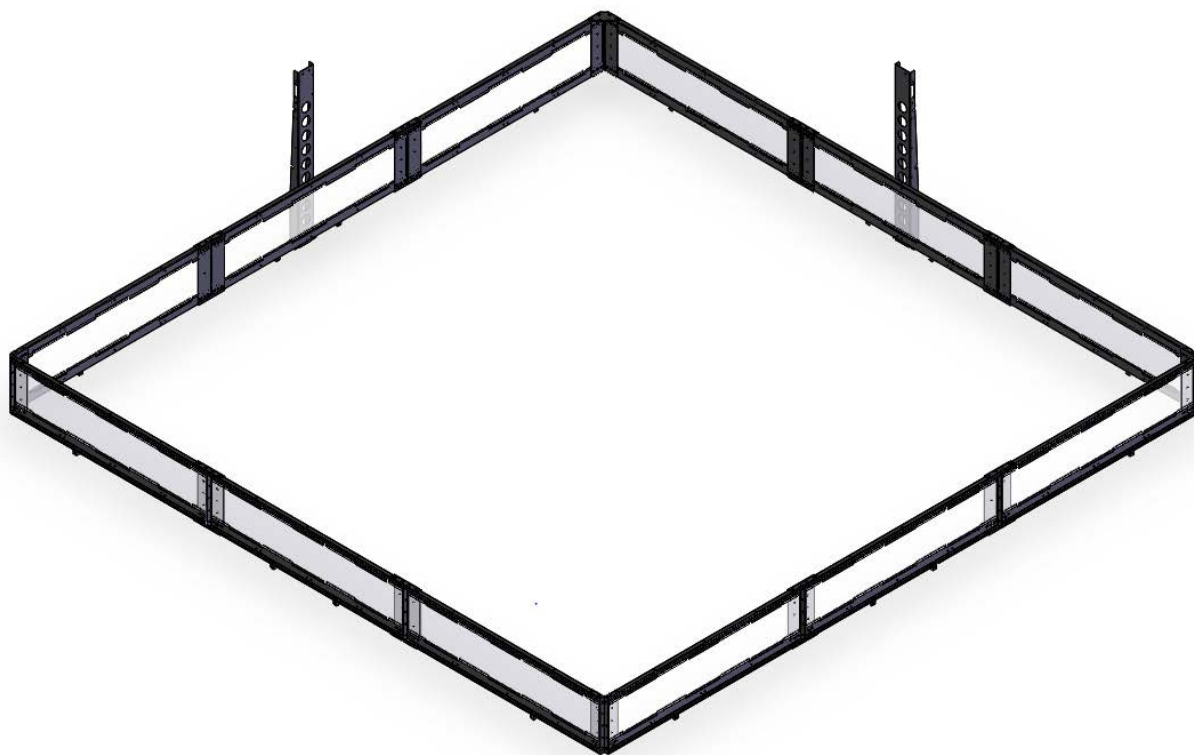
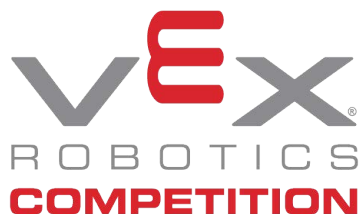


## VEX Competition Field Perimeter Specs & Assembly Instructions



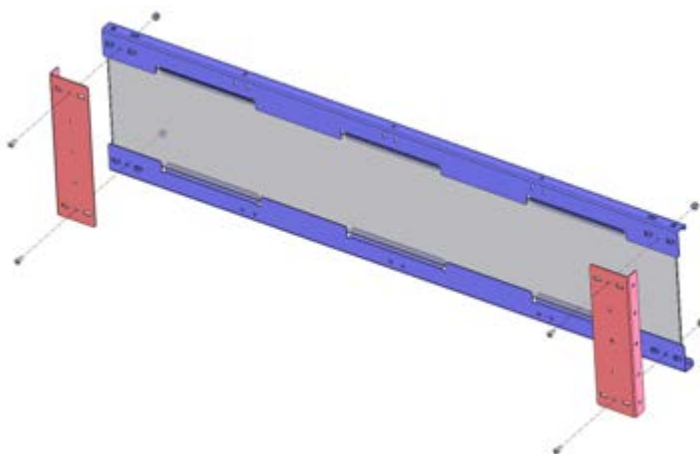


# VEX Field Perimeter

## Overview

The VEX Competition Field Perimeter (278-1501) is designed to provide a relatively low-cost high durability, modular field perimeter for use at a competition tournament. It consists of 12 modular panels, which once assembled can easily be stored or transported. These panels will not need to be disassembled, and are designed with locking hardware for long-term durability.

For assembly, these panels come with two types of gussets, one for joining two panels together linearly, and one for joining panels at a corner. These gussets come with built in lance-and-slot features for easy alignment during assembly. All the assembly screws utilize pre-installed PEM Nuts, which greatly eases the assembly process. These screws are then easy to remove for field-breakdown and transport.



