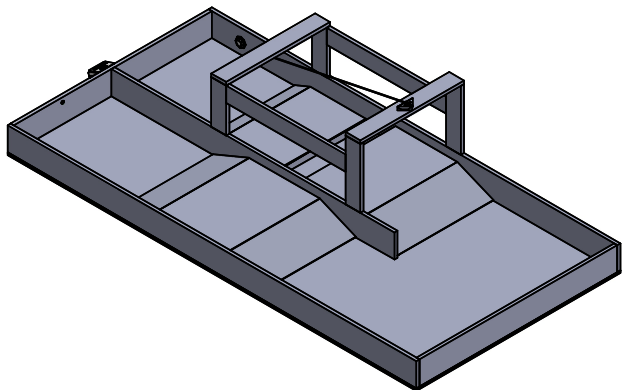
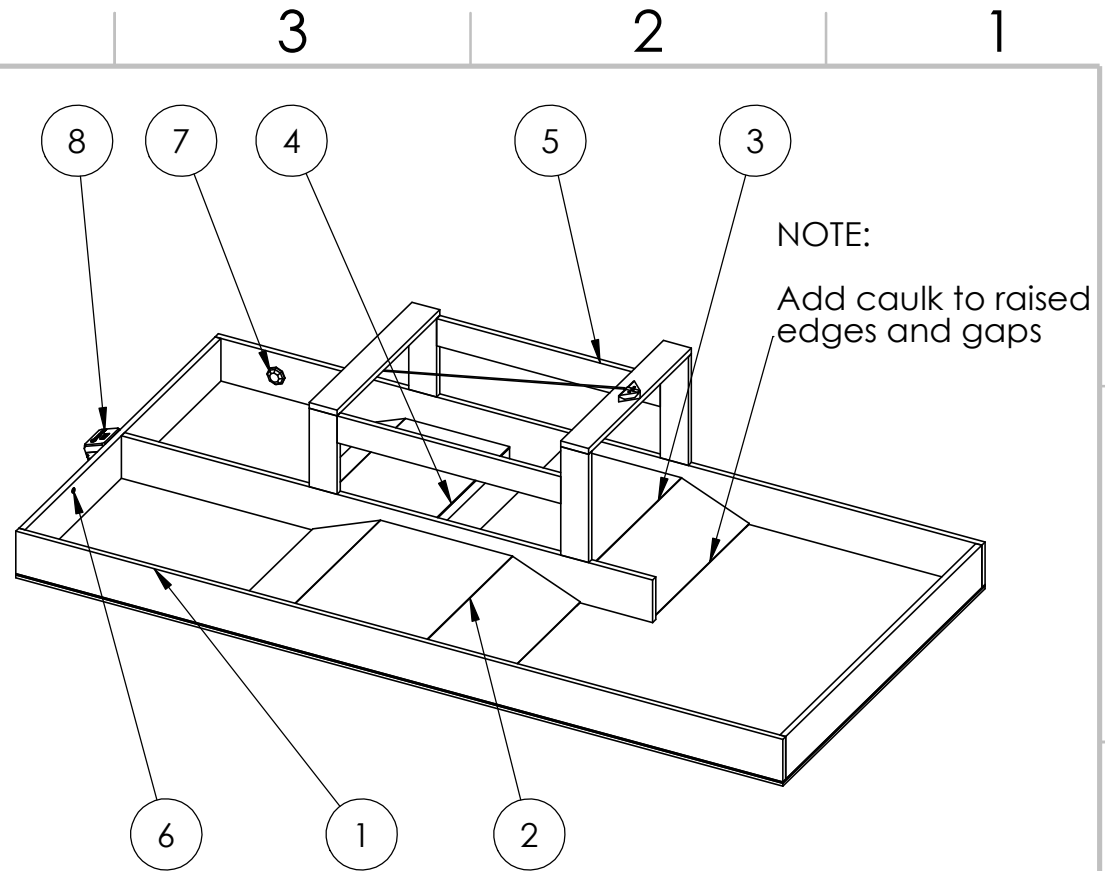
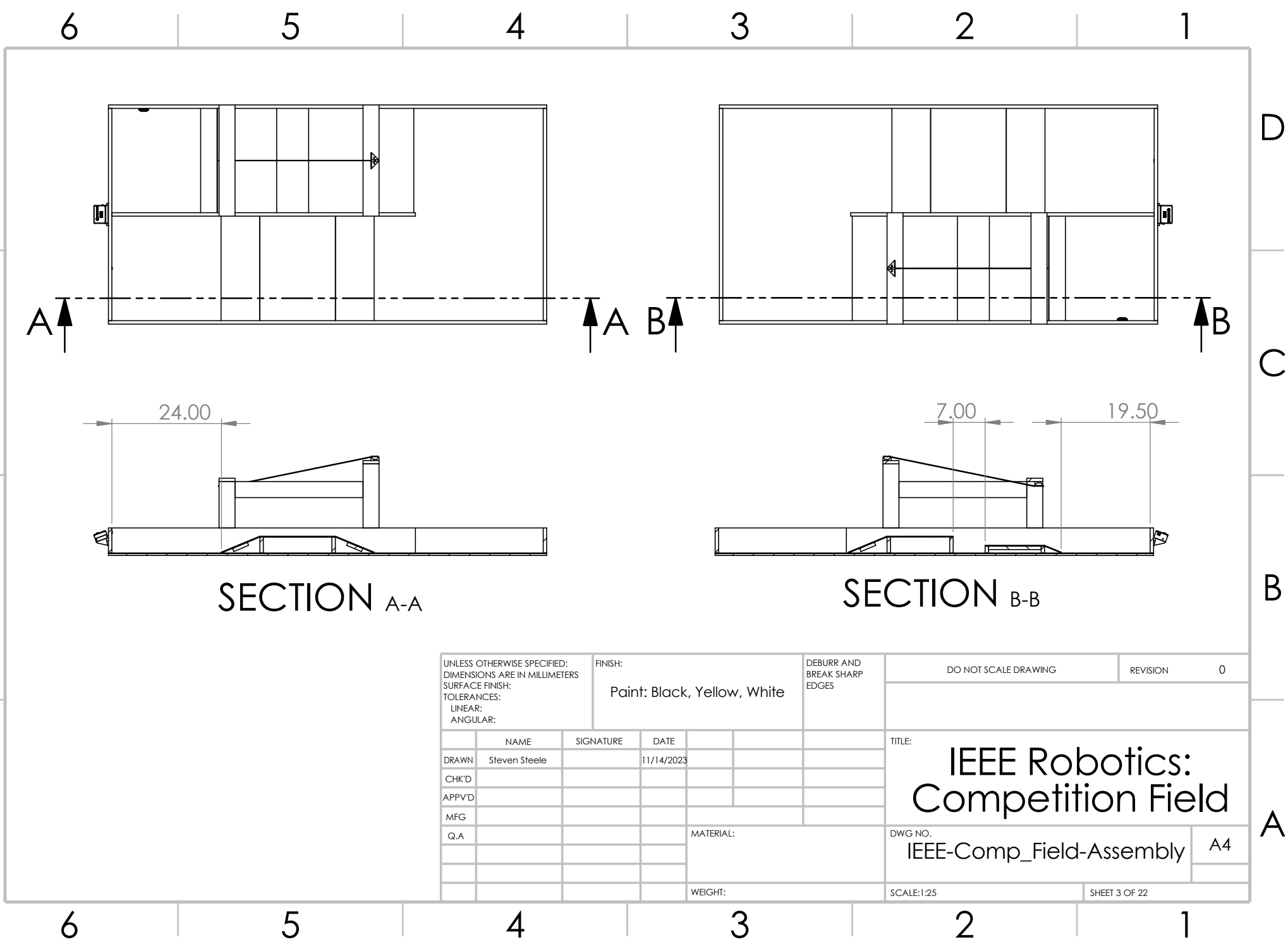


IEEE SOUTHEASTCON 2024
Robotic Competition Field

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Floor-and-Walls-Assembly	Field Area	1
2	Main-Ramp-Assembly	Main Ramp	1
3	Launch-Platform-Assembly	Ramp and platform at start of Zipline	1
4	Landing-Platform-Assembly	Ramp and platform at end of Zipline	1
5	ZipLine-Assembly	Zipline frame	1
6	Timer-Green_Light	Competition begin/run light	1
7	Timer-Button_V2	Competition end button	1
8	Timer_Assembly-V2	Competition control timer	1



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH: Paint: Black, Yellow, White	DEBURR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION 0
NAME	SIGNATURE	DATE		TITLE: IEEE Robotics: Competition Field	
DRAWN Steven Steele		11/14/2023		DWG NO. IEEE-Comp_Field-Assembly	
CHK'D				A4	
APPV'D				SCALE:1:20	
MFG			MATERIAL:	SHEET 2 OF 22	
Q.A			WEIGHT:		

