ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	LED Light Strip		2
2	3 inch - 1/2" PVC	0.5" ID SCH 40	22
3	4 inch - 1/2" PVC	0.5" ID SCH 40	6
4	4.25 inch - 1/2" PVC	0.5" ID SCH 40	4
5	4.5 inch - 1/2" PVC	0.5" ID SCH 40	2
6	6.5 inch - 1/2" PVC	0.5" ID SCH 40	10
7	10 inch - 1/2" PVC	0.5" ID SCH 40	4
8	15 inch - 1/2" PVC	0.5" ID SCH 40	2
9	1.75 inch pvc	1" ID SCH 40	2
10	2.25 inch pvc	1" ID SCH 40	2
11	3.25 inch pvc	1" ID SCH 40	2
12	6.000 inch PVC	1" ID SCH 40	4
13	6.125 inch pvc	1" ID SCH 40	2
14	6.375 inch pvc	1" ID SCH 40	2
15	7.75 inch pvc	1" ID SCH 40	2
16	10.75 inch pvc	1" ID SCH 40	2
17	12.500 inch PVC	1" ID SCH 40	2
18	15 inch pvc	1" ID SCH 40	10
19	16.25 inch pvc	1" ID SCH 40	2
20	18.25 inch pvc	1" ID SCH 40	2
21	22.375 inch pvc	1" ID SCH 40	4
22	32.375 inch pvc	1" ID SCH 40	2
23	33.125 inch pvc	1" ID SCH 40	2
24	PVC Coupler	1.5" ID SCH 40	6
25	16 inch Clear Tube	1.65" Diam. Fluorescent Light Tube	2
26	6" Board	2 x 6 Lumber	4
27	6" Board - Notched	2 x 6 Lumber	1
28	1.000 inch - 3" ID PVC	3" ID SCH 40 Cellular Core PVC-DWV Non-Pressure	2
29	6.500 inch - 3" ID PVC	3" ID SCH 40 Cellular Core PVC-DWV Non-Pressure	3
30	Black duct tape	3M Black Duct Tape - Model #3920-BK	10
31	Gray duct tape	3M Gray Duct Tape - Model #2960	8
32	Black Servo Horn Screw	Black screw that comes in servo horn bag	2
33	SCREW-832-0500	Botball Kit - Medium Screw	4
34	Servo	Botball Servo	2
35	Light Switch Box	CANTEX 1-Gang Gray PVC Shallow Electrical Box	2
36	0.5" Elbow Connector	Connector SCH 40	28
37	1" Elbow Connector	Connector SCH 40	6
38	1" T Connector	Connector SCH 40	12
39	1" x 0.5" T Connector	Connector SCH 40	18
40	1/2" T Connector	Connector SCH 40	6
41	1.25" x 1" T Connector	Connector SCH 40	2
42	3" PVC Coupler	Connector SCH 40 Diam: 4", Height: 3.2"	2
43	6" x 5.625" Sheet	Corrugated Plastic	5
44	6" x 9" Sheet	Corrugated Plastic	8
45	18"x6" Sheet	Corrugated Plastic	6
46	18"x6" Sheet with Hole	Corrugated Plastic	4
47	18"x6" w/ Hole - Notched	Corrugated Plastic	2
48	Light Switch Cover	Eaton 1-Gang Standard Wall Plate - Ivory	2
49	Light Switch	Eaton 15-Amp Single-Pole Toggle - Ivory	2
50	Flat Head 0.5 in	Flat Head 0.5 in - Comes with cover	4
51	Light Switch Screw	Flat Head Screw M5-020 - Comes with switch	4
52	Large Narrow Servo Horn	Large narrow servo horn with one end cut off	2
53	NUT-832-KEPS	Standard Botball black KEPS nut	4
54	Servo Bracket	Standard size servo bracket	2
55	FRP Divider 48" long	White - cut from one 8' long part	2
56	FRP 4' x 4'	White - cut from two 4' x 8' sheets	4
57	Particle Board 4' x 4' x 3/8" thick	or similar - can be cut from two 4' x 8' sheets	4

