

**Four Lane Track**  
 Drawn by: Al Sequeira

MUST NOT  
 HAVE GRAIN

Track consists of 4 sections of approx. 8' each with an extra 4' at the end to catch the cars. The sides are made of 3/4" plywood; Note that the bottom sections are 2" high. The roadway is made of (1/4" hard board or tempered masonite) cut to 15" wide strips. The rails or runners are made of 1/4"x1 5/8" wood strips slightly rounded so cars can run down the track more smoothly. All wood is nailed and glued together except rails are screwed down at the floor stiffeners. The sections attach together via the pegged wooden ends attached to each section end. Make sure that the pegged ends are drilled together and sanded on the top side to insure that when the masonite is attached it will fit to the next section with no drop or step up. Glue the pegs to one section and allow the pegs to slide into its mating section.

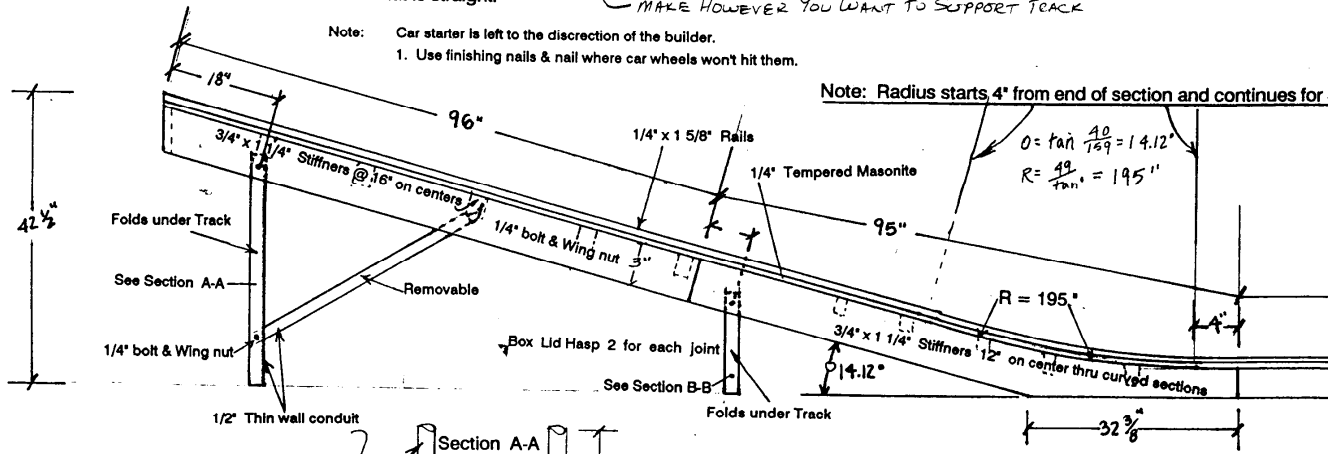
MOUNTED  
 ON THE  
 OUTSIDE

The sections are held with box lid type hasps. The stands that hold up the 2 inclined sections are made of (1/2" thin wall conduit) cut and welded together. When dismantled they fold underneath their corresponding section for storage. All ends must be cut square to insure a track that is straight.

MAKE HOWEVER YOU WANT TO SUPPORT TRACK

Note: Car starter is left to the discretion of the builder.  
 1. Use finishing nails & nail where car wheels won't hit them.

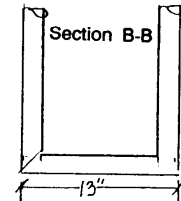
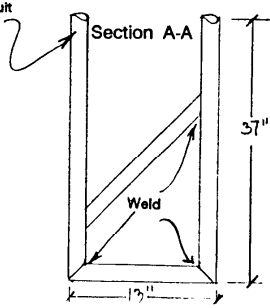
Note: Radius starts 4" from end of section and continues for