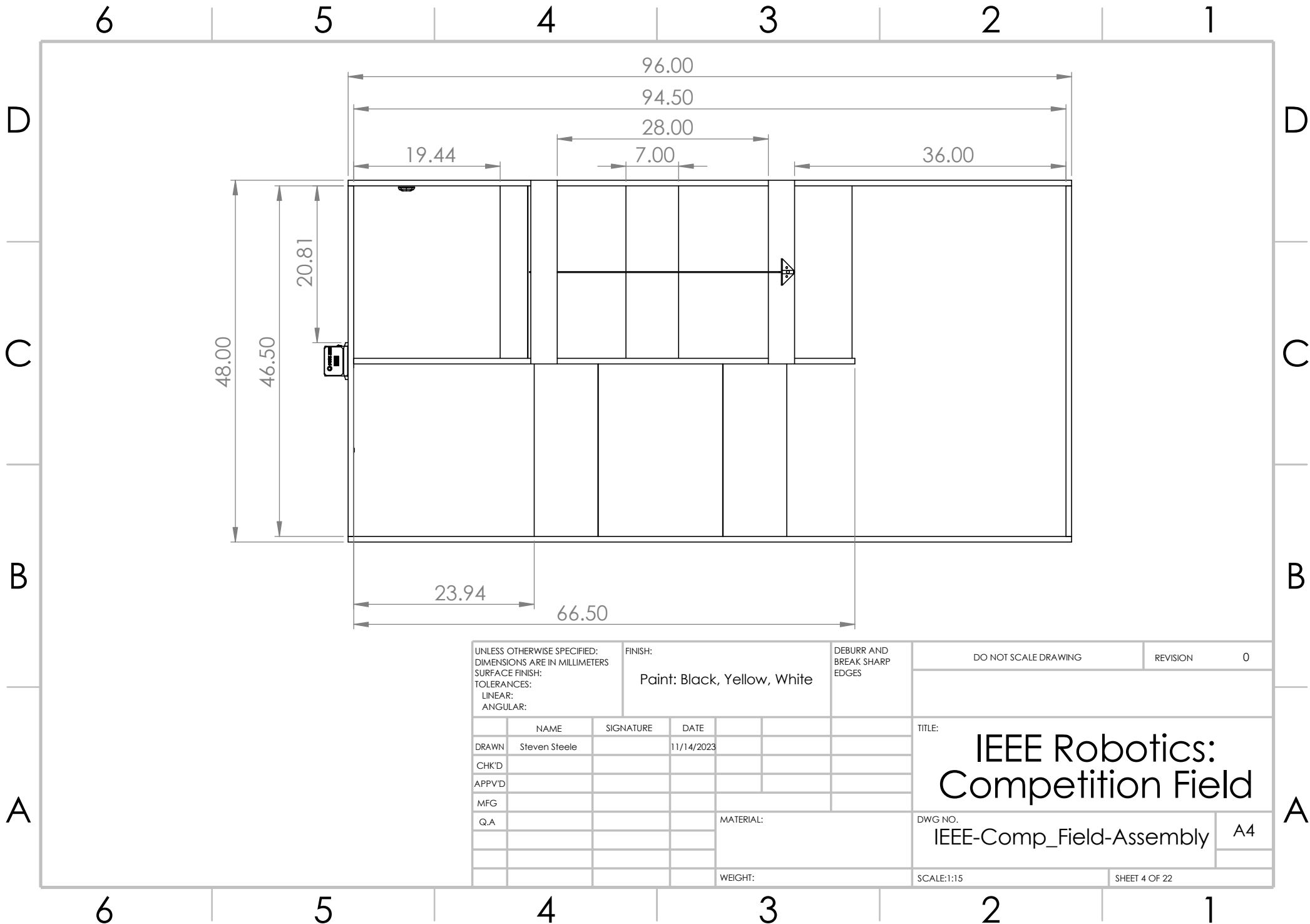


SECTION A-A

SECTION B-B

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:			FINISH: Paint: Black, Yellow, White		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0		
							TITLE: IEEE Robotics: Competition Field				
							DWG NO. IEEE-Comp_Field-Assembly		A4		
					MATERIAL:		SCALE:1:25		SHEET 3 OF 22		
					WEIGHT:						

	NAME	SIGNATURE	DATE
DRAWN	Steven Steele		11/14/2023
CHK'D			
APPV'D			
MFG			
Q.A			



UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN MILLIMETERS
 SURFACE FINISH:
 TOLERANCES:
 LINEAR:
 ANGULAR:

FINISH:
 Paint: Black, Yellow, White

DEBURR AND
 BREAK SHARP
 EDGES

DO NOT SCALE DRAWING

REVISION 0

	NAME	SIGNATURE	DATE			
DRAWN	Steven Steele		11/14/2023			
CHK'D						
APPV'D						
MFG						
Q.A					MATERIAL:	
					WEIGHT:	

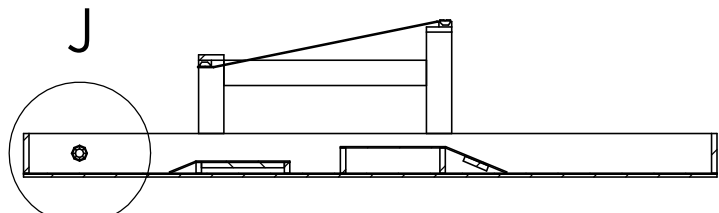
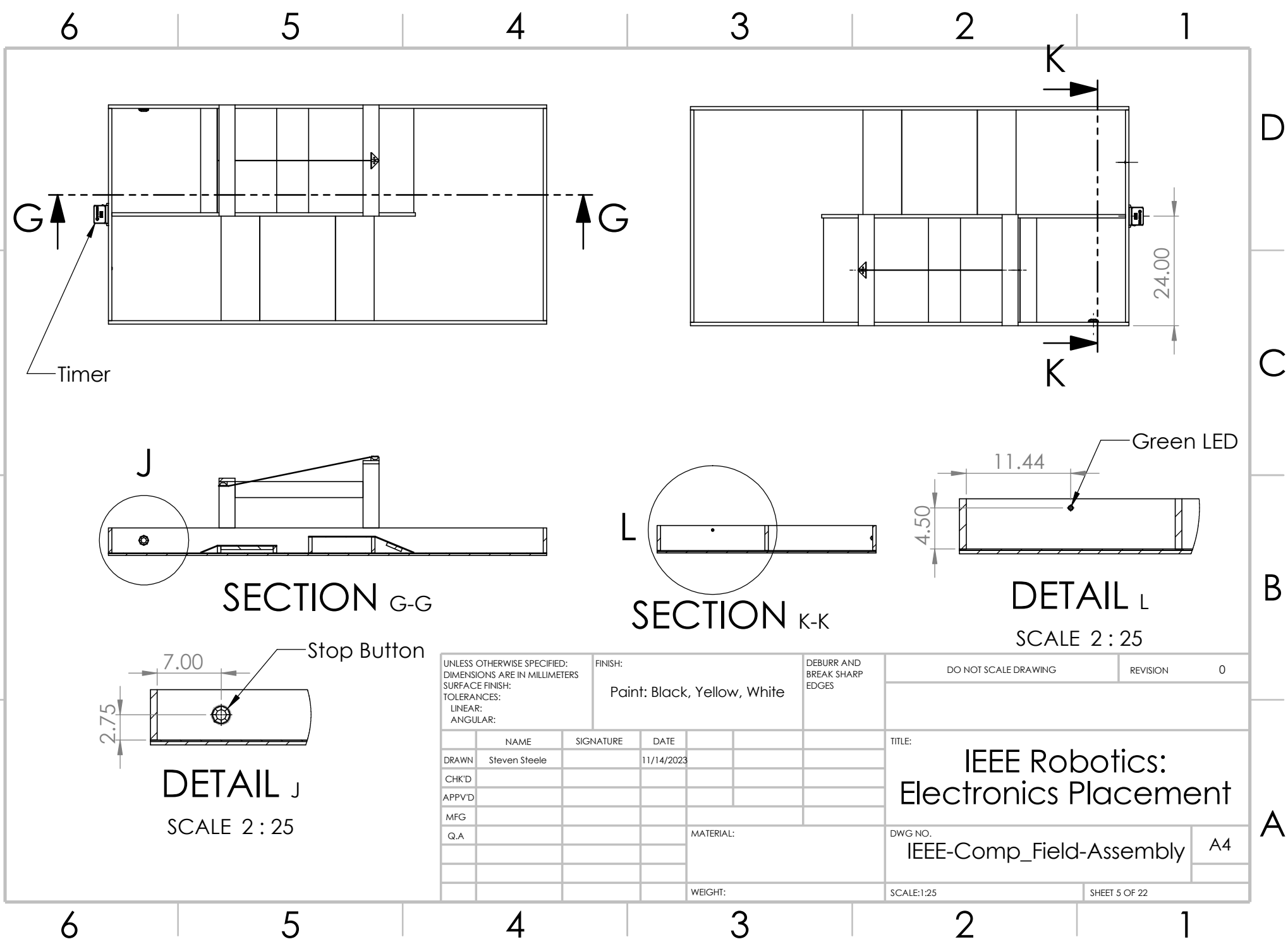
TITLE:
**IEEE Robotics:
 Competition Field**