**Note: When assembling the field panels together, ensure the SMOOTH SIDE of each panel is placed pointing toward the INSIDE of the field!**

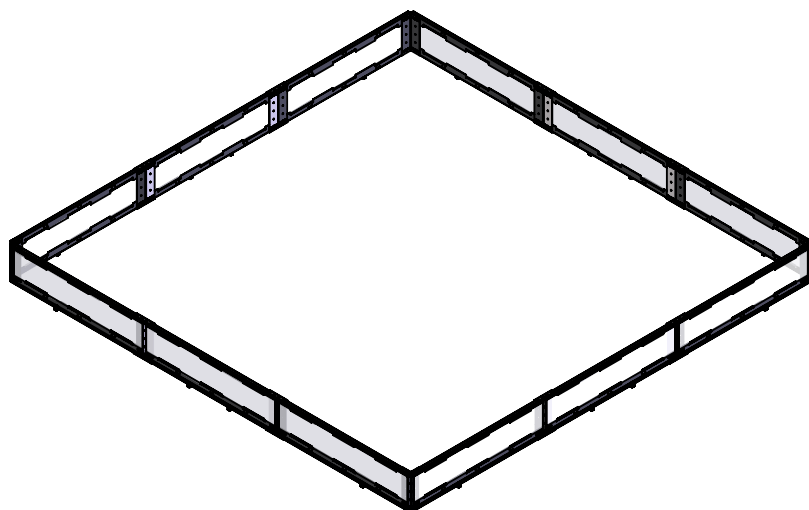
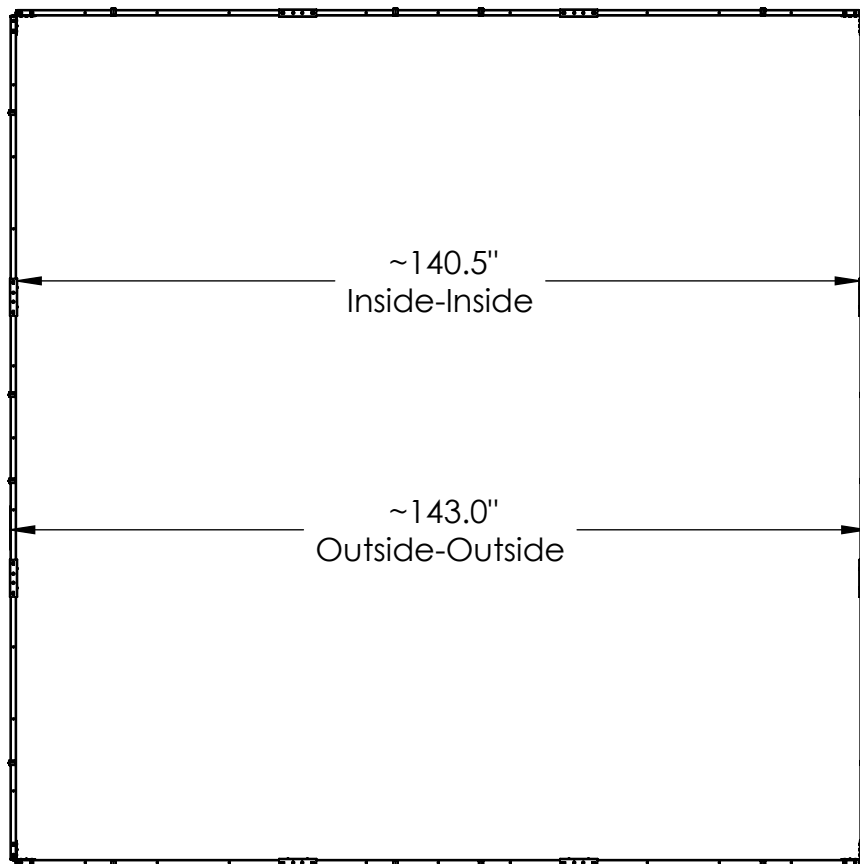
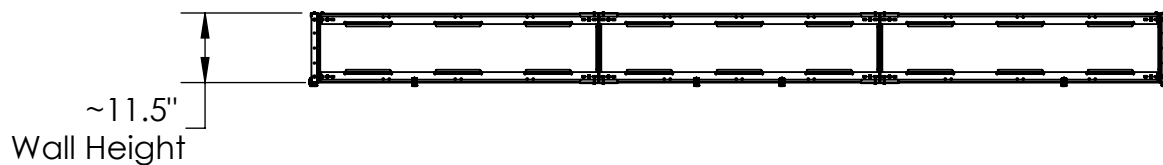
We urge users to pre-construct their 12 modular panels, to cut down on assembly time on-site at an event. The following pages contain all the BOM and assembly information to build this modular perimeter. All of the components in this assembly are available as a kit from [www.vexrobotics.com/fields/](http://www.vexrobotics.com/fields/) the kit P/N is 278-1501.

## Tools Required

The following tools are required for field perimeter assembly:

- 5/32" Allen Wrench
- 7/16" Open Ended Wrench
- #2 Phillips Head Screwdriver

Using multiple sets of 5/32" Allen Wrenches and 7/16" Open Ended Wrenches will allow additional volunteers to simultaneously work on field assembly. This will greatly decrease field setup time.



For more detailed field dimensions and specifications, please refer to the provided 3D CAD models.

VL-FIELD BOM			
Item	Part No.	Description	Qty
1	VL-FIELD-BEAM	Sheet-Metal Horizontal Field Component	24
2	VL-FIELD-POST	Sheet-Metal Vertical Field Component	24
3	VL-FIELD-LEXAN	Wall Panel - 8" x 46" x 1/8" Clear Lexan	12
4	VL-FIELD-GUSSET-WALL	Sheet-Metal Wall Assembly Gusset	16
5	VL-FIELD-GUSSET-CORNER	Sheet-Metal Corner Assembly Gusset	4
6	VL-FIELD-CONTROL-STAND	Sheet-Metal Driver Station Post	2
7	VL-FIELD-CONTROL-CLAMP	Sheet-Metal Driver Station Attachment Bracket	2
8	VL-FIELD-CONTROL-BASE	Sheet-Metal Driver Station Base Plate	2
9	SBS2520-0500SS	1/4-20 x 1/2" Long Button Head Hex Screw	118
10	NNY 2520-ZC	1/4-20 Nylock Nut	56
11	SFP1032-0500ZC-100	10-32 x 1/2" Long Flat Head Phillips Screw	8
12	NNY 1032-ZC	10-32 Nylock Nut	8
13	FIELD CORNER BRACKET	COMPETITION FIELD CORNER BRACKET	4
14	NWG2520-ZC	1/4-20 Wingnut	18
15	276-5156	Field Perimeter Rubber Foot	20
<b>Sub-Assemblies</b>			
16	VL-FIELD-PANEL-ASSY	Field Perimeter Panel	12
17	VL-FIELD-CORNER-ASSY	Field Corner Assembly	4
18	VL-FIELD-QUADRANT-ASSY	Field Quarter Assembly	4
19	VL-FIELD-PERIMETER-ASSY	Full Field Perimeter Assembly	1
20	VL-FIELD-DRIVERPOST-ASSY	Control Mounting Post	2


