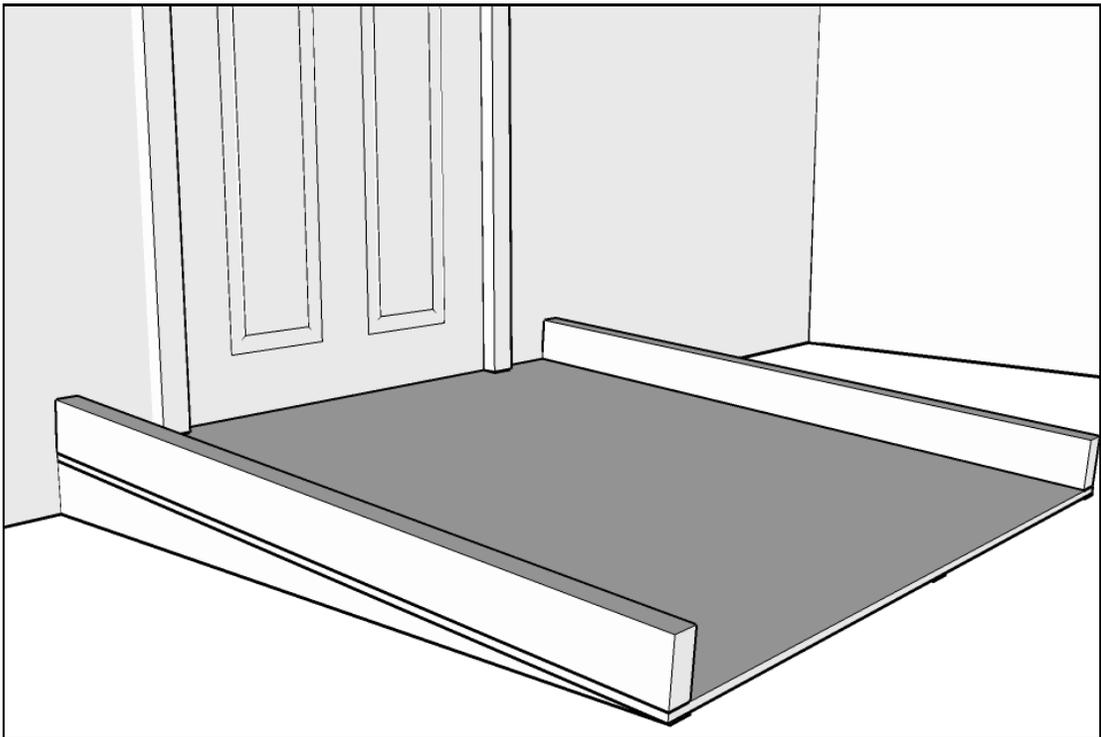


CCC Project Manual

WEDGE RAMPS



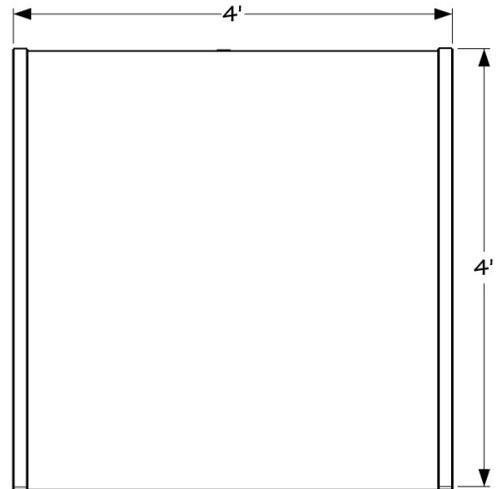
Project Components & How-To's

Wedge Ramps

Wedge Ramp Components

- Dimensions

- ☞ Length: Make wedge ramps 4' long (half sheet of plywood) when possible. Any shorter and the ramp may be too steep. Any longer and you may want to consider building a regular wheelchair ramp.
- ☞ Width: Ramp width should be no less than 4'. This will allow plenty of space for a wheelchair.
- ☞ Height: The height of the wedge ramp is determined by the distance between the porch to the bottom of the door. The height of finish surface of the wedge ramp cannot exceed the level of the bottom of the door.