DWG NO.
 IEEE-Comp_Field-Assembly

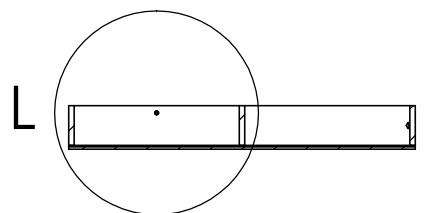
A4

SCALE:1:15

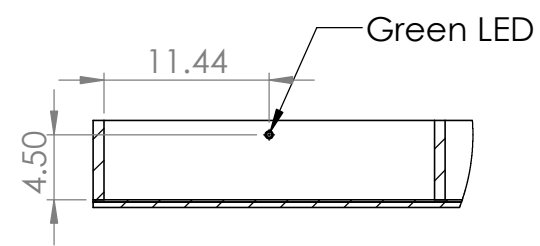
SHEET 4 OF 22



SECTION G-G

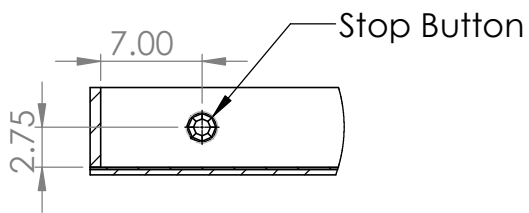


SECTION K-K



DETAIL L

SCALE 2 : 25



DETAIL J

SCALE 2 : 25

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
SURFACE FINISH:
TOLERANCES:
LINEAR:
ANGULAR:

FINISH:
Paint: Black, Yellow, White

DEBURR AND
BREAK SHARP
EDGES

	NAME	SIGNATURE	DATE		
DRAWN	Steven Steele		11/14/2023		
CHK'D					
APPV'D					
MFG					
Q.A				MATERIAL:	
				WEIGHT:	

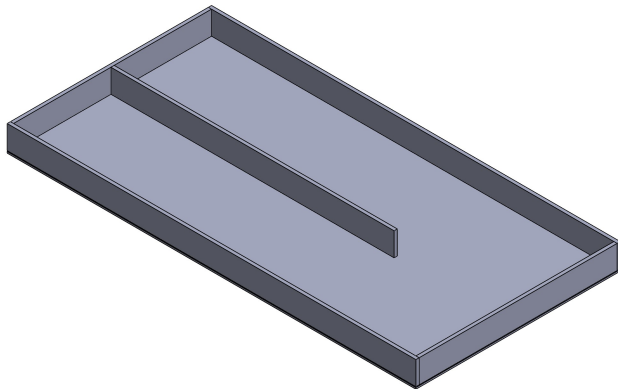
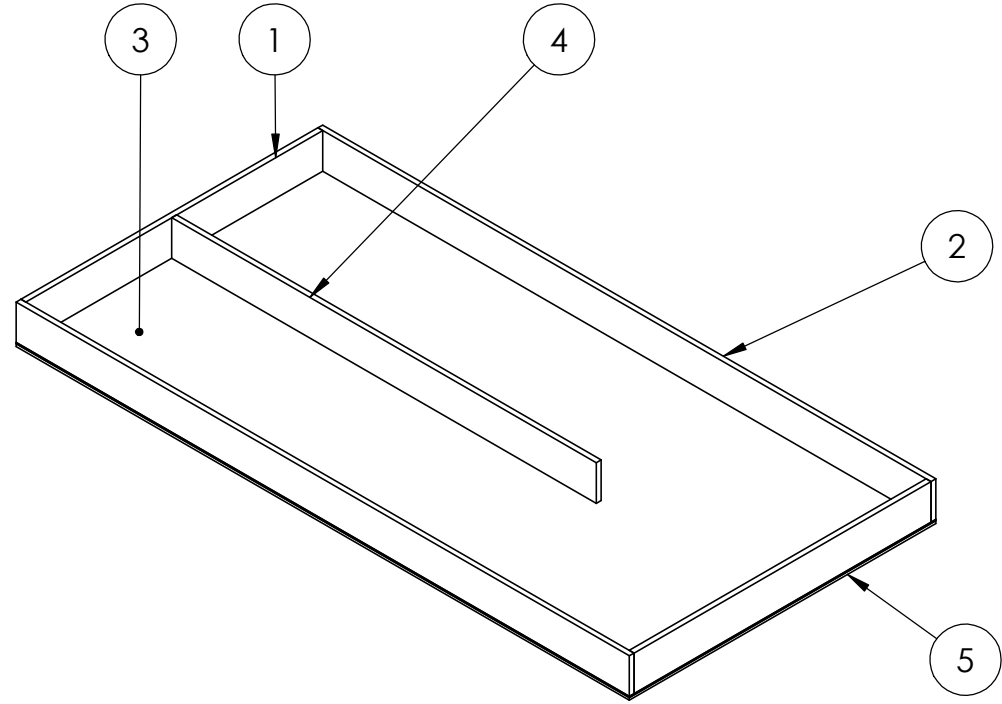
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TITLE:
**IEEE Robotics:
Electronics Placement**

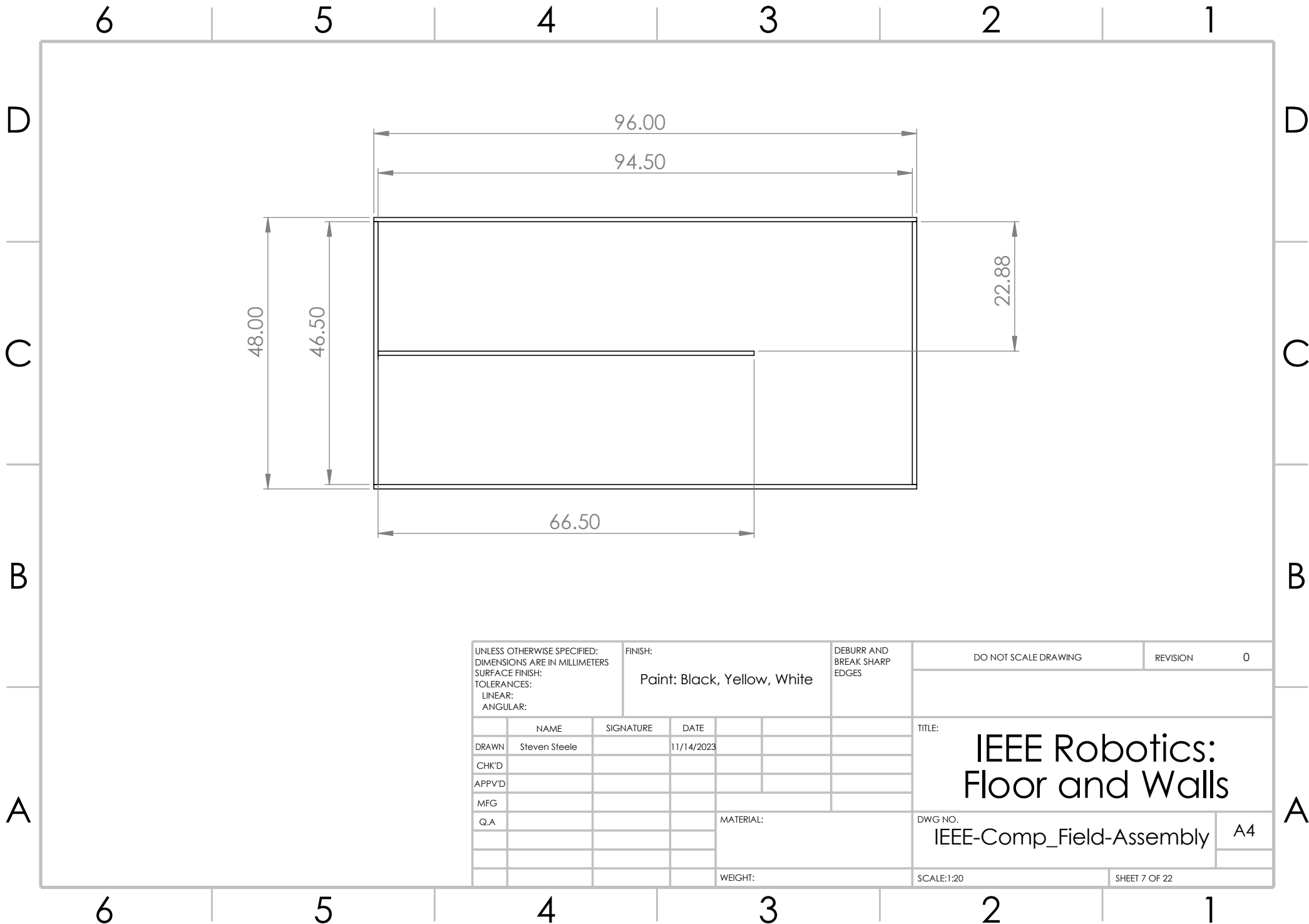
DWG NO.
IEEE-Comp_Field-Assembly A4

SCALE:1:25 SHEET 5 OF 22

ITEM NO.	PART NUMBER	QTY.
1	Board-5.5x0.75x46.5	2
2	Board-5.5x0.75x96	2
3	Field-Floor-96x48x5mm	1
4	Board-5.5x0.75x66.5	1
5	Feild-SubFloor-96x48x0.375	1

