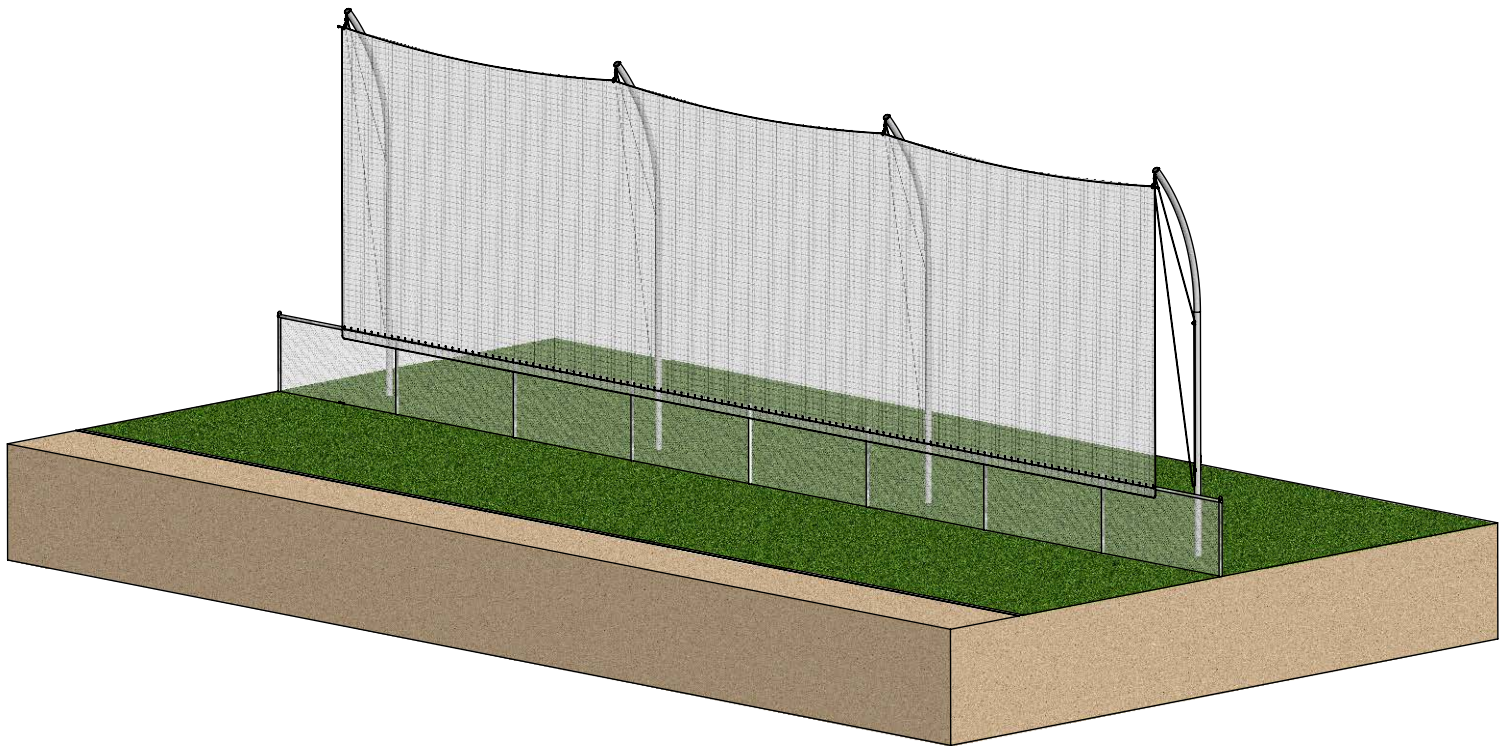
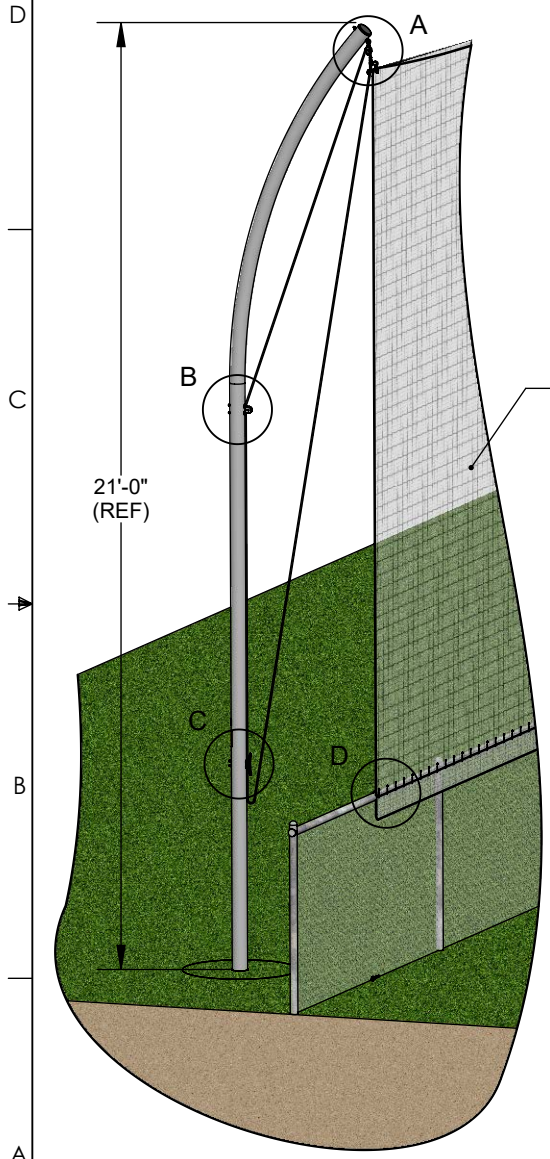


MBS-O-20
20' High Multi-Sport BallStopper System
Specification

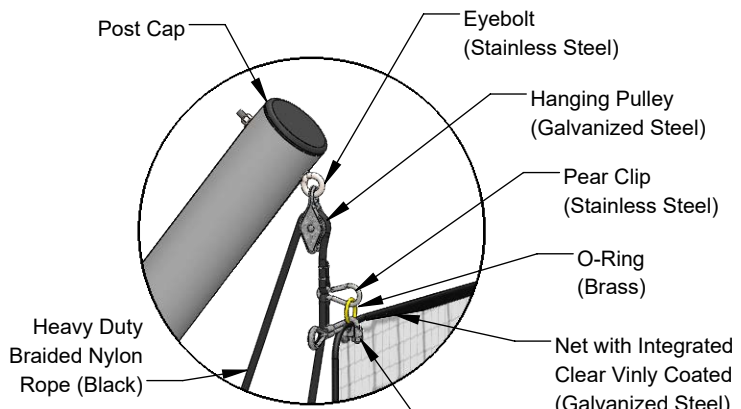


System shown attached to fence, system can also be anchored directly to the ground or wall with additional hardware

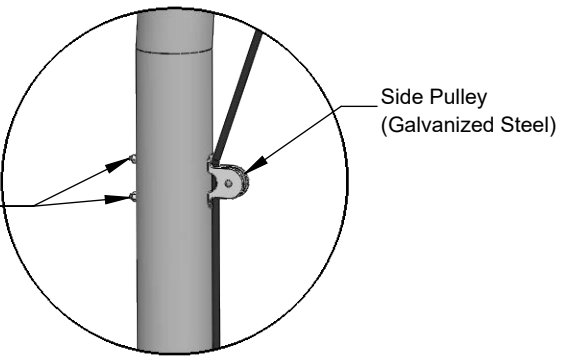
MBS-O-20 Upright Specifications



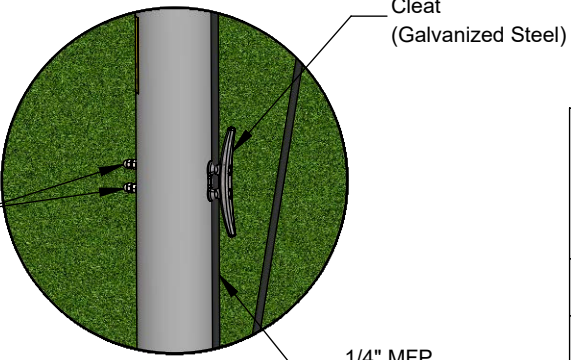
(Fence Attachment Configuration Shown)



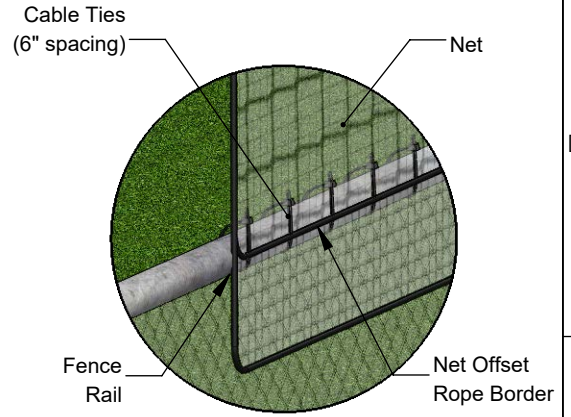
DETAIL A



DETAIL B



DETAIL C



DETAIL D

(standard fence attachment shown, Wall & Ground/Curb attachment will require additional hardware)

MBS-O-20 Specifications

Post (Aluminum):

- $\phi 4''$ x .226" wall aluminum tube (Mill Aluminum 6061T6)
- 25'-4" Overall Length (21'-0" out of ground sleeve)
- Weight = 81lbs./ea.
- All Hardware is RUSTPROOF

Netting:

- Net: #AAE N420, 1-1/2" Sq. Knottless Nylon, FR, DBB, length to vary, 1/4" MFP Rope Border, UV protected and 1/4" cable hog tied to top of net

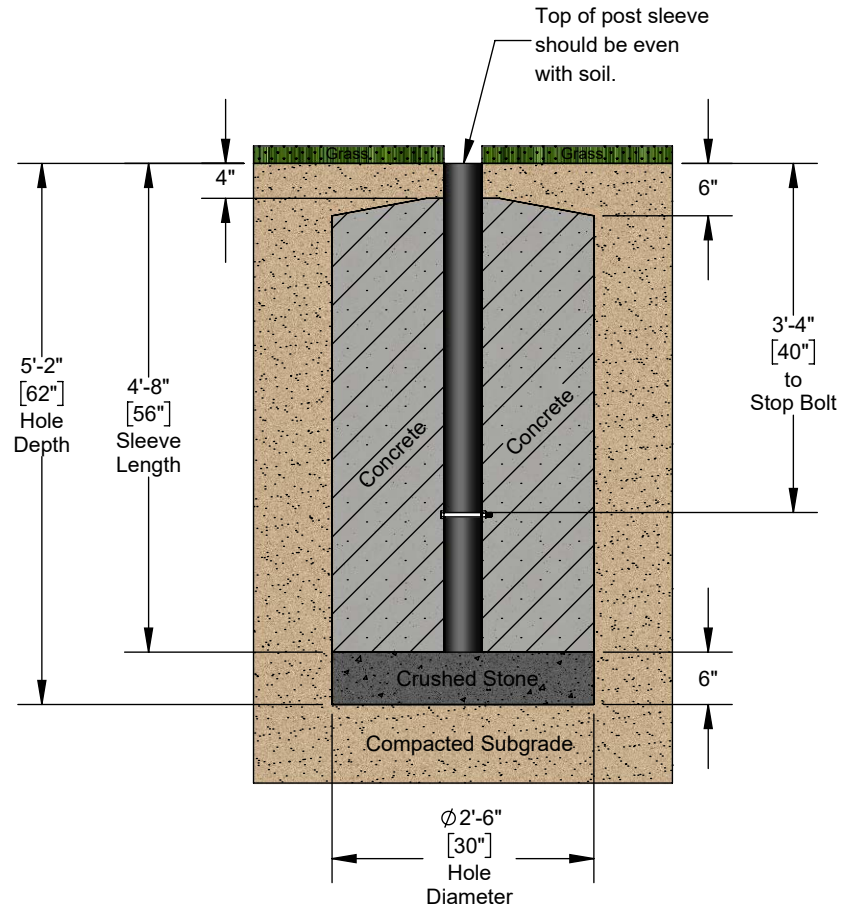


Aluminum Athletic Equipment
1000 Enterprise Drive, Royersford, PA 19468
Toll Free: (800) 523-5471 Phone: (610) 825-6565
www.aaesports.com