- Joists

- ☞ Use treated 2x4s. Three joists are required for a wedge ramp: 2 on the sides, 1 in the middle.
- ☞ Joists MUST be anchored to the porch or whatever surface the ramp is resting on.
- ☞ If the door is so high from the porch that 2x4s will not work, you may need to consider building a full-size wheelchair ramp.

- Decking

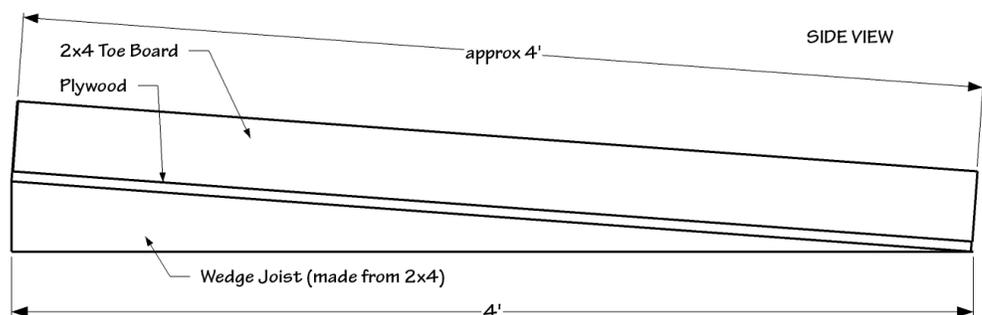
- ☞ Use TREATED plywood. At least 1/2" thick.
- ☞ Plywood usually has a smooth side and a slightly rougher side. Attach rough-side-down.
- ☞ Attach plywood to joists with 8d nails.
- ☞ Do NOT use OSB or particle board, as this kind of paneling won't last long!