$$\theta = \tan^{-1} \frac{40}{169} = 14.12^\circ$$

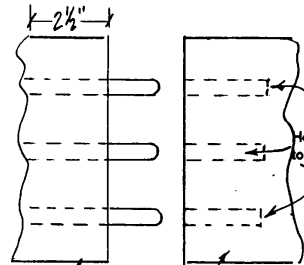
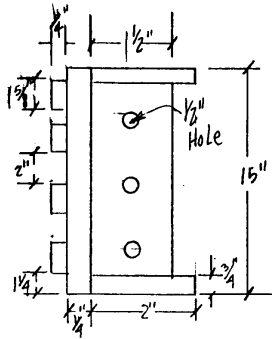
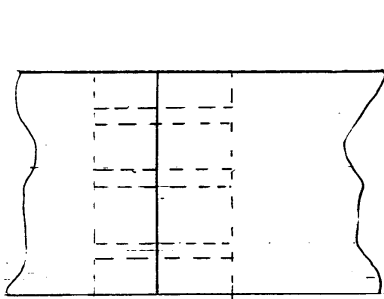
$$R = \frac{49}{\tan \theta} = 195"$$

1/2" Thin wall conduit



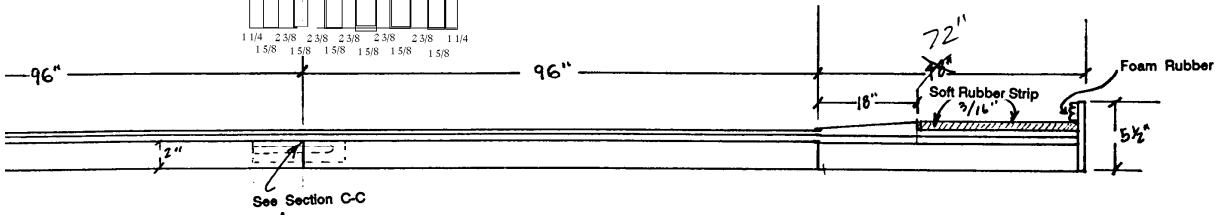
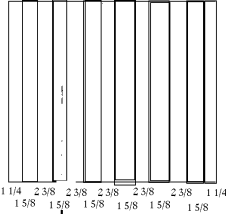
PART 1

SECTION C-C



Both pcs. are drilled together then insert 1/2" dowels on one piece and glue. Leave approx. 1" protruding so it will insert in mating piece. After mating both pieces sand top side so it will be smooth for the top 1/4" board.

6 Lane Measurements on 24" Wide Track



(20)