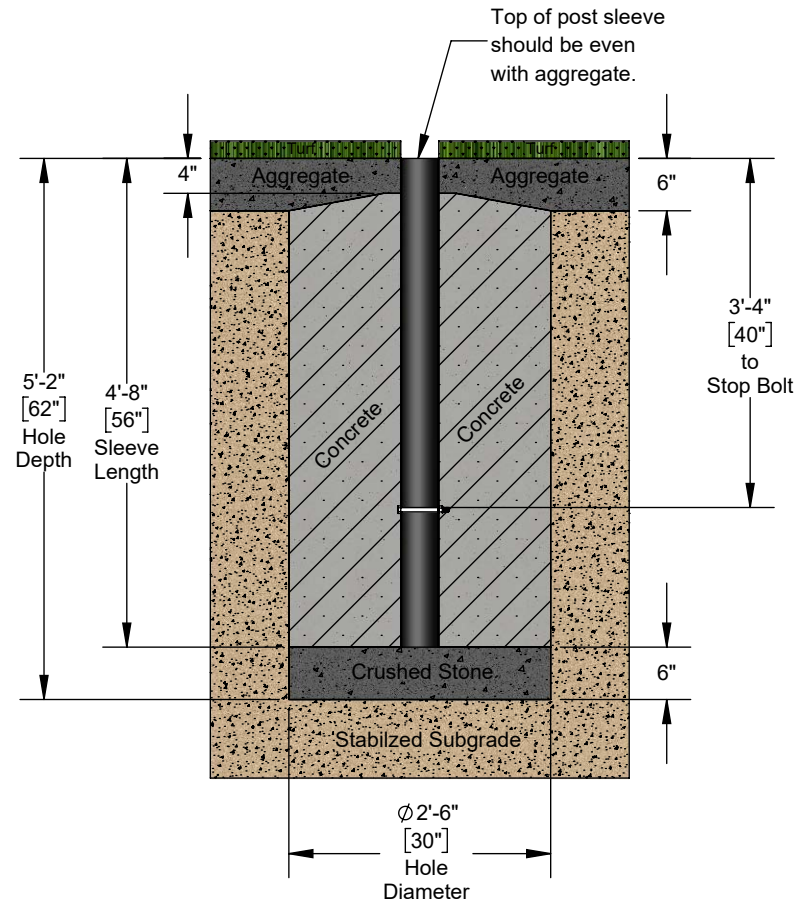
DESCRIPTION			
MBS-O-20 Upright Specification			
NOTE: Upright Assembly Specification			
MODEL:	MBS-O-20	CATEGORY:	CUSTOMER
DRAWN BY:	NR	DATE:	10/7/2021
CAD FILE:	MBS-O-20 Specifications	DWG. NO.:	MBS-O-20-C-002

MBS-O-20 Concrete Footing (Upright) Specification

Natural Grass Field Footing Specification



Artificial Grass Field Footing Specification

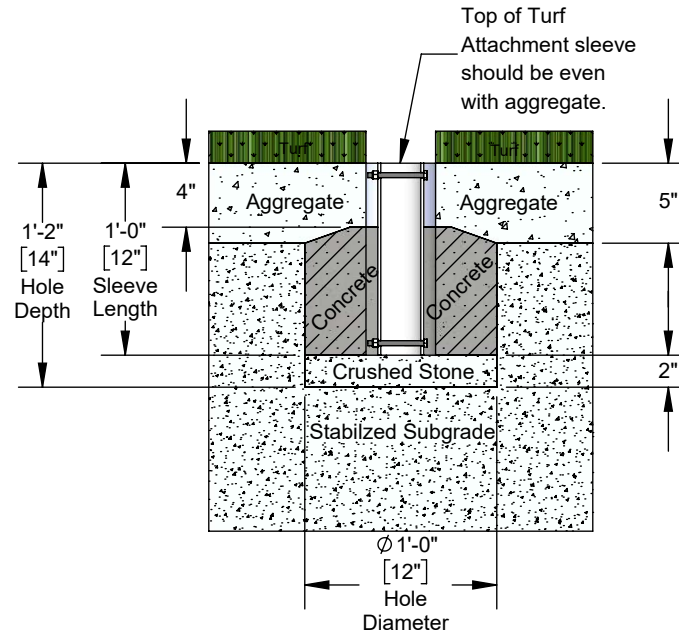


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DESCRIPTION		
Concrete Footing Specification		
NOTE: Grass & Turf Concrete Footing Specification		
MODEL:	CATEGORY:	DATE:
MBS-O-20	CUSTOMER	10/7/2021
DRAWN BY:	CAD FILE:	DWG. NO.:
NR	MBS-O-20 Specifications	MBS-O-20-C-003

MBS-O-20/TA
Concrete Footing (Turf Attachment)
Specification
(Turf Attachment Systems Only)

Artificial Grass Field
Footing Specification



Note: see "TA Placement Spec" on page 5 for placement specs.

Note: **Consult Local Codes



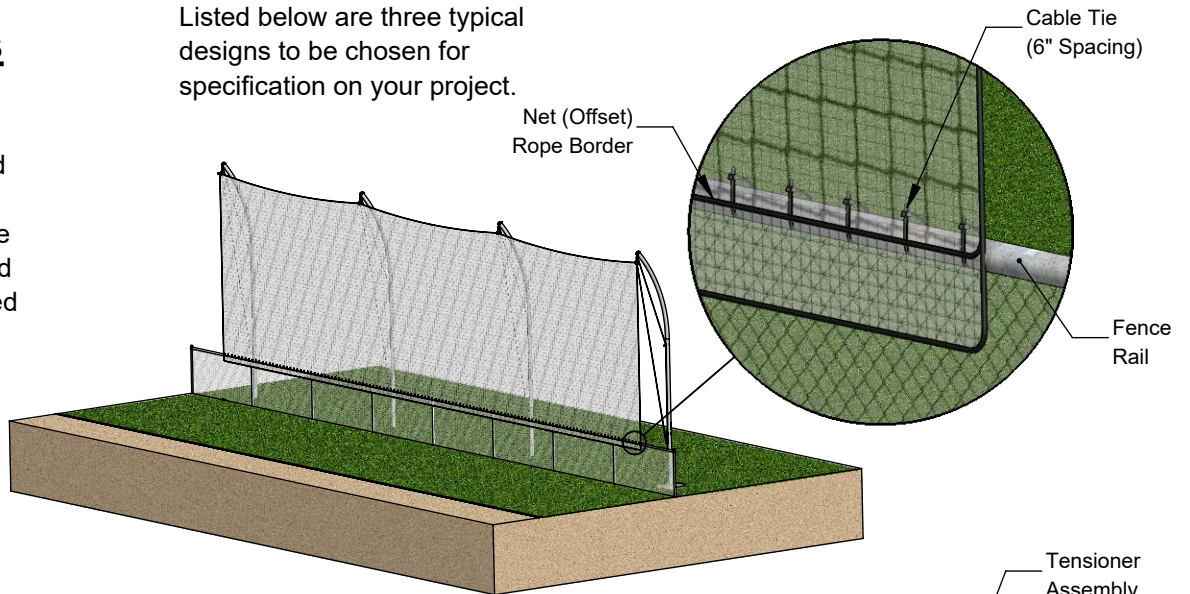
Aluminum Athletic Equipment
 1000 Enterprise Drive, Royersford, PA 19468
 Toll Free: (800) 523-5471 Phone: (610) 825-6565
www.aaesports.com

DESCRIPTION		
Concrete Footing Specification		
NOTE: Turf Attachment Concrete Footing Specification		
MODEL:	CATEGORY:	DATE:
MBS-O-20	CUSTOMER	10/7/2021
DRAWN BY:	CAD FILE:	DWG. NO.
NR	MBS-O-20 Specifications	MBS-O-20-C-004

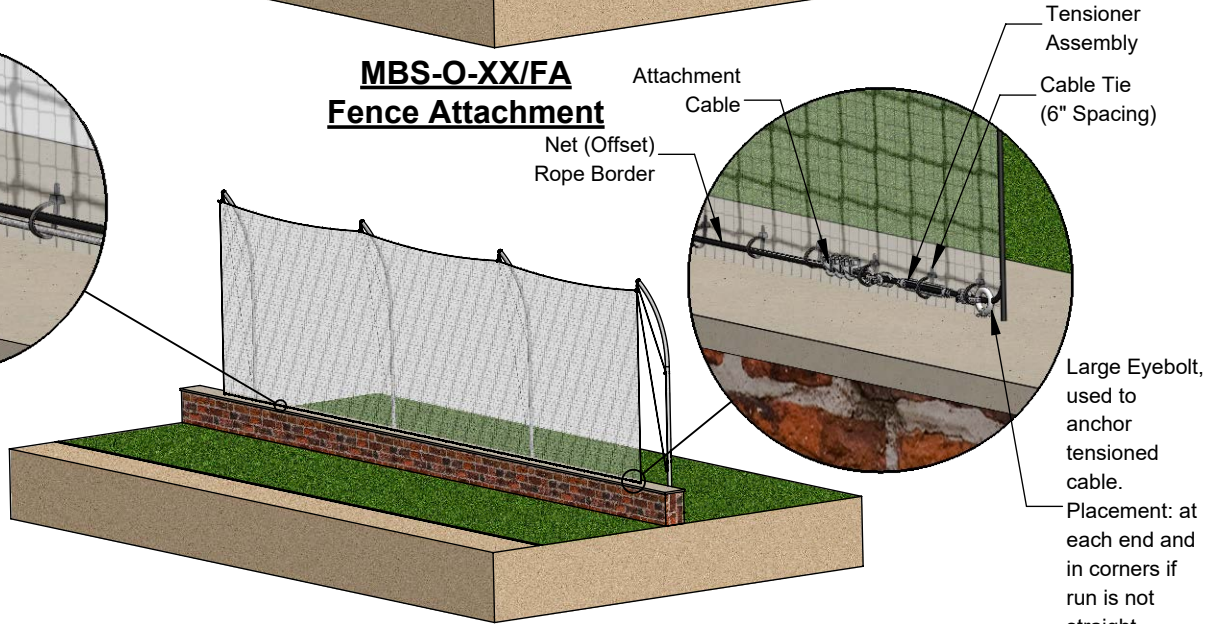
MBS-O-20 Configurations

Listed below are three typical designs to be chosen for specification on your project.

