










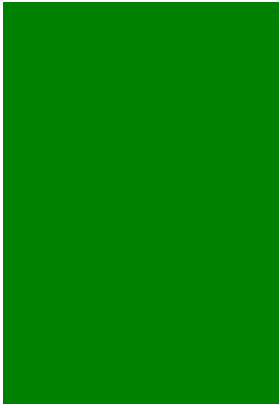
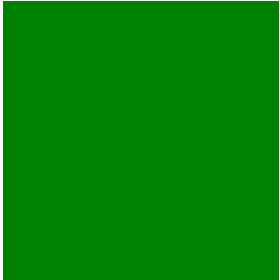
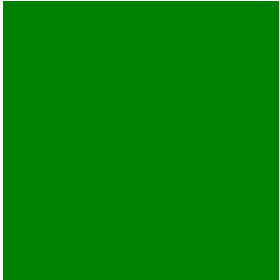
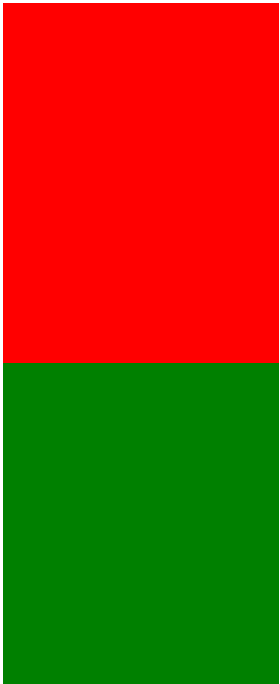
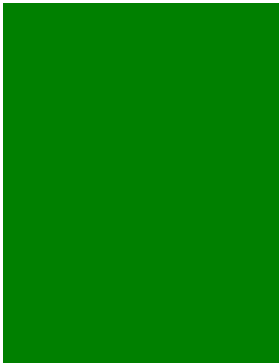


ITEM NO.	Raw Material	DESCRIPTION	QTY	Material In Shop
1	12" Long .86" Diameter Alluminum Rod	<u>Handle Bar</u> - no additional features <u>Steer rod</u> - hollowed threaded cylindrical cut	1	
2	19" Long 1-1/2" Diameter Alluminum Rod	1" diameter 6" deep up throgh the bottom of the rod. Hole .86" diameter through the side of the rod near the top	1	
3		<u>Bike Steering Mechanism</u> (Made) <u>Front Axle</u> - middle section kept .63"diameter	1	
4	6" long .63" Diameter Alluminum Rod	3.2" long, from the mid section to each end the axle will have .39" diameter sections that are threaded	1	
5		<u>Pipe Frame</u> (Made) <u>Movement Blocker</u> - 1/8" thick, 4 through holes total, two of them are 1.315" diameter	1	
6	1/4" Thick 4" x 14" Alluminum Plate	12.25" apart and the other two are centered near the middle of the plate face and are 1.5" in diameter and 1.75" apart	1	
7	1/4" Thick 16" x 32" Alluminum Plate	<u>Floor Plate</u> - rectangular through hole at the back middle of the plate 6" x 8"	1	
8	1/2" Thick 5" x 3" Alluminum Plate	<u>Back Axle Holder (Gearside)</u> - 1.315" through hole on the top middle of the back face of the holder and .39" diameter through hole threaded near the bottom of the skinny face	1	
9	16" long .63" Diameter Alluminum Rod	<u>Back Axle</u> - mid section .63" and 3.2" long smooth, then from that mid section to each end .39" diameter and threaded	1	
10	6 X 1/8" Thick Alluminnum Plates	<u>Battery Box</u> -	1	