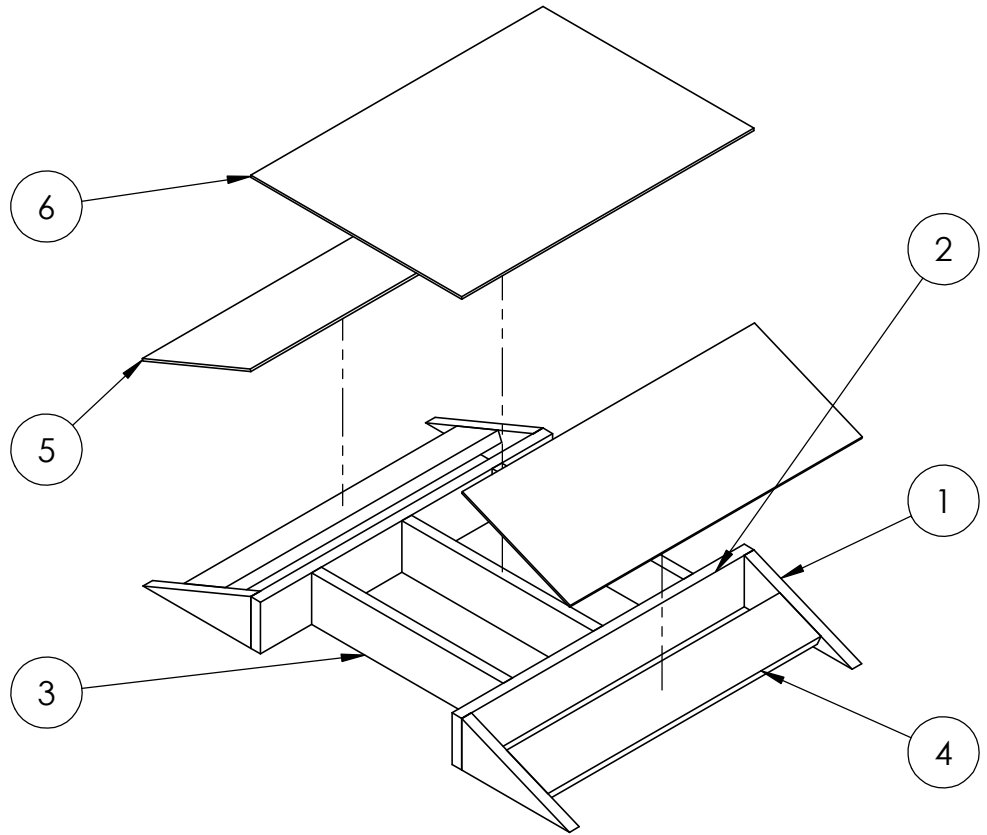
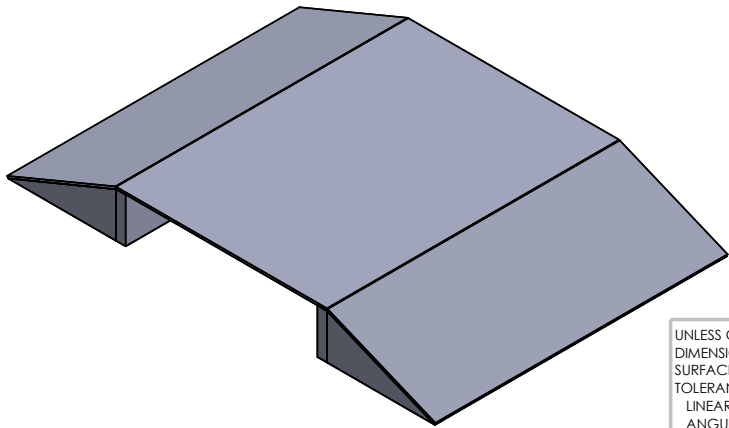


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH: Paint: Black, Yellow, White		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0	
DRAWN Steven Steele		SIGNATURE		DATE 11/14/2023		TITLE: IEEE Robotics: Floor and Walls			
CHK'D									
APPV'D									
MFG									
Q.A									
				MATERIAL:		DWG NO. IEEE-Comp_Field-Assembly		A4	
				WEIGHT:		SCALE:1:20		SHEET 6 OF 22	



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:			FINISH: Paint: Black, Yellow, White			DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0				
								TITLE: <h1 style="text-align: center;">IEEE Robotics: Floor and Walls</h1>						
DRAWN			NAME		SIGNATURE		DATE					DWG NO.		
CHK'D			Steven Steele				11/14/2023					IEEE-Comp_Field-Assembly		
APPV'D												A4		
MFG														
Q.A									MATERIAL:					
									WEIGHT:					
									SCALE:1:20					
									SHEET 7 OF 22					

ITEM NO.	PART NUMBER	QTY.
1	Ramp-Wedge-3.5x0.75x8.45	4
2	Board-3.5x0.75x22.875	2
3	Board-3.5x0.75x15	3
4	Board-3.5x0.75x21.375	2
5	Ramp-Wedge_Plate-9.15x22.875x5mm	2
6	Main-Ramp-Platform-16.5x22.875x5mm	1

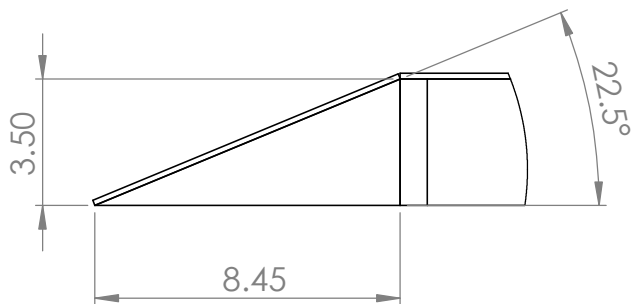
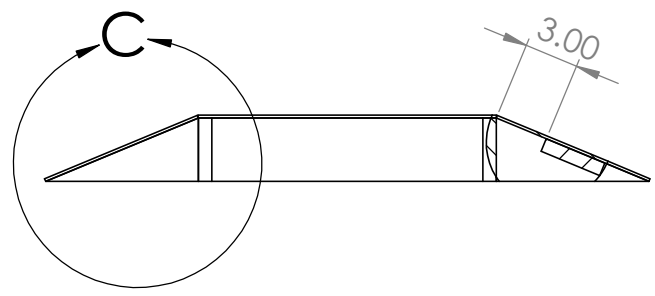


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:			FINISH: Paint: Black, Yellow, White		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0						
							TITLE: <h1 style="text-align: center;">IEEE Robotics: Main Ramp</h1>								
DRAWN Steven Steele			SIGNATURE		DATE 11/14/2023							DWG NO. IEEE-Comp_Field-Assembly		A4	
CHK'D															
APPV'D															
MFG															
Q.A					MATERIAL:										
							WEIGHT:		SCALE:1:10						
									SHEET 8 OF 22						

