

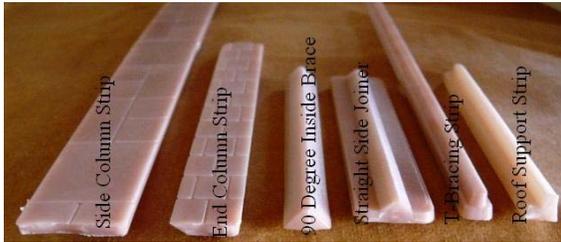
COLORADO MODEL STRUCTURES

Build-A-Building Assembly Basics

PLEASE READ BEFORE BEGINNING

Tools and supplies required are a razor knife, file, scissors, tweezers, 18" square and long straight edge, painters tape and a glue suitable for hi-impact styrene. Flat back clippers, sand paper, and other model project tools are helpful. As with any Colorado Model Structure Kit, the presence of those under 18 years of age during construction is strongly discouraged. The Build-A-Building Concept starts with a base of your choosing and uses our products in a logical order to build any of an almost infinite number of projects to complement your indoor or outdoor Garden Railroad. A color copy of this sheet can be downloaded from our website.

As it is strongly recommended that designs wider than 20" be built with our Expander Wall in 20" wide segments and joined after all segments are complete, this basic guide covers only projects up to 20" in width(may be as deep as desired). If you plan on gluing the roof sections in place all windows and doors should be painted and glued in place prior to proceeding to the following steps. Assembly begins with your selection of a solid, non flexible base such as plywood, particle board, concrete backer board, or other product suitable to your layout and area of the country. The base needs to be large enough to accommodate the entire project with minimal distortion. As the project needs to be attached to the base just prior to completion to provide additional structural integrity, the outline of the project should be sketched on the base. Be sure to plan to either recess any track below the bottom of the Engine House door or plan on cutting off the door bottom to accommodate the rail height. Painting may be done either before assembly begins or after completion. The individual sides of the project should be assembled before any corners are joined. Start with one side of the project lay the component pieces detail side down with the angle on each side of the component just touching. Use as long a straight edge as possible to keep the bottom of the components in line and glue two of the straight wall joiners in place (see drawings (below)). Either two or three hinges may be used per engine door, but extreme care must be exercised to align them or they will bind.

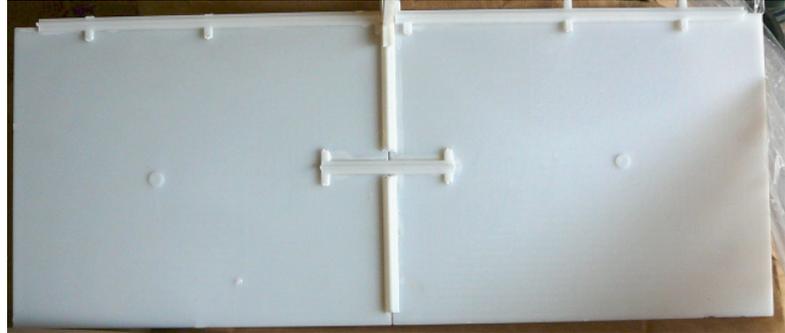


Keep the straight edge in place and repeat for all components on that side. Repeat for the rest of the project sides. When the glue is almost completely set stand the side up on the base and make sure all the components are flush against the base and the individual components touch without gap or overlap. 3M painters tape may be used to hold any joints that need to be held in place. Let the glue dry for 24 hours. Use the long straight edge and mark a line $\frac{1}{2}$ " down from the top of the build across the entire width of each project side. Then glue the roof supports strips in place with the top of the strip at the bottom of the mark. Leave a small gap toward each corner. The corners may then be joined by carefully aligning two adjoining sides with the marking on your base board or using the square and taping across the outside corner in several places with painters tape. When the alignment is good, glue two 90 degree inside braces on the inside corner leaving the tape in place until the glue completely sets. Repeat for the other corners. When the glue is set on all joints(preferably after 24 hours), set the project on the base aligning with your original markings. The project should then be permanently attached to the base. One method is to use strips of quarter round and bond with a silicone adhesive to both the base and the project. When the adhesive is set, you can begin with the roof sections.



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Roof sections are designed to be used with both the 10" wide project or the 20" wide project. One roof section will span a 10" wide project. The roof section width will need to be trimmed slightly. Measure carefully and cut the small excess off with a saw or router with a guide to ensure a straight cut. Glue one of the T-strips to the long edge of the roof section with half of the width sticking out beyond the edge of the roof(see above(shows strip on long & short edge), taking care to trim the T-strip to fit inside the roof support strips when set in the project. Glue that section in place on the roof support strips already mounted on the side walls at the front of the project with the T-strip overlap toward the back facing down. Trim the width of a second piece of roof and glue a T-strip in place behind the first. Glue this piece in place on of the overlap of the first piece and the roof supports. Repeat until all but the last piece is in place. The last piece will need both its' length and width trimmed to fit, but will not need a T-Strip glued to it. Glue in place to complete the project. It will take two roof sections to span a 20" wide project but the width should not need trimming unless the project width is modified in some way. Lay two sections of the roof on a flat surface with the rough side facing up and the short sides touching (as shown above with T-strips attached). Aligning one side of the two roof sections with a straight edge, glue one of the short T-strips over the joint where the two roof sections touch. Glue one of the long T-strips to one edge of each long sections, with half of the width sticking out beyond the edge of the roof(see above). Take care to ensure that T-strips do not interfere with the roof support strips when the section is set in the project. Let dry. Take two support column pieces and glue them together so that the middle of the cross pieces form a "U"(above right). Let dry. Glue the support column to the T-strip of the roof as shown below and let dry. Carefully set the roof assembly in place and adjust the length of the roof column so that the end rests on the base. Glue the column support base to the bottom of the column so that it rest snugly against the base and then glue the roof section and the column support base in place. Repeat until all but the last sections are place. The last sections will need the length and width trimmed to fit, but will not need the long T-Strips or support column base glued to it. Glue the last sections in place. The inside of a completed project is shown below with one roof segment open. NOTE: If access to the inside of the project is desired, one or more roof sections may be set in place without gluing, but lateral support should be provided to ensure project integrity.