Note: Pre-Fab Approval form will need to be filled out prior to making the system, where wall/fence heights, length of net and attachment style will need to be specified.

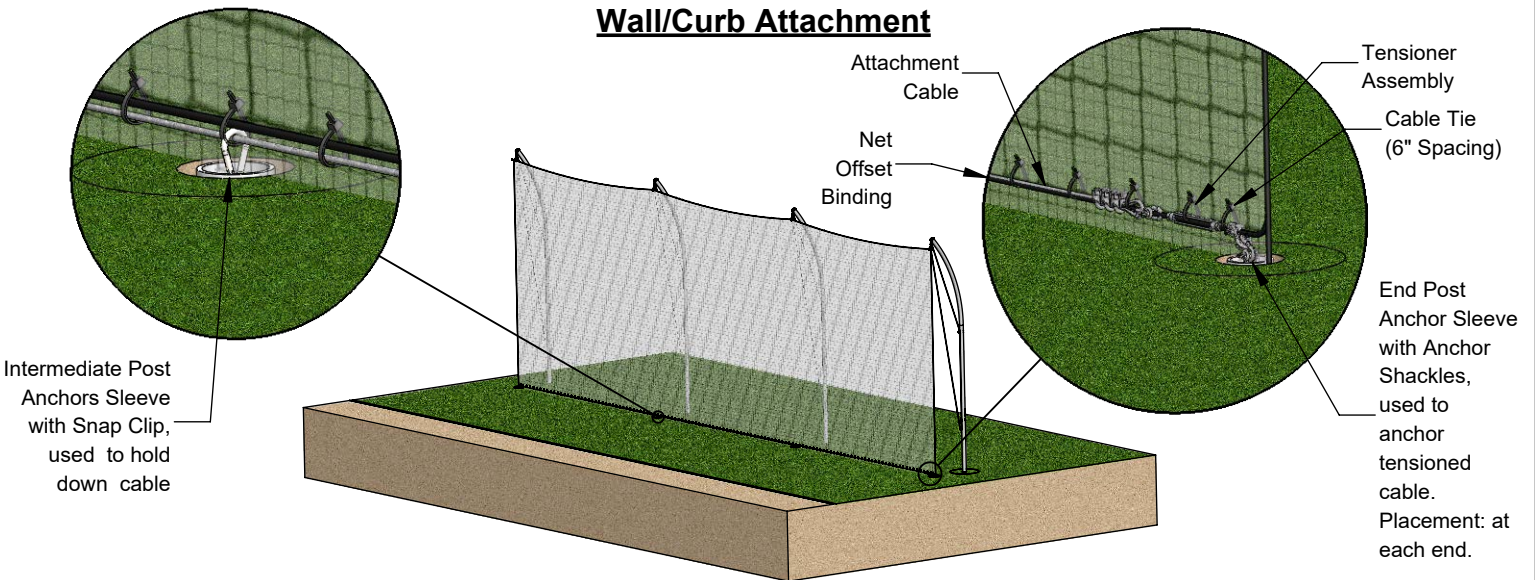


MBS-O-XX/FA Fence Attachment



Small Eyebolt used to hold down cable. (4' Spacing)

MBS-O-XX/WA Wall/Curb Attachment

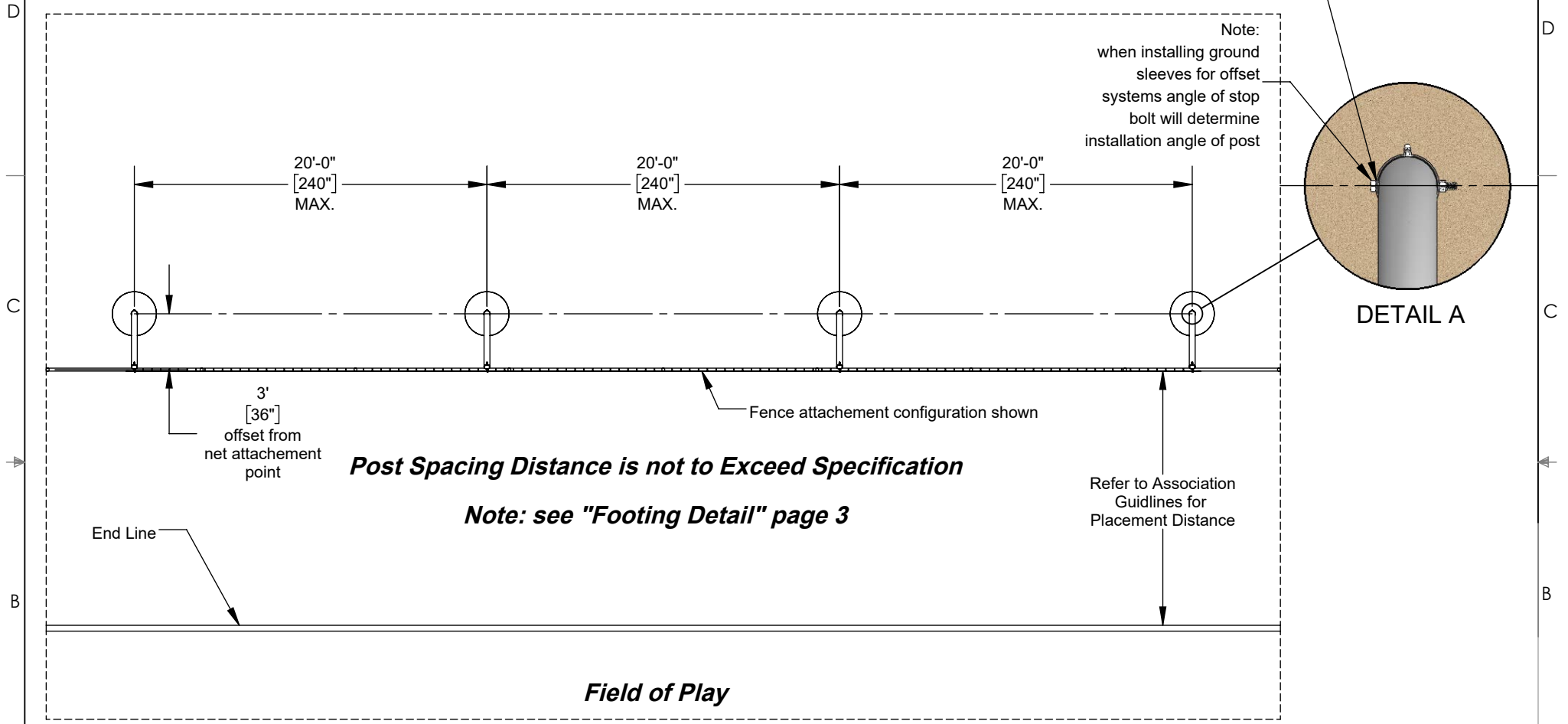


Intermediate Post Anchors Sleeve with Snap Clip, used to hold down cable

MBS-O-XX/TA Turf Attachment

Note: XX equals specified system height (i.e. 20' height, wall attachment system = MBS-O-20/WA)

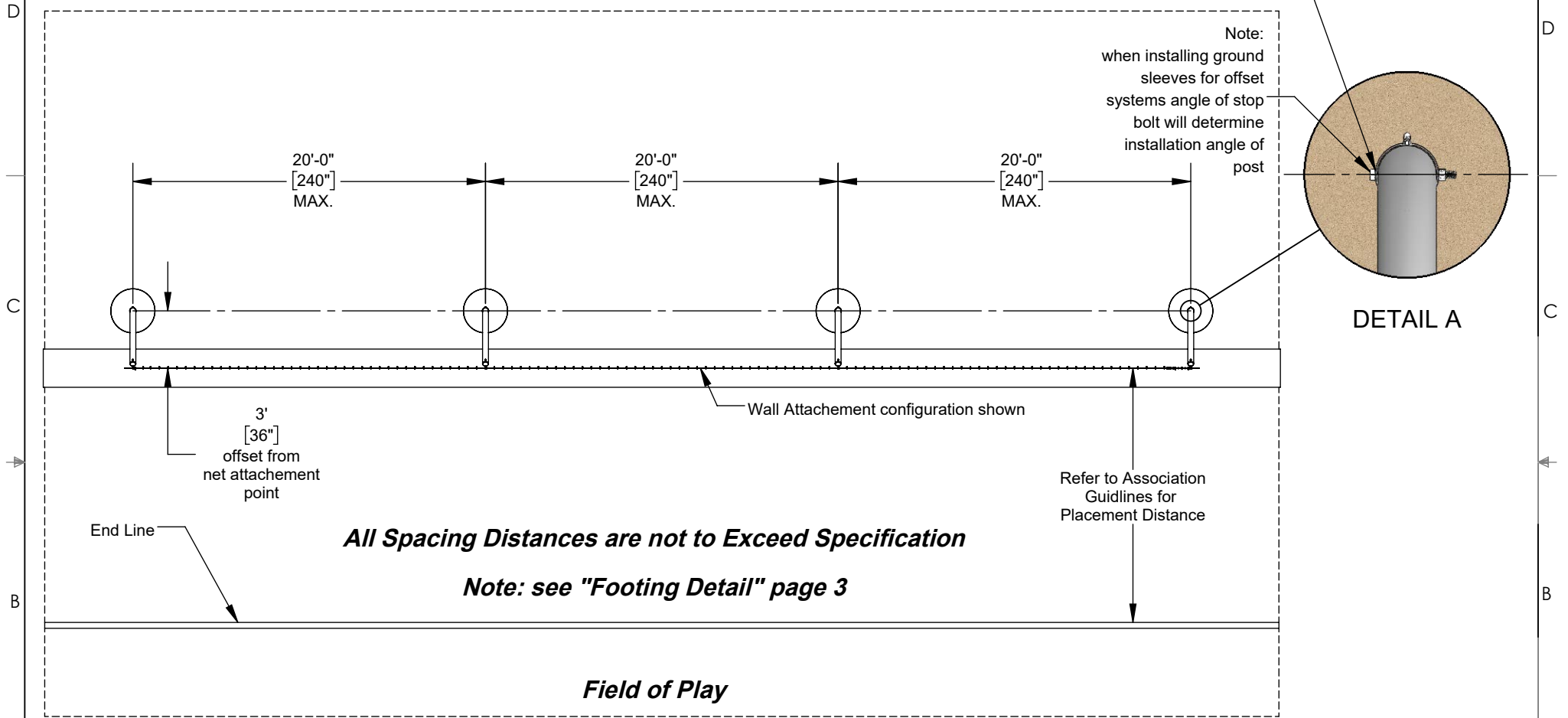
MBS-O-20/FA Placement Specifications



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 www.aaesports.com

DESCRIPTION: Concrete Footing Placement Specification		
NOTE: 20' HIGH BALLSTOPPER SYSTEM with OFFSET		
MODEL: MBS-O-20	CATEGORY: CUSTOMER	DATE: 10/7/2021
DWN. BY: NR	CAD FILE: MBS-O-20 Specifications	DWG. NO. MBS-O-20-C-006

