull-Back Cable, 85'-0" lg. 1/4" vinyl coated galvanized cable with 1 made up end. 1 ea. 1/4" galvanized thimble 2 ea. 4/4" crimp sleave	1
3	Upright Ground Sleeve	2 ea. 1/4" crimp sleeve I 6.625" O.D. x .134" x 50" aluminum tube, 6061T6 with factory-installed stop bolt	10
4	Gate Ground Sleeve	6.625" O.D. x .134" x 90" aluminum tube, 6061T6 with factory-installed UHMW insert	2
5	Hoist Rope Assembly	Assembly comprised of: 1 ea. (5a.) Hanging Swivel Pulley #3-5 fast eye, Galv. 1 ea. (5b.) Fixed Pulley, #1 deck block, Galv. Steel 2 ea. (5c.) 1/4"-20 x 6 1/2" hex bolt, S.S. 2 ea. (5d.) 1/4" Flat Washer, S.S. 2 ea. (5e.) 1/4" Nylon lock nut, S.S.	
		1 ea. (5f.) 5/16"-18 x 8" Eyebolt, S.S. 2 ea. (5g.) 5/16" Flat Washer, S.S. 1 ea. (5h.) 5/16"-18 Nylon lock nut, S.S. 1 ea. (5i.) 5/16" Hoist Rope, 54' lg, polypropylene black 1 ea. (5j.) Brass O-ring 1 ea. (5k.) Cable Clamp 1 ea. (5l.) Pear Clip	10
6 7	Cleat Cleat Bolt	6" galvanized steel cleat 1/4"-20 x 7 1/2" hex bolt, S.S.	10 20
, 8 9	Hex Nut Acorn Nut	1/4"-20 steel hex nylon lock nut, S.S. 1/4"-20 steel acorn nut, S.S.	20 20 20
10	Washer	1/4" Flat Washer, S.S.	20
11 12	Eyebolt Concrete	3/8"-16 x 2 1/2" eyebolt, S.S. Double expansion anchor, zinc	10 10
13 14 15	Anchor Hex Bolt Hex Nut Washer	1/2"-13 x 5 1/2" steel hex bolt, HDG 1/2"-13 steel hex nut, HDG 1/2" flat washer, HDG	16 16 32

#### CHDC-DUAL-EH NCAA EXTENDED HEIGHT DUAL-PAD HAMMER-DISCUS CAGE PARTS LIST

Pt#	ltem	Description	Qty.
16 17	Lock Washer Pear Clip	1/2" split lock washer, HDG Spring hook clip, 1/4" dia. (*2 extra per upright with optional barrier net)	16 20 (*40)
18	Main Gate Frame	Rotating Gate main frame (7'-0" x 30' with 6" x 37'-0" post with factory-installed UHMW insert)	2
19	Gate Extension Arm	4" sq. x .250" wall x 7'-3" 6061T6 aluminum	4
20 21	Gate Extension Arm Support Fixed Caster Assembly	3" sq. x .1875" wall x 10'-0" Stainless Steel with Welded Boss Assembly comprised of: 1 ea. (21a.) 12" fixed caster, 15" high 4 ea. (21b.) 1/2"-13 x 6 1/2" steel hex bolt, HDG	4
		<ul> <li>8 ea. (21c.) 1/2" steel flat washer, HDG</li> <li>4 ea. (21d.) 1/2"-13 Nylon lock nut, S.S.</li> <li>1 ea. (21e.) Caster Plate, 6 1/4" x 4 3/4" x 1/8" pre- drilled attachment plate</li> <li>4 ea. (21f.) Caster Shim, 4" x 5" x 1/4" Aluminum Shim</li> <li>1 ea. (21g.) Caster Shim, 4" x 5" x 1/8" Aluminum Shim</li> </ul>	2
22	Vertical Gate Post Cable Assembly	Assembly comprised of: 1 ea. 30'-6" lg. 1/4" vinyl-coated galvanized cable (Included with Gate Net) 1 ea. Tensioner Kit (Pt# 30.) 2 ea. (22a.) 6" diameter Galvanized post collars vinyl- coated black with carriage bolt 3 ea. (22b.) 6" diameter Galvanized post collars vinyl- coated black with Open eye bolt	2
23	Gate Extension Cable Assembly	Assembly comprised of: 1 ea. 29'-0" lg. 1/4" vinyl-coated galvanized cable (Included with Gate Net) 1 ea. Tensioner Kit (Pt# 30.) 2 ea. (23a.) 3/8"-16 x 6" forged eyebolts 2 ea. (23b.) 3/8" flat washers, S.S. 2 ea. (23c.) 3/8" hex nylon lock nuts, S.S.	2
24	Gate Net	N820H - 29' 6" high, 29'-6" around, 1 end open, framed, B-treated Includes: 1 ea. (24a.) Vertical Gate Post Cable, 30'-6" lg. 1/4"	2
		vinyl coated galvanized cable with 1 made up end. 1 ea. 1/4" galvanized thimble 2 ea. 1/4" crimp sleeve 1 ea. (24b.) Gate Extension Cable, 29'-0" lg. 1/4"	