B

55

56

57

B

A
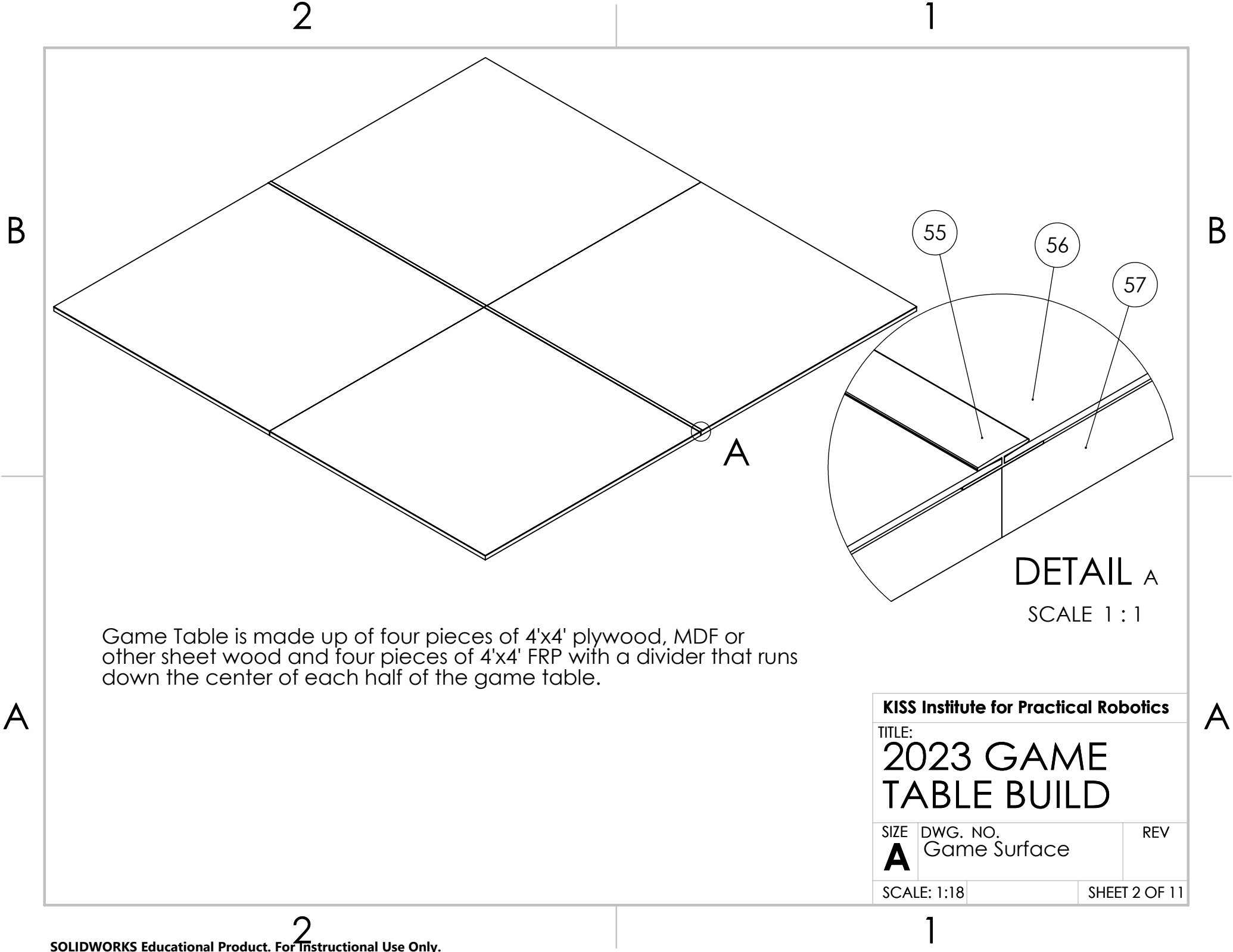
DETAIL A

SCALE 1 : 1

Game Table is made up of four pieces of 4'x4' plywood, MDF or other sheet wood and four pieces of 4'x4' FRP with a divider that runs down the center of each half of the game table.
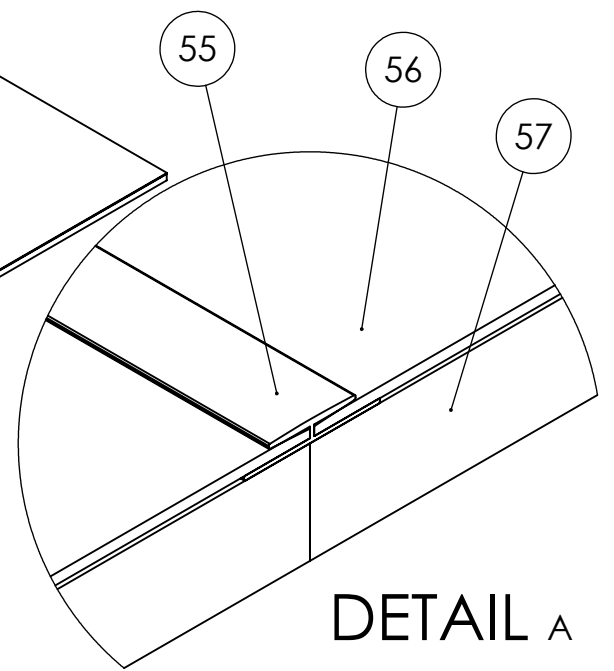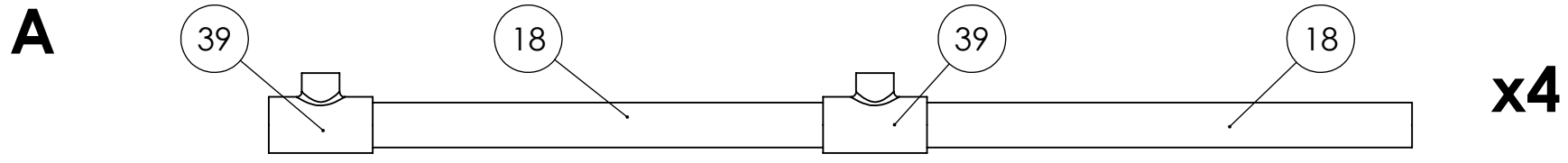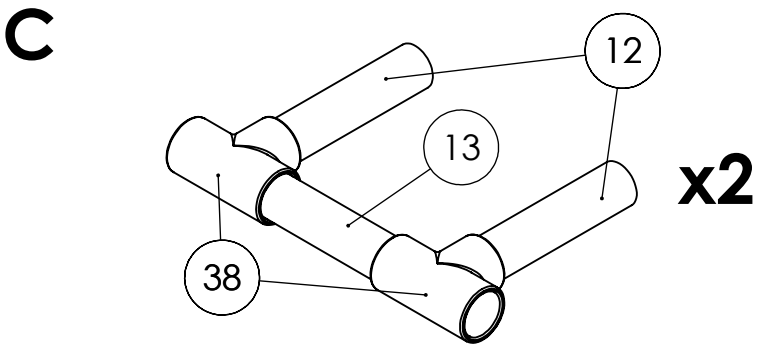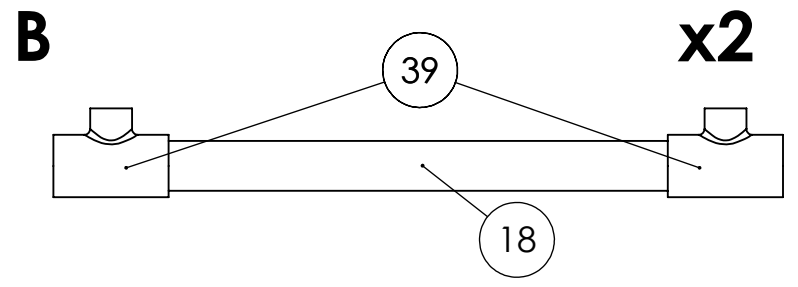
A

A

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TITLE:

2023 GAME TABLE BUILD

SIZE **A**	DWG. NO. Game Surface		REV
SCALE: 1:18			SHEET 2 OF 11

A

(39)   (18)   (39)   (18)   **x4**

B

B   **x2**

(39)

(18)

Assembly 1

C

(12)

(13)

(38)   **x2**

C

A

B

A

B

A

A

C

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TITLE:
2023 GAME TABLE BUILD

SIZE	DWG. NO.		REV
A	Assembly 1		

SCALE: 1:5	SHEET 3 OF 11

A

(21) (38) (20)

B

(19)
(37)

C

(38) (22)

D

(39) (23) (39)

E

(16) (37)
(15)

F

(8)
(39)
(14)

G

(21)
(38)

Assembly 2

(G)
(F)
(E)
(D)
(A)
(B)
(C)