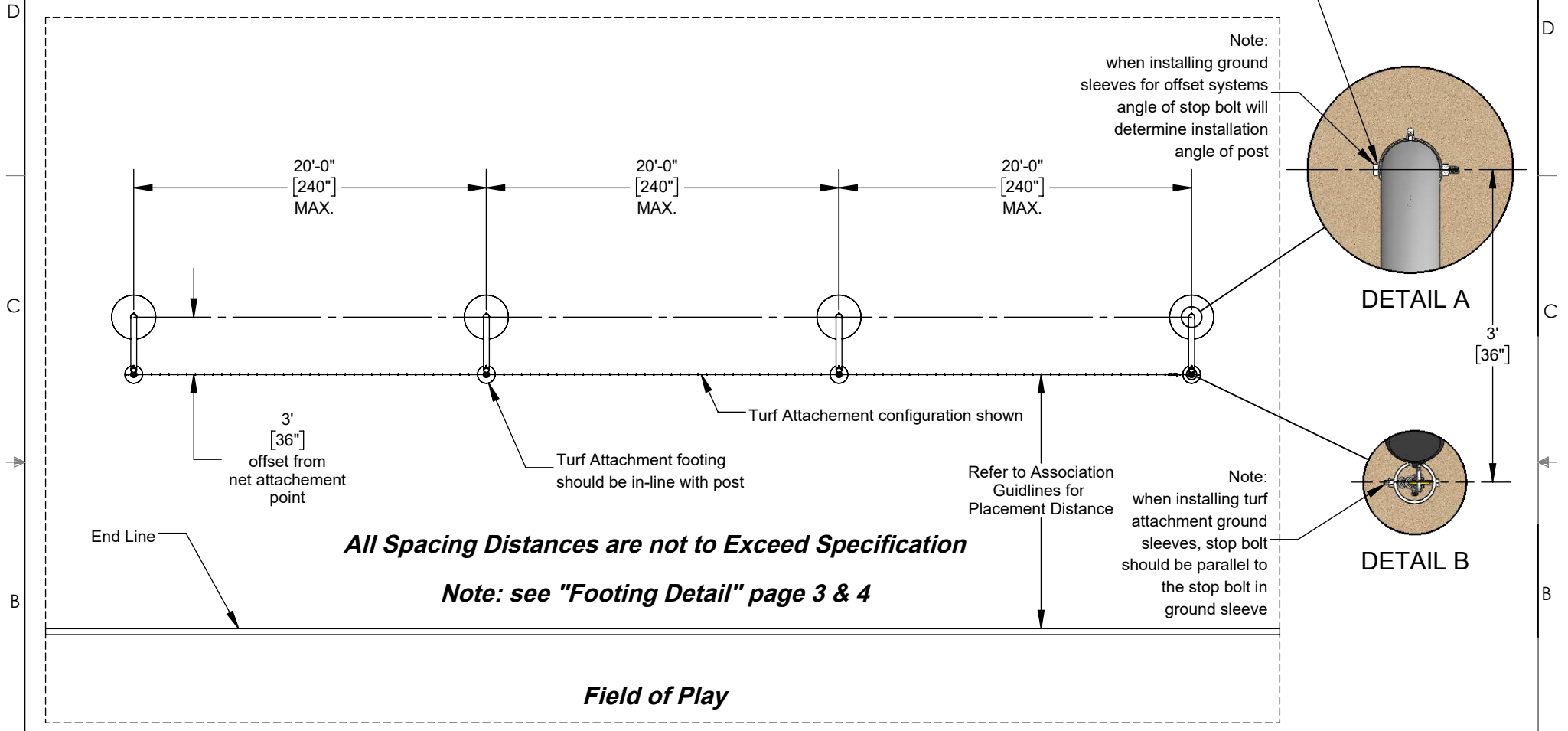
MBS-O-20/WA Placement Specifications



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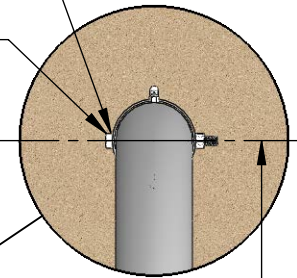
DESCRIPTION: Concrete Footing Placement Specification		
NOTE: 20' HIGH BALLSTOPPER SYSTEM with OFFSET		
MODEL: MBS-O-20	CATEGORY: CUSTOMER	DATE: 10/7/2021
DWN. BY: NR	CAD FILE: MBS-O-20 Specifications	DWG. NO. MBS-O-20-C-007

MBS-O-20/TA Placement Specifications



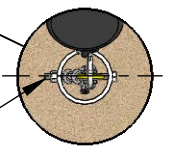
top edge of ground sleeve has alignment cuts, these can be used in conjunction with a string line to verify alignment prior to pour

Note: when installing ground sleeves for offset systems angle of stop bolt will determine installation angle of post



DETAIL A

3' [36"]



DETAIL B

Note: when installing turf attachment ground sleeves, stop bolt should be parallel to the stop bolt in ground sleeve

Refer to Association Guidelines for Placement Distance

All Spacing Distances are not to Exceed Specification

Note: see "Footing Detail" page 3 & 4

Field of Play



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DESCRIPTION: Concrete Footing Placement Specification		
NOTE: 20' HIGH BALLSTOPPER SYSTEM with OFFSET		
MODEL: MBS-O-20	CATEGORY: CUSTOMER	DATE: 10/7/2021
DWN. BY: NR	CAD FILE: MBS-O-20 Specifications	DWG. NO. MBS-O-20-C-008

Model No.
MBS-O-20/FA
Parts List

PARTS LIST				
Part List #	Item	Description	Per Post	System Qty.
1	Post	20' MBS System Posts w/ Cap	1	?
2	Ground Sleeve	56" Length Ground Sleeve, w/ Stop Bolt	1	?
Hanging Rope & Pulley System (Pre-Assembled)				
3	Hanging Pulley	Pre-assembled Hanging Rope/Pulley System	1	?
4	Washer	5/16" Flat Washer, SS	1	Σ
5	Hex Nut	5/16"-18 Hex Nut, Self Locking	1	?
Side Pulley Hardware (Side Pulley part of Hanging Rope System)				
6	Bolt	1/4"-20 x 4-1/2" Flat Head ScREW, SS	2	Σ
7	Washer	1/4" Flat Washer, SS	2	Σ
8	Hex Nut	1/4"-20 Hex Nut, SS, Self Locking	2	Σ
Cleat & Hardware				
9	Cleat	Tapered Cleat, Glavanized Steel	1	?
10	Bolt	1/4"-20 x 5-1/2" Hex Bolt, SS	2	Σ
7	Washer	1/4" Flat Washer, SS	2	Σ
8	Hex Nut	1/4"-20 Hex Nut, SS, Self Locking	2	Σ
11	Cap Nut	1/4"-20 Cap Nut, SS,	2	Σ
Net & Hardware				
12	Net	#AAE N420, 1-1/2" sq. Mesh, Knottless Nylon		Ψ
13	Cable Tie	1/4" Pear Clip Snap, Plated		?
OPTIONAL ACCESSORIES				
30	Debris Collar	Debris Collar, 4" Diameter	1	?
<i>*Qty of posts (will vary depending on length fo system)</i> $? = (\# \text{ ft. per section} / 20 \text{ ft.}) + 1$ $\Sigma = [(\# \text{ ft. per section} / 20 \text{ ft.}) + 1] \times 2$ $\Psi = \# \text{ ft. per section}$ $? = (\# \text{ ft. per section}) \times 2$				

Model No.
MBS-O-20/WA
Parts List

PARTS LIST				
Part List #	Item	Description	Per Post	Qty.
1	Post	20' MBS System Posts w/ Cap	1	Ω
2	Ground Sleeve	56" Length Ground Sleeve, w/ Stop Bolt	1	Ω
Hanging Rope & Pulley System (Pre-Assembled)				
3	Hoist	Pre-assembled Hanging Rope/Pulley System	1	Ω
4	Washer	5/16" Flat Washer, SS	1	Σ
5	Hex Nut	5/16"-18 Hex Nut, Self Locking	1	Ω
Side Pulley Hardware (Side Pulley part of Hanging Rope System)				
6	Bolt	1/4"-20 x 4-1/2" Flat Head ScREW, SS	2	Σ
7	Washer	1/4" Flat Washer, SS	2	Σ
8	Hex Nut	1/4"-20 Hex Nut, SS, Self Locking	2	Σ
Cleat & Hardware				
9	Cleat	Tapered Cleat, Glavanized Steel	1	Ω
10	Bolt	1/4"-20 x 5-1/2" Hex Bolt, SS	2	Σ
7	Washer	1/4" Flat Washer, SS	2	Σ
8	Hex Nut	1/4"-20 Hex Nut, SS, Self Locking	2	Σ
11	Cap Nut	1/4"-20 Cap Nut, SS,	2	Σ
Net & Hardware				
12	Net	#AAE N420, 1-1/2" sq. Mesh, Knottless Nylon		ψ
13	Cable Tie	15" Cable Tie, 120 LB., Black		↵
Lower Attachement Cable & Hardware				
14	Hold-down Cable	3/16" Steel Cable with Clear Jacket, 1/4" O.D.		λ
15	Large eyebolt	3/8"-16 x 3" Closed Eyebolt, SS		π
16	Washer	3/8" x 1" O.D., Flat Washer, SS		π
17	Anchor	3/8" Double Expansion Anchor		π
18	Small Eyebolt	1/4"-20 x 2" Closed Eyebolt, SS		Φ
19	Washer	1/4" x 5/8" O.D., Flat Washer, SS		Φ
20	Anchor	1/4" Double Expansion Anchor		Φ
21	Tensior Kit	Ball Stopper Tensioner Kit		Δ
OPTIONAL ACCESSORIES				
30	Debris Collar	Debris Collar, 4" Diameter	1	Ω
<i>*Qty of posts (will vary depending on length fo system)</i>				
$\Omega = (\# \text{ ft. per section} / 20 \text{ ft.}) + 1$				
$\Sigma = [(\# \text{ ft. per section} / 20 \text{ ft.}) + 1] \times 2$				
$\Phi = (\# \text{ ft. per section} / 20 \text{ ft.}) - 1$				
$\pi = 2 \text{ per section}$				
$\Delta = 1 \text{ per section}$				
$\lambda = (\# \text{ ft. per section}) + 1\text{ft.}$				
$\psi = \# \text{ ft. per section}$				
$\↵ = (\# \text{ ft. per section}) \times 2$				