VL-FIELD-PANEL-ASSY BOM		
BOM Item #16 - Qty: 12 per Field		
Item	Part No.	Qty
1	VL-FIELD-BEAM	2
2	VL-FIELD-POST	2
3	VL-FIELD-LEXAN	1
9	SBS2520-0500SS	4
10	NNY2520-ZC	4
See Full VL-FIELD BOM for Details		

VL-FIELD-CORNER-ASSY BOM		
BOM Item #17 - Qty: 4 per Field		
Item	Part No.	Qty
16	VL-FIELD-PANEL-ASSY	2
5	VL-FIELD-GUSSET-CORNER	1
9	SBS2520-0500SS	6
13	FIELD CORNER BRACKET	1
14	NWG2520-ZC	4
See Full VL-FIELD BOM for Details		

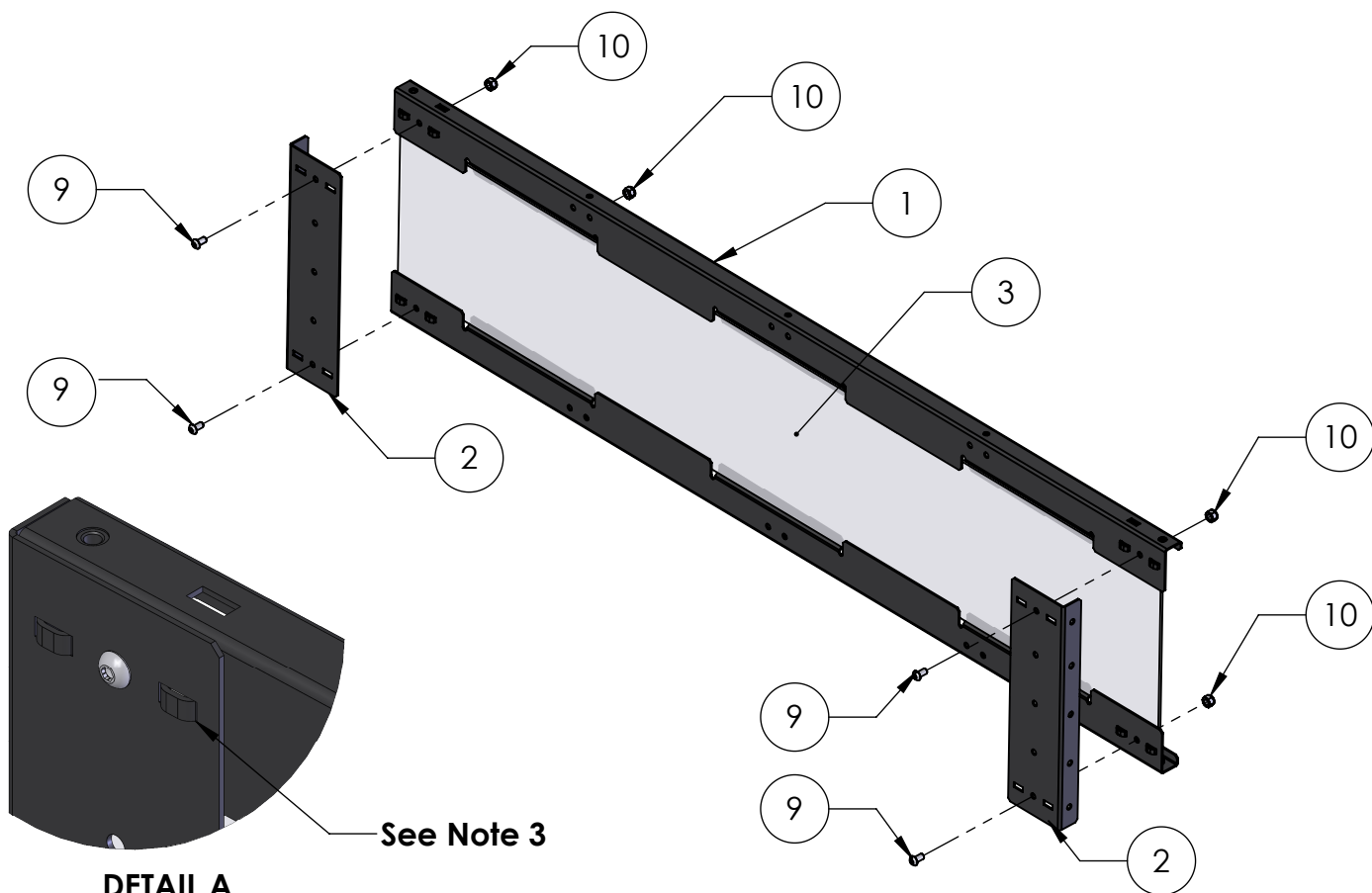
VL-FIELD-QUADRANT-ASSY BOM		
BOM Item #18 - Qty: 4 per Field		
Item	Part No.	Qty
17	VL-FIELD-CORNER-ASSY	1
16	VL-FIELD-PANEL-ASSY	1
4	VL-FIELD-GUSSET-WALL	2
9	SBS2520-0500SS	4
See Full VL-FIELD BOM for Details		