x2
(for full table)
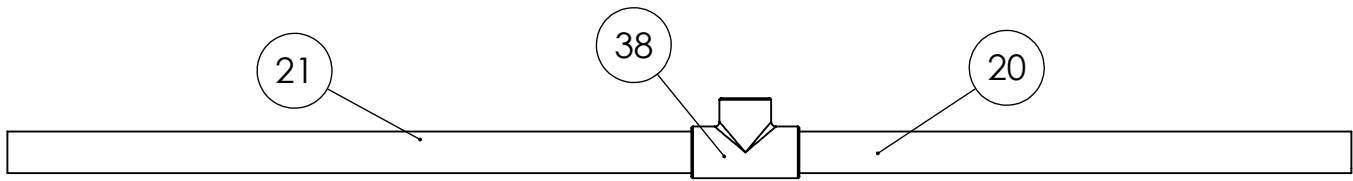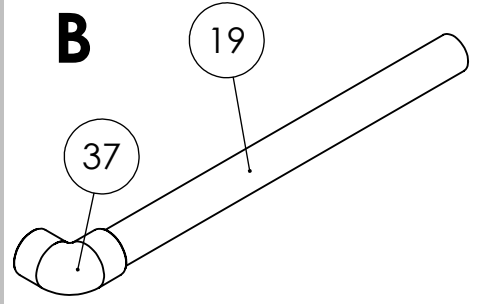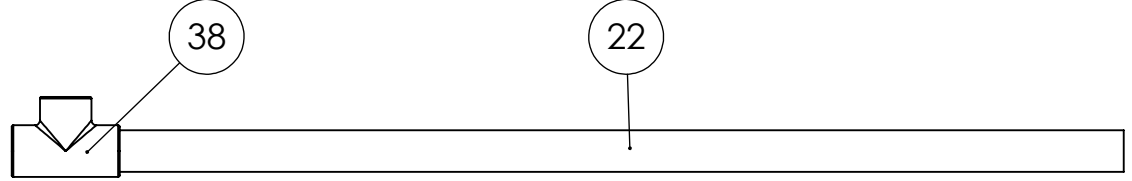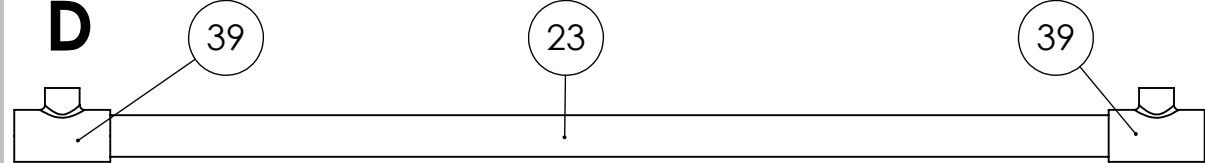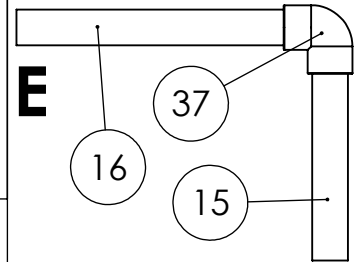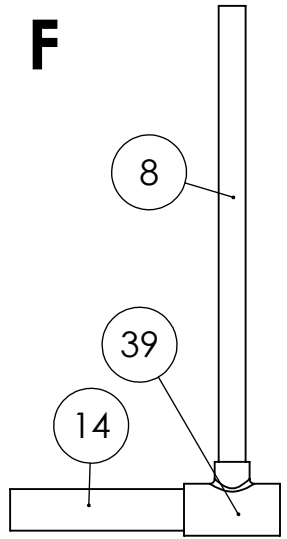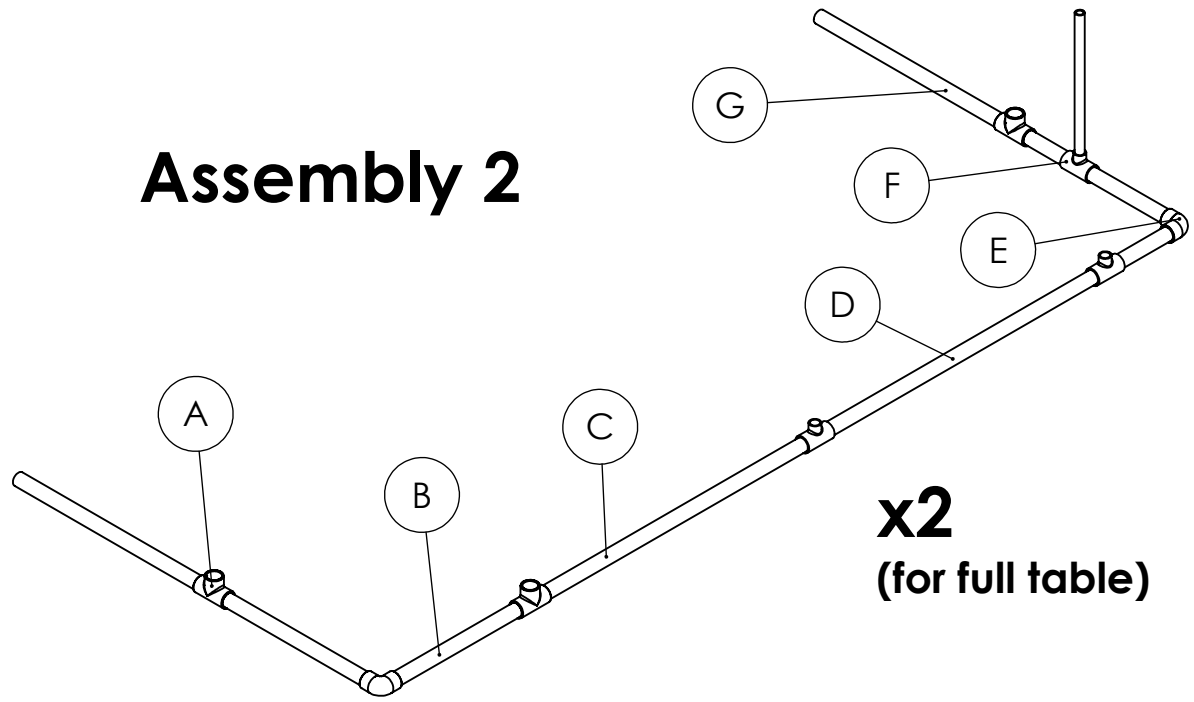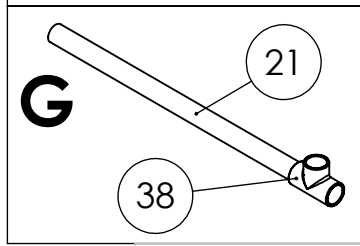
KISS Institute for Practical Robotics

