2 1

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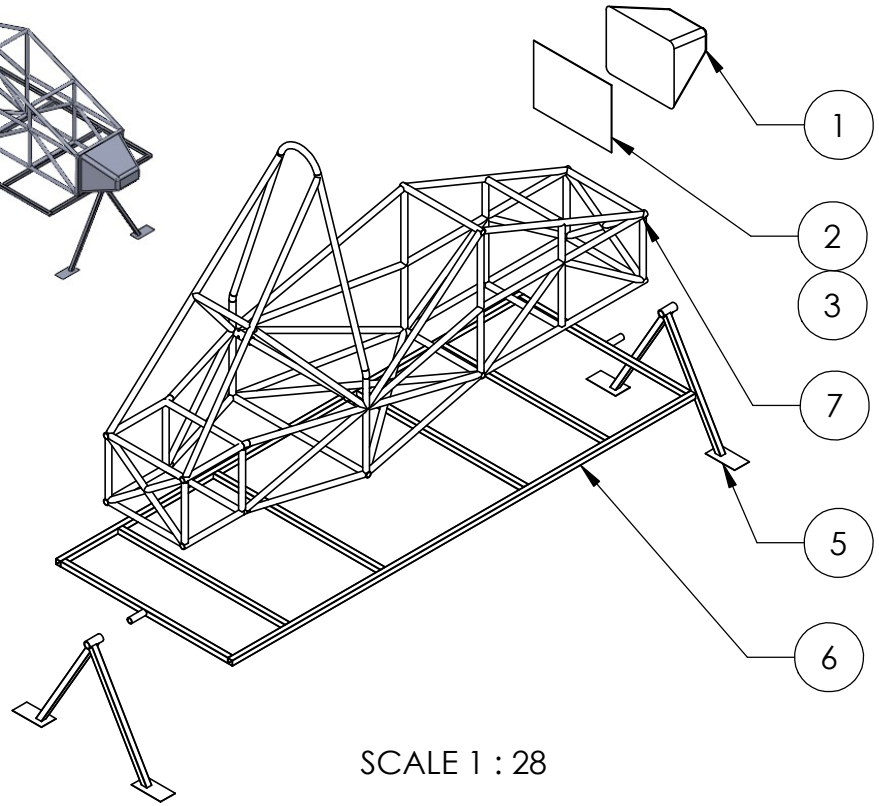
B B

A A

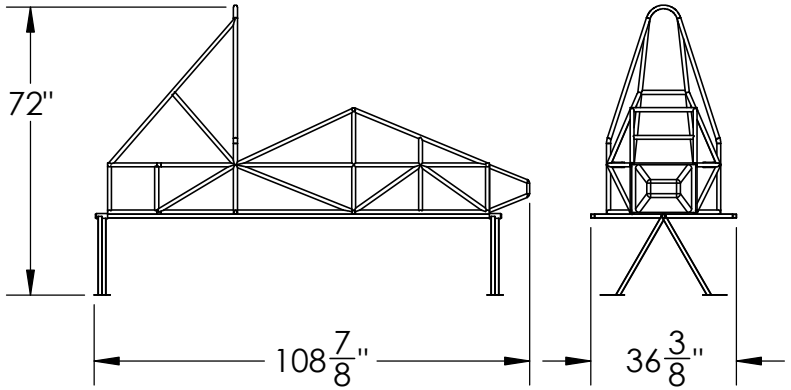
Group: Jan, Nate, Daniel		
TITLE: TABLE OF CONTENTS		
SIZE **A**	DWG. NO. 0	DATE: 2/14
SCALE: 1:1	DRAWN BY: JS	SHEET 0 OF 15

2 1

ITEM NO.	PART NAME	ASSEMBLY TYPE	QTY.	DESCRIPTION	VENDOR	COST ($)
1	IMPACT ATTENUATOR (IA)	FINAL ASSEMBLY	1	12" X 14" X10" IMPAXX 700 FOAM ABSORBS FRONT IMPACT	BSCI ENERGY IMPACT SYSTEMS	170.00
2	ANTI-INTRUSION PLATE (AIP)	FINAL ASSEMBLY	1	12" X 16" x 0.06" STEEL PLATE KEEPS DEBRIS OUT WELDED TO CHASSIS	MCMASTER-CARR	26.38
4	U-BOLTS AND NUTS	FINAL ASSEMBLY	12	1" U 2 3/16" LONG BOLT, STEEL HOLDS CHASSIS ON THE JIG	MCMASTER-CAR	0.99
3	GLUE	FINAL ASSEMBLY	1	HOLDS IA AND AIP TOGETHER	AMAZON	156.20
5	JIG SUPPORTS	SUBASSEMBLY	1	ALLOWS THE JIG TO ROTATE	FAB. SEE PG. 2	51.30
6	JIG	SUBASSEMBLY	1	HOLDS THE CHASSIS	FAB. SEE PG. 3	124.13
7	CHASSIS	SUBASSEMBLY	1	FRAME FOR THE FSAE CAR	FAB. SEE PG. 6	416.25
					TOTAL	956.14



SCALE 1 : 28



Group: Jan, Nate, Daniel

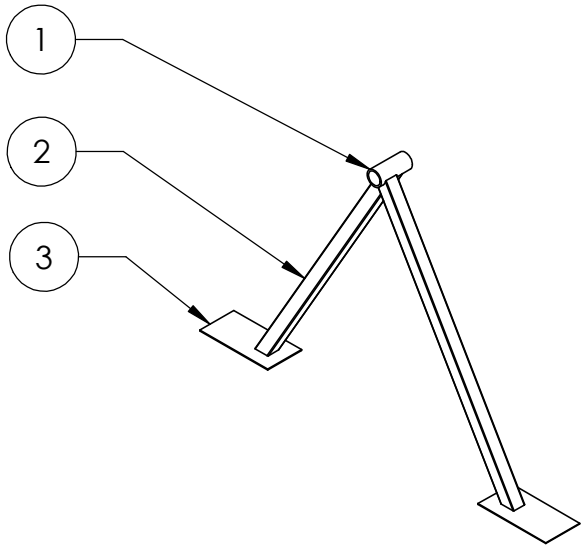
TITLE:

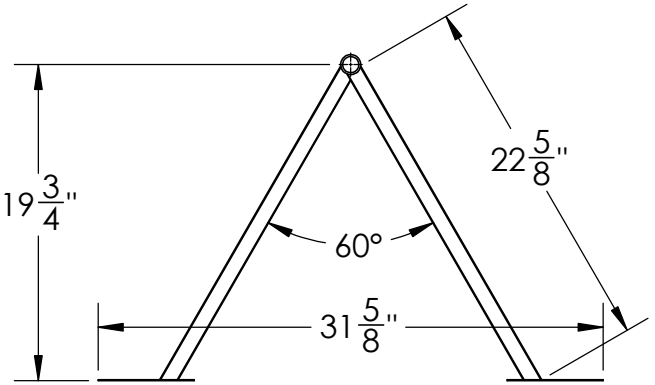
FSAE CHASSIS ASSEMBLY

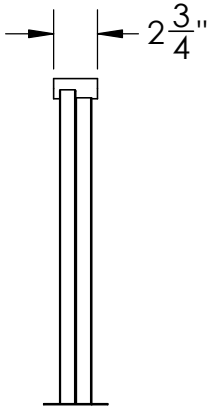
SIZE	DWG. NO.	DATE:
A	1	2/14

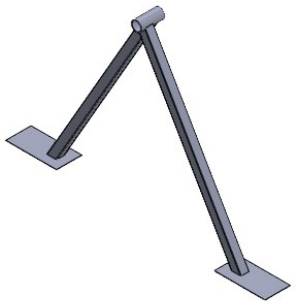
SCALE: 1:48	DRAWN BY: JS	SHEET 1 OF 15

ITEM NO.	PART NAME	QTY.	DESCRIPTION	VENDOR	COST ($)
1	TUBE	1	1.25" OD 1" ID X 1FT CUT TO TWO 2 3/4" TUBES TOLERANCE +/- 1/16" LOW CARBON 1010 HOT ROLLED STEEL ALLOWS THE JIG TO ROTATE	MCMASTER-CARR	7.36
2	SQUARE TUBE	2	1" X 1" X 6FT WITH 0.065 WALL THICKNESS CUT TO FOUR 22 5/8" TUBES, TOLERANCE +/- 1/16" LOW CARBON 1005 HOT ROLLED STEEL ELEVATES THE JIG OFF THE GROUND SO IT CAN ROTATE	MCMASTER-CARR	17.98
3	PLATE	1	6" X 18" 16GA CUT TO FOUR 6" X 3" PLATES TOLERANCE +/- 1/16", PLAIN STEEL ALLOWS THE SUPPORTS TO BE HELD IN PLACE BY WEIGHT	HOME DEPOT	7.98
				TOTAL	51.30