Model No.
MBS-O-20/TA
Parts List

PARTS LIST				
Part List #	Item	Description	Per Post	Qty.
1	Post	20' MBS System Posts w/ Cap	1	Ω
2	Ground Sleeve	56" Length Ground Sleeve, w/ Stop Bolt	1	Ω
Hanging Rope & Pulley System (Pre-Assembled)				
3	Hoist	Pre-assembled Hanging Rope/Pulley System	1	Ω
4	Washer	5/16" Flat Washer, SS	1	Σ
5	Hex Nut	5/16"-18 Hex Nut, Self Locking	1	Ω
Side Pulley Hardware (Side Pulley part of Hanging Rope System)				
6	Bolt	1/4"-20 x 4-1/2" Flat Head ScREW, SS	2	Σ
7	Washer	1/4" Flat Washer, SS	2	Σ
8	Hex Nut	1/4"-20 Hex Nut, SS, Self Locking	2	Σ
Cleat & Hardware				
9	Cleat	Tapered Cleat, Glavanized Steel	1	Ω
10	Bolt	1/4"-20 x 5-1/2" Hex Bolt, SS	2	Σ
7	Washer	1/4" Flat Washer, SS	2	Σ
8	Hex Nut	1/4"-20 Hex Nut, SS, Self Locking	2	Σ
11	Cap Nut	1/4"-20 Cap Nut, SS,	2	Σ
Net & Hardware				
12	Net	#AAE N420, 1-1/2" sq. Mesh, Knottless Nylon		ψ
13	Cable Tie	15" Cable Tie, 120 LB., Black		↵
Lower Attachement Cable & Hardware				
14	Hold-down Cable	3/16" Steel Cable with Clear Jacket, 1/4" O.D.		λ
21	Tensior Kit	Ball Stopper Tensioner Kit		Δ
22	Small Ground Sleeve	12" Ground Sleeve fir Turf Attachment, w/ Bolts		π
23	Snap Clip	2-1/2" Snap Clip, SS		Φ
24	Anchor Shackle	1/4" Anchor Shackle, with Screw Pin		π
OPTIONAL ACCESSORIES				
30	Debris Collar	Debris Collar, 4" Diameter	1	Ω
*Qty of posts (will vary depending on length fo system)				
$\Omega = (\# \text{ ft. per section} / 20 \text{ ft.}) + 1$				
$\Sigma = [(\# \text{ ft. per section} / 20 \text{ ft.}) + 1] \times 2$				
$\Phi = (\# \text{ ft. per section} / 20 \text{ ft.}) - 1$				
$\pi = 2 \text{ per section}$				
$\Delta = 1 \text{ per section}$				
$\lambda = (\# \text{ ft. per section}) + 1\text{ft}$				
$\psi = \# \text{ ft. per section}$				
$\↵ = (\# \text{ ft. per section}) \times 2$				

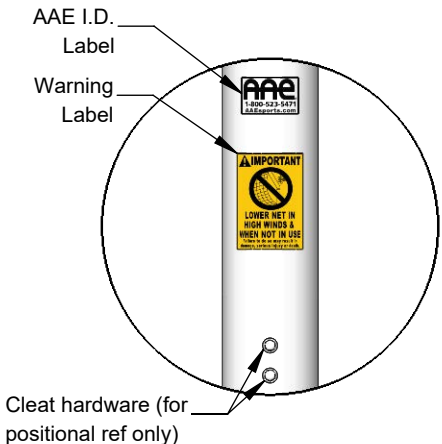
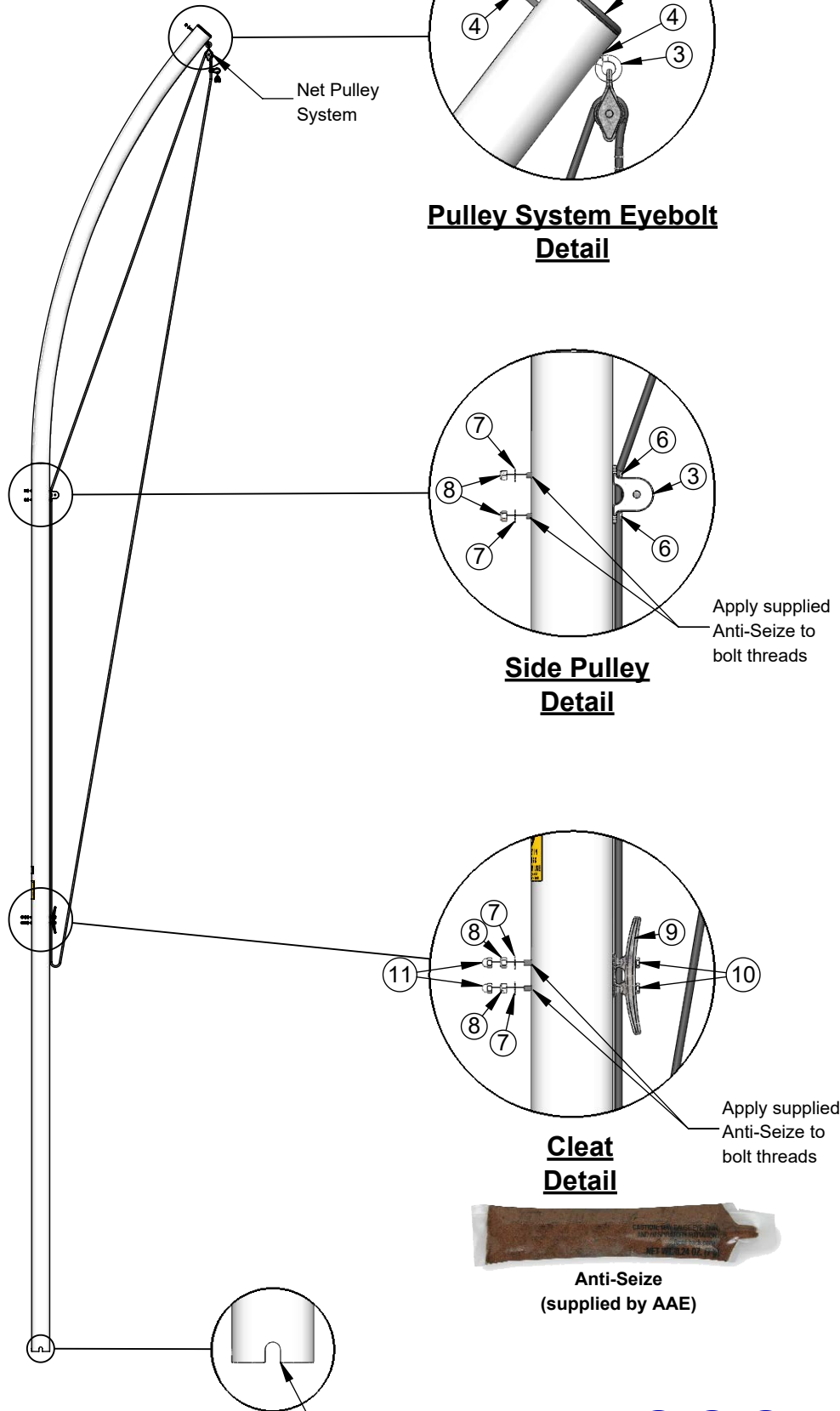


MBS-O-20

Post Assembly Instruction

Installation Notes:

- Pulley system Eyebolt:** Pulley comes pre-assembled to eyebolt. Install washer onto eyebolt then insert eyebolt with washer through front side of hole at top of post. From opposite side secure eyebolt into place using a flatwasher and Nylock hex-nut. (refer to diagram)
- Side Pulley:** Is part of the pre-assembled pulley system and should be installed so that it is on frontside of post, same side as net. Screws will be inserted through side pulley and post and secured on backside using flat washers, Nylock hex-nuts. (refer to diagram)
- Cleat:** Is to be installed so that it is on frontside of post, same side as net. Screws will be inserted through cleat and post and secured on backside using flat washers, Nylock hex-nuts and cap nuts. (refer to diagram)
- Make sure warning labels are present on upright posts.



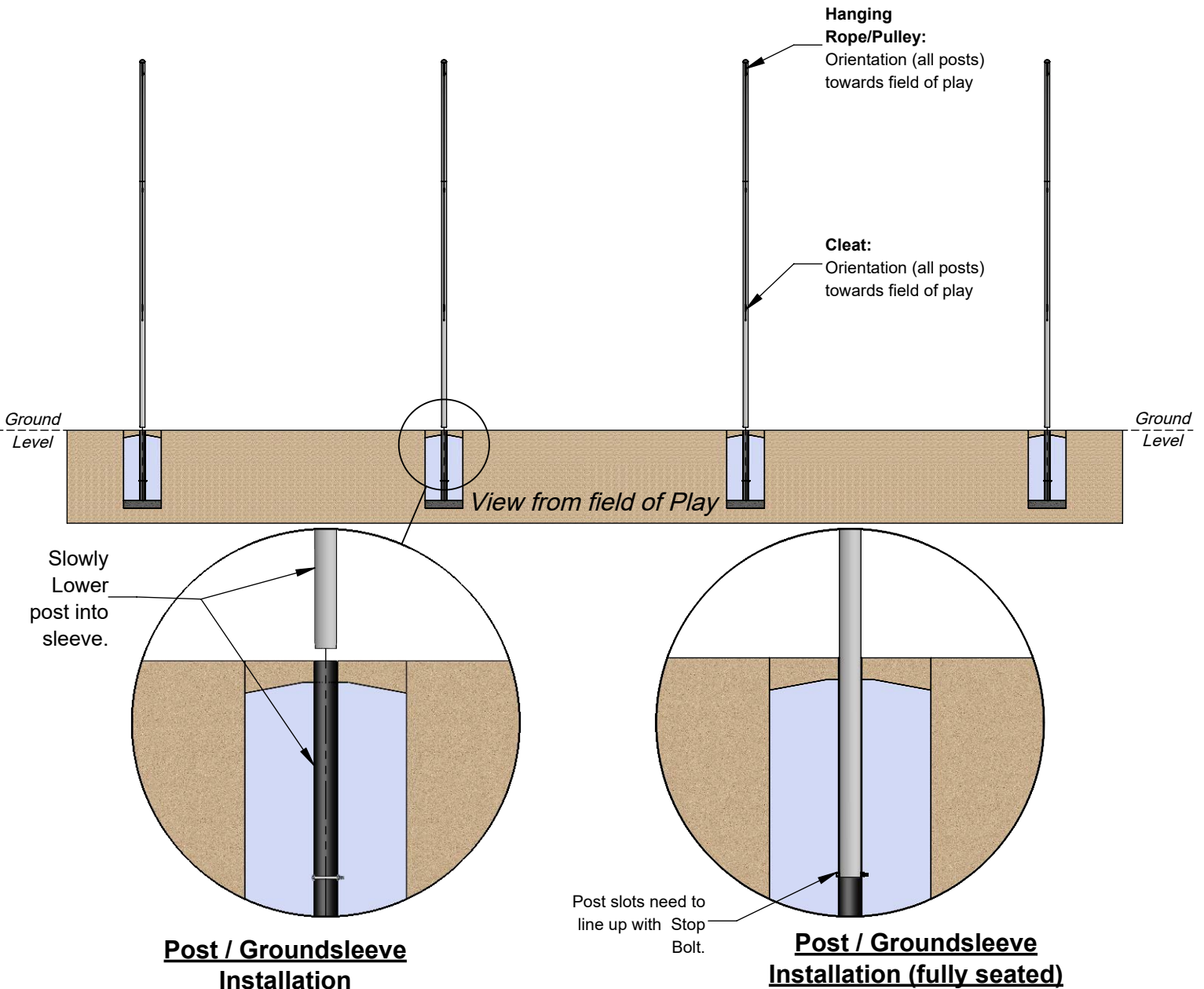
Note: Post assembly should be done with post laying down on flat level surface.