#### CHDC-DUAL-EH NCAA EXTENDED HEIGHT DUAL-PAD HAMMER-DISCUS CAGE PARTS LIST

Pt#	ltem	Description	Qty.
		vinyl coated galvanized cable with 1 made up end. 1 ea. 1/4" galvanized thimble 2 ea. 1/4" crimp sleeve	
*25	Barrier Net	N820H- 8'x 95' framed with 3/8" rope, B-treated	1
26	Galvanized	6" I.D. galvanized steel collar vinyl-coated black w/ 3/8"	12
	Post Collar	stainless steel hardware (*2 extra per upright with optional barrier net)	(*32)
27	Ground Cable	Assembly Comprised of:	1
	Assembly	1 ea. 85'-0" lg. 1/4" vinyl-coated galvanized cable (included with Main Net) 1 ea. Tensioner Kit (Pt# 30.)	
28	Horizontal Pull-	Assembly Comprised of:	1
20	Back Cable	1 ea. 85'-0" lg. 1/4" vinyl-coated galvanized cable (included with Main Net) 1 ea. Tensioner Kit (Pt# 30.)	·
29	Net Retractor	5/16" polypropylene black braided rope w/ pear clip on each end, 24" long	10
30	Tensioner Kit	Galvanized Tensioner Kit	6
		Includes: 1 ea. Galvanized Turnbuckle 1 ea. 1/4" Galvanized Thimble 2 ea. 1/4" Galvanized Cable Clamp 3 ea. 1/4" Galvanized Anchor Shackle	-

#### **\* OPTIONAL ITEMS FOR BARRIER NET**

#### FOR TECHNICAL ASSISTANCE, CALL 1-800-523-5471

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- Step No. 1 Using masonry string, establish perpendicular lines "MN" and "XY", which intersect at point "O", the center of the hammer circle.
- Step No. 2 Refer to drawing no. CHDC-DUAL-EH-C-001 to locate points "1" thru "10".

<u>NOTE:</u> Points "1" thru "10" are the location of the <u>center</u> of the ground sleeves (for the main uprights) to be installed.

Step No. 3 Refer to drawing no. CHDC-DUAL-EH-C-001 to locate points "A" thru "J".

<u>NOTE:</u> Points "A" thru "J" are the location of the eyebolts that will anchor the Ground Cable Assembly.

Step No. 4 Refer to drawing CHDC-DUAL-EH-C-001 to locate points "K" and "L".

<u>NOTE:</u> Points "K" and "L" are the location of the <u>center</u> of the rotating gate ground sleeves to be installed.

#### **INSTALLATION**

Step No. 1 Full Throwing Area Concrete Pad Excavation

See Drawing No.