VL-FIELD-PERIMETER-ASSY BOM		
BOM Item #19 - Qty: 1 per Field		
Item	Part No.	Qty
18	VL-FIELD-QUADRANT-ASSY	4
4	VL-FIELD-GUSSET-WALL	8
9	SBS2520-0500SS	16
15	276-5156	16
See Full VL-FIELD BOM for Details		

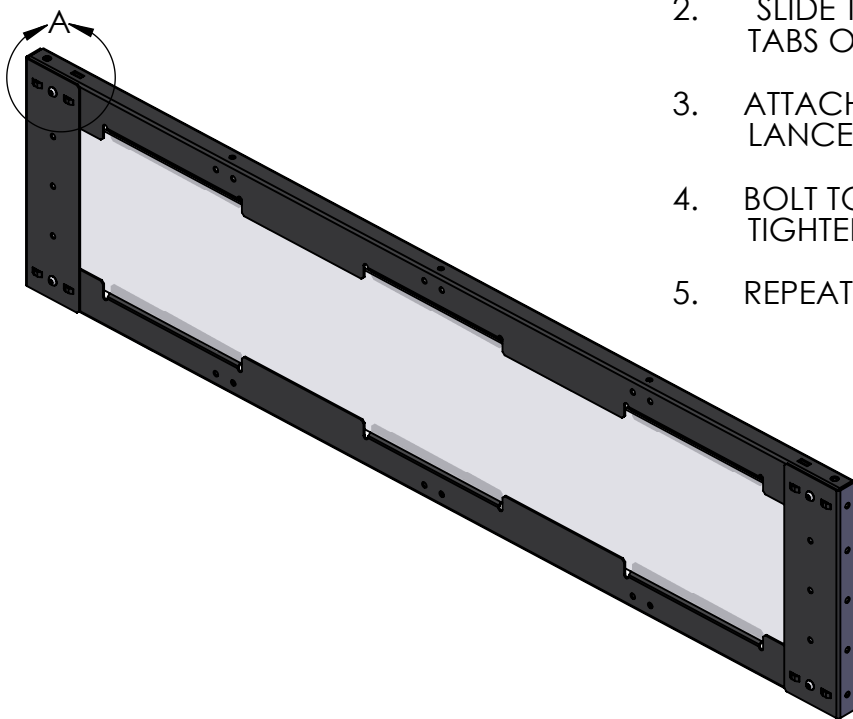
VL-FIELD-DRIVERPOST-ASSY		
BOM Item #20 - Qty: 2 per Field		
Item	Part No.	Qty
6	VL-FIELD-CONTROL-STAND	1
7	VL-FIELD-CONTROL-CLAMP	1
8	VL-FIELD-CONTROL-BASE	1
9	SBS2520-0500SS	2
11	SFP1032-0500ZC-100	4
12	NNY1032-ZC	4
See Full VL-FIELD BOM for Details		

	Description		Competition Field Perimeter BOM
	Dwg No		278-1501-BOM
	Competition	VRC	Sheet 2 of 8
	Release	6/29/2017	ALL DIMENSIONS ARE IN INCHES.





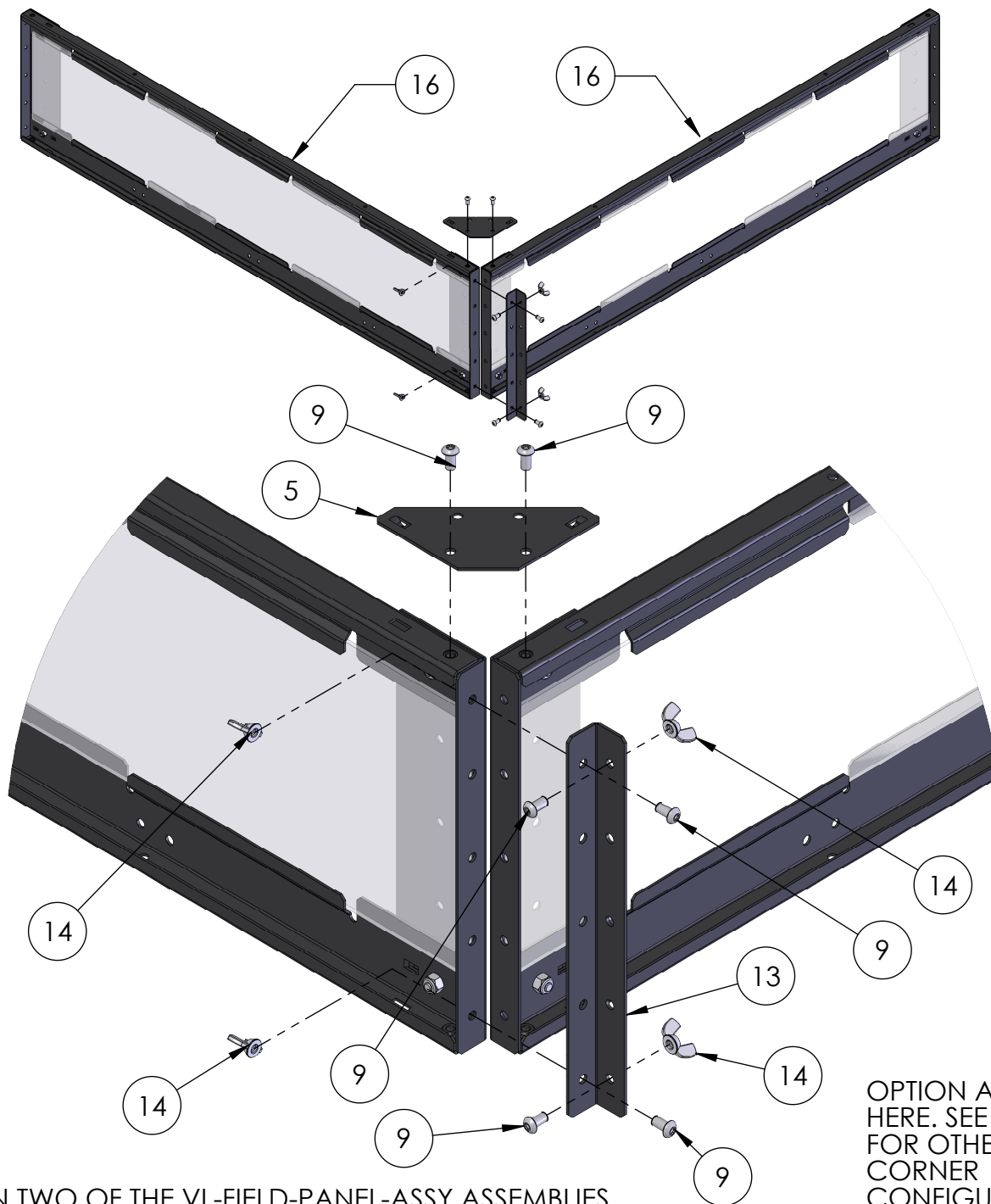
1. PEEL THE PAPER OFF BOTH SIDES OF THE VL-FIELD-LEXAN PANELS.
2. SLIDE THE VL-FIELD-LEXAN PANEL BETWEEN THE TABS OF THE VL-FIELD-BEAM PARTS.
3. ATTACH THE VL-FIELD-POST PIECES AND ALIGN LANCES AND SLOTS AS SHOWN IN DETAIL A.
4. BOLT TOGETHER (4X) USING BOM ITEM #9 & #10 TIGHTEN ALL SCREWS.
5. REPEAT FOR (12) FIELD PANELS.