MBS-O-20

Assembly Instruction

Posts to Groundsleeve

*Note: number of inner posts may vary from what is shown.
(Sample 60' section show below)*



Installation Notes:

1. View above is from net side of post (*field of play*).
2. **Caution**, slowly lower posts into sleeves. Dropping post into sleeve may result in damage to the stop bolt.
3. Notches in bottom of post should line up with Stop Bolt. Ensure proper alignment by trying to turn the post, If posts do not turn they have been properly seated.

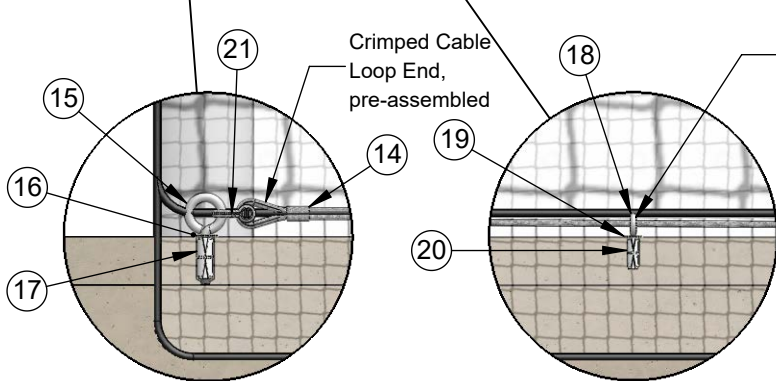
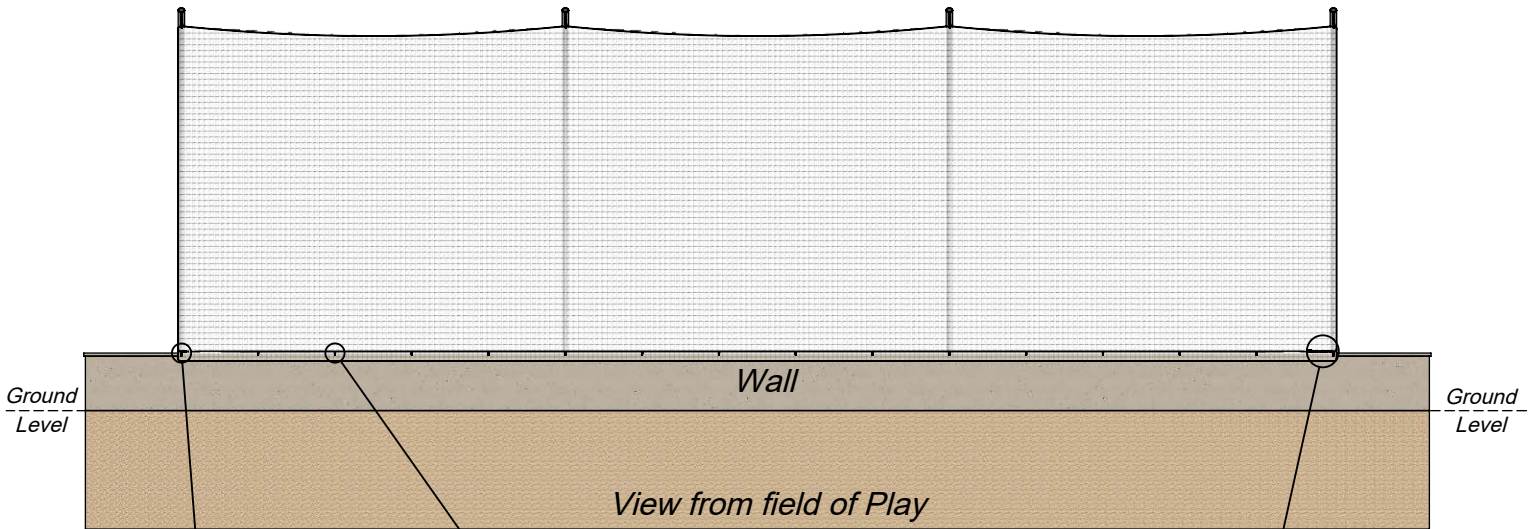
MBS-O-20/WA

Assembly Instruction

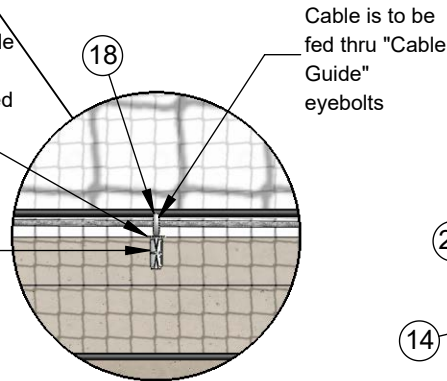
Support Cable

(Wall Attachment Systems Only)

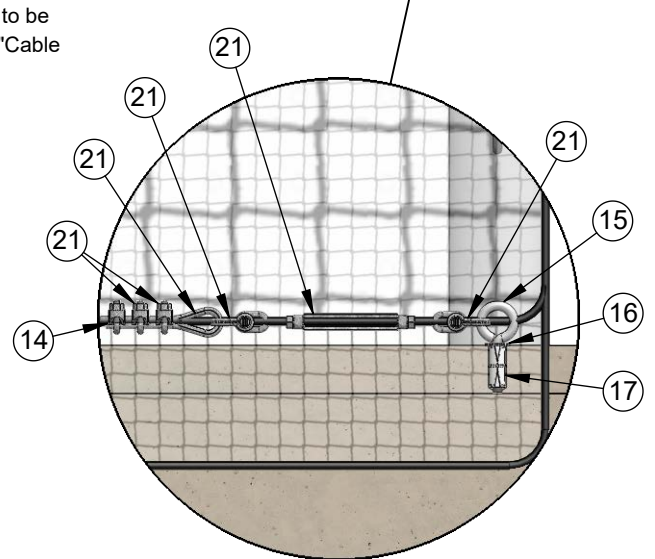
*Note: number of inner posts may vary from what is shown.
(Sample 60' section show below)*



Cable End Anchor Installation



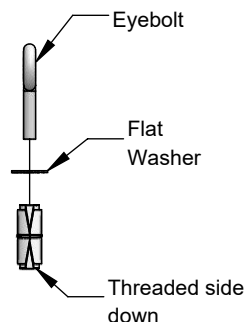
Cable Guide Installation



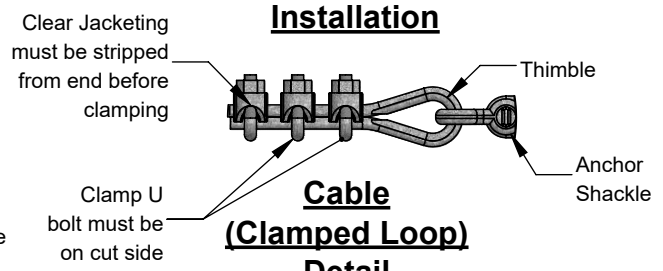
Cable End Anchor/Tensioner Installation

Installation Notes:

1. Mark off anchor locations on top of wall
Cable End Anchors should be located inline with end posts.
Cable Guide Anchors should be placed approx. 4' apart running inline with the end anchors
2. Drill Expansion anchor Holes.
Cable End Anchors
Ø3/4" x 1-3/4" D hole
Cable Guide Anchors
Ø1/2" x 1-1/8" D hole
3. Insert eyebolt thru washer and into expansion anchor, engage about 1 to 2 threads, then tap assembly into hole. After assembly has been fully seated in hole, continue tightening eyebolt to fully seat anchor. Make note of orientation of eyebolt (refer to images above)



Anchor Detail



Cable (Clamped Loop) Detail

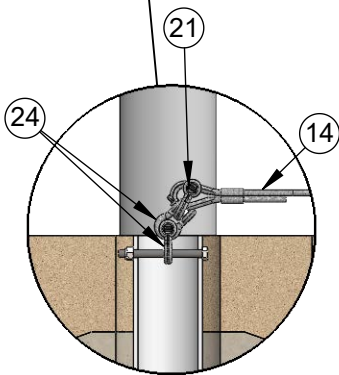
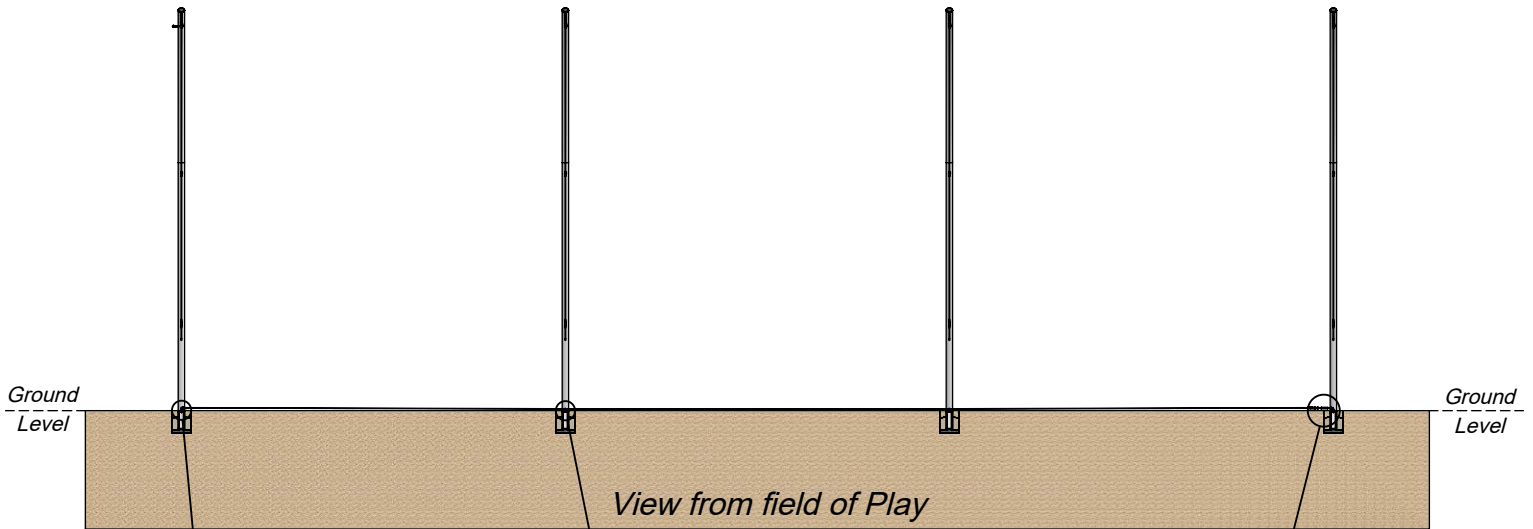
MBS-O-20/TA

Assembly Instruction

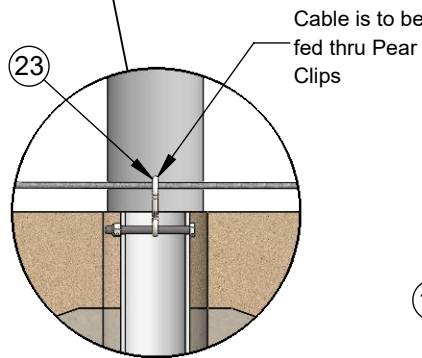
Support Cable

(Turf Attachment Systems Only)