CHDC-DUAL-EH-

C-002

Dig an area for the 6"-8" thick Full Throwing Area Concrete Pad (minimum recommended coverage shown in drawing no. CHDC-DUAL-EH-C-002). The pad must include an area with a radius of at least 8' from the gate posts (K & L) to create a level area for the gate wheel to roll. **Consult local building codes for depth and drainage requirements.** 

**NOTE:** AAE recommends that a concrete pad be installed for the entire throwing area to reduce maintenance around the net. This eliminates the need to cut grass around the net, reducing the risk of cutting the net with maintenance equipment. This also reduces the risk of debris collecting in the ground sleeves and concrete anchors. AAE also recommends a dedicated warm-up area of concrete or artificial turf to prevent mud, grass, etc. from being tracked into the throwing area. This is not only aesthetically beneficial, but keeping the throwing area free of debris of any kind is essential for the throwers' safety.

Step No. 2 Placing Ground Sleeves

See Drawing No. CHDC-DUAL-EH-C-001 & 002 for Steps 2-5 Drill or dig 24"-30" diameter holes a minimum of 58" deep **(Consult local building codes for concrete depth and drainage requirements.)** at points "1" thru "10" and minimum 36" diameter and 98" deep at points "K" and "L" (Gate Sleeves). Fill the bottom of each hole with approximately 8" of crushed stone, so the depth from ground level to the top of the stone is 50" for holes "1" thru "10" and 90" for holes "K" and "L". Insert the upright ground sleeves (Item No. 3) at points "1" thru "10" ("bolt side" down). Make sure the ground

	sleeves are flush with the ground, centered, leveled, (individually, as well as with each other), and plumb. Also, rotate the ground sleeves so that the two (2) grooves (Installation notches) on top of the ground sleeve are aligned correctly - See drawing no. CHDC-DUAL-EH-C-001 for details. A masons string or straight edge may be used to aid in the aligning process.
	<b>NOTE:</b> All listed depths are measured from the desired ground level at completion.
	<b><u>NOTE</u>:</b> It is extremely important that the installation notches on top of the ground sleeve are in proper alignment, so the key slot in the main upright will lock the upright into its proper position when set into the ground sleeve.
Step No. 3 Placing Gate Ground Sleeves	Install the gate ground sleeves (Item No. 4) "UHMW side" down at points "K" and "L". Make sure the ground sleeves are flush with the ground, centered, and plumb. Be sure the inside depth of the ground sleeve to the UHMW insert is 84". The rotating gate ground sleeves have no installation notches, and thus require no special positioning.
Step No. 4 Pouring Full Throwing Area Concrete Pad	When all the ground sleeves are in the proper position and alignment, the concrete can be poured for the entire throwing area. <b>(Be sure not</b> <b>to get any concrete inside the ground sleeves!)</b> As the concrete cures, constantly check to see that the ground sleeves are flush with the ground, centered, plumb, and in the correct alignment. Add expansion joints to the pad as necessary.
Step No. 5 Drilling and Installing Concrete Anchors	Drill 3/4" diameter holes 1 3/4" deep at points "A" thru "J". Use a hammer to tap a concrete anchor (Item No. 12), "thread-side" down, into each of the holes. Allow a small amount of the anchor to protrude from the hole (about 1/4" or less) for maximum expansion. Thread 3/8"-16 eyebolts (Item No. 11) into the anchors until tight.
Step No. 6 Ground Cable Assembly Installation	Lay out the Ground Cable Assembly (Item No. 27) around the perimeter of the cage (marked by eyebolts at points "A" thru "J"). Attach the anchor shackle at each end of the Ground Cable Assembly to the eyebolts at point "I" and "J", a turnbuckle should be located at one of the ends. (See Detail A in drawing no. CHDC-DUAL-EH-C-
See Drawing No. CHDC-DUAL-EH- C-003	003). Use pear clips (Item No. 17) to secure the cable to each of the other eight (8) eyebolts at points "A" thru "H" (See Detail B in drawing no. CHDC-DUAL-EH-C-003). Tension the cable using the turnbuckle located at the one end.
Step No. 7 Upright Assembly See Drawing No.	Attach the swivel pulley, w/ attached eyebolt and hoisting rope assembly, (Item Nos. 5) to the top hole of the upright using a 5/16"-18 hex nylon lock nut (Item No. 5h). (If there are 2 holes present at the