#### VL-FIELD-PANEL-ASSY BOM

BOM Item #16 - Qty: 12 per Field

Item	Part No.	Qty
1	VL-FIELD-BEAM	2
2	VL-FIELD-POST	2
3	VL-FIELD-LEXAN	1
9	SBS2520-0500SS	4
10	NNY2520-ZC	4
See Full VL-FIELD BOM for Details		



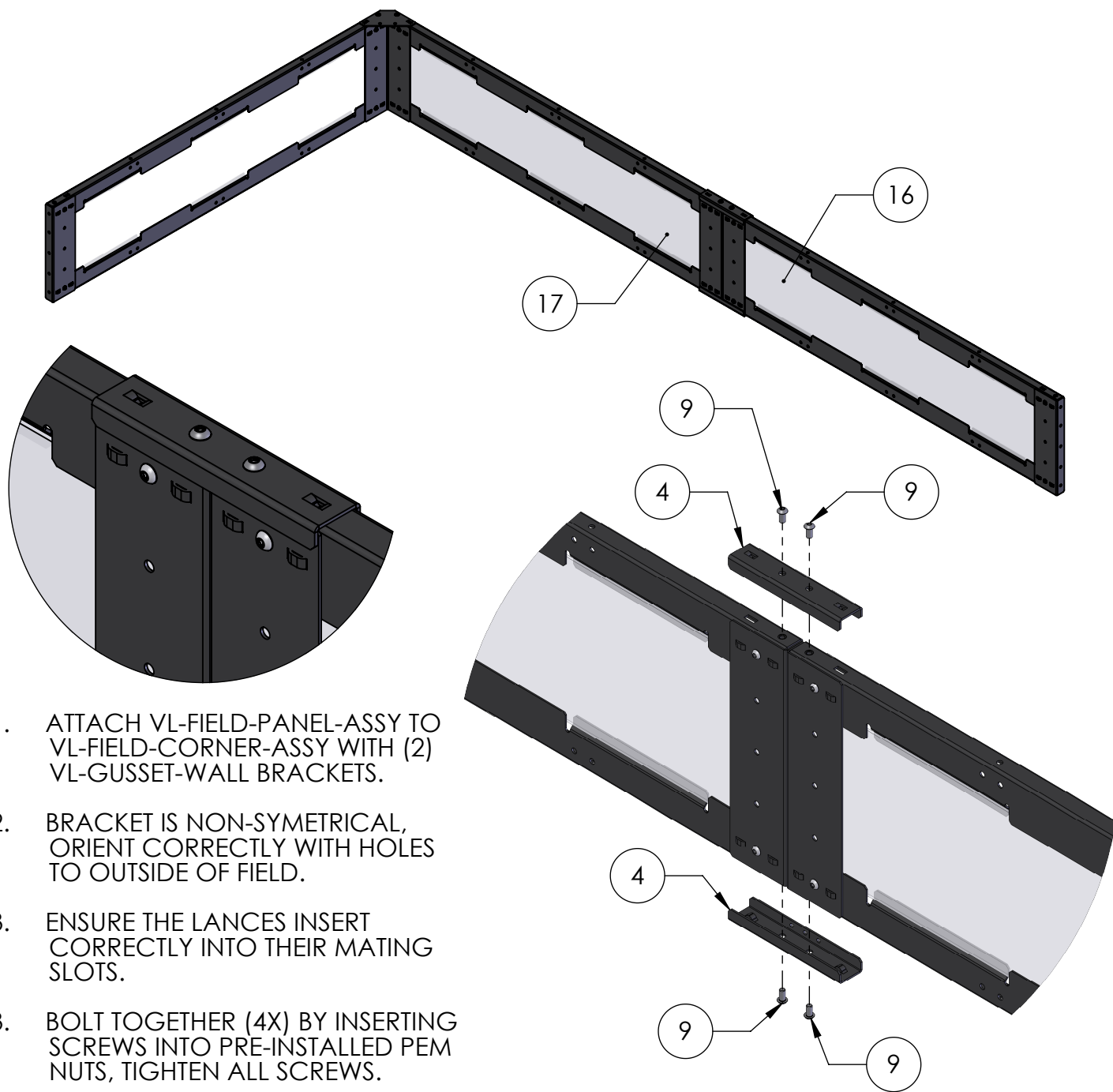
OPTION A SHOWN  
HERE. SEE PAGE 4  
FOR OTHER  
CORNER  
CONFIGURATIONS.