- Anchors

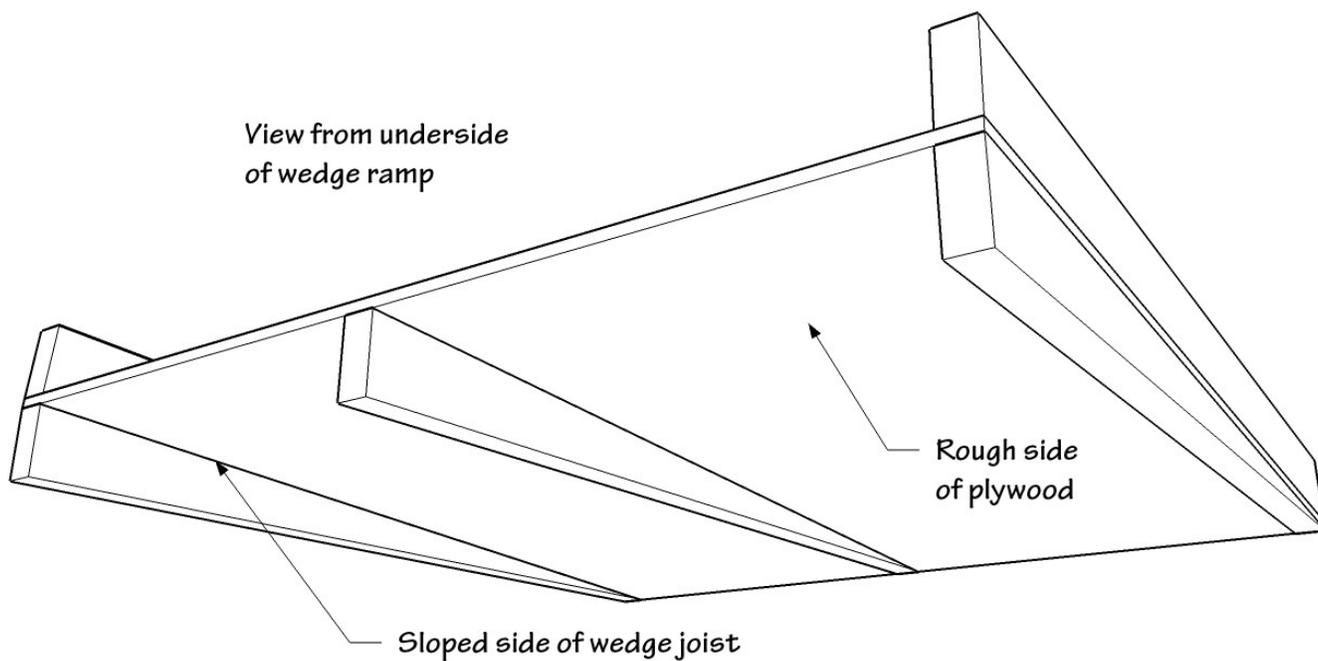
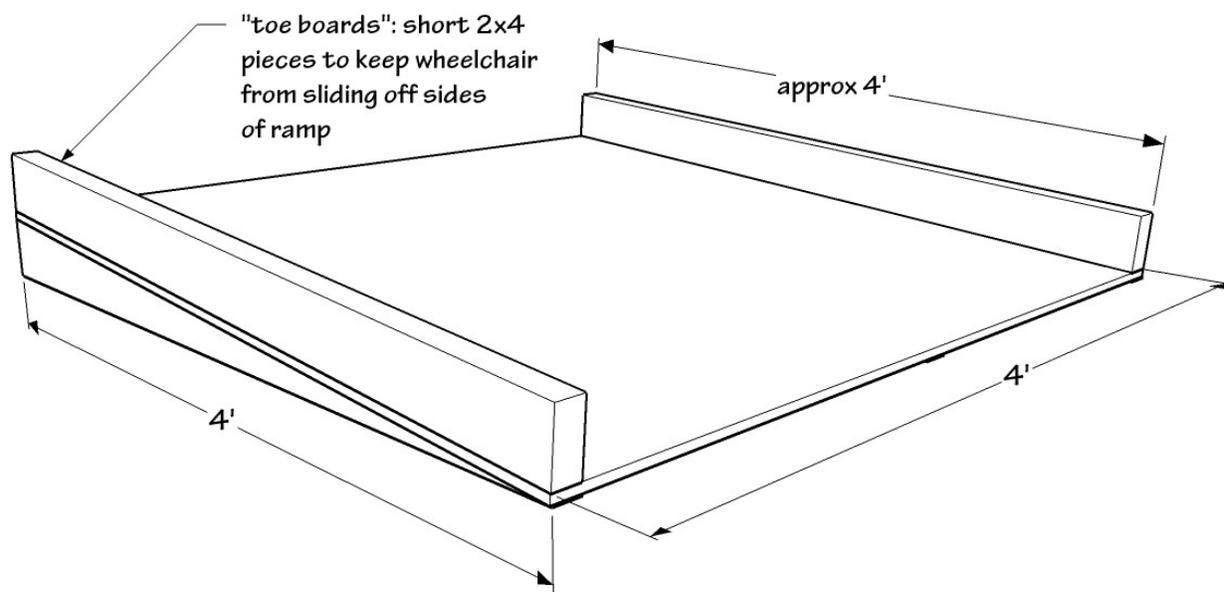
- ☞ A wedge ramp MUST ALWAYS be anchored! If the homeowner wants a wedge ramp that can be mobile, help them understand that an unanchored ramp will can shift easily.
- ☞ For a wood porch, use 16d nails or decking screws to anchor wedge ramp joists to the porch.
- ☞ For concrete surfaces, use Tapcons, hex head, 1/4" diameter, 2 1/2 to 4" long. Use a 3/16" masonry bit to drill a pilot hole. Use a 3/8" countersink drill bit so that the hex head can be countersunk. Another option for concrete surfaces is to use Liquid Nails, exterior grade. Clean and dry surface thoroughly first, apply Liquid Nails, and set the ramp down gently.
- ☞ For asphalt surfaces, use decking screws or Tapcons, but don't drill a pilot hole first. Or use liquid nails.

- Toe Boards

- ☞ 48" long 2x4s attached at the outer edges of the ramp to keep the wheelchair from rolling off.
- ☞ Make sure that toe boards will not interfere with the door opening and closing.