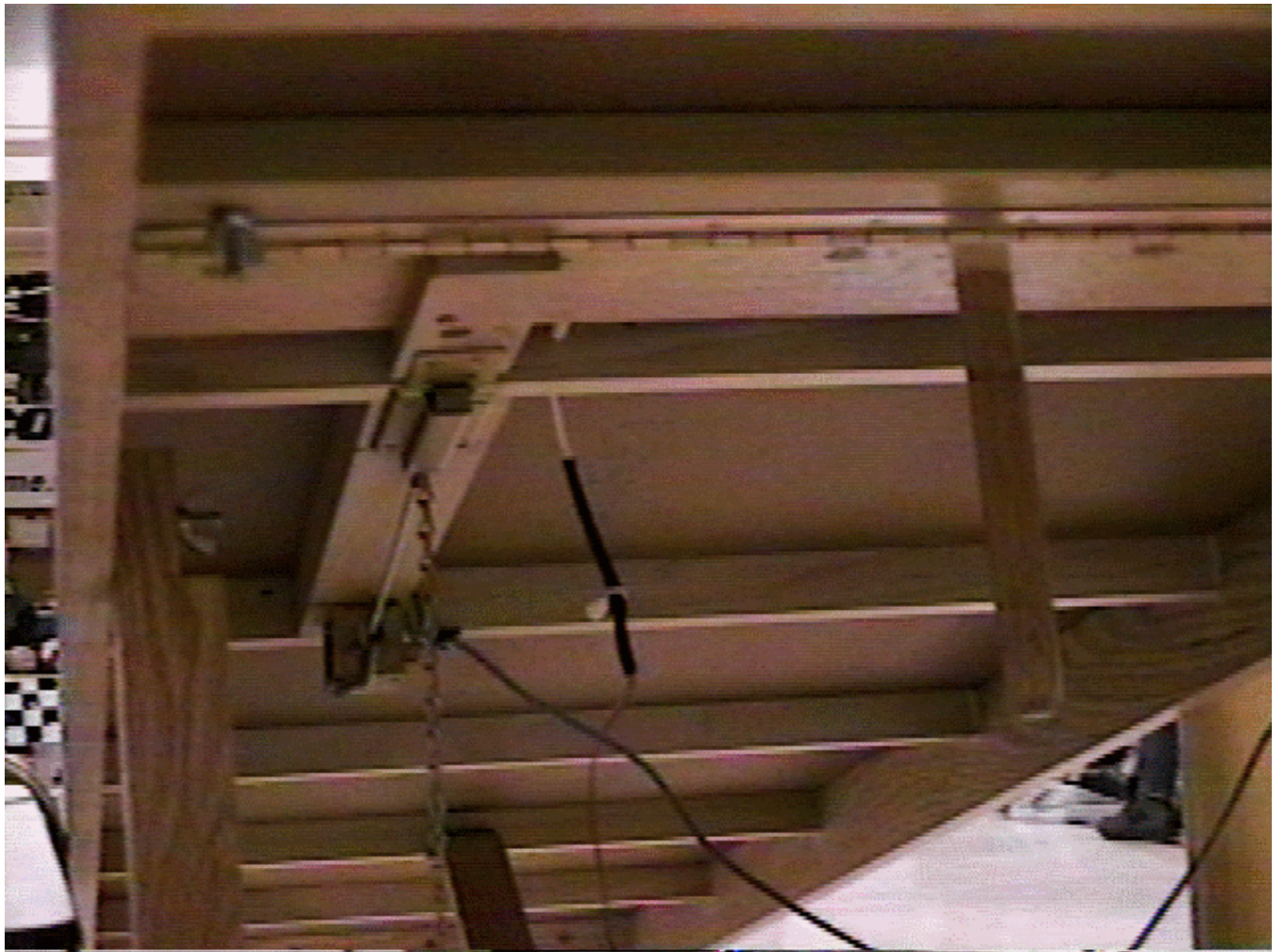
No. Calif./ Nev. District \_\_\_\_\_  
 ROYAL RANGERS  
 R. MARIOTT - 1990 - SEP. \_\_\_\_\_