TITLE:
2023 GAME TABLE BUILD

SIZE	DWG. NO.	REV
A	Assembly 2	

SCALE: 1:6 SHEET 4 OF 11
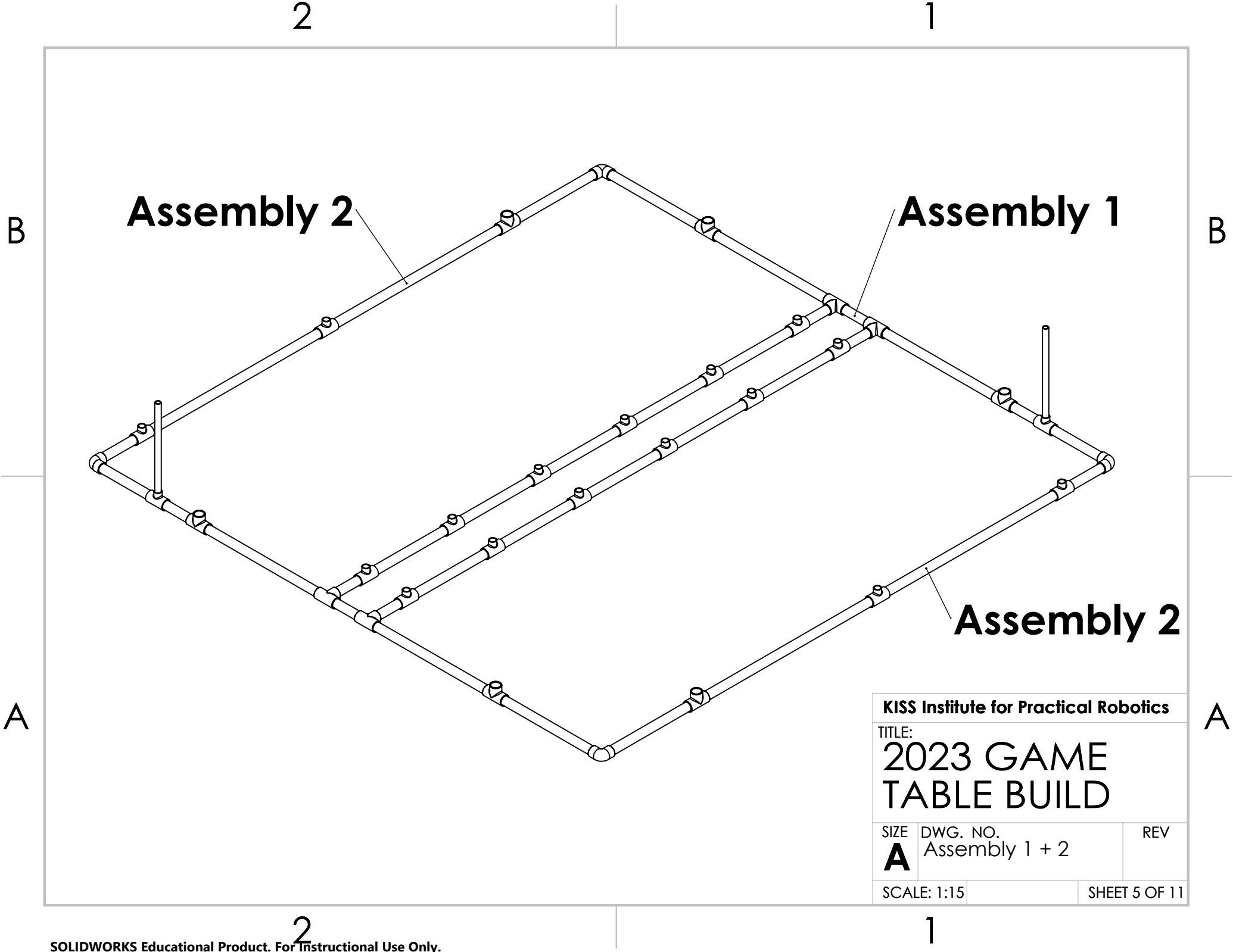
Assembly 2

Assembly 1

Assembly 2

KISS Institute for Practical Robotics

TITLE:
2023 GAME TABLE BUILD
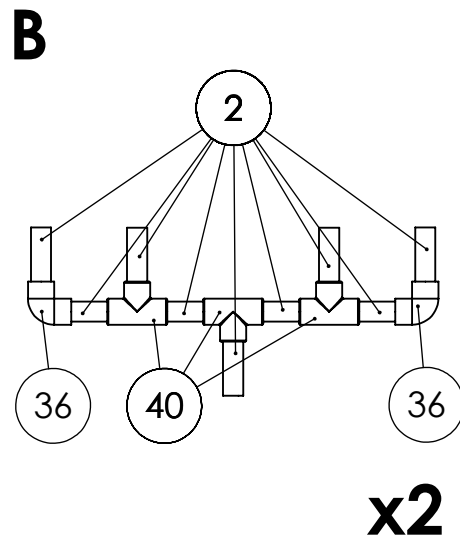
SIZE	DWG. NO.	REV
A	Assembly 1 + 2	