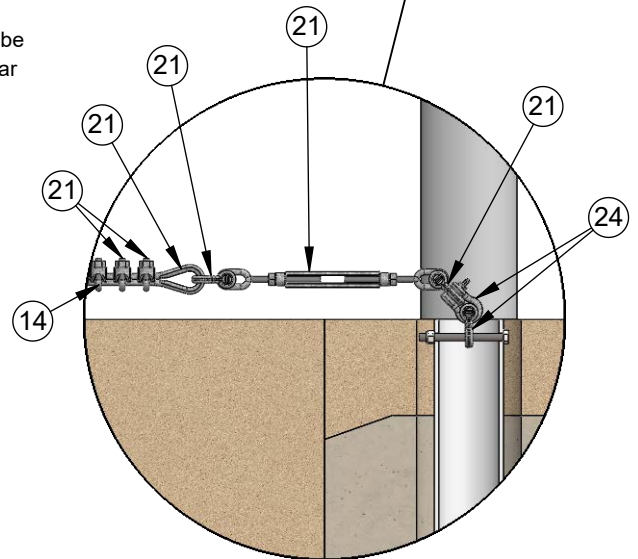
Note: number of inner posts may vary from what is shown.
(Sample 60' section show below)



Cable End Anchor Installation



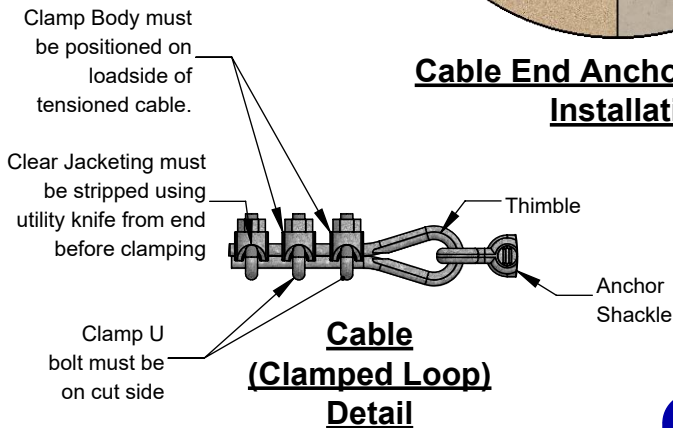
Cable Guide Installation



Cable End Anchor/Tensioner Installation

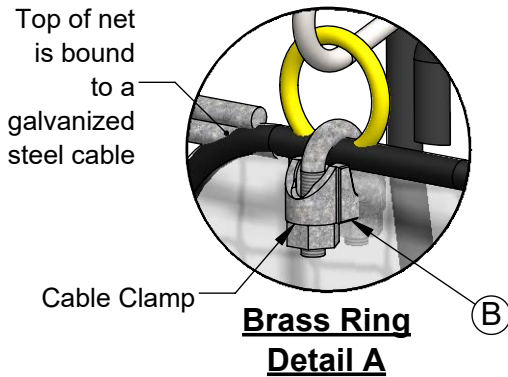
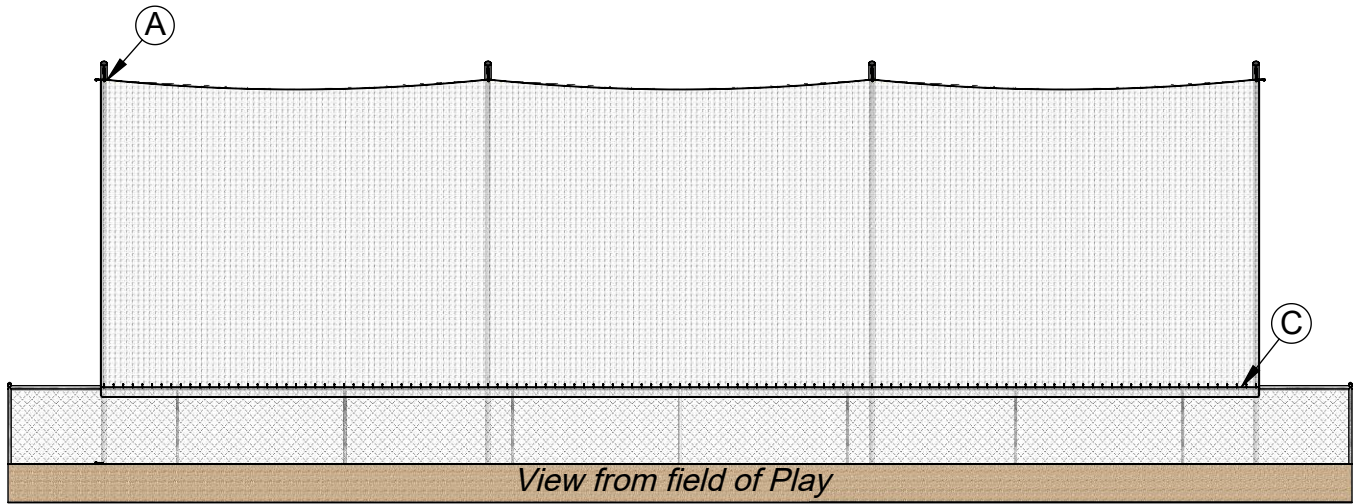
Installation Notes:

1. Turf Anchor Sleeves
 Cable End Anchors, install an Anchor Shackle around the top bolt of each end sleeve, then daisy chain a 2nd Shackle onto the 1st shackle.
 Cable Guide Anchors, install Pear Clip onto top bolt of the intermediate sleeves.
2. Using Anchor Shackle provided in tensioner kit, secure clamped end of support cable to end sleeve shackles (refer to Cable End Anchor Installation).
3. Using Anchor Shackle provided in tensioner kit, secure tensioner to end sleeve shackles. Then assemble and secure clamped loop end (refer to Cable End Anchor/Tensioner Installation).

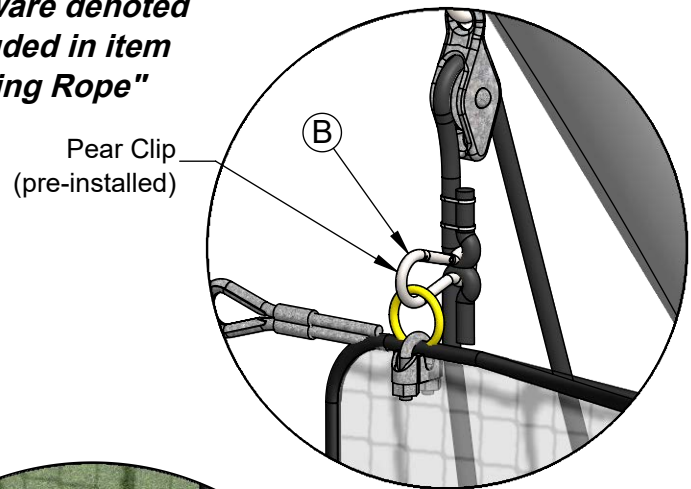


MBS-O-20 Assembly Instruction Net to Fence Attachment

Note: When raising net, it must be done in increments across the entire span

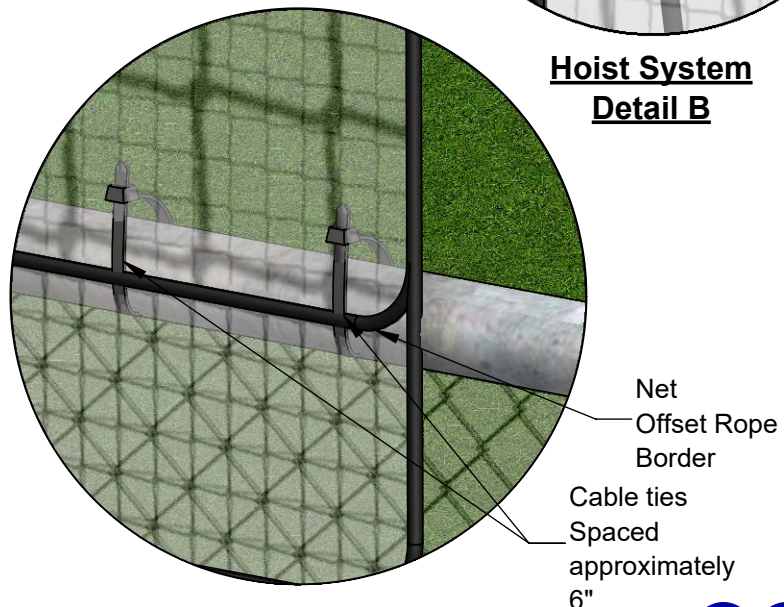


Note: Hardware denoted "B" is included in item #3 "Hanging Rope"



Installation Notes:

1. Lay net on ground across span of posts. *Make sure net is centered across span of posts.*
2. Secure Brass Rings to top of net using Cable Clamp (*as shown in Detail A*). One ring and clamp per post and they should be centered as close as possible to its coinciding post.
3. After Brass Rings have been secured to net, clip ring into it's posts hanging rope system Pear Clip (*as shown in Detail B*).
4. Before net has been fully raised, secure the offset rope border on the bottom of the net to top fence rail (*as shown in Detail C*). Cable ties should be spaced approximately 6" apart.
5. Once bottom of net has been completely attached raise net to full height and secure rope to cleat.