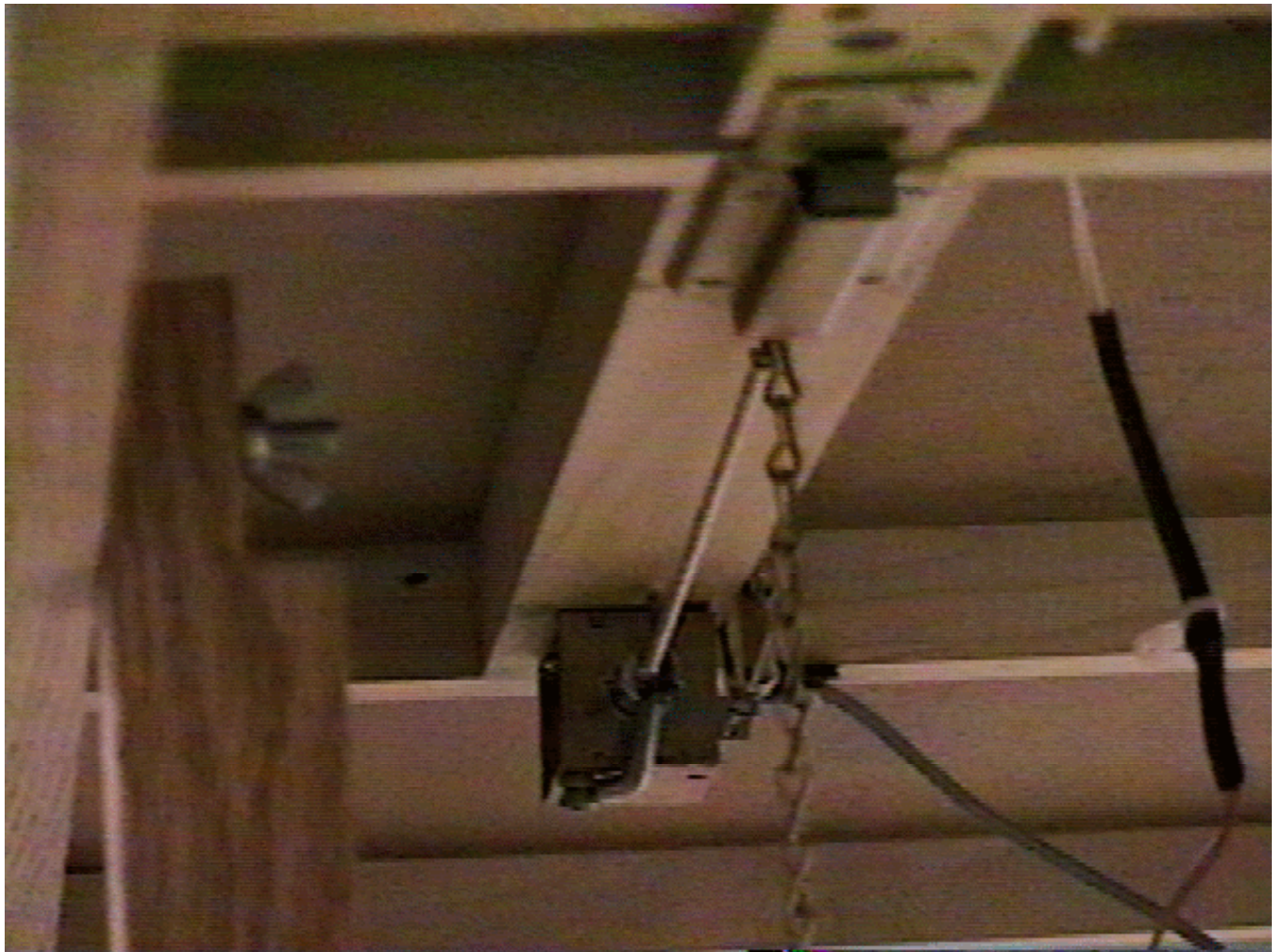
PART 2



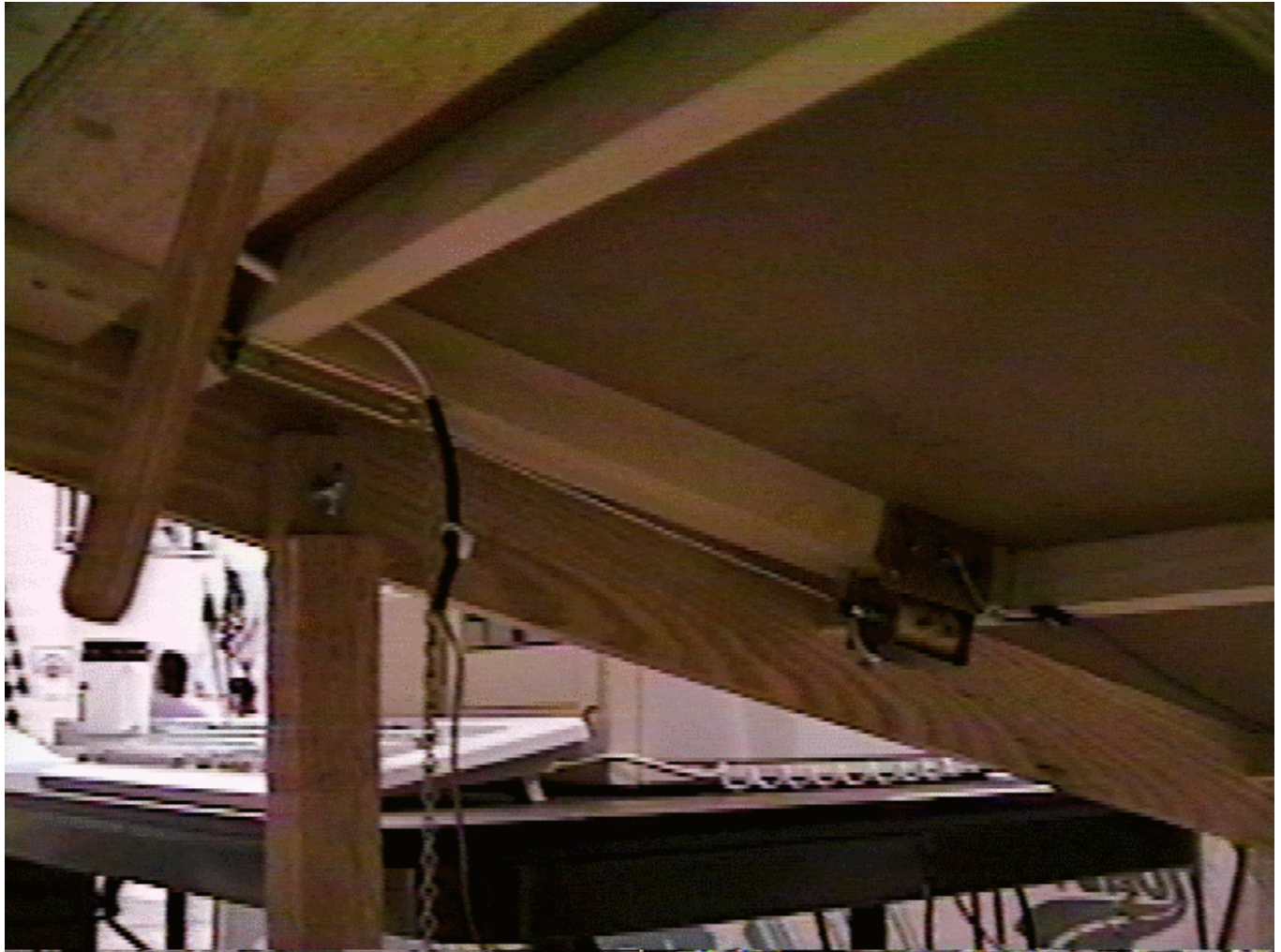












Hi! I hope you can use these plans to build your own track.

If you have any questions hollar.

Mark Jones

2502 S. 14th Street

Ozark, MO 65721

[mjonesranger@juno.com](mailto:mjonesranger@juno.com)

[mjones02@classicnet.net](mailto:mjones02@classicnet.net)

<http://home.classicnet.net/mjones02/index.html>

NOTE\* The following cut list is for the track we built.

It is a 6 lane track with the computer timer. If you want a ton of info do a search for Pinewood Derby on the Internet.

We are using the Super Timer II Software from. <http://supertimer.com>

This program figures all the heats and shows the top speeds. It is a great program.

**The 6 lane track looks nice and is very stable. However in practical use....If I had it all to do over again I would build a 4 lane track and put in more cross braces 1 foot apart to support the lane runners. These are called Stiffeners. (Bump this number up)**

**I would also add a bumper board 1/4" Thick along the top edge of the track to keep the edge from getting dents in it while being transported or in storage.**

**I have since added a staging light. It is basically a series of relays that pass the 24volts to activate the start gate solenoid shown in one of the pictures.**

C U T S H E E T for 6 Lane Track.