SCALE: 1:15	SHEET 5 OF 11
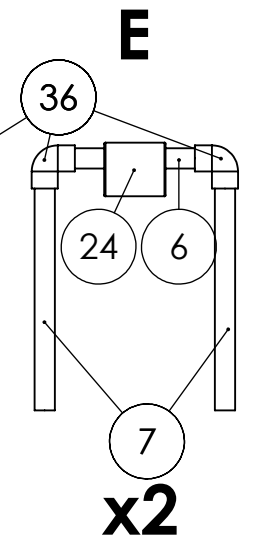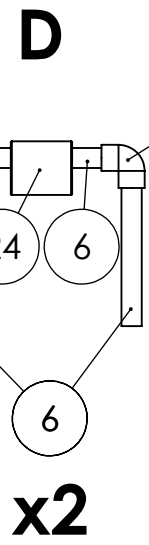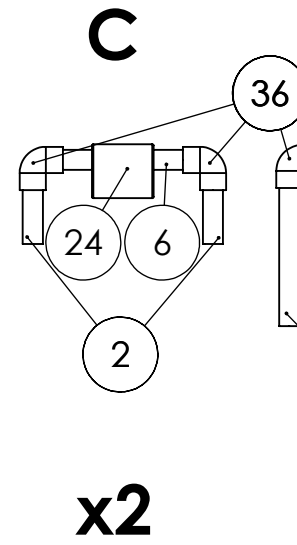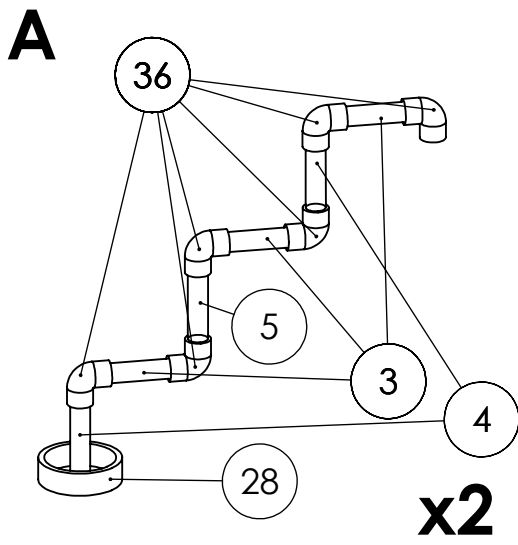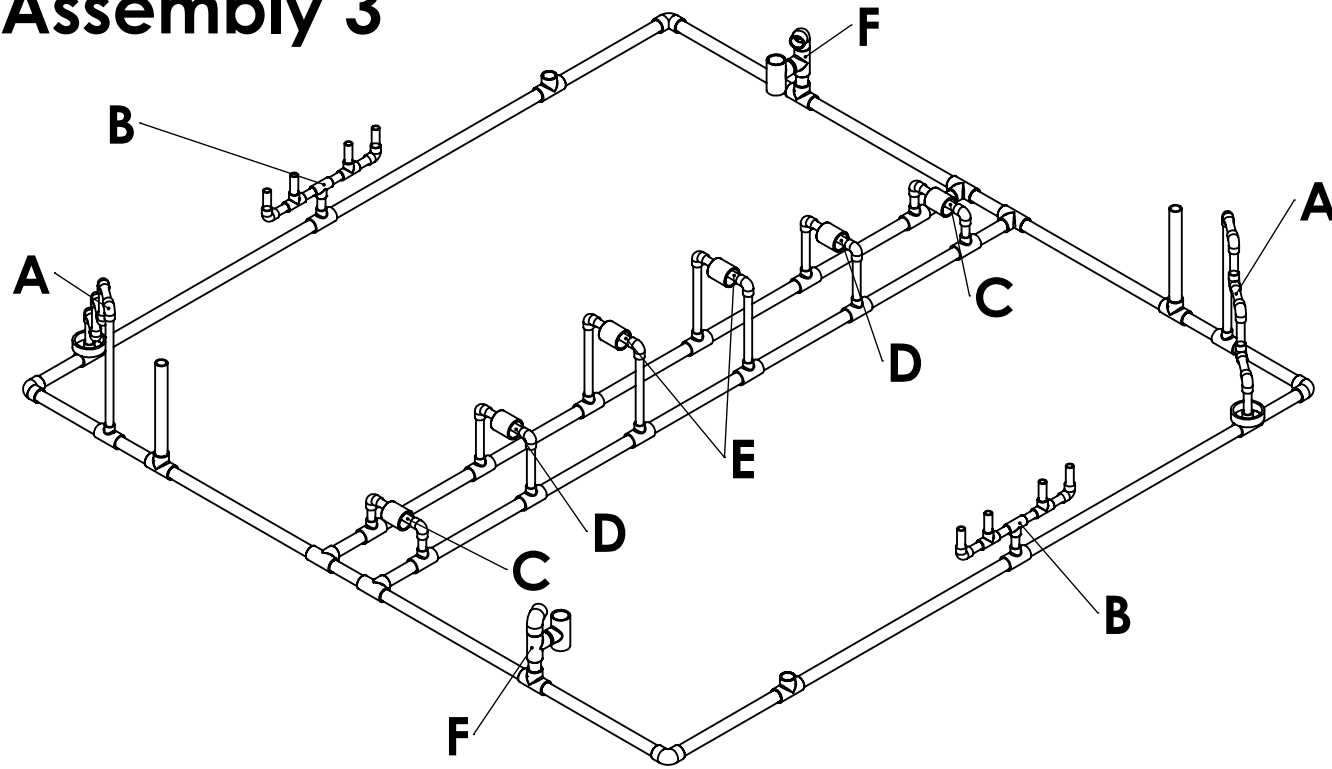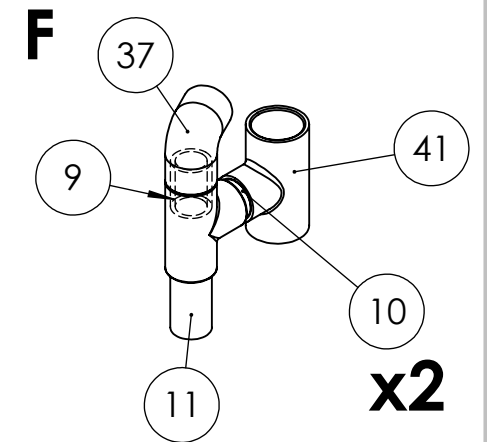
A

36, 5, 3, 4, 28

x2

B

2, 36, 40, 36

x2

C   D   E

36, 24, 6, 2, 6

x2

24, 6, 6

x2

36, 24, 6, 7

x2

Assembly 3

B, A, A, F, C, D, E, D, C, B, F

F

37, 9, 41, 10, 11

x2

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TITLE:
2023 GAME TABLE BUILD

SIZE	DWG. NO.	REV
A	Assembly 3	

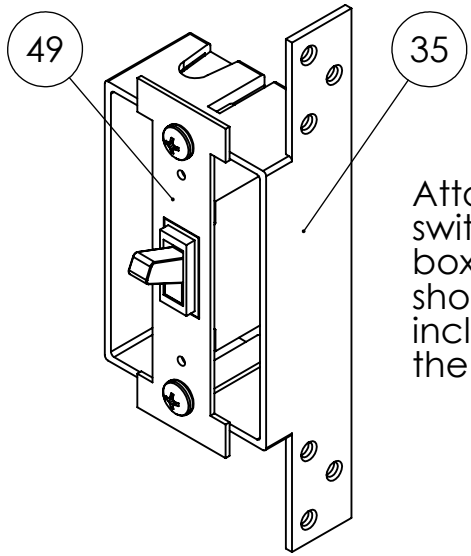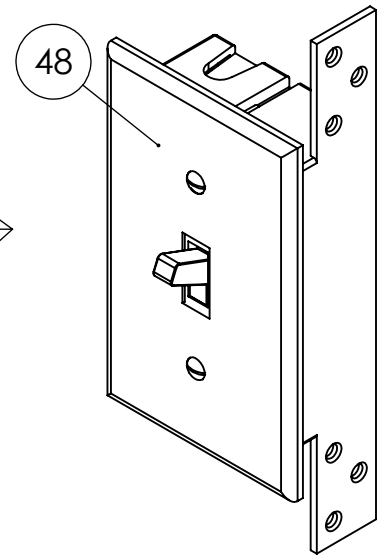| SCALE: 1:8	SHEET 6 OF 11