SCALE 1 : 16

Group: Jan, Nate, Daniel

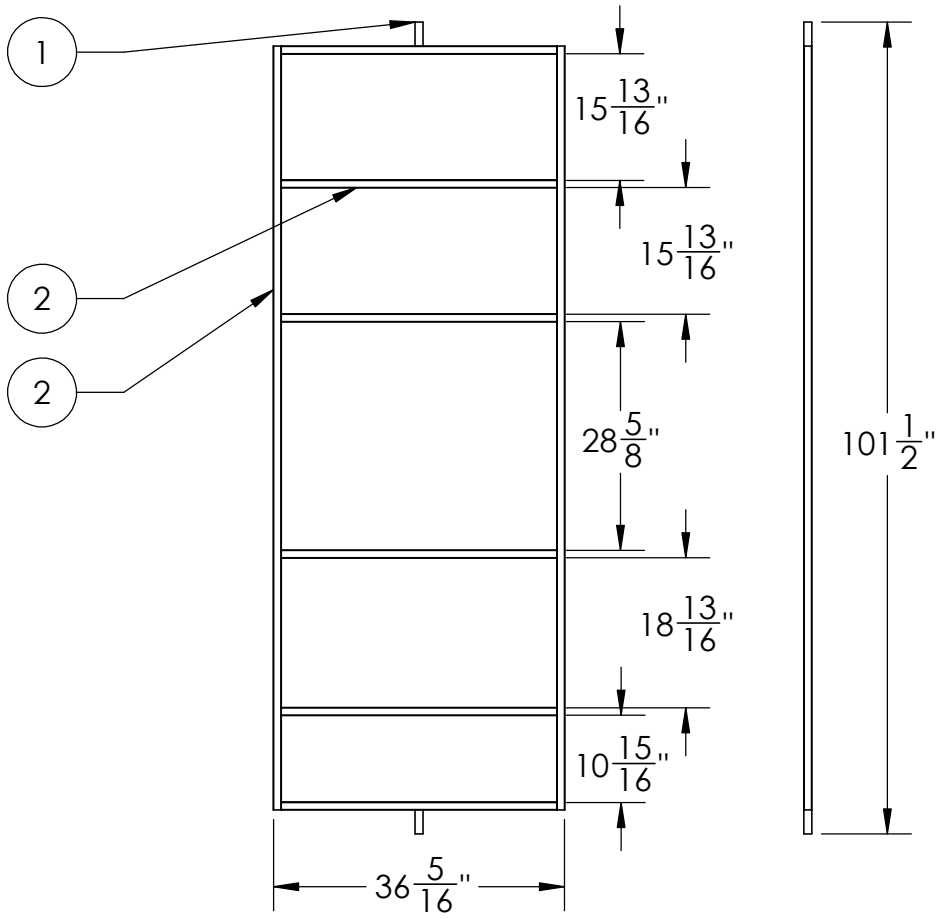
TITLE:

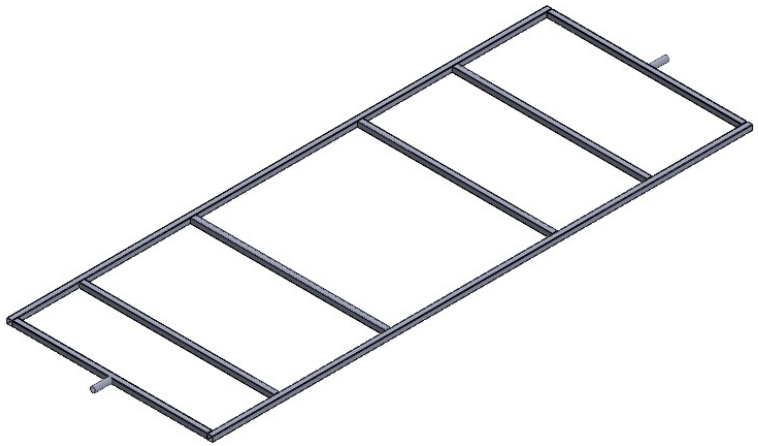
JIG SUPPORTS

SIZE	DWG. NO.	DATE:
A	2	2/14

SCALE: 1:12	DRAWN BY: JS	SHEET 2 OF 15

ITEM NO.	PART NAME	QTY.	DESCRIPTION	VENDOR	COST ($)
1	STOCK ROUND TUBE A	1	1" OD 0.81" ID X 6FT LOW CARBON 1010 HOT ROLLED STEEL ALLOWS THE JIG TO ROTATE	MCMASTER-CARR	16.25
2	STOCK SQUARE TUBE	6	1" X 1" X 6FT WITH 0.065 WALL THICKNESS LOW CARBON 1005 HOT ROLLED STEEL USED TO CREATE THE JIG WHERE THE CHASSIS WILL MOUNT TO	MCMASTER-CARR	17.98
				TOTAL	124.13





Group: Jan, Nate, Daniel

TITLE:

JIG

SIZE	DWG. NO.	DATE:
A	3	2/14

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PART NO.	PAGE NO.
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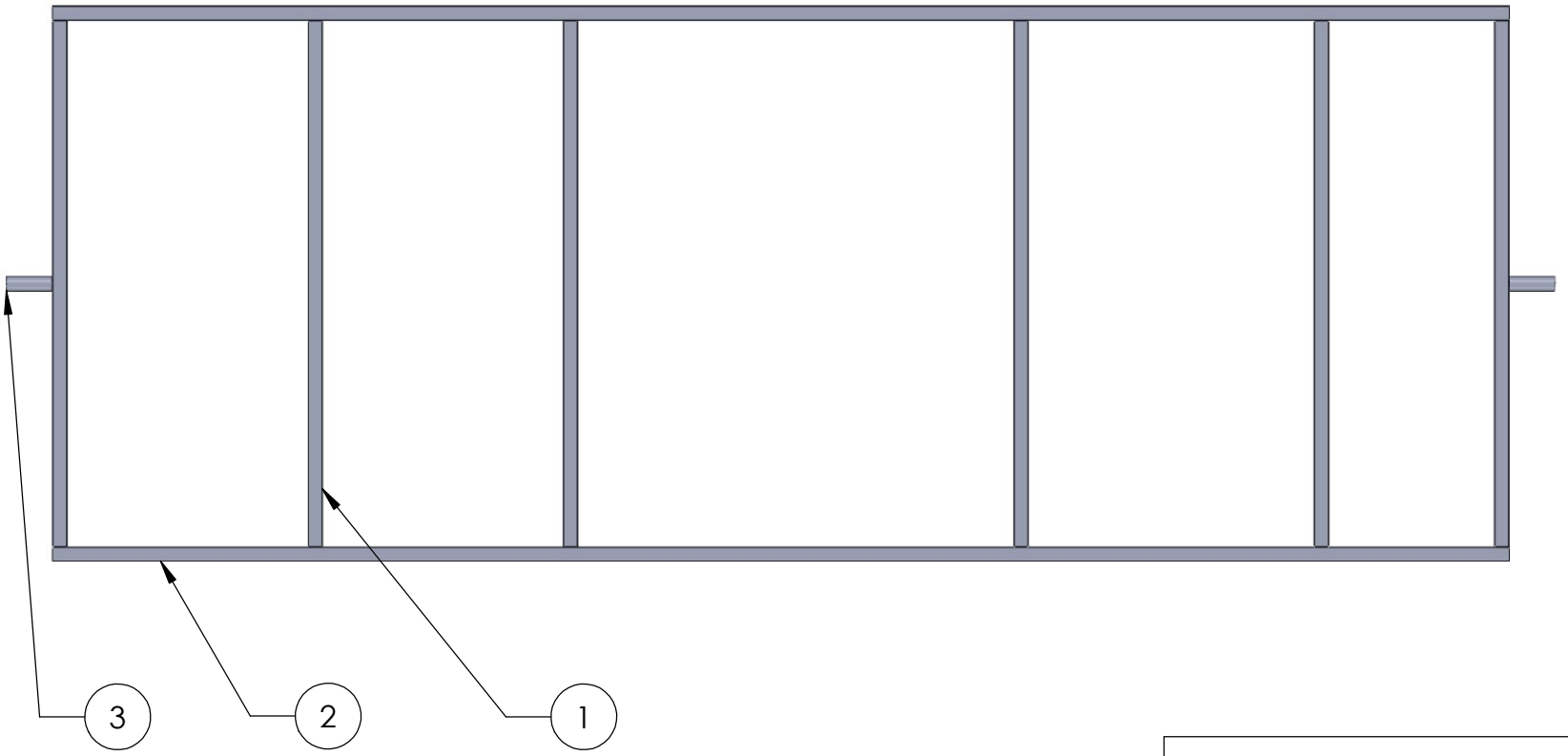


Group: Jan, Nate, Daniel

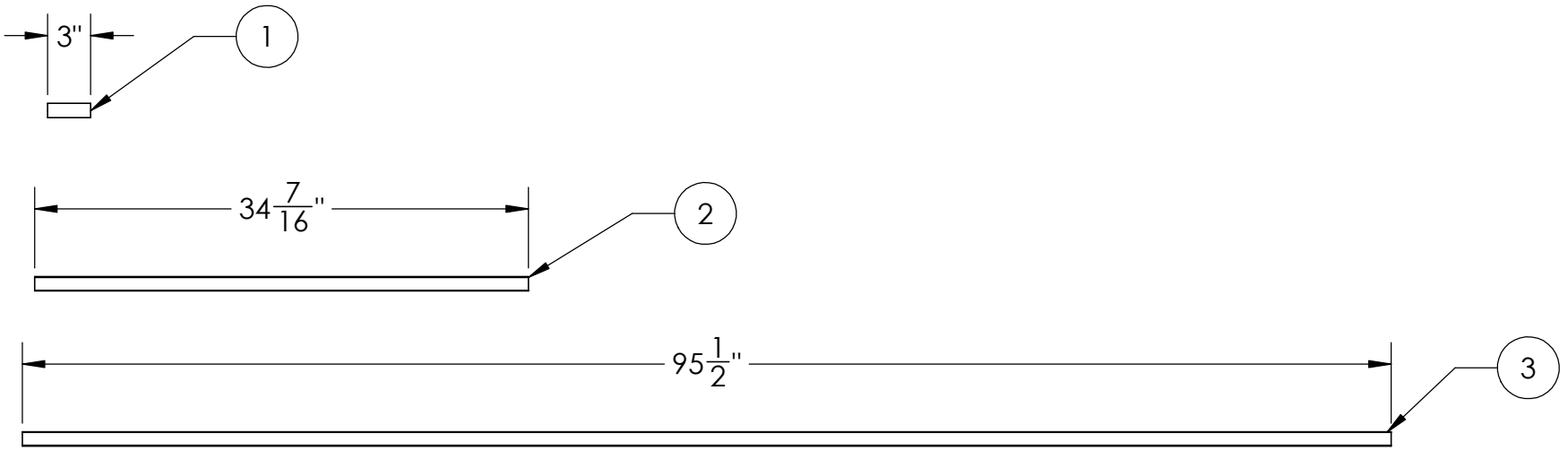
TITLE:

