Class will work in groups as we did in drywall. Stair landings and stringers will need to be built before we can install the finish rails and balusters.

Two groups will combine efforts to frame one stair landing. Each group will then calculate, layout and cut 3 stair stringers with runs of 10" and the calculated rise (max 7") to be installed on opposing sides of the landing.

The landing will be **42" wide and 36" deep.** Use **2 x 6 as floor joist @ 24" O/C,** supported by **2 x 4 walls.** Use **3/4" particle board for the subfloor.** The landings will be attached to the outside of one of the workstation modules. Try to keep a **safe working distance** between group projects. **Landing height 50"** from concrete floor to the top of the 3/4” subfloor.

**Make your framing dimensions accurate and your landing plumb and level!**

**Each student should calculate the stair rise & run** for their groups landing. Each group will split then layout and cut a practice stringer from a 11 1/2" wide x 1/2" x 8’ rip of particleboard. **Try both of the test patterns.** Select the one that fits best and use it as a pattern for marking the 2 x 12’ stringers for your project. If both patterns don’t fit try it again until you get it right.

Each group will cut and assemble two of the most common stair rail systems. The first stair system will be the **Open with Treadcap**

Open Treadcap

The open side stair run will have the balusters supported by a tread cap on each step. Newel posts will be installed at the top and bottom of the run with balusters evenly spaced to meet code.

**Closed Knee wall**

After the open system is completed you will remove the portion necessary to build a rake knee wall rough framed at 4” vertical above the riser / tread corner of the stringer. Apply 1/2” sheetrock strip ( 6” to 8” wide) to the knee wall (both sides). You should be able to reuse the handrail and balusters.

To save on cost we will use 4x4 doug fir for our newel posts. Each group will get one 10’ post to cut for the top and bottom newel. Make sure of your calculations before you cut.