CHDC-DUAL-EH- C-004	top of the upright, mount the pulley and eyebolt through the <b>top</b> hole.)
	Attach the fixed pulley (Item no. 5b) through the middle set of holes using 1/4"-20 x 4-1/2" hex bolts (Item No. 5c) and 1/4"-20 hex nylon lock nuts (Item No. 5e).
	Attach one cleat (Item No. 6) through the lower set of holes using $1/4$ "-20 x 5-1/2" hex bolts (Item No. 7) and $1/4$ "-20 hex nylon lock nuts (Item No. 8). Cap threads with $1/4$ " -20 acorn nuts (Item No. 9). Secure the hoisting rope to the cleat.
	After concrete cures, insert assembled upright into ground sleeve. Repeat procedures to assemble remaining uprights.
Step No. 8 Rotating Gate Assembly <b>See Drawing No.</b>	Lay entire assembled gate horizontally on carpenter's horses. Attach Gate Extension Arms (Item No. 19) to the top and bottom of the Main Gate Frame (Item No. 18) using 1/2" hardware listed (Item Nos. 13, 14, 15, & 16).
CHDC-DUAL-EH- C-003 & HDC-C- 001	Attach Gate Extension Cable assembly (Item No. 23) by placing the 3/8"-16 x 6" closed eyebolts in the holes at the ends of the Gate Extension Arms and securing with a 3/8" flat washer and 3/8"-16 hex nylon lock nuts. Adjust and tighten if necessary.
	Attach 12" caster (Item No. 21) to the bottom of Gate Main Frame using 1/2" hardware listed (Item Nos. 21b, 21c, & 21d) (See drawing no. HDC-C-001). Open and spread out gate net envelope, and slide the open part of the envelope over the top, and down the gate. Use zip ties, positioned every 6"-8", to close the bottom of the gate net around the bottom of the gate.
	Attach the Vertical Gate Post Cable Assembly (Item No. 22) to the pivot post of the rotating gate by placing the pre-assembled post collar-cable assembly around the post on the inside of the net, 6' from the top of the post, leaving the cable outside of the net. Install the other collar just below the bottom of the gate (about 100" from the bottom of the post), attach the cable to the bottom collar, and tighten in place. Tension the cable using the turnbuckle (Item No. 30) at the bottom of the cable, being sure the cable runs up the throwing side of the gate (with the rubber facing) on the outside of the net. Adjust and tighten as necessary.
	Using a mechanical hoisting device, crane, or a front-end loader, (after concrete has cured) raise the assembled gate until it is perfectly perpendicular to the ground, and slowly lower the main post of the rotating gate into the ground sleeve. Use the included shims (Item No. 21f & 21g) to adjust the height of the 12" caster so it remains in contact with the concrete pad through the gate's entire range of motion (See drawing no. HDC-C-001).