Net to Fence Attachment **Detail C**



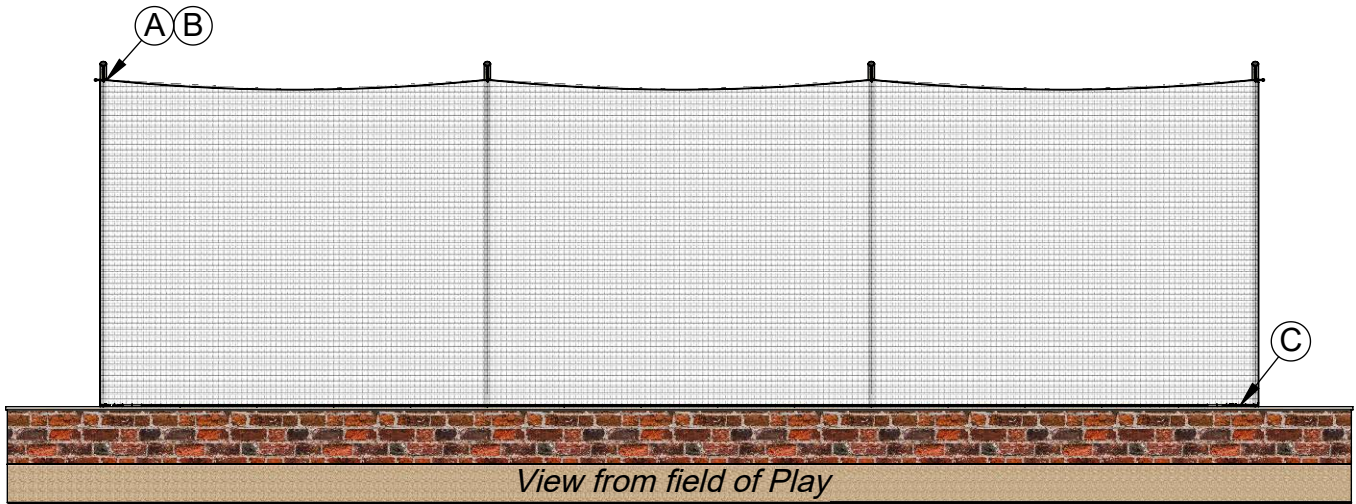
Aluminum Athletic Equipment
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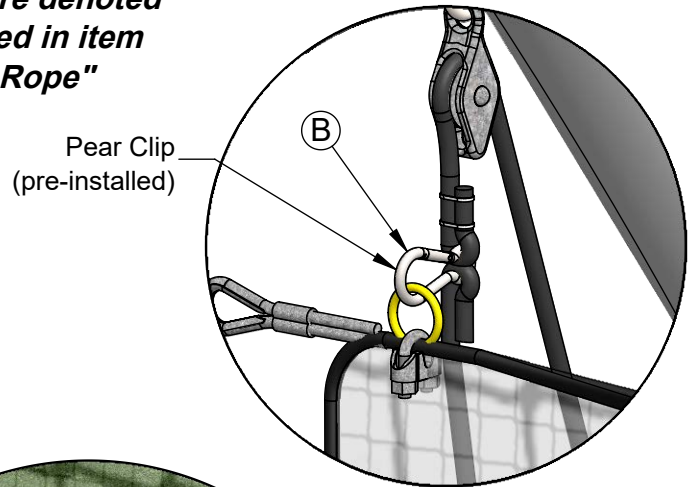
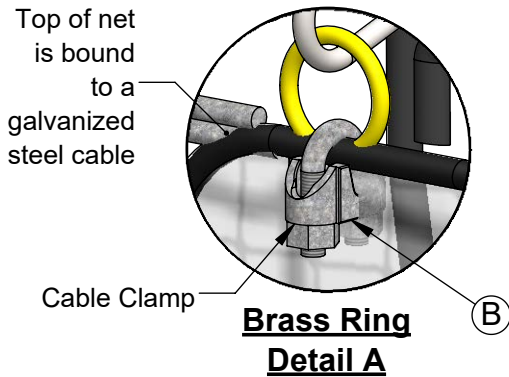
Assembly Instruction

Net Attachment

Note: When raising net, it must be done in increments across the entire span

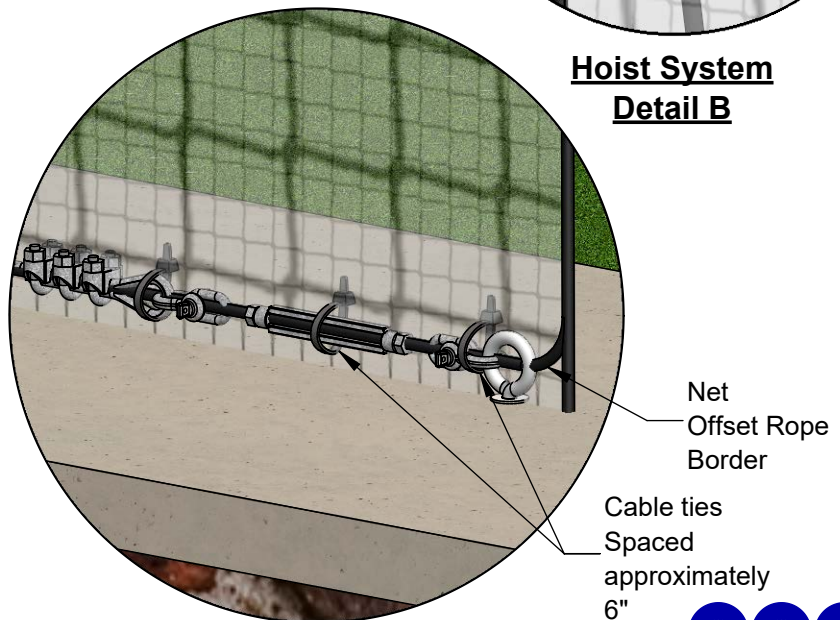


Note: Hardware denoted "B" is included in item #3 "Hoist Rope"



Installation Notes:

1. Lay net on ground across span of posts. *Make sure net is centered across span of posts.*
2. Secure Brass Rings to top of net using Cable Clamp (*as shown in Detail A*). One ring and clamp per post and they should be centered as close as possible to its coinciding post.
3. After Brass Rings have been secured to net, clip ring into its posts hanging rope system Pear Clip (*as shown in Detail B*), start to raise the net.
4. Before net has been fully raised & tensioned, secure the offset rope border on the bottom of the net to the Hold-down cable (*as shown in Detail C*). Cable ties should be spaced approximately 6" apart.
5. Once bottom of net has been completely attached raise net to full height and secure rope to cleat.



Net to Fence Attachment

Detail C



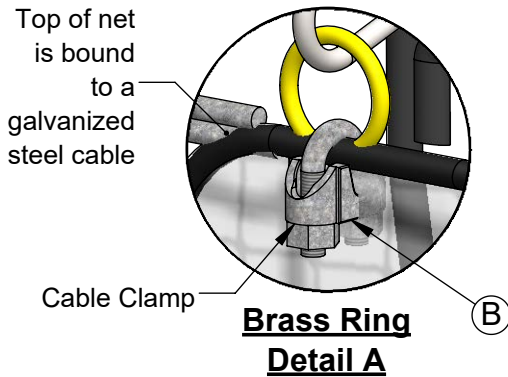
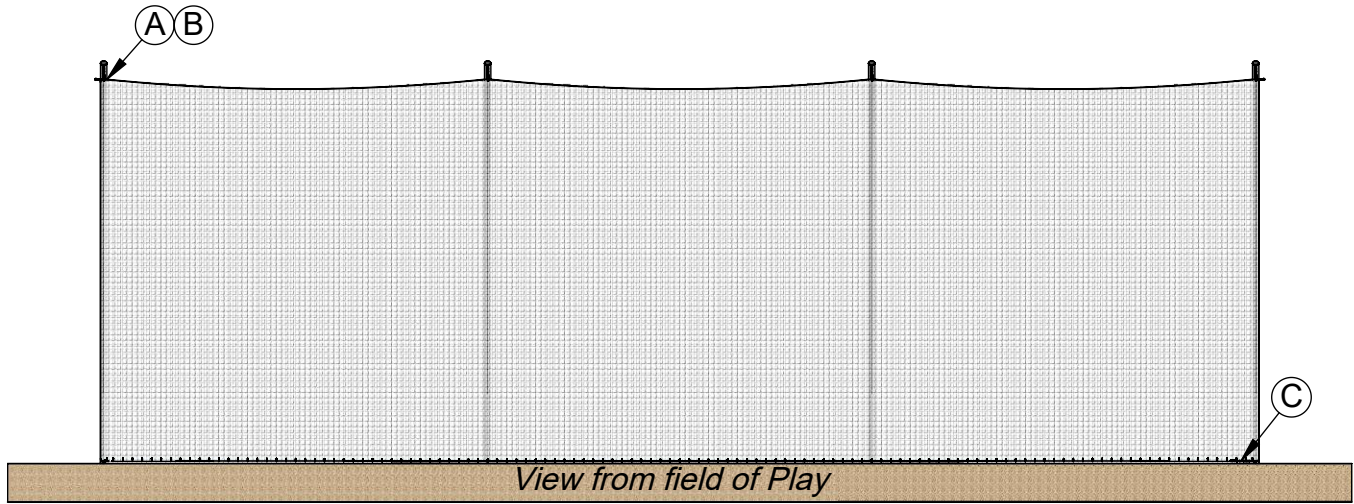
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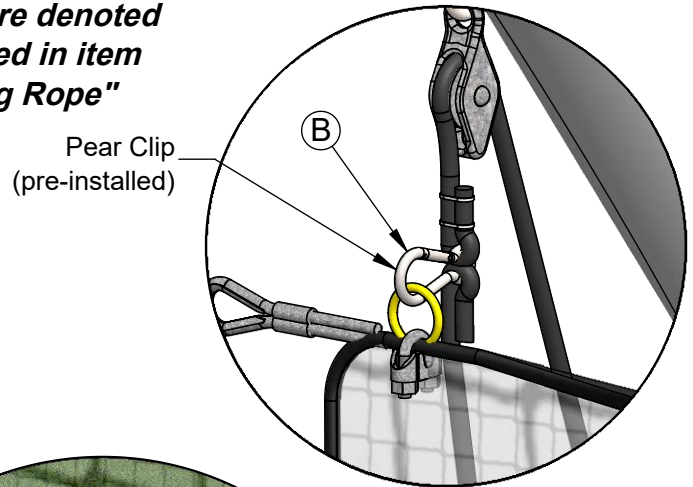
Assembly Instruction

Net Attachment

Note: When raising net, it must be done in increments across the entire span

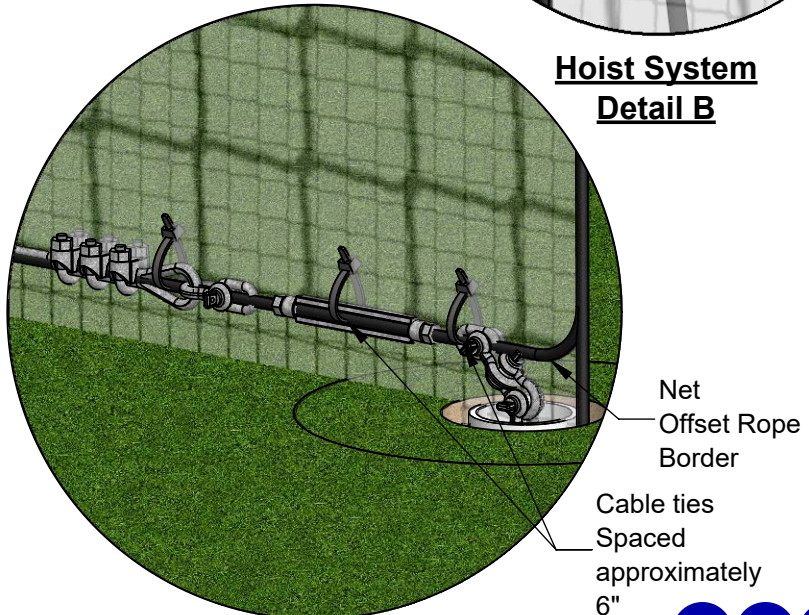


Note: Hardware denoted "B" is included in item #3 "Hanging Rope"



Installation Notes:

1. Lay net on ground across span of posts. *Make sure net is centered across span of posts.*
2. Secure Brass Rings to top of net using Cable Clamp (*as shown in Detail A*). One ring and clamp per post and they should be centered as close as possible to its coinciding post.
3. After Brass Rings have been secured to net, clip ring into it's posts hanging rope system Pear Clip (*as shown in Detail B*), start to raise the net.
4. Before net has been fully raised & tensioned, secure the offset rope border on the bottom of the net to the Hold-down cable (*as shown in Detail C*). Cable ties should be spaced approximately 6" apart.
5. Once bottom of net has been completely attached raise net to full height and secure rope to cleat.



Net to Fence Attachment

Detail C