49   35

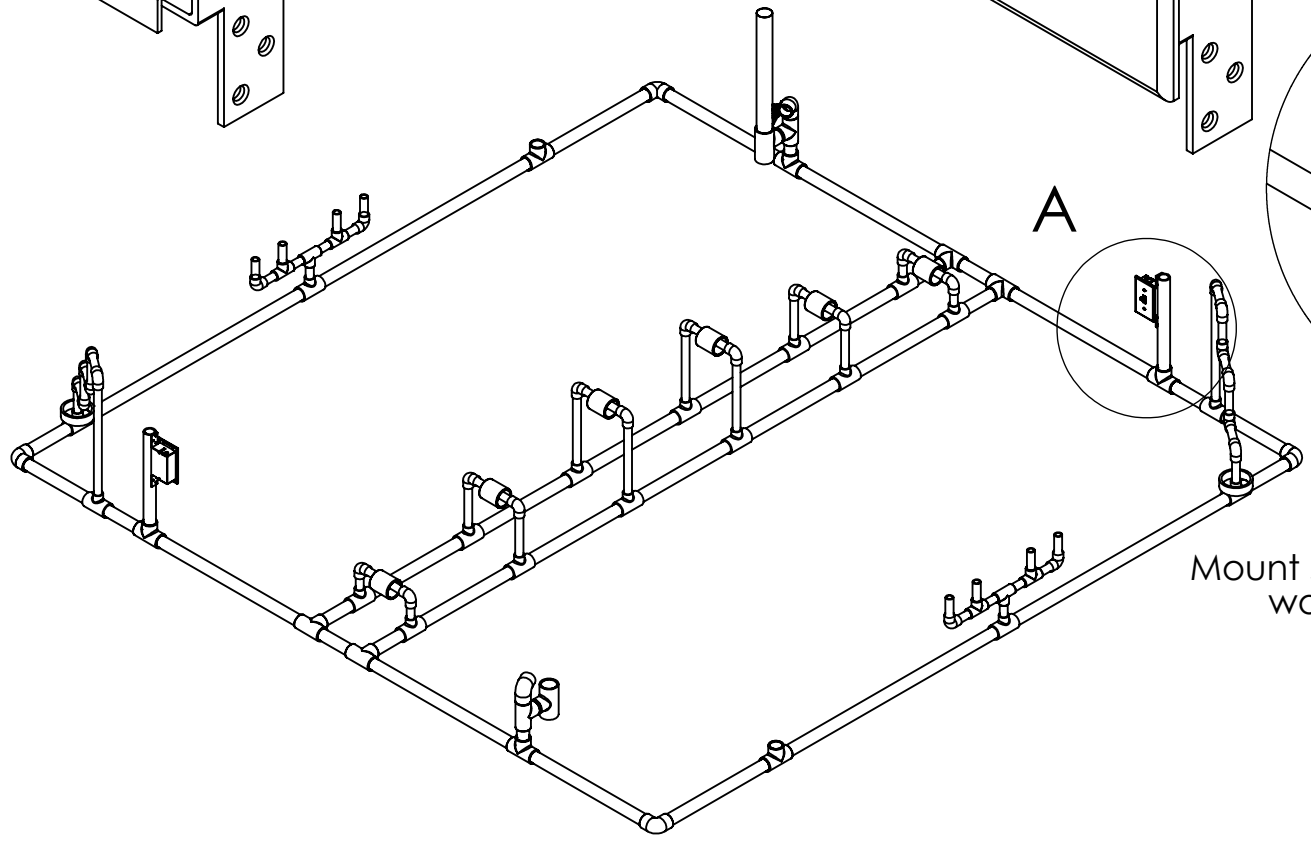Attach the light switch to the box. The screws should be included with the switch.

48

Attach the cover to the switch. The screws for this will usually be in the package.
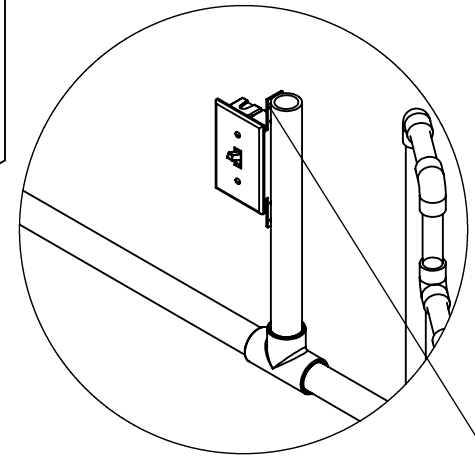
x2

A

DETAIL A

SCALE 1 : 8
Mount switch to PVC with screws that won't stick out through PVC.

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TITLE:
2023 GAME TABLE BUILD

SIZE	DWG. NO.	REV
A	Light Switch	

SCALE: 1:2	SHEET 7 OF 11

*If you are planning to wire the light switch to the LEDS, make sure to do so before building the whole switch.

B

Cut in tube should be approximately 1" wide and 0.25" thick.

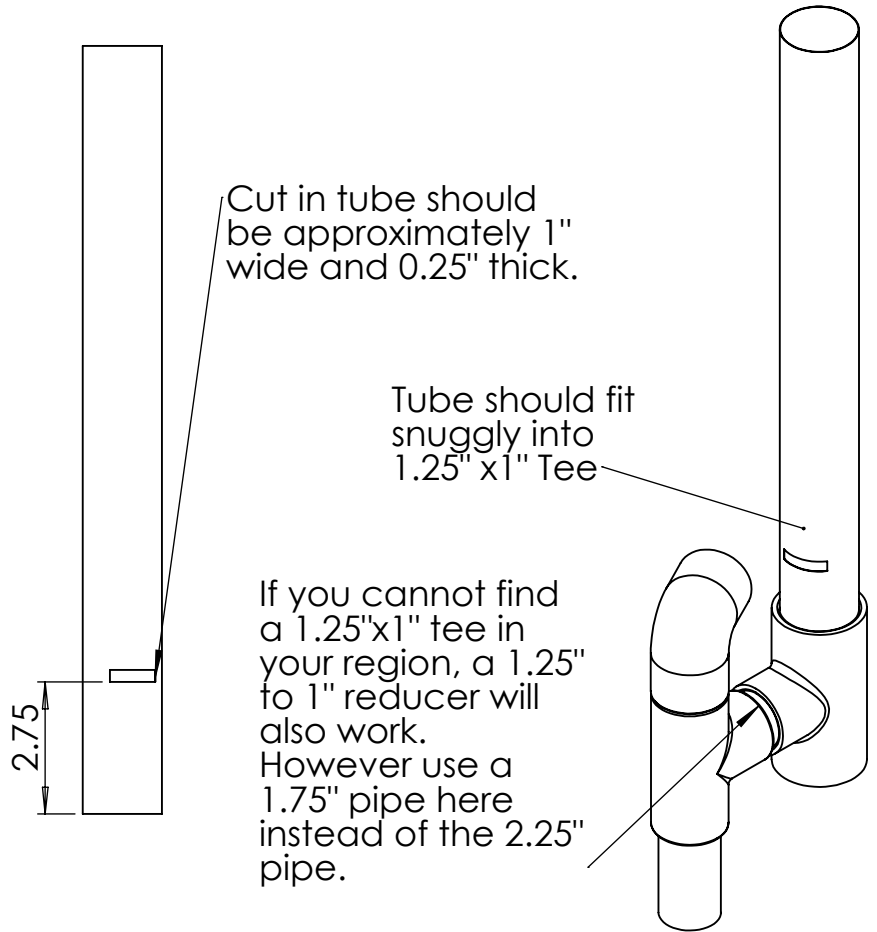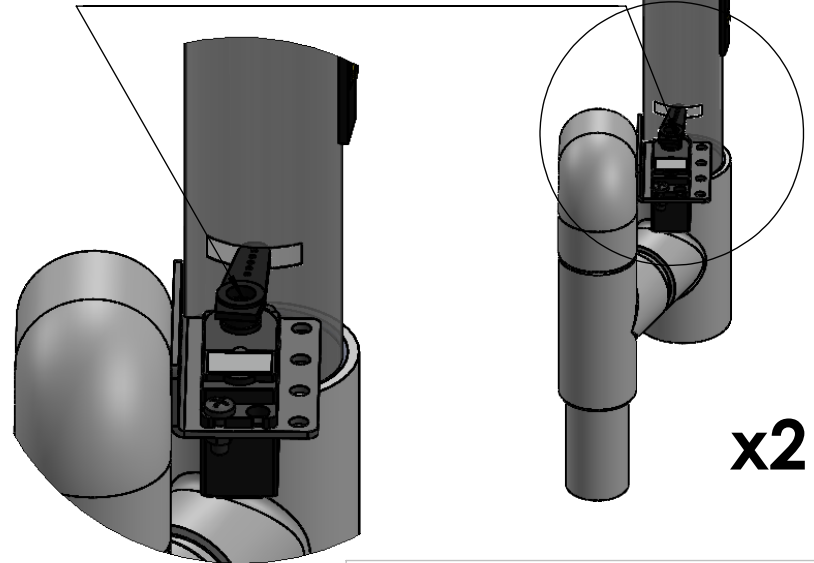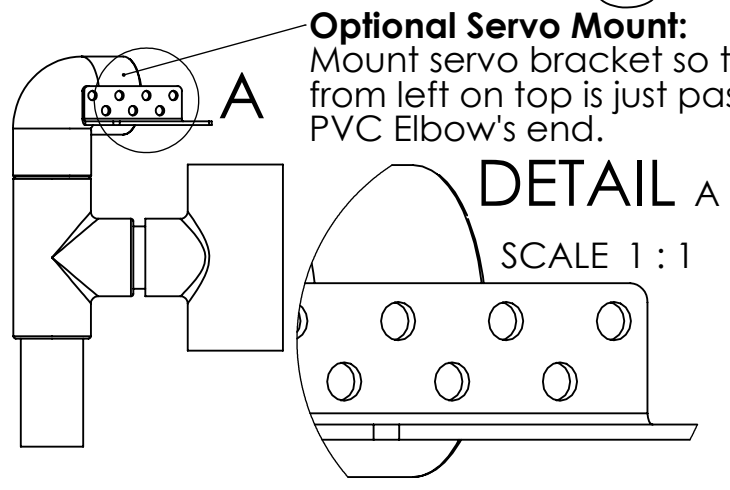**Optional:** If you use an LED strip on your table, mount it on the side closest to the start box to match tournament tables. It will connect to the light switch at the other end of the table.