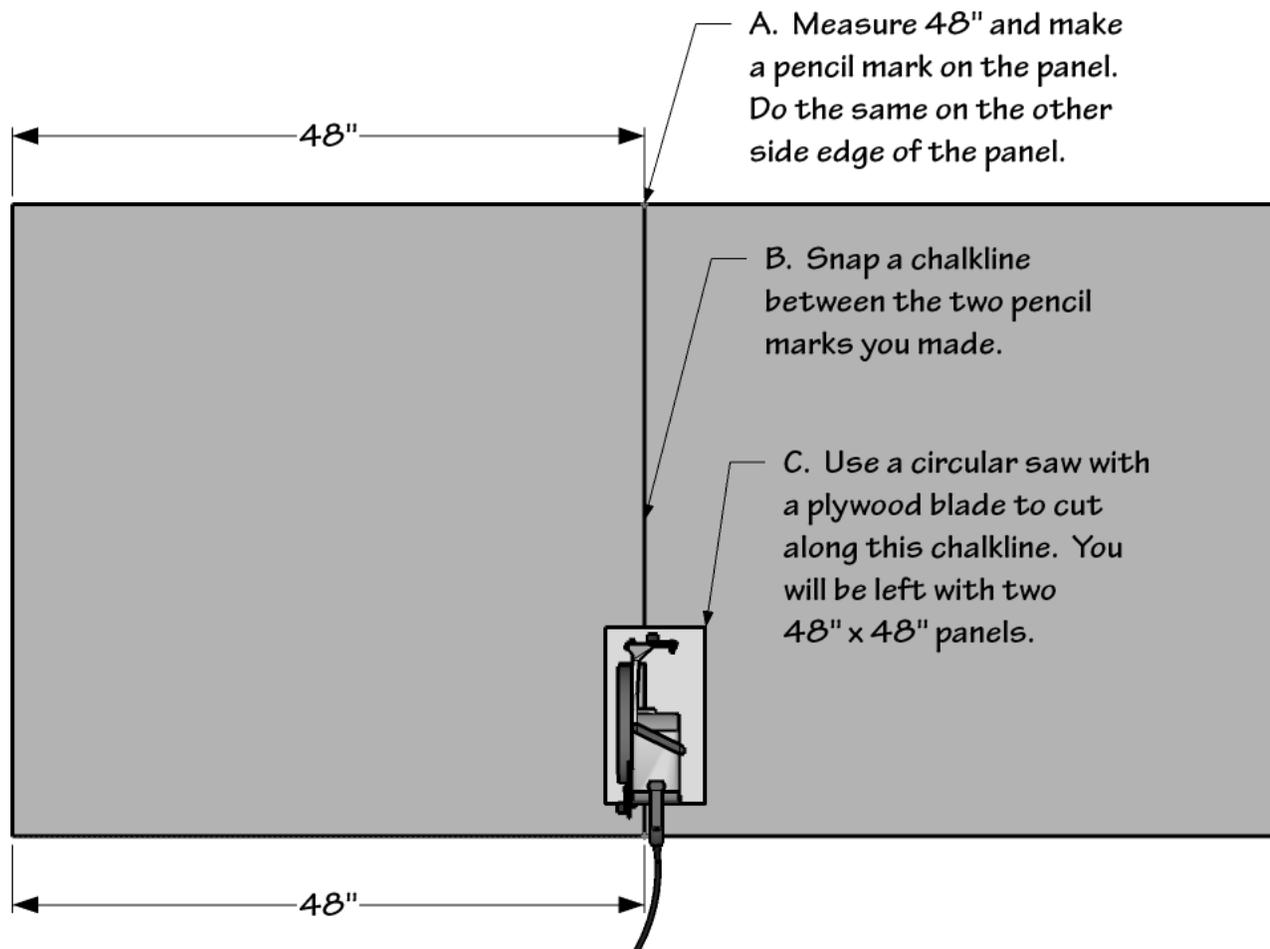
Wedge Ramps



Wedge Ramps

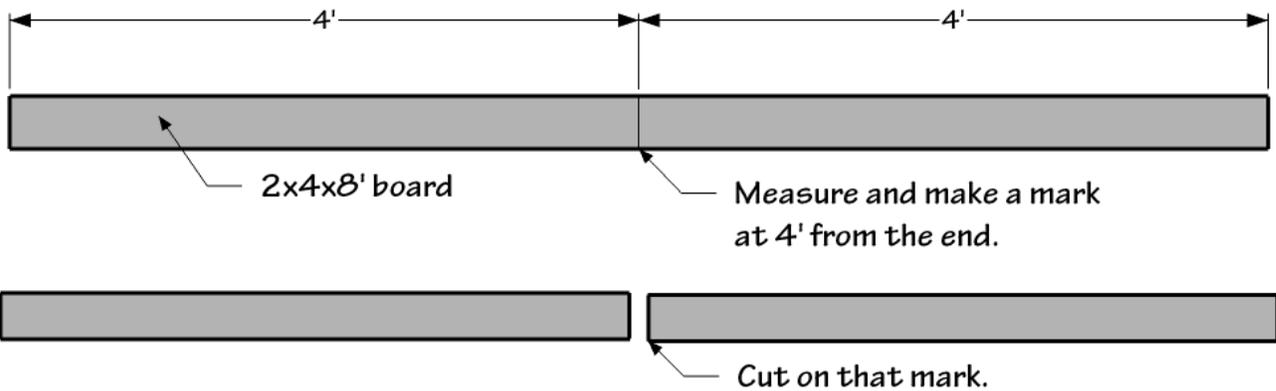
How to Build a Wedge Ramp

1. For this example, we will assume that the height from the porch to the bottom of the door is about 4 inches. On the long sides of the plywood, measure down 48" from the corners. Make a mark on both long sides at 48". Use a chalk line to make