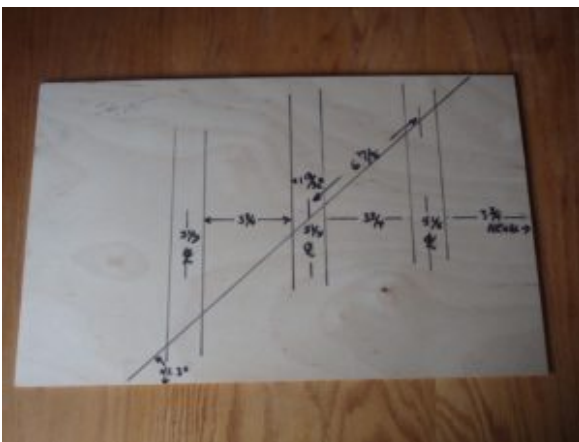


Stair Construction: Determining Run and Baluster Construction

This week I went back to work to finish the stairs. I found out I'm really not good at basic math anymore... Well, at least in determining the as-built run for a set of stairs. Getting the run was the hardest part, what with a double top newel, crooked walls, molding interfering with measurement on the newels, base and quarter round molding at the bottom of the wall, eventually after three tries I finally came to the conclusion that making a full size template would get me close. So, after guesstimating the actual run to be approximately eight feet, I ran my Excel spreadsheet for baluster calcs, and grabbed a piece of plywood and did this layout.



baluster template

With the layout now figured out, I did a preliminary assembly of the top and bottom plates of the balustrade with a few pieces of baluster, dragged it into the house, and found that I was about $3/16$ " out of level with the marks on the top and bottom plate. Oh, just for reference, each of these plates is fully bullnose both sides, so transferring a mark with a square and level is just a best guess at being close. So, it

was back out to the assembly table, pull it apart and refit the balusters. That got us to this point (below) today. I nailed the balusters in place with the finish nailer to hold the assembly together and bring it into the actual location position for final adjustment. The balustrade is temporarily clamped in position on top of the stair skirt so that I can get screws thru the top plate for a permanent connection to the balusters. Once that's done, the assembly will be removed, the bottom plate screwed to the balusters, and the whole thing painted before being re-installed and the hand rail attached.

Here is what happens when there is a short landing at the top of a flight of stairs with an exposed outside stringer. The sleeve on this newel is clamp up to allow the skirt installation. It will slide down over the skirt, and matches the elevation of the loft wall end newel. The two newels are 6" apart. Humbug to fit in one baluster and a chunk of rail!

We stained the treads some time ago, but the color was way too light to match up with our flooring. I made a stain mix of traditional cherry and red mahogany to get us into the range. I sanded the treads down with 220 grit, and used a staining pad to get the stain well distributed. I did 3-4 treads at a time and wiped down with Viva paper towels to get off the excess. After an hour or so, I went over all of the treads again with a nice white rag to clean off all of the excess so that I can poly.