1. ALIGN TWO OF THE VL-FIELD-PANEL-ASSY ASSEMBLIES TOGETHER USING ONE VL-GUSSET-CORNER BRACKET AND ONE FIELD CORNER BRACKET. ENSURE THE LANCES INSERT CORRECTLY INTO THEIR MATING SLOTS.
2. BOLT TOGETHER PANELS BY INSERTING SCREWS INTO PRE-INSTALLED PEM NUTS, AND (4X) SCREWS WITH WINGNUTS TO ATTACH COMPETITION FIELD CORNER BRACKET. TIGHTEN ALL SCREWS
3. REPEAT FOR (4) FIELD CORNERS.

#### VL-FIELD-CORNER-ASSY BOM

BOM Item #17 - Qty: 4 per Field

Item	Part No.	Qty
16	VL-FIELD-PANEL-ASSY	2
5	VL-FIELD-GUSSET-CORNER	1
9	SBS2520-0500SS	6
13	FIELD CORNER BRACKET	1
14	NWG2520-ZC	4
See Full VL-FIELD BOM for Details		



1. ATTACH VL-FIELD-PANEL-ASSY TO VL-FIELD-CORNER-ASSY WITH (2) VL-GUSSET-WALL BRACKETS.
2. BRACKET IS NON-SYMETRICAL, ORIENT CORRECTLY WITH HOLES TO OUTSIDE OF FIELD.
3. ENSURE THE LANCES INSERT CORRECTLY INTO THEIR MATING SLOTS.
3. BOLT TOGETHER (4X) BY INSERTING SCREWS INTO PRE-INSTALLED PEM NUTS, TIGHTEN ALL SCREWS.
4. REPEAT FOR (4) FIELD QUADRANTS.

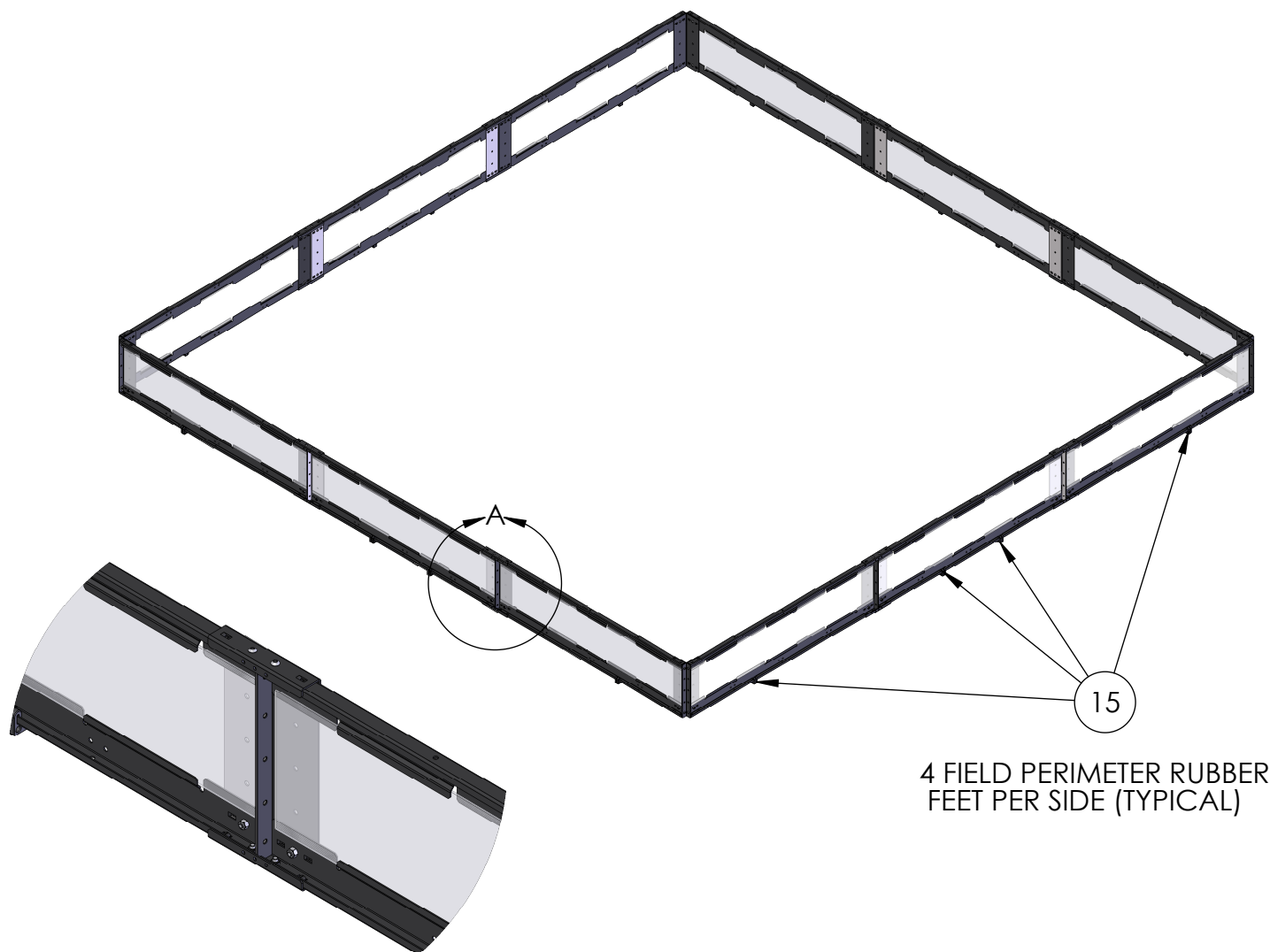
#### VL-FIELD-QUADRANT-ASSY BOM

BOM Item #18 - Qty: 4 per Field

Item	Part No.	Qty
17	VL-FIELD-CORNER-ASSY	1
16	VL-FIELD-PANEL-ASSY	1
4	VL-FIELD-GUSSET-WALL	2
9	SBS2520-0500SS	4
See Full VL-FIELD BOM for Details		