JIG COMPONENTS

SIZE	DWG. NO.	DATE:
A	4	2/14

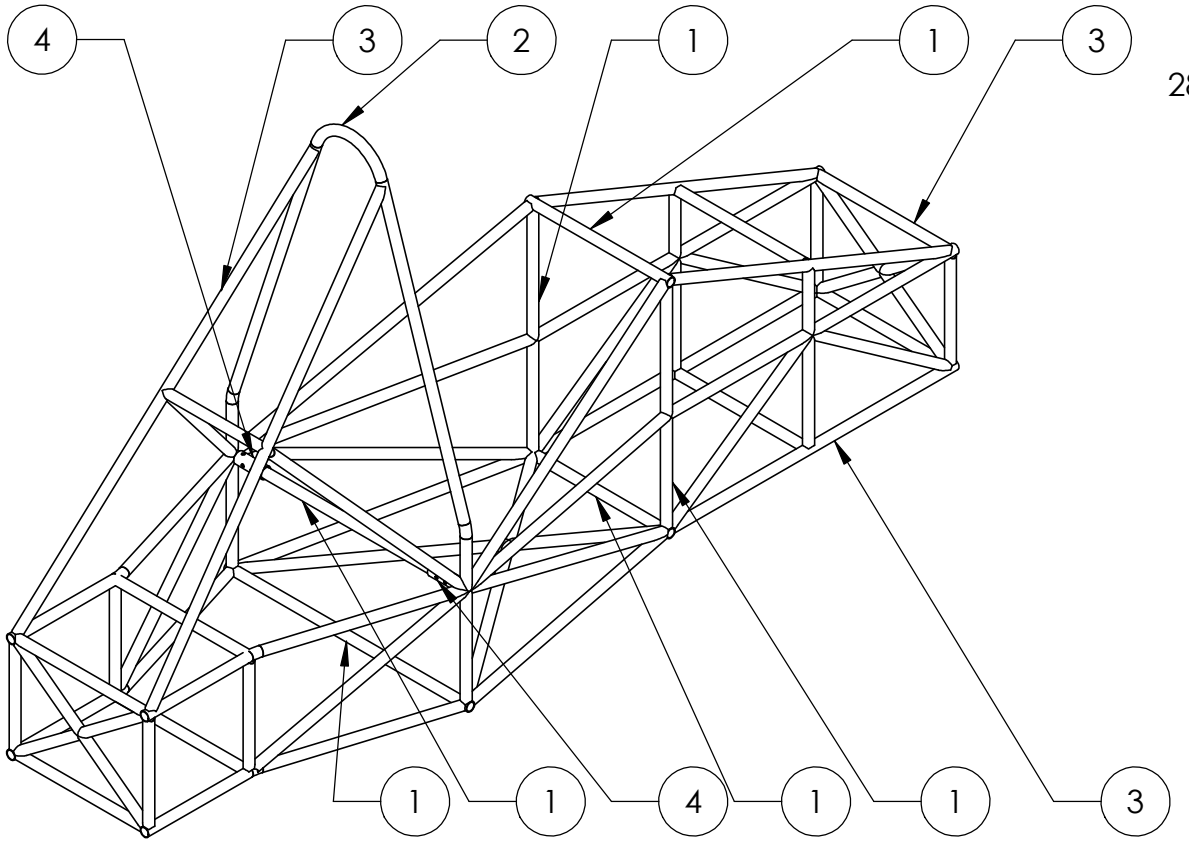
SCALE: 1:12	DRAWN BY: JS	SHEET 4 OF 15

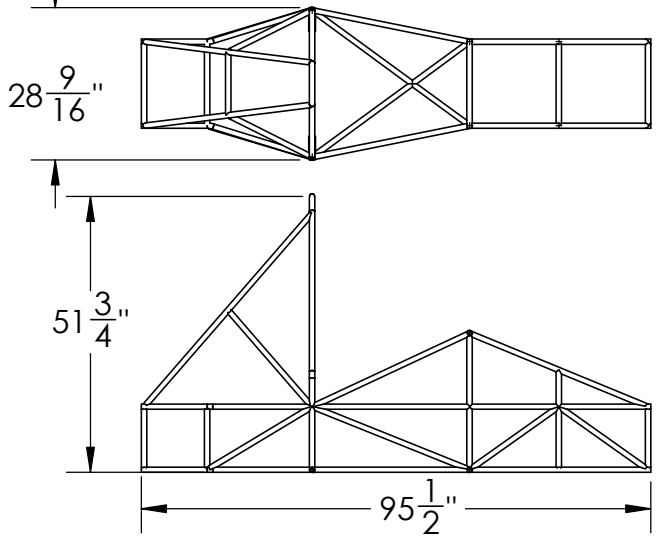
PART NO.	QTY.	MATERIAL	CUT LENGTH	NOTES
1	2	1" 1010 STEEL RD. TUBE 0.095" WALL THICKNESS	3"	TOLERANCE +/- 1/16"
2	4	1" 1005 STEEL SQ. TUBE 0.065" WALL THICKNESS	36 7/16"	TOLERANCE +/- 1/16"
3	2	1" 1005 STEEL SQ. TUBE 0.065" WALL THICKNESS	93 31/64"	TOLERANCE +/- 1" , WELD TOGETHER 6FT PEICE AND A 22" PEICE THEN CUT TO LENGTH



Group: Jan, Nate, Daniel		
TITLE: JIG PARTS 1-3		
SIZE A	DWG. NO. 5	DATE: 2/14
SCALE: 1:12	DRAWN BY: JS	SHEET 5 OF 15

ITEM NO.	PART NAME	QTY.	DESCRIPTION	VENDOR	COST ($)
1	STOCK ROUND TUBE A	2	1" OD 0.81" ID X 6FT LOW CARBON 1010 HOT ROLLED STEEL USED FOR THE MAIN HOOP AND FRONT HOOP	MCMASTER-CARR	16.25
2	STOCK ROUND TUBE A 10FT	1	1" OD 0.81" ID X 10FT LOW CARBON 1010 HOT ROLLED STEEL USED FOR THE MAIN HOOP	MCMASTER-CARR	109.36
3	STOCK ROUND TUBE B	23	1" OD 0.87" ID X 6FT LOW CARBON 1010 HOT ROLLED STEEL USED FOR THE FRONT BULK HEAD AND ALL OF THE SUPPORT BRACES	MCMASTER-CARR	11.93
4	STOCK TUBE	1	1.25" OD 1" ID X 6.5" LOW CARBON 1010 HOT ROLLED STEEL REMAINING FROM JIG, BUTT JOINT SLEEVE	MCMASTER-CARR	0.00
				TOTAL	416.25





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NOTE: IF IT IS NOT BALLOONED IT IS ITEM 3

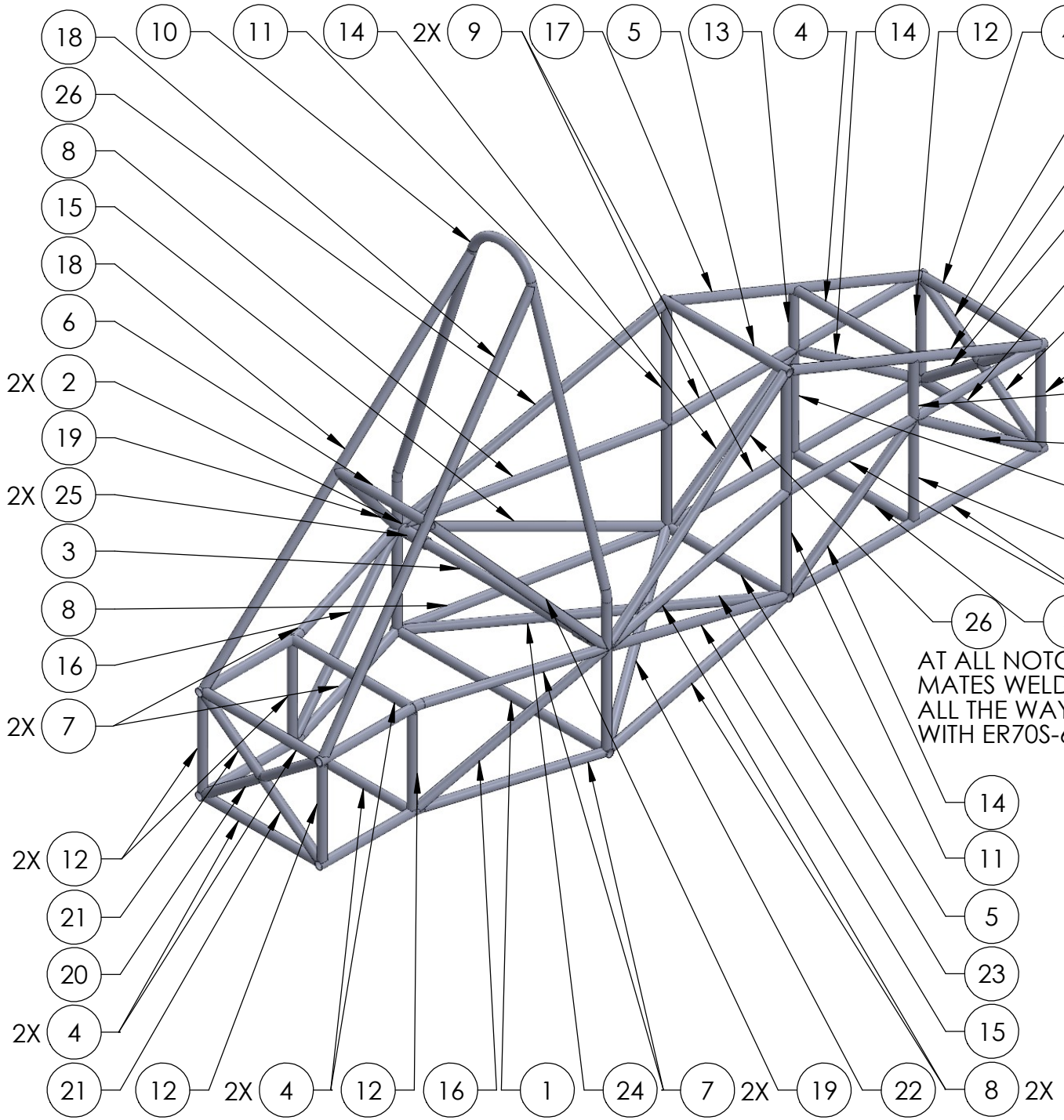
Group: Jan, Nate, Daniel

TITLE:

CHASSIS

SIZE	DWG. NO.	DATE:
A	6	2/14

SCALE: 1:36	DRAWN BY: JS	SHEET 6 OF 15



PART NO.	PAGE NO.
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22	13
23	14
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25	14
26	14

Group: Jan, Nate, Daniel

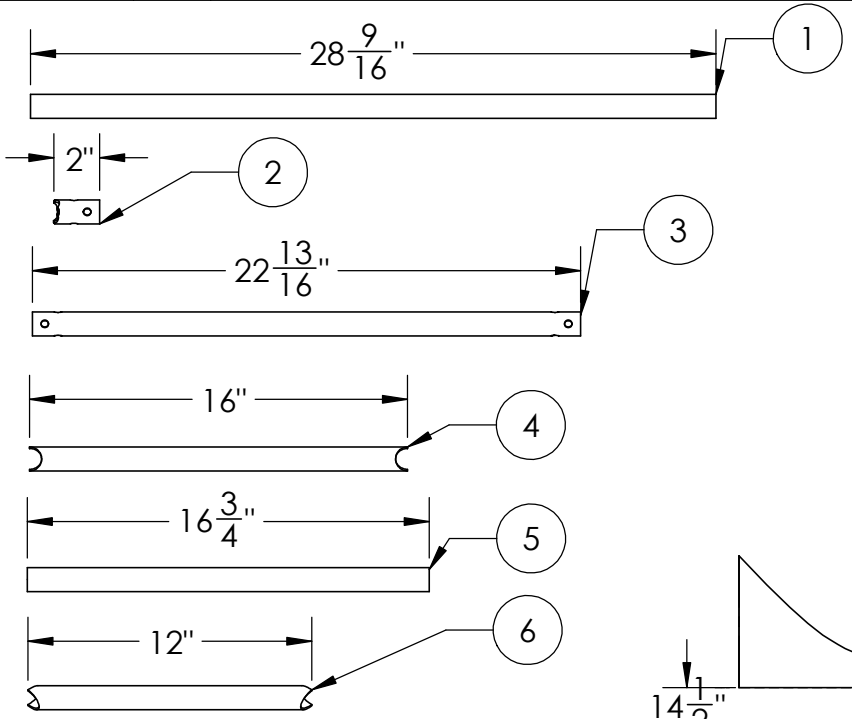
TITLE:

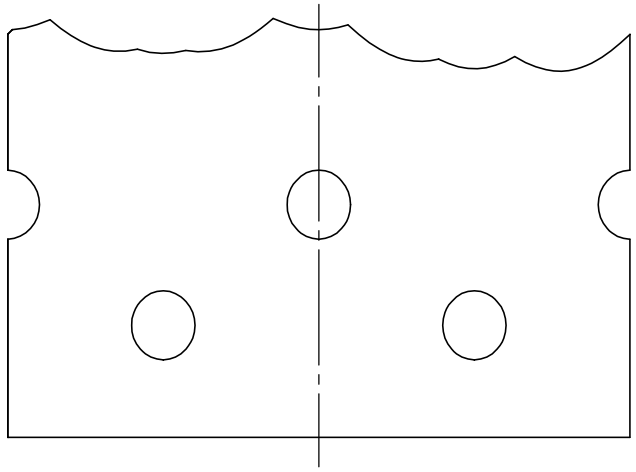
CHASSIS COMPONENTS

SIZE	DWG. NO.	DATE:
A	7	2/14

SCALE: 1:14 | DRAWN BY: JS | SHEET 7 OF 15

PART NO.	QTY.	MATERIAL	CUT LENGTH	NOTES
1	1	1" 1010 STEEL RD. TUBE 0.095" WALL THICKNESS	28 9/16"	TOLERANCE + 1/32"
2	2	1" 1010 STEEL RD. TUBE 0.095" WALL THICKNESS	2"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
3	1	1" 1010 STEEL RD. TUBE 0.095" WALL THICKNESS	22 13/16"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
4	8	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	16"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
5	2	1" 1010 STEEL RD. TUBE 0.095" WALL THICKNESS	16 3/4"	TOLERANCE + 1/32"
6	1	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	12"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN





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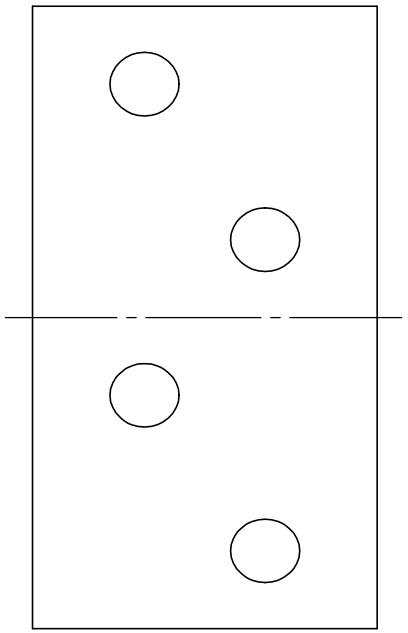
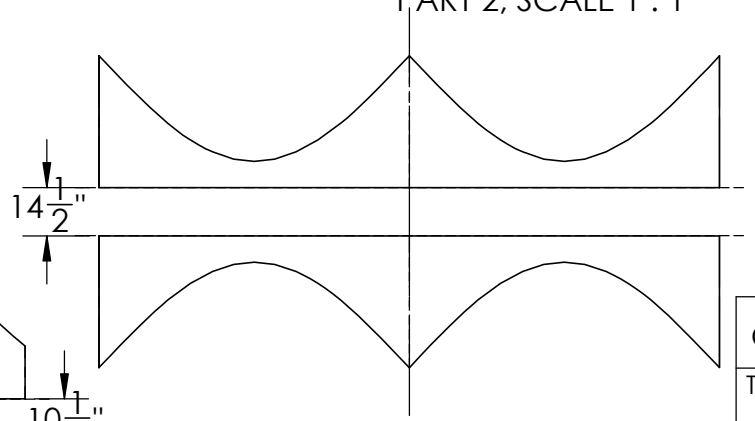
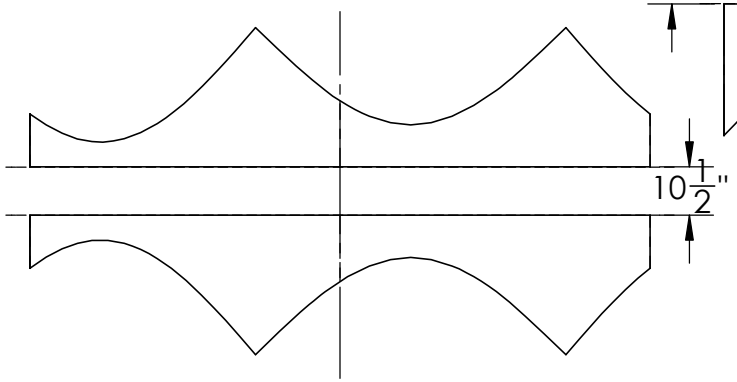


PART 3, SCALE 1 : 1



PART 4, SCALE 1 : 1



PART 6, SCALE 1 : 1

Group: Jan, Nate, Daniel

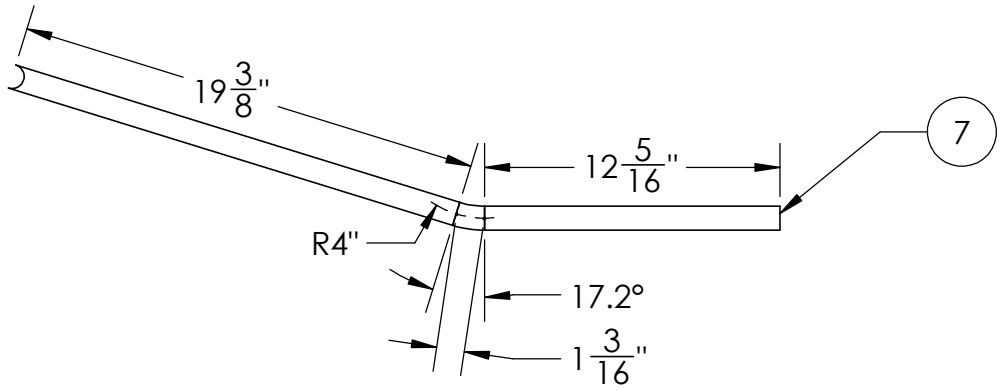
TITLE:

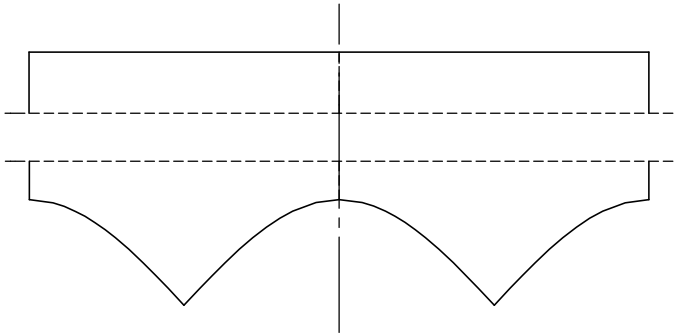
CHASSIS PARTS 1-6
LATERAL TUBES

SIZE	DWG. NO.	DATE:
A	8	2/14

SCALE: 1:8	DRAWN BY: JS	SHEET 8 OF 15

PART NO.	QTY.	MATERIAL	CUT LENGTH	NOTES
7	4	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	34"	TOLERANCE + 1/32", +/- 0.5 degrees, FOLLOW NOTCHING PATTERN
8	4	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	30"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
9	4	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	34"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN





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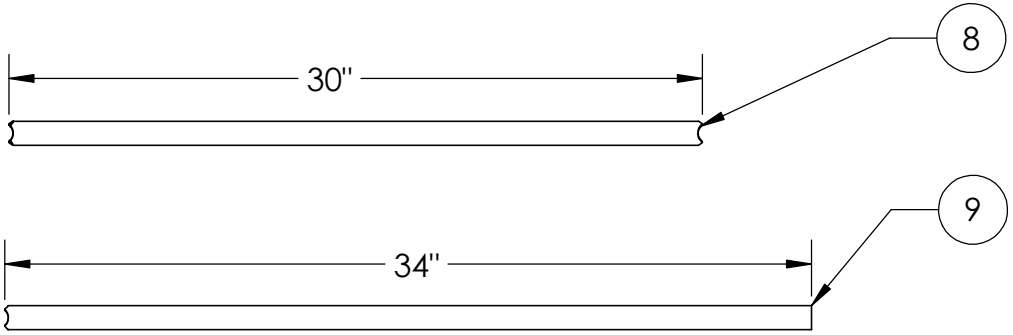

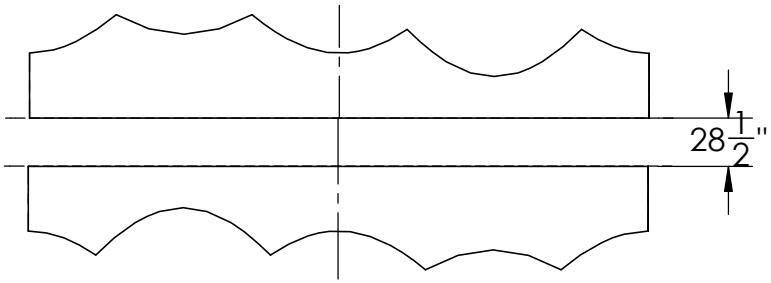

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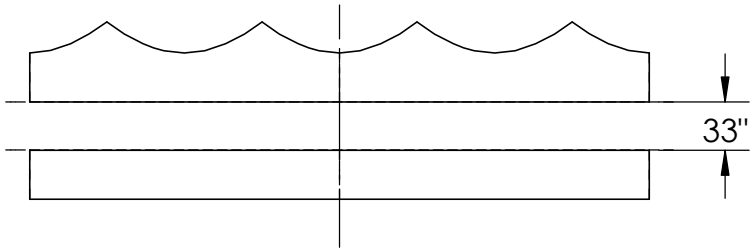


PART 9, SCALE 1 : 1

Group: Jan, Nate, Daniel

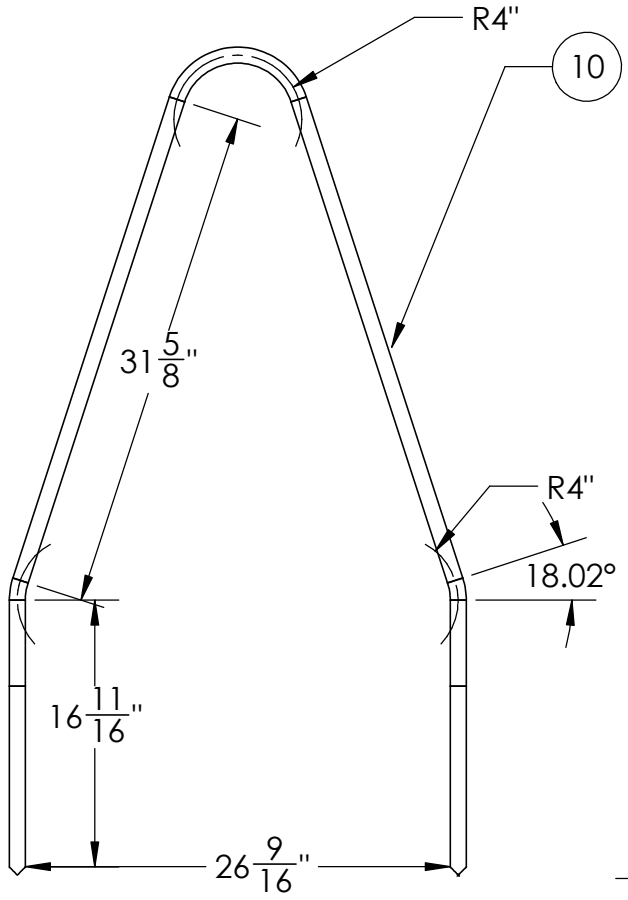
TITLE:

CHASSIS PARTS 7-9
LONGITUDINAL TUBES

SIZE	DWG. NO.	DATE:
A	9	2/14

SCALE: 1:8	DRAWN BY: JS	SHEET 9 OF 15

PART NO.	QTY.	MATERIAL	CUT LENGTH	NOTES
10	1	1" 1010 STEEL RD. TUBE 0.095" WALL THICKNESS	120"	TOLERANCE + 1/32", +/- 0.5 degrees, FOLLOW NOTCHING PATTERN
11	2	1" 1010 STEEL RD. TUBE 0.095" WALL THICKNESS	26"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
12	8	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	11 1/2"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
13	2	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	7"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN



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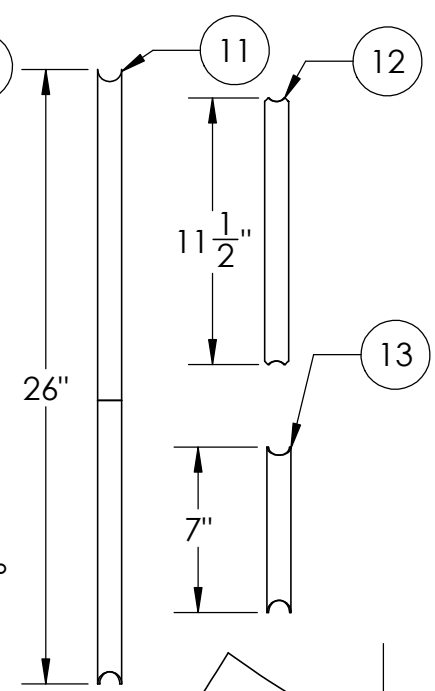

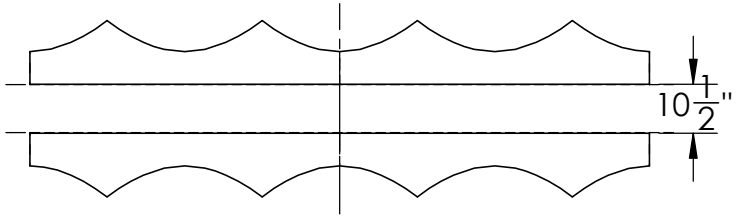

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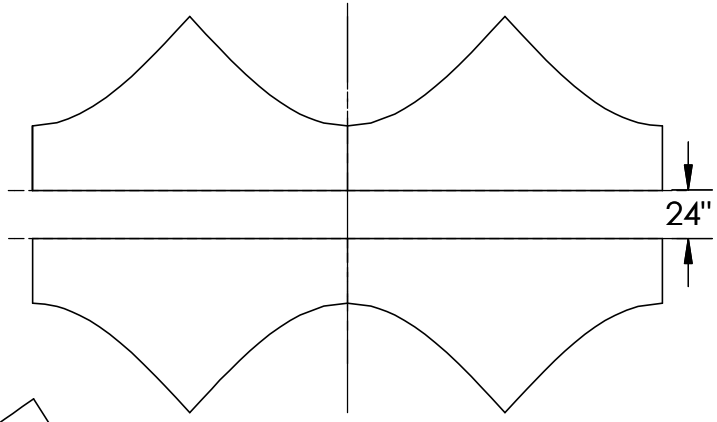

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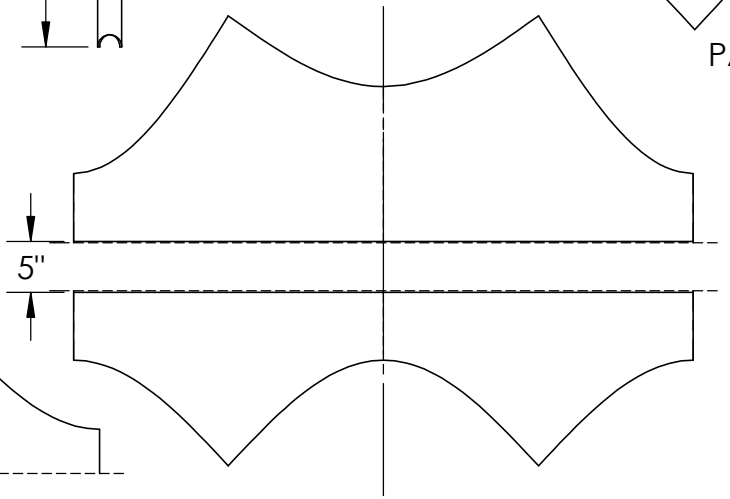

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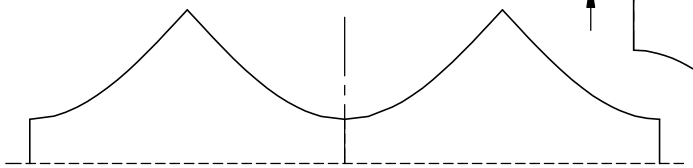


PART 10, SCALE 1 : 1
NOTE: BOTH ENDS ARE THE SAME

Group: Jan, Nate, Daniel

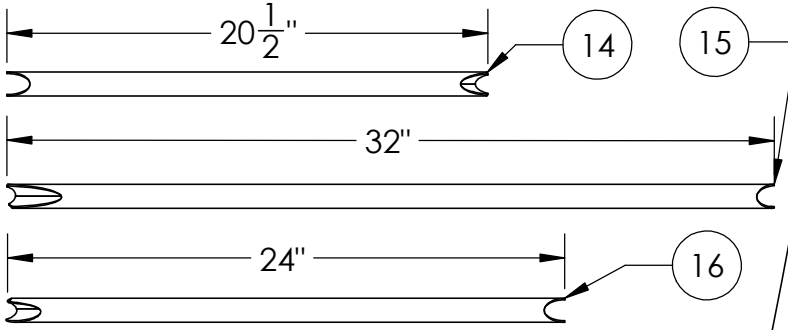
TITLE:

CHASSIS PARTS 10-13
VERTICAL TUBES

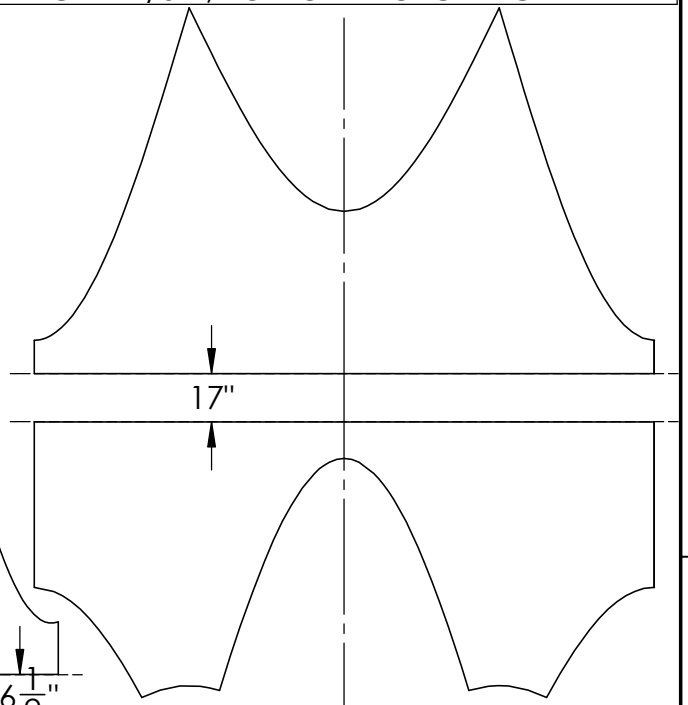
SIZE	DWG. NO.	DATE:
A	10	2/14

SCALE: 1:8	DRAWN BY: JS	SHEET 10 OF 15

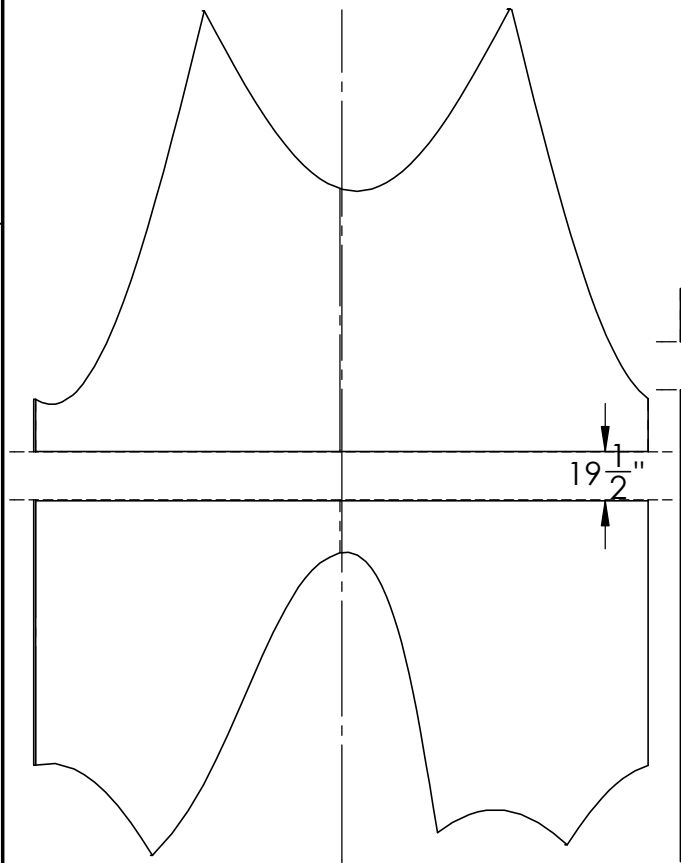
PART NO.	QTY.	MATERIAL	CUT LENGTH	NOTES
14	4	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	20 1/2"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
15	2	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	32"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
16	2	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	24"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN



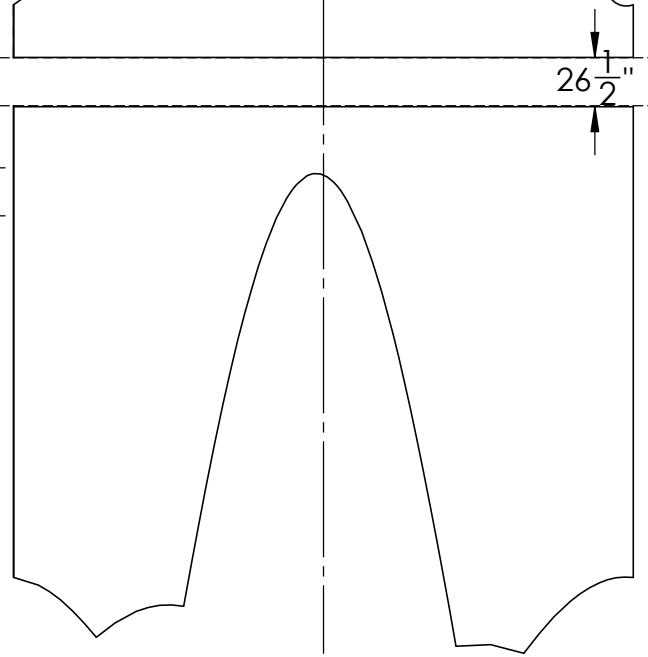
PART 15, SCALE 1 : 1



PART 14, SCALE 1 : 1



PART 16, SCALE 1 : 1



Group: Jan, Nate, Daniel

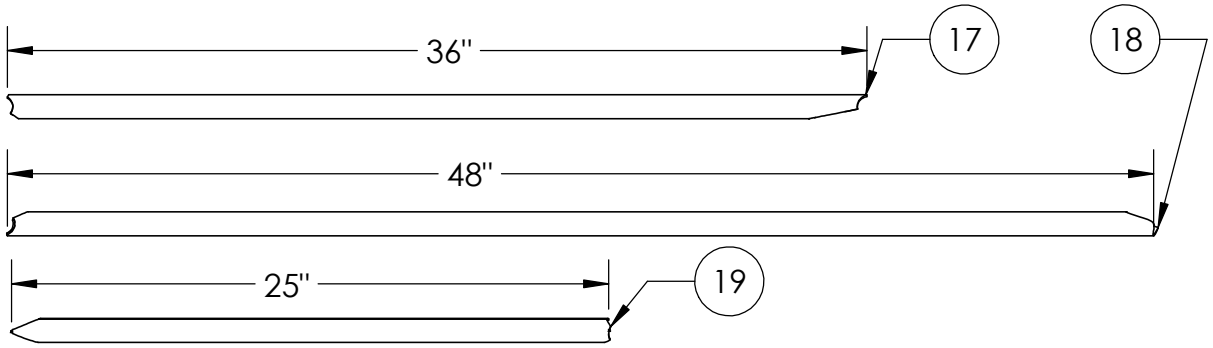
TITLE:

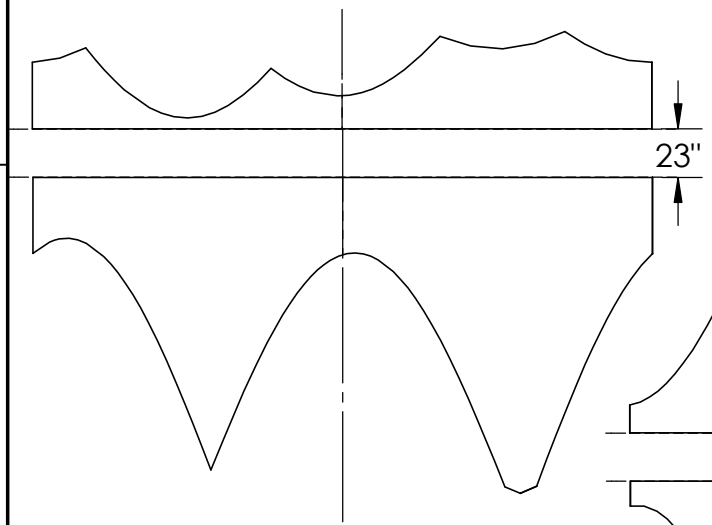
CHASSIS PARTS 14-16
DIAGONAL TUBES

SIZE	DWG. NO.	DATE:
A	11	2/14

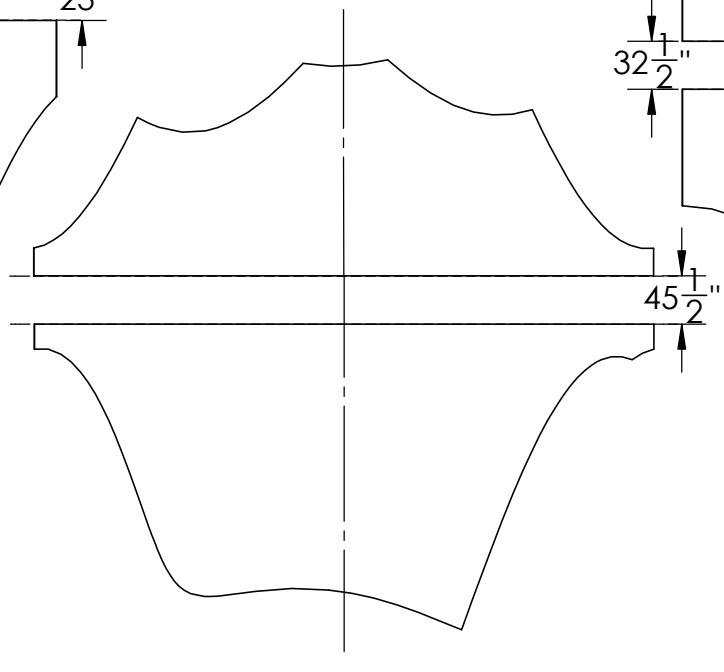
SCALE: 1:8	DRAWN BY: JS	SHEET 11 OF 15

PART NO.	QTY.	MATERIAL	CUT LENGTH	NOTES
17	2	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	36"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
18	2	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	48"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
19	2	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	25"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN

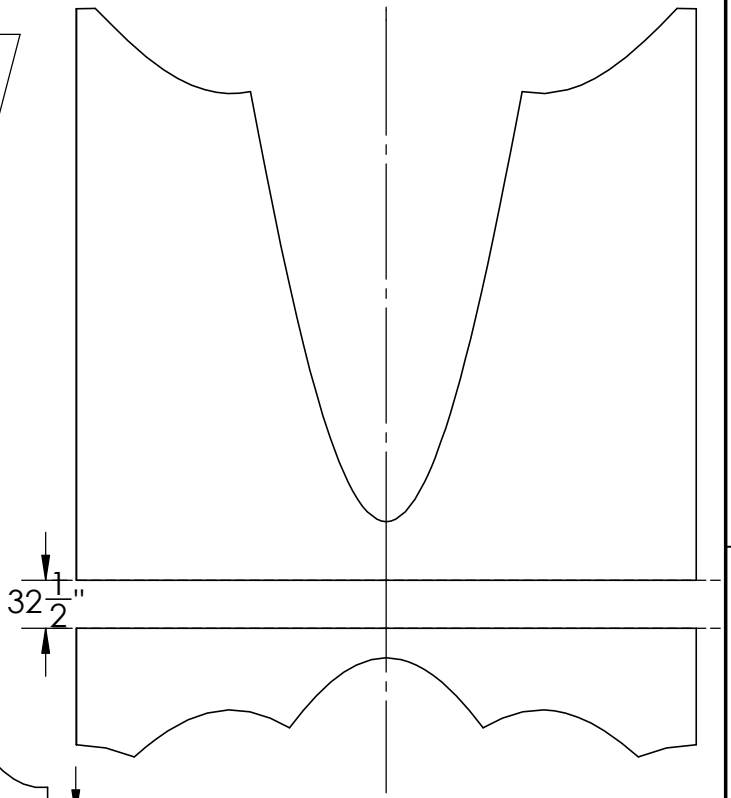




PART 19, SCALE 1 : 1



PART 18, SCALE 1 : 1



PART 17, SCALE 1 : 1

Group: Jan, Nate, Daniel

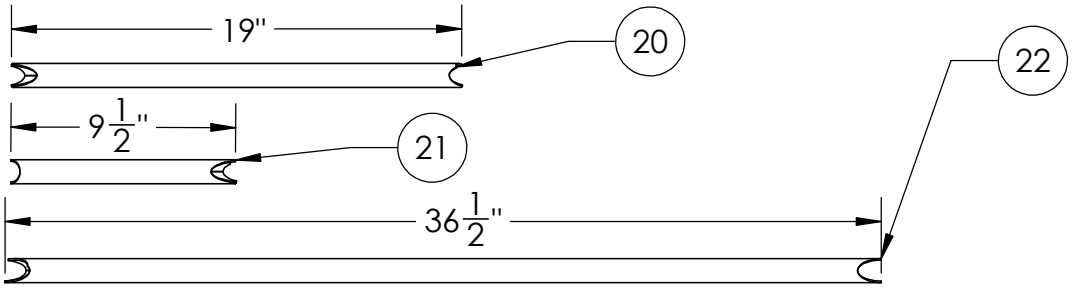
TITLE:

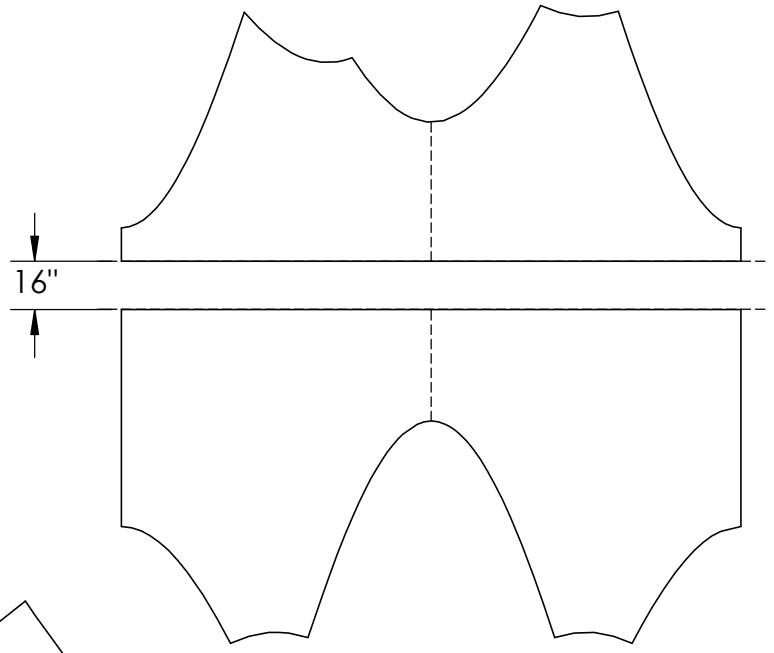
CHASSIS PARTS 17-19
DIAGONAL TUBES

SIZE	DWG. NO.	DATE:
A	12	2/14

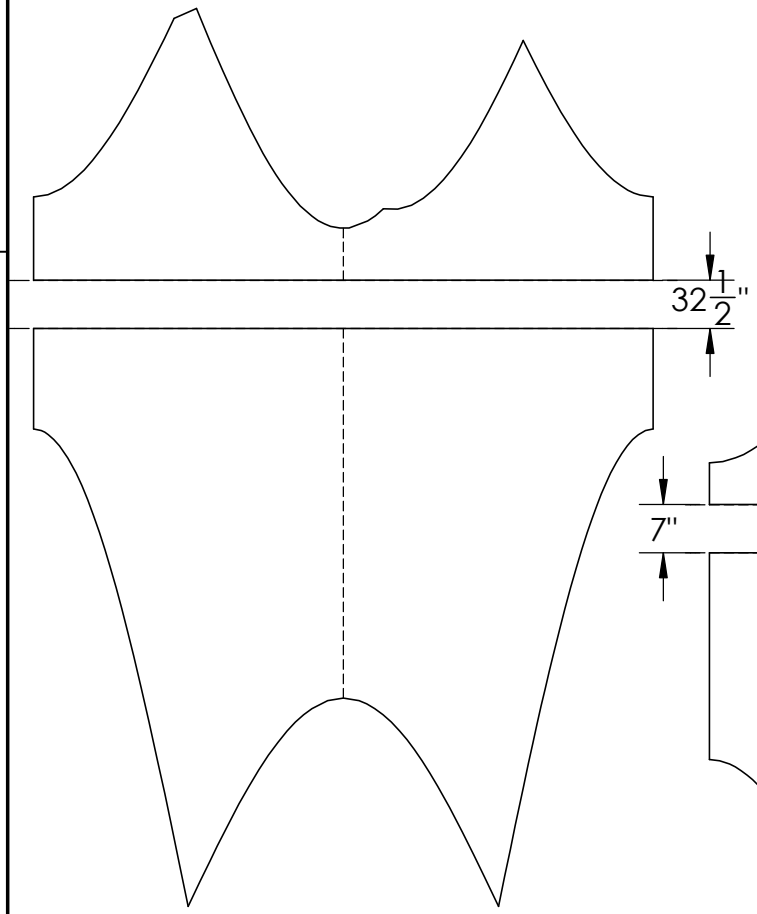
SCALE: 1:8	DRAWN BY: JS	SHEET 12 OF 15

PART NO.	QTY.	MATERIAL	CUT LENGTH	NOTES
20	2	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	19"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
21	4	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	9 1/2"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
22	1	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	36 1/2"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN

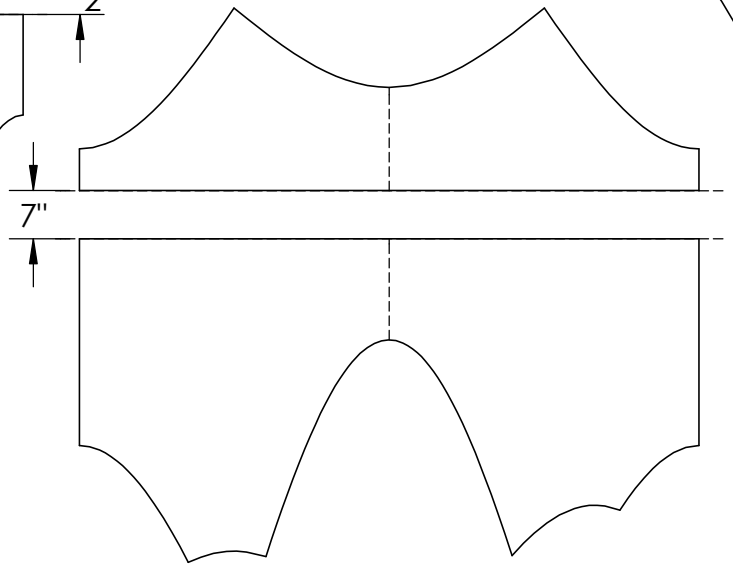




PART 20, SCALE 1 : 1



PART 22, SCALE 1 : 1



PART 21, SCALE 1 : 1

Group: Jan, Nate, Daniel

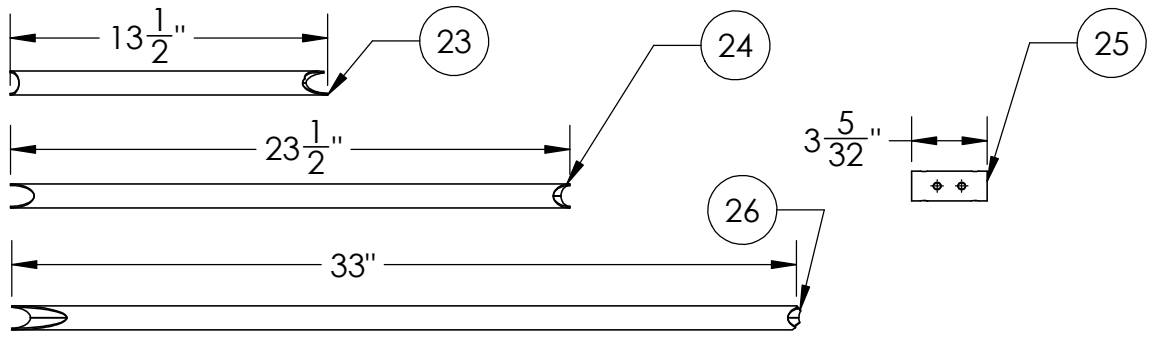
TITLE:

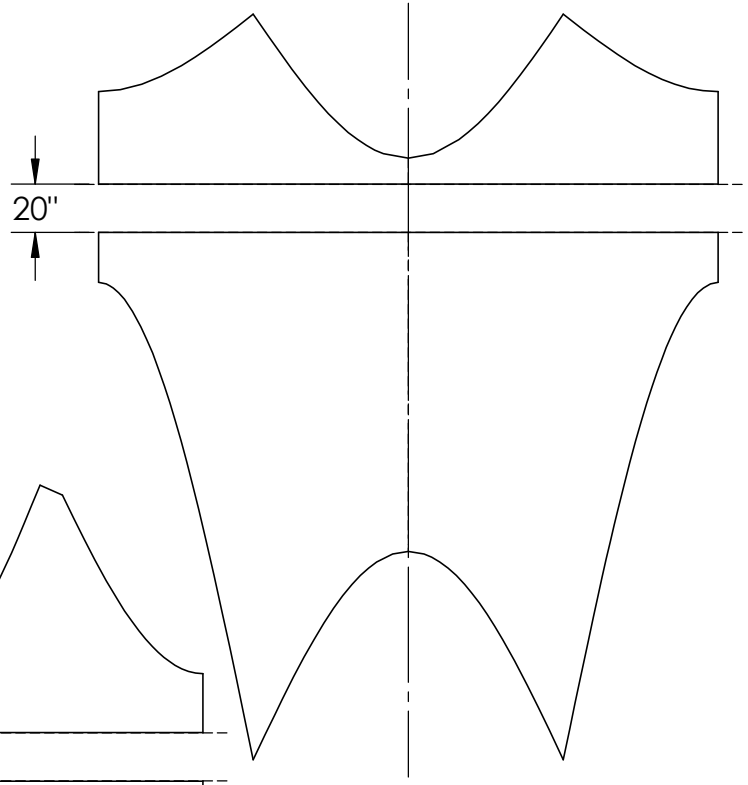
CHASSIS PARTS 20-22
CROSS BRACE TUBES

SIZE	DWG. NO.	DATE:
A	13	2/14

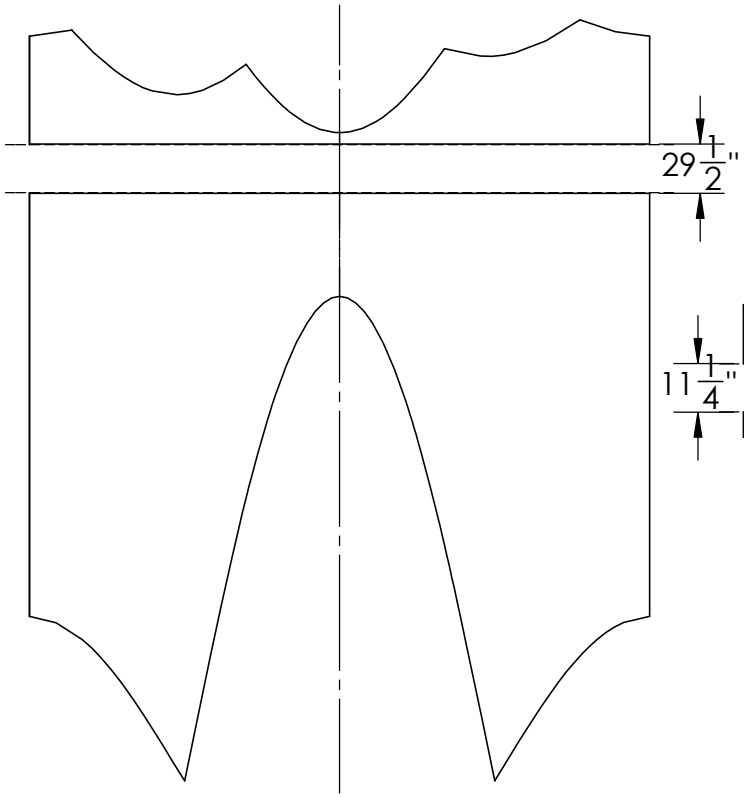
SCALE: 1:8	DRAWN BY: JS	SHEET 13 OF 15

PART NO.	QTY.	MATERIAL	CUT LENGTH	NOTES
23	1	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	13 1/2"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
24	1	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	23 1/2"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN
25	2	1.25" 1010 STEEL RD. TUBE 0.12" WALL THICKNESS	3 5/32"	TOLERANCE + 1/32", REFERENCE PART NO. 2 & 3
26	2	1" 1010 STEEL RD. TUBE 0.065" WALL THICKNESS	33"	TOLERANCE + 1/32", FOLLOW NOTCHING PATTERN

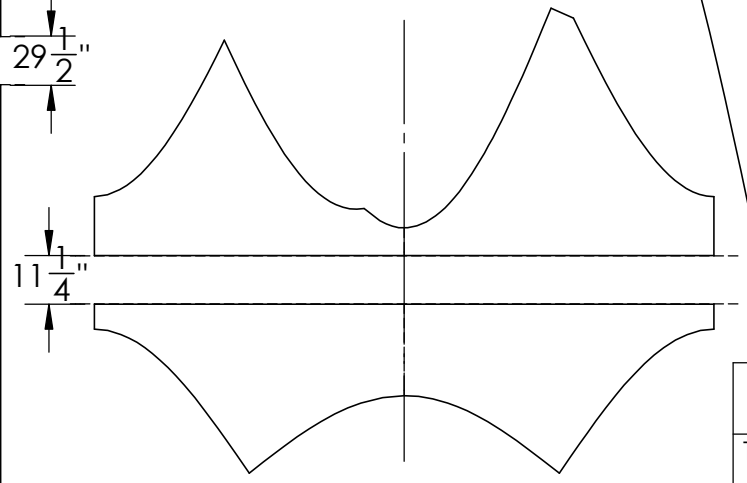




PART 24, SCALE 1 : 1



PART 26, SCALE 1 : 1



PART 23, SCALE 1 : 1

Group: Jan, Nate, Daniel

TITLE:

CHASSIS PARTS 23-26
CROSS BRACE TUBES

SIZE	DWG. NO.	DATE:
A	14	2/14

SCALE: 1:8	DRAWN BY: JS	SHEET 14 OF 15

ITEM NO.	PART NAME	QTY.	DESCRIPTION	VENDOR	COST ($)
1	IMPACT ATTENUATOR (IA)	1	12" X 14" X10" , IMPAXX 700 FOAM ABSORBS FRONT IMPACT	BSCI ENERGY IMPACT SYSTEMS	170.00
2	ANTI-INTRUSION PLATE (AIP)	1	12" X 16" x 0.06", STEEL PLATE KEEPS DEBRIS OUT, WELDED TO CHASSIS	MCMASTER-CARR	26.38
3	U-BOLTS AND NUTS	12	1" U 2 3/16" LONG BOLT, STEEL HOLDS CHASSIS ON THE JIG	MCMASTER-CAR	0.99
4	GLUE	1	HOLDS IA AND AIP TOGETHER	AMAZON	156.20
5	TUBE	1	1.25" OD 1" ID X 1FT CUT TO 2 3" TUBES TOLERANCE +/- 1/16" LOW CARBON 1010 HOT ROLLED STEEL ALLOWS THE JIG TO ROTATE	MCMASTER-CARR	7.36
6	SQUARE TUBE	8	1" X 1" X 6FT WITH 0.065 WALL THICKNESS CUT TO 4 22 9/16" TUBES, TOLERANCE +/- 1/16" LOW CARBON 1005 HOT ROLLED STEEL ELEVATES THE JIG OFF THE GROUND SO IT CAN ROTATE	MCMASTER-CARR	17.98
7	PLATE	1	6" X 18" 16GA CUT TO 4 6" X 3" PLATES TOLERANCE +/- 1/16", PLAIN STEEL ALLOWS THE SUPPORTS TO BE HELD IN PLACE BY WEIGHT	HOME DEPOT	7.98
8	ROUND TUBE A	3	1" OD 0.81" ID X 6FT LOW CARBON 1010 HOT ROLLED STEEL ALLOWS THE JIG TO ROTATE	MCMASTER-CARR	16.25
9	ROUND TUBE A 10FT	1	1" OD 0.81" ID X 10FT LOW CARBON 1010 HOT ROLLED STEEL USED FOR THE MAIN HOOP	MCMASTER-CARR	109.36
10	ROUND TUBE B	23	1" OD 0.87" ID X 6FT LOW CARBON 1010 HOT ROLLED STEEL USED FOR THE FRONT BULK HEAD AND ALL OF THE SUPPORT BRACES	MCMASTER-CARR	11.93
				TOTAL	956.14

Group: Jan, Nate, Daniel

TITLE:

BILL OF MATERIALS

SIZE	DWG. NO.	DATE:
A	15	2/14

SCALE: 1:1	DRAWN BY: JS	SHEET 15 OF 15