Tube should fit snuggly into 1.25" x1" Tee

Full Tube Mechanism:
Mount servo and trimmed servo horn on bracket with two medium screws. Angle elbow and servo horn so that it sits inside tube slightly and can rotate out.
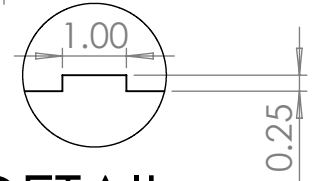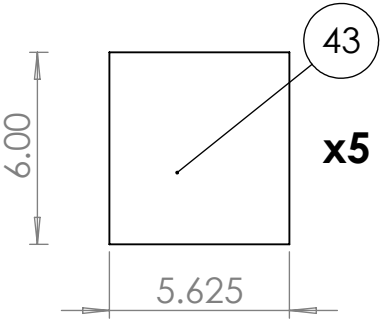
B

If you cannot find a 1.25"x1" tee in your region, a 1.25" to 1" reducer will also work. However use a 1.75" pipe here instead of the 2.25" pipe.

2.75

B

Optional Servo Mount:
Mount servo bracket so that 3rd hole from left on top is just past edge of PVC Elbow's end.

x2

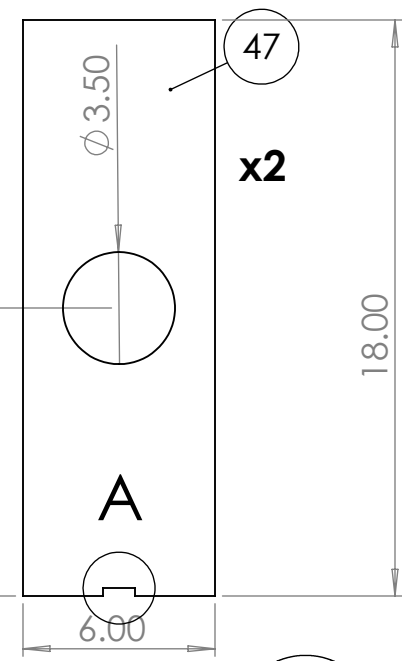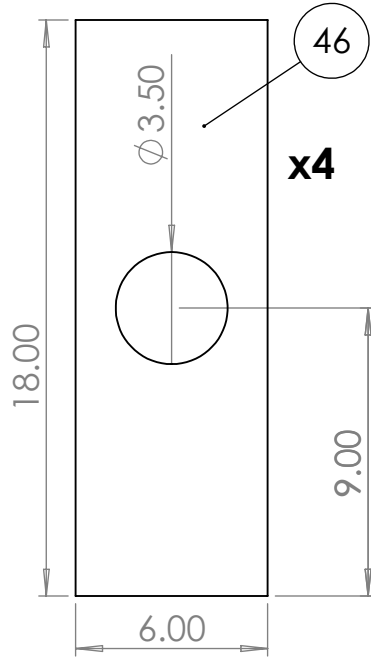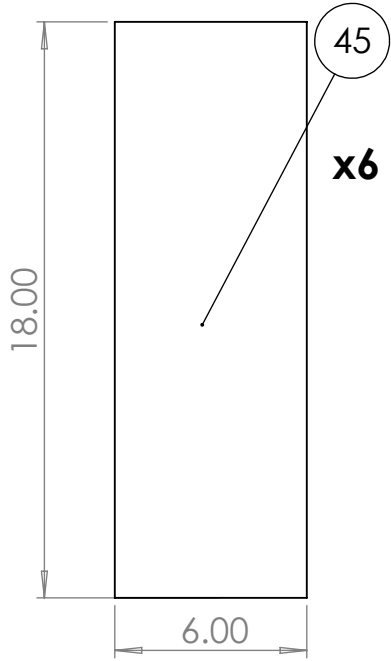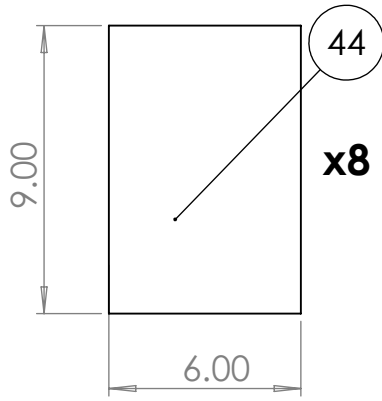**DETAIL** A

SCALE 1 : 1

DETAIL B

SCALE 1 : 2

Note: A popsicle stick will also work as well instead of servo mount. Especially if you only have this year's kit.