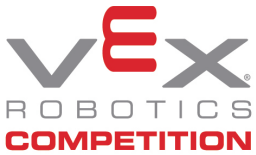
**SEE NOTE 2,  
WHEN POSITIONING  
VL-FIELD-GUSSET-WALL:**

  
 PUT SOLID FACE TOWARDS INSIDE OF FIELD  
  
 PUT HOLES TOWARDS OUTSIDE OF FIELD



1. ATTACH THE (4) VL-FIELD-QUADRANT ASSEMBLIES TOGETHER USING THE VL-FIELD-GUSSET-WALL BRACKETS.
2. INSTALL AND BOLT BRACKETS IN THE SAME MANNER AS INSTALLED ON THE VL-FIELD-QUADRANT-ASSY
3. TO INSTALL SOME OF THE BOTTOM BRACKETS, A PORTION OF THE ASSEMBLY WILL NEED TO BE LIFTED OFF THE GROUND.
4. ONLY (1) VL-FIELD-PERIMETER-ASSY IS NEEDED PER FIELD.
5. ATTACH (16) FIELD PERIMETER RUBBER FOOT TO BOTTOM EDGES. SEE FOLLOWING PAGE FOR DETAILED INSTRUCTIONS.

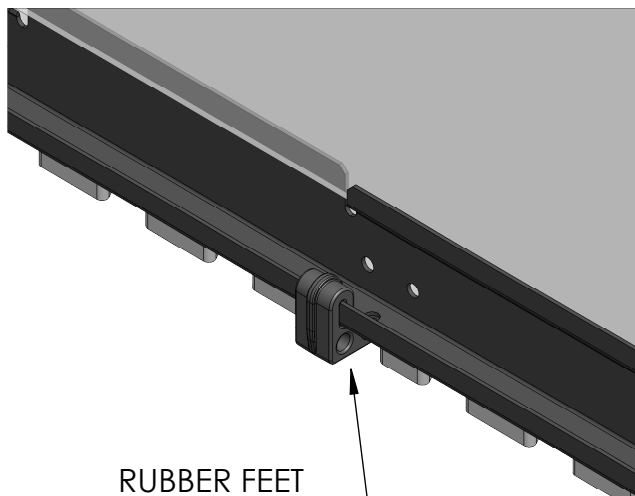
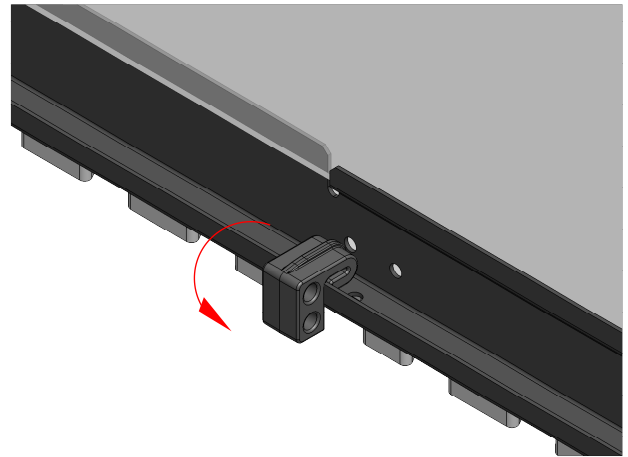
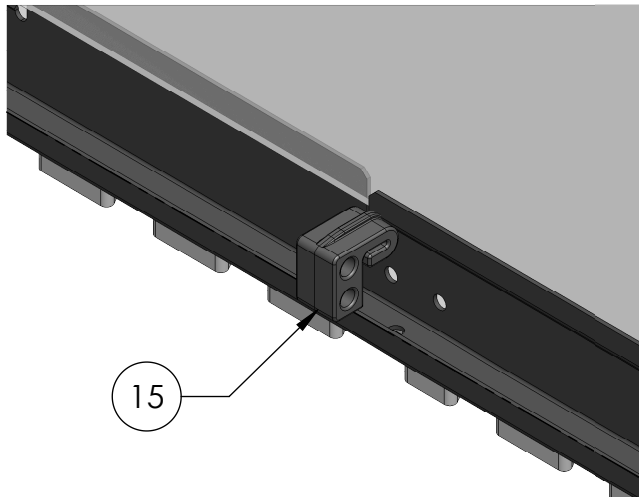
VL-FIELD-PERIMETER-ASSY BOM		
BOM Item #19 - Qty: 1 per Field		
Item	Part No.	Qty
18	VL-FIELD-QUADRANT-ASSY	4
4	VL-FIELD-GUSSET-WALL	8
9	SBS2520-0500SS	16
15	276-5156	16
See Full VL-FIELD BOM for Details		

	Description		Competition Field Perimeter - Full Assy
	Dwg No		VL-FIELD-PERIMETER-ASSY
	Competition	VRC	Sheet 6 of 8
	Release	6/29/2017	ALL DIMENSIONS ARE IN INCHES.