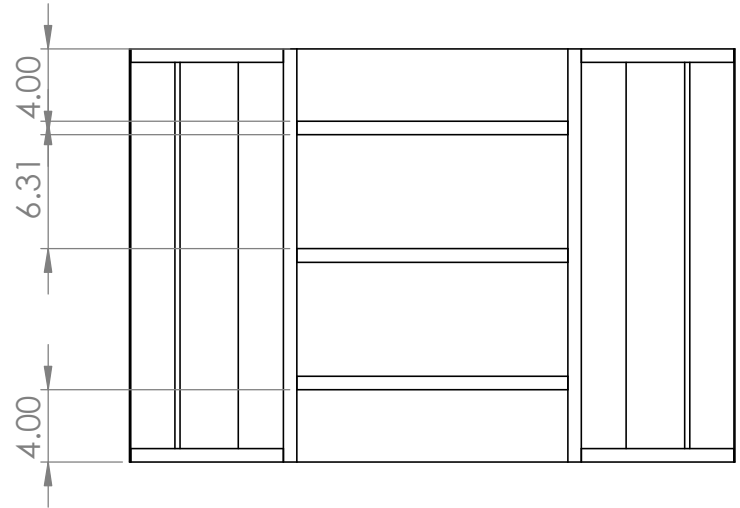
6 5 4 3 2 1

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DETAIL C
SCALE 1 : 5



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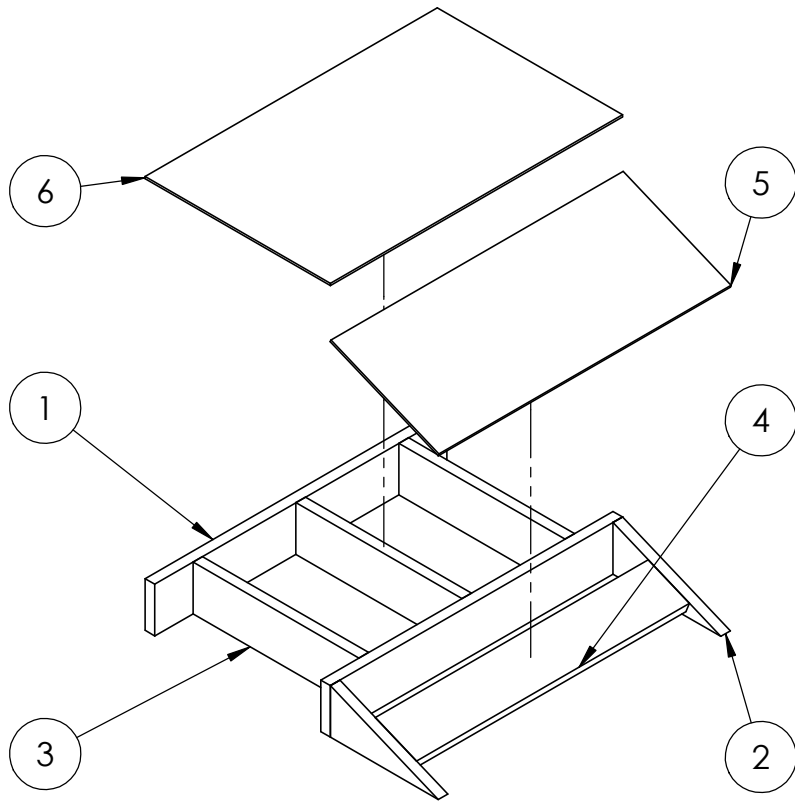
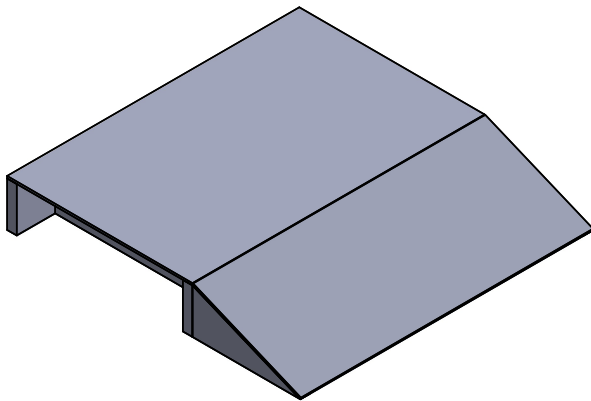
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:			FINISH: Paint: Black, Yellow, White		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0						
							TITLE: <h1 style="text-align: center;">IEEE Robotics: Main Ramp</h1>								
DRAWN			NAME		SIGNATURE							DATE			
CHK'D															
APPV'D															
MFG															
Q.A							MATERIAL:		DWG NO.						
									IEEE-Comp_Field-Assembly						
							WEIGHT:		SCALE:1:10						
									SHEET 9 OF 22						

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6 5 4 3 2 1

ITEM NO.	PART NUMBER	QTY.
1	Board-3.5x0.75x22.875	2
2	Ramp-Wedge-3.5x0.75x8.45	2
3	Board-3.5x0.75x13	3
4	Board-3.5x0.75x21.375	1
5	Ramp-Wedge_Plate-9.15x22.875x5mm	1
6	Launch-Platform-14.5x22.875x5mm	1

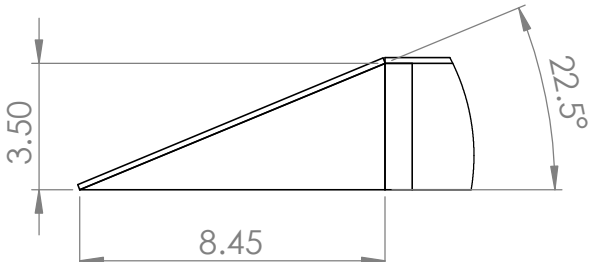


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH: Paint: Black, Yellow, White		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0	
DRAWN Steven Steele		SIGNATURE		DATE 11/14/2023		TITLE: <h1>IEEE Robotics: Launch Platform</h1>			
CHK'D									
APPV'D									
MFG									
Q.A									
				MATERIAL:		DWG NO. IEEE-Comp_Field-Assembly		A4	
				WEIGHT:		SCALE:1:10		SHEET 10 OF 22	

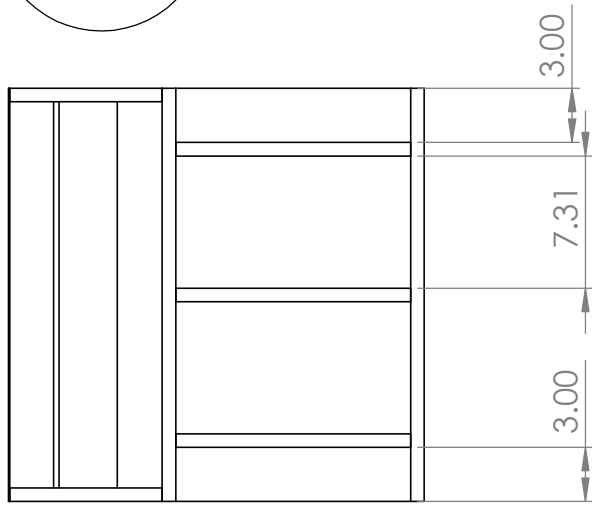
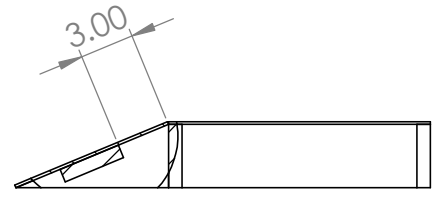
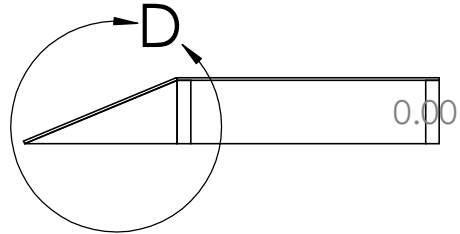
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DETAIL D
SCALE 1 : 5



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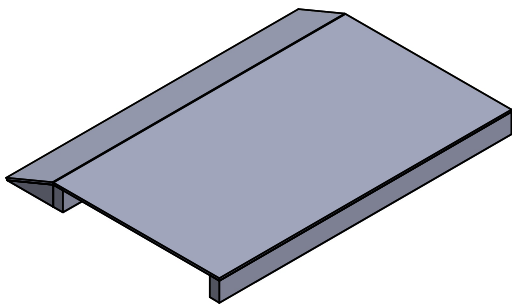
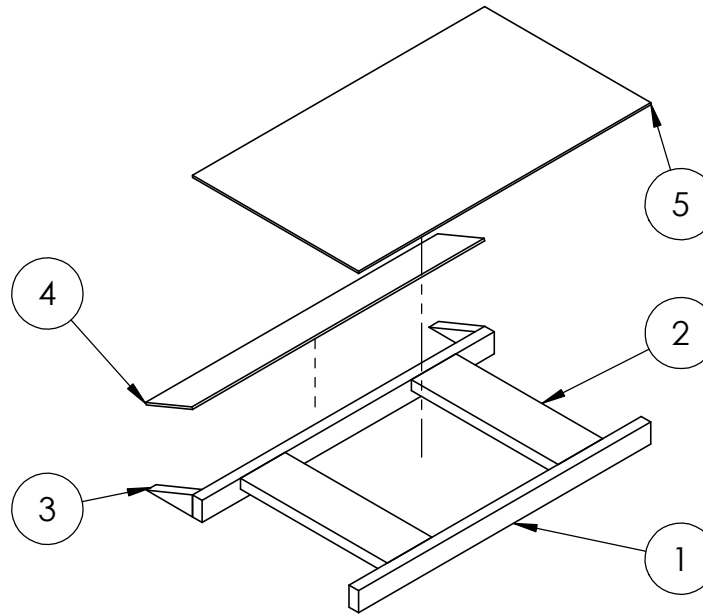
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UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:			FINISH: Paint: Black, Yellow, White		DEBURR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION 0	
DRAWN Steven Steele			SIGNATURE		DATE 11/14/2023	TITLE: IEEE Robotics: Launch Platform		
CHK'D								
APPV'D								
MFG								
Q.A								
					MATERIAL:	DWG NO. IEEE-Comp_Field-Assembly		A4
					WEIGHT:	SCALE:1:10		SHEET 11 OF 22