11	1.5" Thick 2" x 9" Alluminum Block	<u>Folding Mechanism Top</u> - 3" x 1" block of alluminum with two 1" by 3.5" prongs with .5" bolt holes(2 each) attached to a rod 1" diameter 4" long with a through hole .75" in diameter, end of rod cut at 45 degree angle	1	
12		<u>Front Wheel (Made)</u>	1	
13	1/2" Thick 6" x 4.15" Alluminum Plate	<u>Back Axle Holder (Breakside)</u> - has a through hole 1.315" diameter at the top right and a threaded hole through the skinny side .39" diameter	1	
14	1" Thick 6" x 3.5" Alluminum Plate	<u>Folding Mechanism Bottom</u> - 1" diameter rod with a through hole through the bottom .75" diameter with a semicircular block at the top with three through holes .5" diameter that are 1.5" apart, end of rod cut at 45 degree angle	1	
15		<u>Back Wheel (Made)</u>	1	
16	2.1" Thick 4.5" Diameter Alluminum Cylinder	<u>Wheel Hub Gearside</u> - 4.5" diameter cylinder of alluminum 1.6" thick with a semicircular cut revolved around the sides to allow the wheel to fit around it, with a .63" diameter hole through the center and 8 other .25" threaded holes for bolts on the on the larger surface.	1	

17	2.2" Thick 4.5" Diameter Alluminum Cylinder	<p><u>Wheel Hub Breakside</u> - 4.5" diameter cylinder of alluminum 1.6" thick with a semicircular cut revolved around the sides to allow the wheel to fit around it, with a .63" diameter hole through the center, has a jut out 1.95" diameter extrusion with 5 screw holes in it for the break disk and 4 other .25" threaded holes for bolts on the on the larger surface.</p> <p><u>Break Mount</u> - elbow style joint with 2 plate surfaces 3" x 1", one of those plates has two .25" holes for bolts to attach to the breakside back axle holer and the other has two .75" long jut out cylinders that are .5" diameter with .38" threaded holes through the middle to mount break caliper on.</p>	1	
18	1" Thick 1.75" x 3"		1	
19		Caliper (Made)	1	
20		Break Disk (Made)	1	
21		Gear (Made)	1	
22	1/2" Thick 3" x 3" Plate of Alluminum	<p><u>Under Support</u> - 3" diameter semi circle cylinder with 1.315" diameter hole cut in a semicircle in the top center with a cut .5" away from the bottom that goes .34"" into the 3" diameter alluminum semi circle cylinder that is revolved around the center point of the 3" diameter circle and stops .5" away from the end. It has holes on the side</p>	9	
23		Motor (Made)	1	

Manufacturing Plan

Lathe will be used if alluminum raw material provided is thicker than .86"

Lathe will be used to create a hole penetrating up through the bottom of the rod that is threaded and if the alluminum raw material

Lathe will be used to make fabricate the correct diameter thicknesses and threading of the alluminum rod at the proper distances

Water Jet will be used for the four holes in the plate at the appropriate diameters and distances as per the part drawing on solidworks

Water Jet will be used for the one rectangular hole at the back middle of plate as per drawing on solid works

Water Jet will be used to cut the shape and top hole of the part and CNC or Drill will be used to make the axle hole that is threaded

Lathe will be used to make fabricate the correct diameter thicknesses and threading of the alluminum rod at the proper distances

Water Jet will be used to cut the shape of the box and the metal sheet bender will be used if nessesary to overlap metal sheets to make

CNC

Water Jet will be used to cut the shape and top hole of the part and CNC or Drill will be used to make the axle hole that is threaded.

CNC

Lathe will be used to create proper thicknesses of the aluminum cylinder and axle hole. And Mill will be used to make gear connection.

Lathe will be used to create proper thicknesses of the aluminum cylinder and axle hole. And Mill will be used to make break connections.

Lathe will be used to make the cylindrical juts and Mill will be used to make the aluminum plates according to SolidWorks dimensions.

CNC machine will be used to cut the shape and thickness of all 9 parts out of an aluminum block and to make the holes in them.

Phase

4

3

2

1

1

2

2

4

3

2

3

2

2

3

1