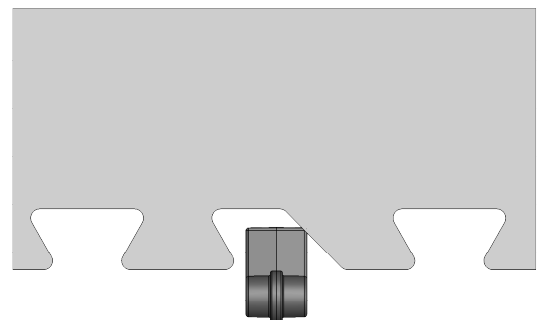
FIELD PERIMETER RUBBER FEET ARE ATTACHED TO THE FIELD PERIMETER AS SHOWN.

(4X) RUBBER FEET ARE USED ON EACH FIELD PERIMETER SIDE.

**NOTE: FIELD PERIMETER RUBBER FEET FIT BETWEEN FOAM TILE TABS. TABS DO NOT NEED TO BE REMOVED.**

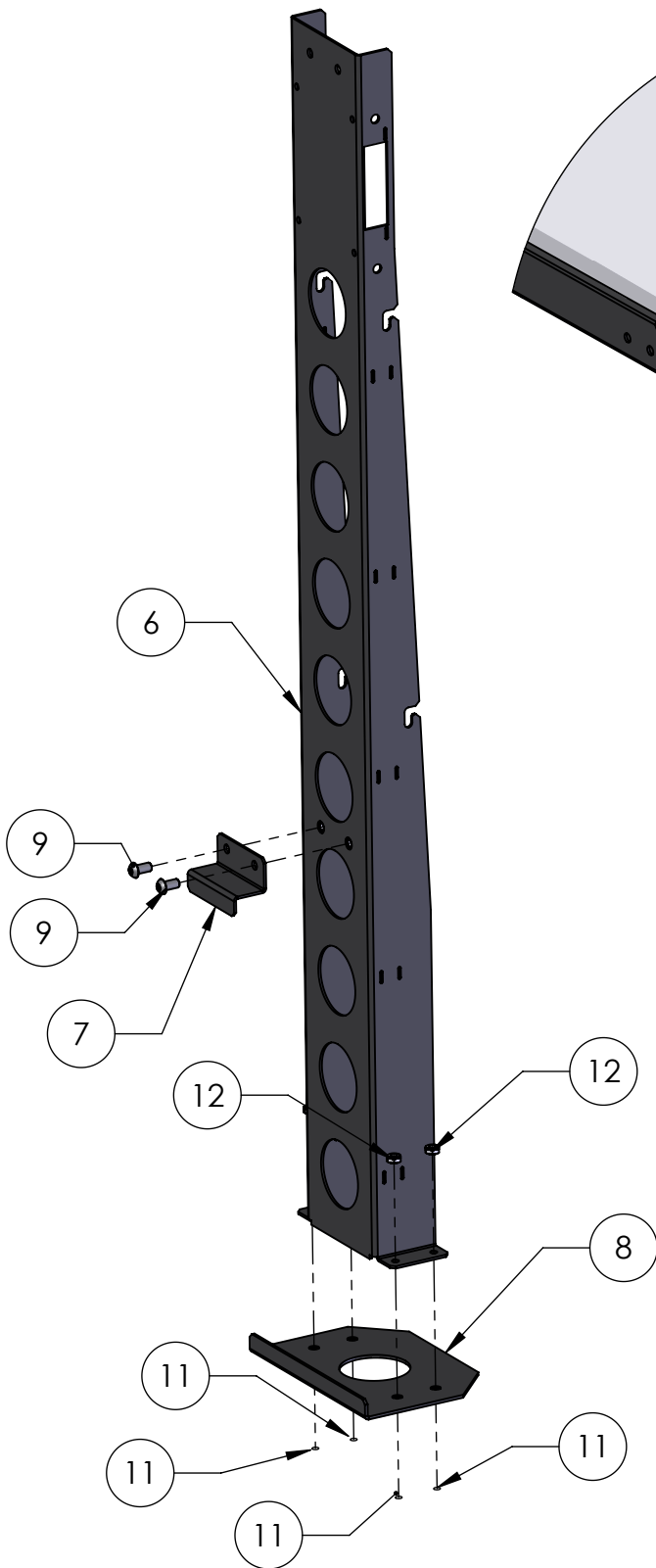


RUBBER FEET  
FIT BETWEEN  
FIELD TILE TABS



RUBBER FEET GO  
BETWEEN HALF TABS

POST CAN CLAMP ANYWHERE  
ON ANY VL-FIELD-PANEL-ASSY



1. ATTACH VL-FIELD-CONTROL-BASE TO VL-FIELD-CONTROL-STAND USING BOM ITEM #11 AND #12 (4X) TIGHTEN ALL SCREWS
2. POSITION POST ASSEMBLY ONTO VL-FIELD-PANEL-ASSY IN DESIRED LOCATION
3. BOLT (2X) THROUGH VL-CONTROL-CLAMP INTO PRE-INSTALLED PEM NUTS USING BOM ITEM #9 TIGHTEN ALL SCREWS
4. REPEAT ASSEMBLY & ATTACHMENT FOR (2) DRIVER POSTS
5. POST PLACEMENT MAY DEPEND ON GAME RULES & FIELD LAYOUT.

#### VL-FIELD-DRIVERPOST-ASSY

BOM Item #20 - Qty: 2 per Field

Item	Part No.	Qty
6	VL-FIELD-CONTROL-STAND	1
7	VL-FIELD-CONTROL-CLAMP	1
8	VL-FIELD-CONTROL-BASE	1
9	SBS2520-0500SS	2
11	SFP1032-0500ZC-100	4
12	NNY1032-ZC	4
See Full VL-FIELD BOM for Details		