	Repeat entire procedure to erect and install the other gate.	
Step No. 9 Main Net Installation	Lower hoisting ropes on each post so the pear clip is reachable. Attach a cable clamp and O-ring (Item Nos. 5j & 5k) to the cable woven into the top of the main net (Item No. 2) at each hoisting location, marked by a red stripe (See drawing no. CHDC-DUAL-EH- C-002 for distances between hoisting locations if a red stripe is missing). Clip each post's pear clip to the O-ring at its respective hoisting location.	
	Raise the main net, and subsequently attach each front edge of the net to the Vertical Gate Post Cable Assembly using the zip-ties provided (spaced EVERY 6 in.) Zip-ties attach the net to the cable, but slide easily to allow the net to be raised and lowered. <b>DO NOT</b> over-tighten zip-ties!	
	Raise the net all the way by the hoisting rope and secure the end of the rope firmly and professionally to the cleat. (Consult former Navy personnel or handbook for proper method.)	
	With the net fully raised, use an extension ladder or lift to install three Galvanized Post Collars (Item No. 22b) on each gate post. Space them evenly up the post (approx. 7', 12'-8", & 18'-4"). As with the top and bottom collars (Item No. 22a), place them inside the net with the bolt flange sticking out. Attach the Vertical cable to the top and bottom collars using anchor shackles and turnbuckle located in the tensioner kit (Item No. 30).	
	Clip the bottom cable of the net to the eyebolts at points A-J. Attach the bottom of the net to the Ground Cable Assembly (Item No. 27) using the provided zip-ties spaced about every 12-18" around the perimeter of the net.	
Step No. 10 Horizontal Pull- Back Cable Installation	Install a Galvanized Post Collar (Item No. 28) at a height of 78" on each of the gate posts with the bolt side facing the back of the cage. Clip one end of the Horizontal Pull-Back Cable (Item No. 28) to the bolt on the Galvanized Post Collar on gate post "L" using an anchor shackle (Item No. 20). Weave the cable through three or four squares	
See Drawing No. CHDC-DUAL-EH- C-002	shackle (Item No. 30). Weave the cable through three or four squa of the Main Net (Item No. 2). Run the cable along the inside (throw side) of the net to point "H". Weave the cable through three or four squares of the Main Net at point "H". Repeat for each subsequent point, making sure to run the cable between points on the inside of the net. Clip the other end of the cable to the collar on the other ga post ("K") using an anchor shackle and turnbuckle.	
	Attach a Galvanized Post Collar (Item No. 26) to upright nos. "1"-"8" at a height of 78". Clip one pear clip from each Net Retractor (Item No. 29) to the collar on each of the uprights. Clip the other pear clip to the Net Retractor Cable Assembly at points "A" thru "H" where the	
	Page <b>4</b> of <b>5</b>	

cable is woven through the net.

OPTIONAL Barrier Net Installation (Purchased separately) Position galvanized post collars (Item No. 26) at the bottom and one about 8' (96") off the ground (2 per upright). Clip the top and bottom of net to the carriage bolts with pear clips (Item No. 17) at each location marked with a red stripe. Any excess net may be wrapped around the end upright. Use two Galvanized Post Collars per upright on upright nos. "9" & "10" to hold the backup net to the post. Space the collars about every 32" between the two backup net eyebolts. Loop the collar through the net and clamp it tight to the post. This keeps the net tight on the post to ensure safety and give a consistently clean look.

## **OPERATION, CARE, AND SPECIAL INSTRUCTIONS**

- 1. When cage is not in use, gates should be closed and loosely attached to one another. Be sure the wheel brakes are OFF to allow the gates to move and absorb wind forces safely.
- 2. NEVER pin or lock the gates in place as this can result in damage to the lock, the concrete pad, or the gate itself due to wind.
- 3. When the cage is in use, use the wheel brakes to hold the gates in the appropriate position for the throwing event. Wheel brakes should always be ON during use to prevent unwanted gate movement.
- 4. In the event of high winds, lower the Main Net and Barrier Net. DO NOT use the cage and keep out of the throwing area in high wind conditions.
- 5. During the off-season, removal and storage of the Main Net, Gate Nets and Barrier Net will prolong the life of the nets. Nets should be stored in a sealed drum (See AAE Model No. ND-P Net Drums) in a dry location to protect them from moisture and pests.

#### FOR TECHNICAL ASSISTANCE, CALL 1-800-523-5471

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