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TITLE:

2023 GAME TABLE BUILD

SIZE	DWG. NO.	REV
A	Tube Mechanism	

SCALE: 1:4	SHEET 8 OF 11

Corrugated Plastic and Wood Cuts
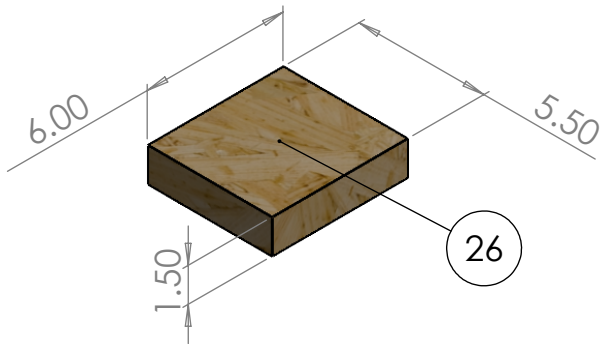
B

(44) **x8**
9.00
6.00

(45) **x6**
18.00
6.00

(46) **x4**
Ø 3.50
18.00
6.00

(47) **x2**
Ø 3.50
18.00
9.00
A
6.00

(43) **x5**
6.00
5.625

DETAIL A

SCALE 1 : 3

1.00
0.25

(26)
6.00
5.50
1.50

A

TITLE:		
2023 GAME TABLE BUILD		
SIZE **A**	DWG. NO. Plastic and Wood Cuts	REV
SCALE: 1:6		SHEET 9 OF 11

18" Building

47

50

1.00

A

51

53

48

Can be secured with hot glue or tape.

x2

All buildings have a 2x6 at their base that can be screwed into the table and the corrugated plastic around it. The center building may need a notch in the wood to sit properly over the FRP divider. This view shows the inside of the building with one face hidden.

18" Building Notched

47

43

45

45

29

Can be secured with hot glue or tape.

x1

DETAIL A

SCALE 1 : 1

Note how edges meet up

9" Building

44

43

x2

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TITLE:

2023 GAME TABLE BUILD

SIZE	DWG. NO.	REV
A	Buildings	

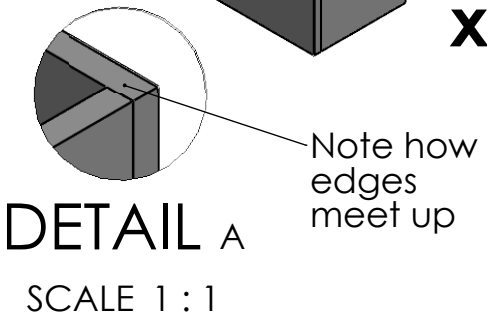| SCALE: 1:4	SHEET 10 OF 1

B

18" Building

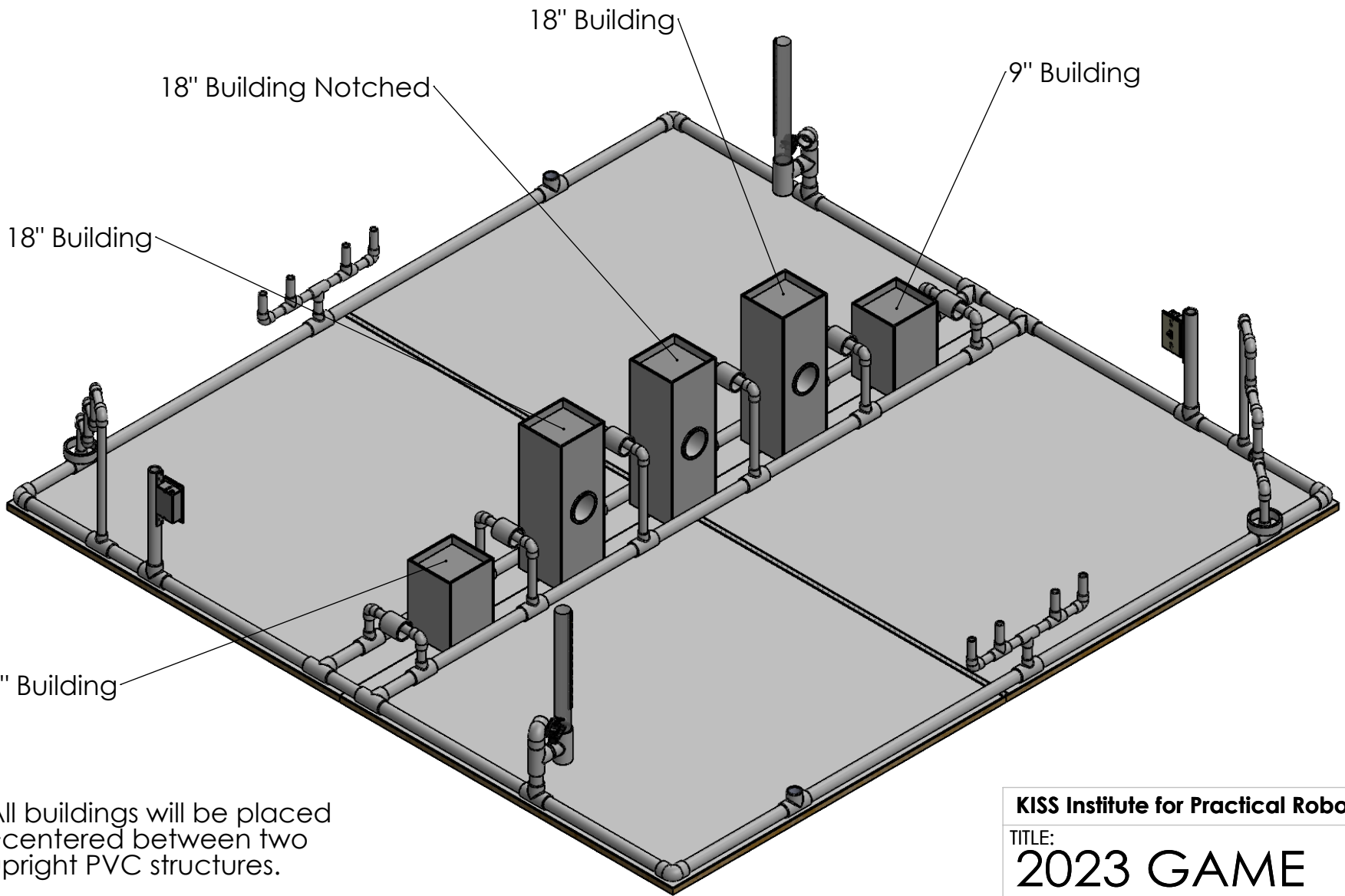18" Building Notched

18" Building

9" Building

9" Building

A

All buildings will be placed
~centered between two
upright PVC structures.

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TITLE:
2023 GAME TABLE BUILD

SIZE **A**	DWG. NO. Full Construction	REV
SCALE: 1:50		SHEET 11 OF 1