6 Lane Pinewood Derby Track ( I would recommend a 4 Lane Track and Timer System)

# of Pieces: Order this: Actual Size per part: Description:

=====

- 21 (40' of 3/4 x 1 1/4) (3/4 x 1 1/4 x 22.5) Stiffeners
- 10 (19' of 3/4 x 1 1/2) (3/4 x 1 1/2 x 22.5) Dowel End Block
- 4 (36' of 1/4 x 24") (1/4 x 24" x 8'(1-4')) White Masonite Track
- 4 (32' of 3/4" x 3 1/2") (3/4 x 3" x 8') Upper Side Rails
- 4 (40' of 3/4" x 2") (3/4 x 2" x 8'(1-4')) Lower Side Rails
- 1 (24" of 3/4 x 5 1/2") (3/4 x 5 1/2" x 24") Lower End Cap
- 1 (24" of 3/4 x 3 1/2") (3/4 x 3 1/2" x 24") Top End Cap
- 1 Red Cabinet Top Face 1 5/8 x 36' Long Track 1
- 1 Wht Cabinet Top Face 1 5/8 x 36' Long Track 2
- 1 Blu Cabinet Top Face 1 5/8 x 36' Long Track 3
- 1 Grn Cabinet Top Face 1 5/8 x 36' Long Track 4
- 1 Gry Cabinet Top Face 1 5/8 x 36' Long Track 5



1 Blk Cabinet Top Face 1 5/8 x 36' Long Track 6  
 6 216' of 1/8" x 1 5/8 Track Under Face For Tracks 1-6  
 200 Brass Screws Countersunk 1" Long For Tracks 1-6  
 16 8' of 1/2' Dowel Rod (1/2" by 5") Dowels  
 8 Brass Box Lid Hasp Holds Together  
 8 Brass 1/4 x 2" Wing Nut and Bolt For Legs  
 2 14' of 1.5"x1.5" (2-37") (2-22 1/2") (2-20") Leg Material  
 2 (8' of 3/4 x 1.5' x 48") (2 - 48") Leg Angle Support  
 6 10' of 3/4 stock for break taper (18"long) Taper Stop at end  
 1 Foam Rubber Stop Pad 3/4"x 24" x 30" Soft Rubber Strip  
 1 Foam Rubber End Pad 3/4" x 2" by 24" End Stop Pad  
 1 Brass Piano Hinge 24" Long Car Start Assembly  
 1 3/4" x 3 1/2" x 24" Hinge Board Car Start Assembly  
 1 12" of 3/4" Dowel for Handle Car Start Assembly  
 6 4' of 1/2" Dowel(1/2 "x 6" cut 24) (6-Lanes) Car Start Assembly

**S H O P P I N G L I S T**

(Formula: Feet of Stock x 12 x Inches wide \ 144 = Board Feet)

**PRICE QTY. Board Ft Description**

=====

\_\_\_\_\_ 3 1/4 4x8 Hardend White Masonite Base Track  
 \_\_\_\_\_ 14' of 1/2 Hardwood Dowel Start assembly and Joints  
 \_\_\_\_\_ 1' of 3/4 Hardwood Dowel Handle  
 4 Stiffeners  
 3 Dowel End Block  
 10 Upper Side Rails  
 7 Lower Side Rails  
 1 Lower End Cap  
 1 Top End Cap  
 16 Track Under Face For Tracks 1-6  
 5 Leg Material 2x2  
 1 Leg Angle Support  
 2 Taper Stop at end  
 1 Car Start Assembly

=====

\_\_\_\_\_ 50 board Ft. of Wood

1 Blue Cabinet Top Face 1 5/8 x 36' Long Track 1  
1 Orange Cabinet Top Face 1 5/8 x 36' Long Track 2  
1 Green Cabinet Top Face 1 5/8 x 36' Long Track 3  
1 Brown Cabinet Top Face 1 5/8 x 36' Long Track 4  
1 Slate Cabinet Top Face 1 5/8 x 36' Long Track 5  
1 Red Cabinet Top Face 1 5/8 x 36' Long Track 6

\_\_\_\_\_

\_\_\_\_\_ 8 Brass Box Lid Hasps

\_\_\_\_\_ 200 Brass 1' Counter Sink Screws

\_\_\_\_\_ 8 Brass Wing Nut and Bolt

\_\_\_\_\_ 1 Brass Piano Hinge 24" Long

\_\_\_\_\_ 1 Foam Rubber Pad 3/4 x 2" by 24" Rubber Strip

\_\_\_\_\_ 1 Foam Rubber Pad 3/4 x 2" by 24" Stop Pad

\_\_\_\_\_ STAIN AND FINISH

=====

\_\_\_\_\_ Total Price of Track and Hardware and Finish!