6 5 4 3 2 1

ITEM NO.	PART NUMBER	QTY.
1	Board-1.5x0.75x22.875	2
2	Board-3.5x0.75x11.5	2
3	Ramp-Wedge-1.5x3.62x0.75	2
4	Ramp-Wedge_Plate-2-3.92x22.875x5mm	1
5	Landing-Platform-22.88x13x5mm	1



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH: Paint: Black, Yellow, White	DEBURR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION 0
NAME	SIGNATURE	DATE	TITLE: IEEE Robotics: Landing Platform		
DRAWN Steven Steele		11/14/2023	DWG NO. IEEE-Comp_Field-Assembly A4		
CHK'D			SCALE:1:10		
APPV'D			SHEET 12 OF 22		
MFG					
Q.A					
			MATERIAL:		
			WEIGHT:		

6 5 4 3 2 1

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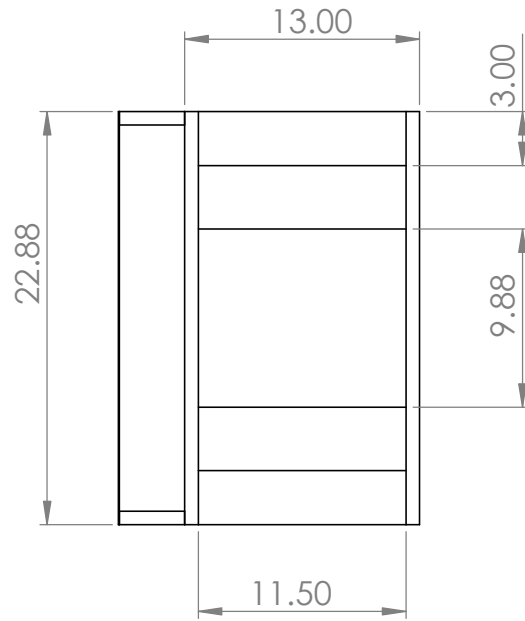
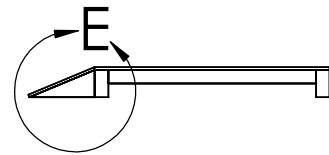
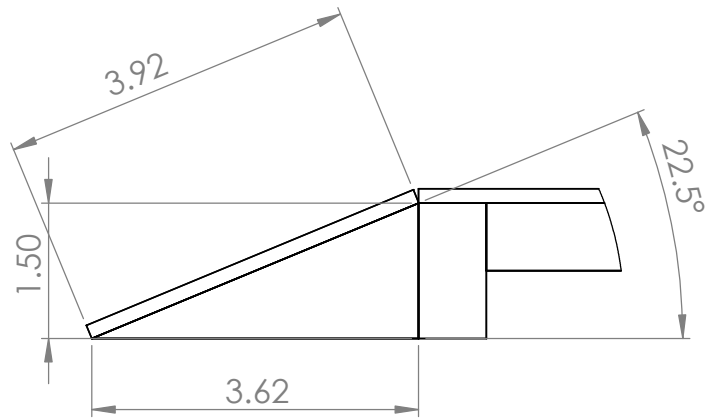
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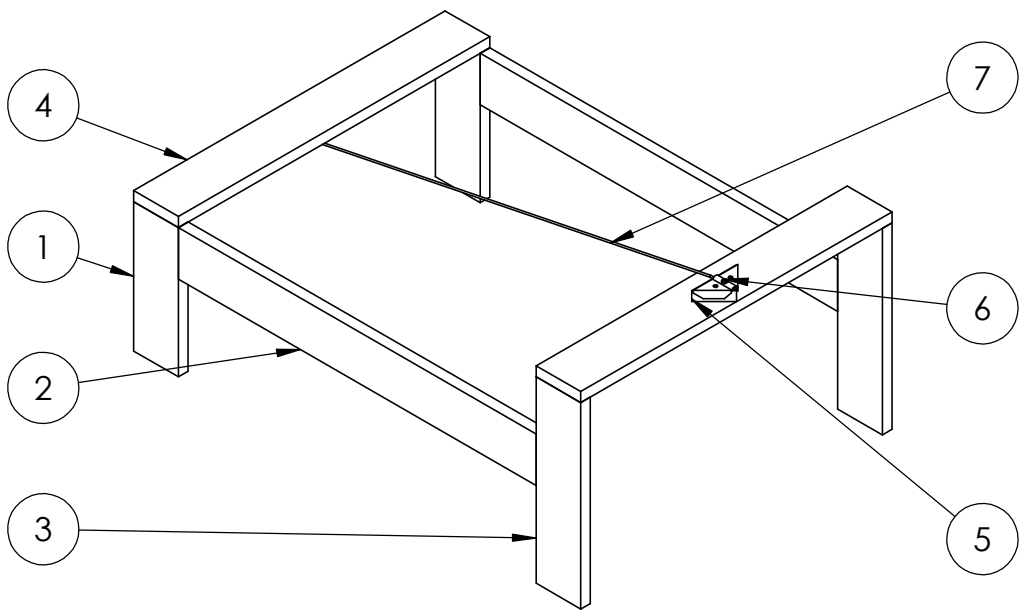
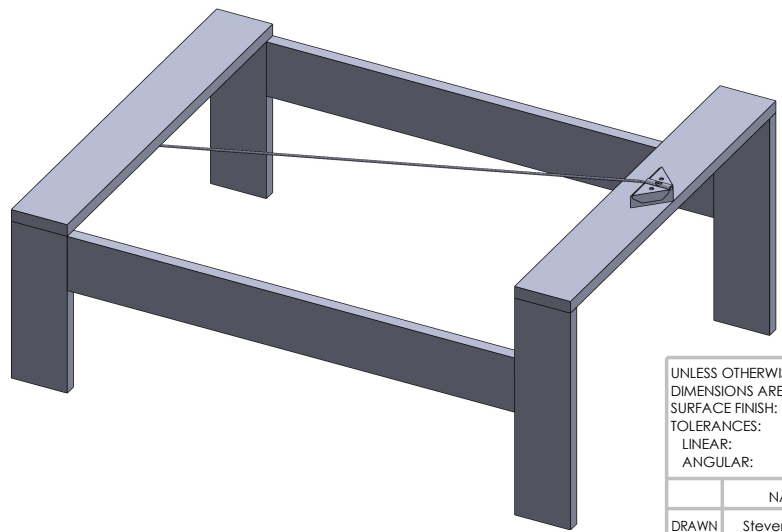


DETAIL E
SCALE 1 : 2

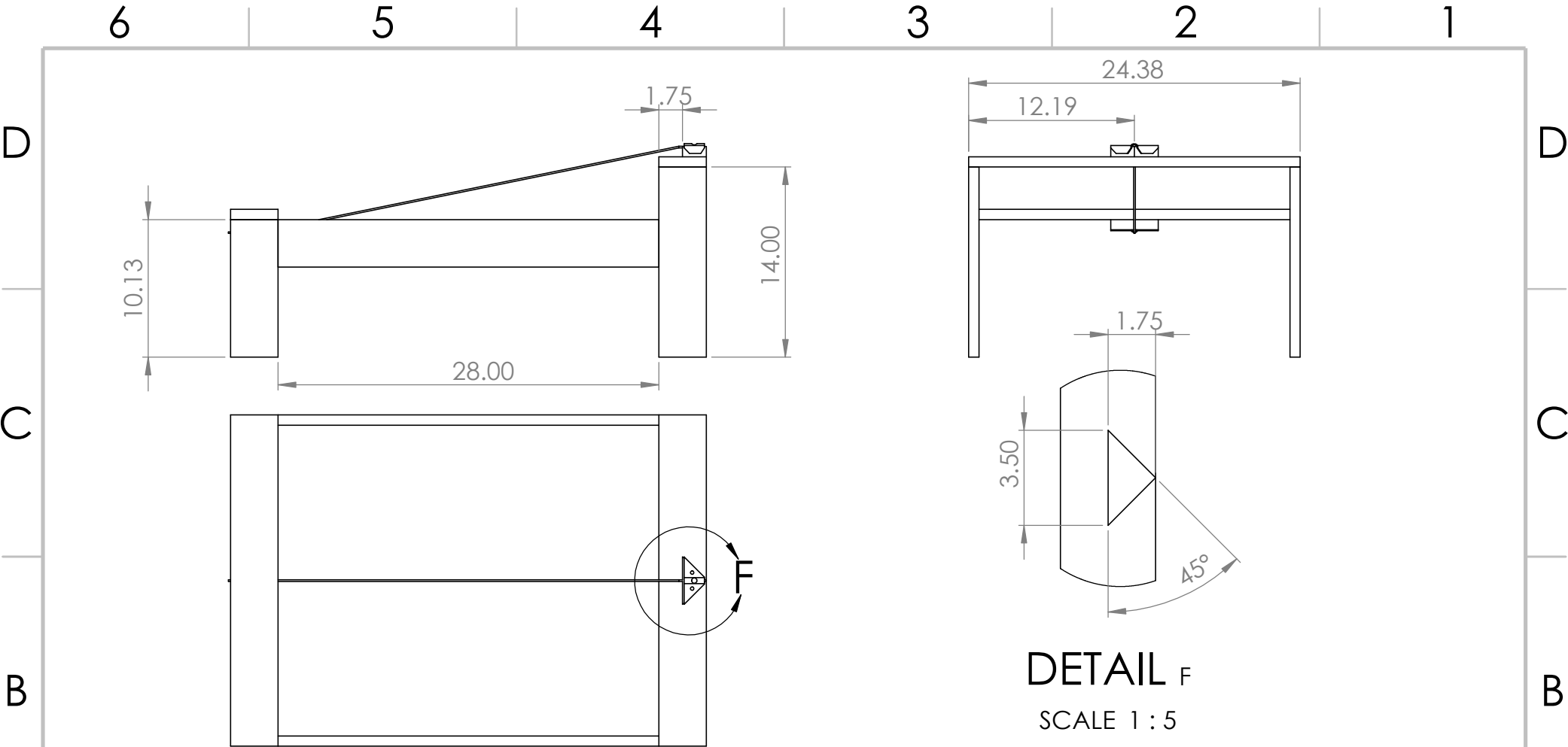
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							TITLE: <h1 style="text-align: center;">IEEE Robotics: Landing Platform</h1>								
DRAWN			NAME		SIGNATURE							DATE		DWG NO.	
CHK'D			Steven Steele									11/14/2023		IEEE-Comp_Field-Assembly	
APPV'D														A4	
MFG														SCALE:1:10	
Q.A									SHEET 13 OF 22						
									WEIGHT:						

6 5 4 3 2 1

ITEM NO.	PART NUMBER	QTY.
1	Board-3.5x0.75x10.125	2
2	Board-3.5x0.75x28	2
3	Board-3.5x0.75x14	2
4	Board-3.5x0.75x24.375	2
5	Cable_Bracket-Mount	2
6	Zipline-Corner-Bracket-1.75x3.5x0.75	2
7	Zipline-Cable	1



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH: Paint: Black, Yellow, White	DEBURR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION 0
NAME	SIGNATURE	DATE	TITLE: IEEE Robotics: Zipline		
DRAWN Steven Steele		11/14/2023	DWG NO. IEEE-Comp_Field-Assembly A4		
CHK'D			SCALE:1:10		
APPV'D			SHEET 14 OF 22		
MFG					
Q.A					
MATERIAL:					
WEIGHT:					



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH: Paint: Black, Yellow, White		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0					
								<p>TITLE:</p> <h1>IEEE Robotics: Zipline</h1>							
DRAWN		NAME		SIGNATURE		DATE						DWG NO.		A4	
CHK'D												IEEE-Comp_Field-Assembly			
APPV'D															
MFG															
Q.A															
						MATERIAL:		SCALE:1:10		SHEET 15 OF 22					
						WEIGHT:									

ITEM NO.	PART NUMBER	QTY.
1	Board-5.5x0.75x46.5	2
2	Board-5.5x0.75x96	2
3	Field-Floor-96x48x5mm	1
4	Board-5.5x0.75x66.5	1
5	Feild-SubFloor-96x48x0.375	1
6	Ramp-Wedge-3.5x0.75x8.45	6
7	Board-3.5x0.75x22.875	4
8	Board-3.5x0.75x15	3
9	Board-3.5x0.75x21.375	3
10	Ramp-Wedge_Plate-9.15x22.875x5mm	3
11	Main-Ramp-Platform-16.5x22.875x5mm	1
12	Board-3.5x0.75x13	3
13	Launch-Platform-14.5x22.875x5mm	1
14	Board-1.5x0.75x22.875	2
15	Board-3.5x0.75x11.5	2
16	Ramp-Wedge-1.5x3.62x0.75	2
17	Ramp-Wedge_Plate-2-3.92x22.875x5mm	1
18	Landing-Platform-22.88x13x5mm	1
19	Board-3.5x0.75x10.125	2
20	Board-3.5x0.75x28	2
21	Board-3.5x0.75x14	2
22	Board-3.5x0.75x24.375	2

ITEM NO.	PART NUMBER	QTY.
23	Cable_Bracket-Mount	2
24	Zipline-Corner-Bracket-1.75x3.5x0.75	2
25	Zipline-Cable	1
26	Timer-Green_Light	1
29	Timer	1

Material	Nominal Dimensions	Actual Dimensions
Whitewood Board	6 x 1	5.5 x 0.75
Whitewood Board	4 x 1	3.5 x 0.75
Whitewood Board	2 x 1	1.5 x 0.75

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH: N/A		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0	
DRAWN Steven Steele		SIGNATURE		DATE 11/14/2023		TITLE: IEEE Robotics: Field Tables			
CHK'D									
APPV'D									
MFG									
Q.A									
				MATERIAL: XXXXXXX		DWG NO. IEEE-Comp_Field-Assembly		A4	
				WEIGHT:		SCALE:1:10		SHEET 16 OF 22	

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IEEE SOUTHEASTCON 2024
Robotic Competition Field - Timer

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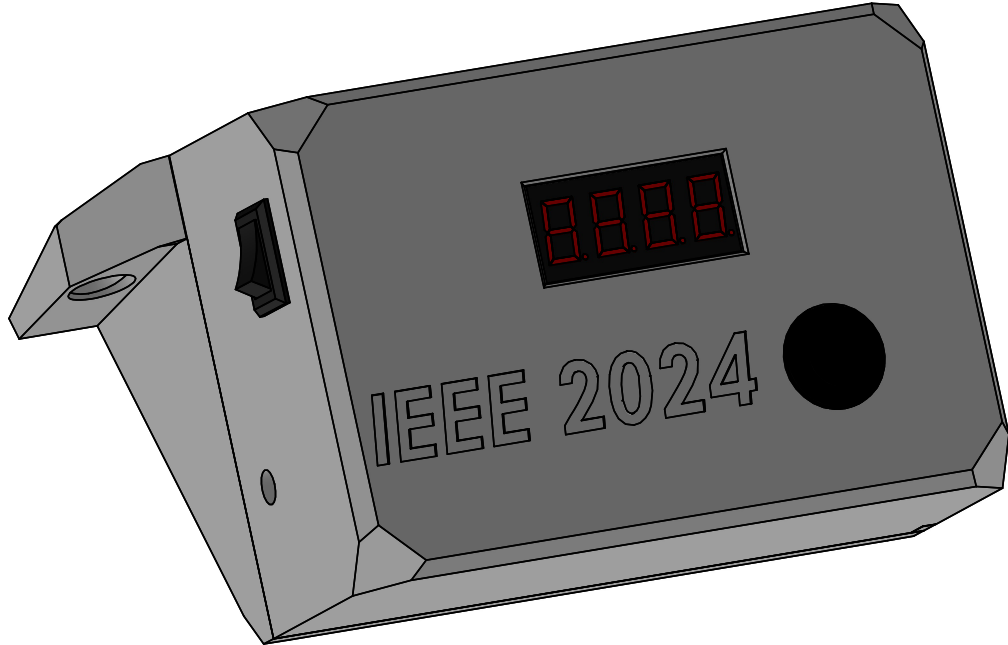
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UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:			FINISH: N/A		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0						
							TITLE: <h1 style="text-align: center;">IEEE Robotics: Timer Assembly</h1>								
DRAWN	NAME	SIGNATURE	DATE												
CHK'D															
APPV'D															
MFG															
Q.A					MATERIAL: PLA		DWG NO. IEEE-Comp_Field-Assembly		A4						
								SCALE:1:1		SHEET 18 OF 22					

6

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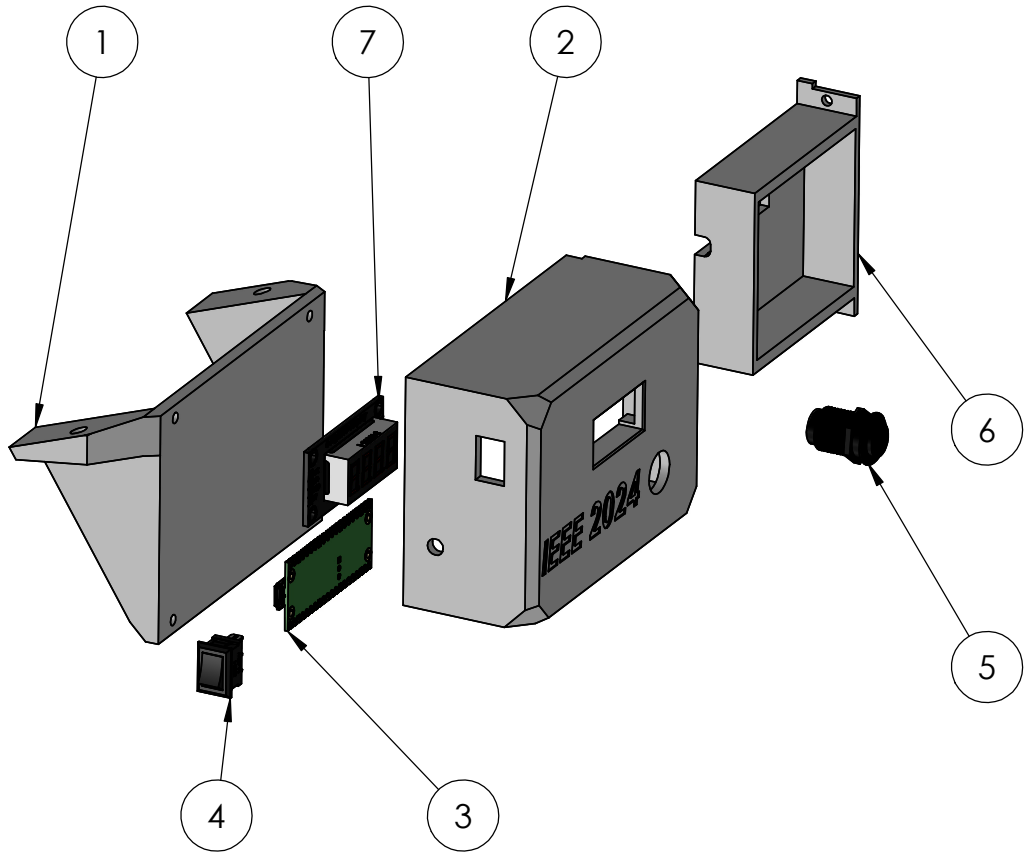
4

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2

1

ITEM NO.	PART NUMBER	QTY.
1	Timer_Case-Back-Angle-V2	1
2	Timer_Case-Front-V2	1
3	RaspBerryPi Pico W.step	1
4	Rocker Switch	1
5	Timer_Case-Start_Button	1
6	Timer_Case-Battery_Holder	1
7	TM1637 4 Digit 7-Segment Display	1



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:			FINISH: N/A		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0		
DRAWN Steven Steele			SIGNATURE		DATE 11/14/2023		TITLE: IEEE Robotics: Timer Assembly				
CHK'D							DWG NO. IEEE-Comp_Field-Assembly A4				
APPV'D							SCALE:1:2				
MFG							SHEET 19 OF 22				
Q.A					MATERIAL: PLA						
					WEIGHT:						

ITEM NO.	PART NUMBER	QTY.
1	Timer_Case-Back-Angle-V2	1
2	Timer_Case-Front-V2	1
3	RaspBerryPi Pico W.step	1
4	Rocker Switch	1
5	Timer_Case-Start_Button	1
6	Timer_Case-Battery_Holder	1
7	TM1637 4 Digit 7-Segment Display	1
8	M3 Self Tapping Screw - 6mm	6
9	M2.2 Self Tapping Screw - 4mm	4
10	M2 Self Tapping Screw - 4mm	4
11	Stop Button	1

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:			FINISH: N/A			DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0							
						IEEE Robotics: Timer Tables											
DRAWN		NAME		SIGNATURE								DATE		DWG NO.		A4	
CHK'D												11/14/2023		IEEE-Comp_Field-Assembly			
APPV'D																	
MFG																	
Q.A								MATERIAL: PLA		SCALE:1:2							
								WEIGHT:		SHEET 20 OF 22							

6

5

4

3

2

1



IEEE SOUTHEASTCON 2024
Robotic Competition Field - Game Pieces

6

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D

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C

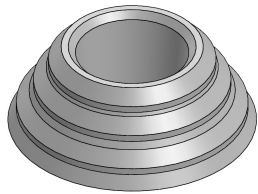
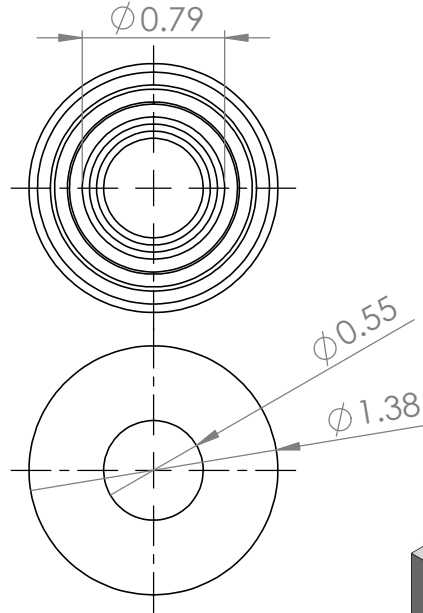
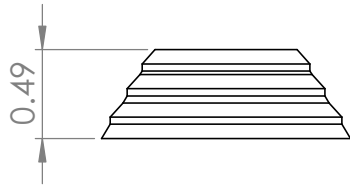
C

B

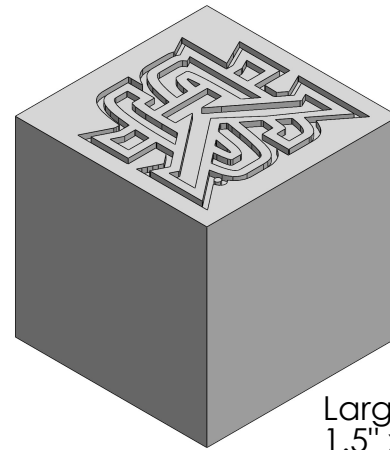
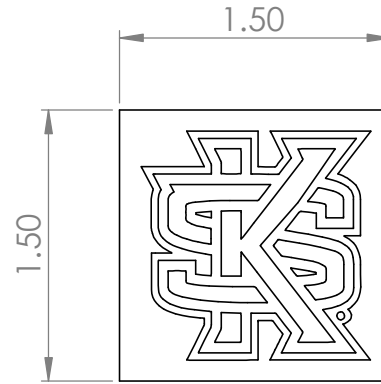
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A

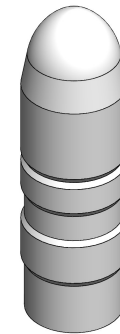
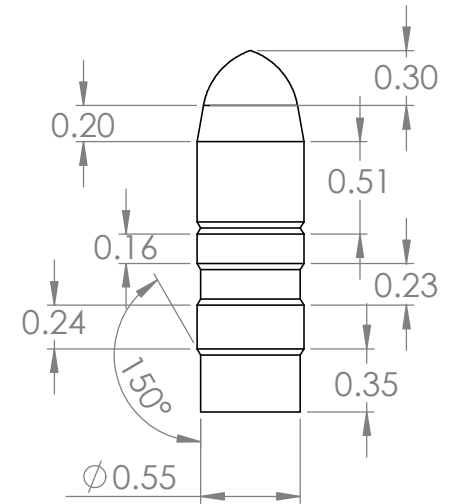
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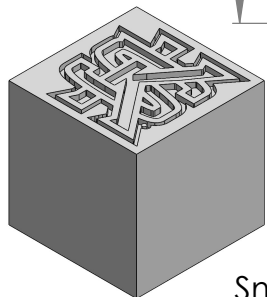
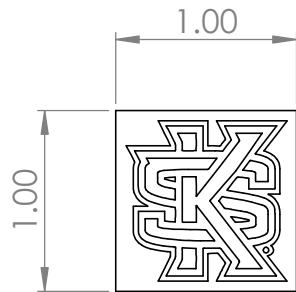
Thruster Nozzle



Large Cargo Cube
1.5" x 1.5" x 1.5"



Fuel Tank



Small Cargo Cube
1" x 1" x 1"

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH: N/A		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION 0	
DRAWN Steven Steele		SIGNATURE		DATE 11/14/2023		TITLE: IEEE Robotics: Game Pieces			
CHK'D						DWG NO. IEEE-Comp_Field-Assembly		A4	
APPV'D						SCALE:1:1		SHEET 22 OF 22	
MFG						MATERIAL: PLA			
Q.A						WEIGHT:			