a straight line between these two marks. Carefully cut on this line using a power saw. You should be left with two 4' x 4' (or 48" x 48") panels.

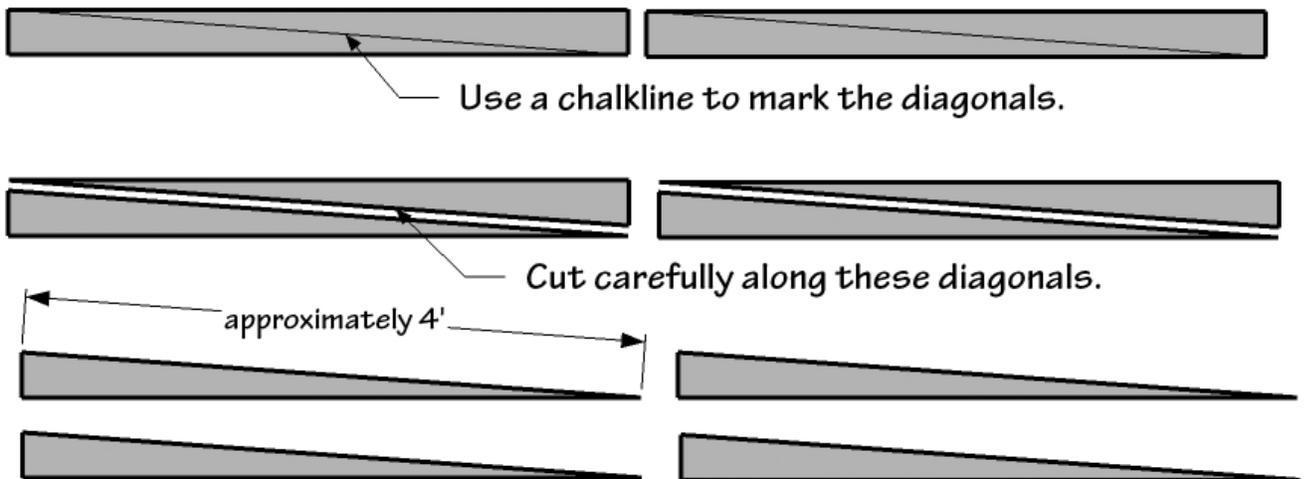


2. Measure 48" on a 2x4x8' piece of lumber. Make a mark at 48". Using a speed square, draw a straight line at this mark, perpendicular to the edge of the board. Cut on this mark.

Wedge Ramps

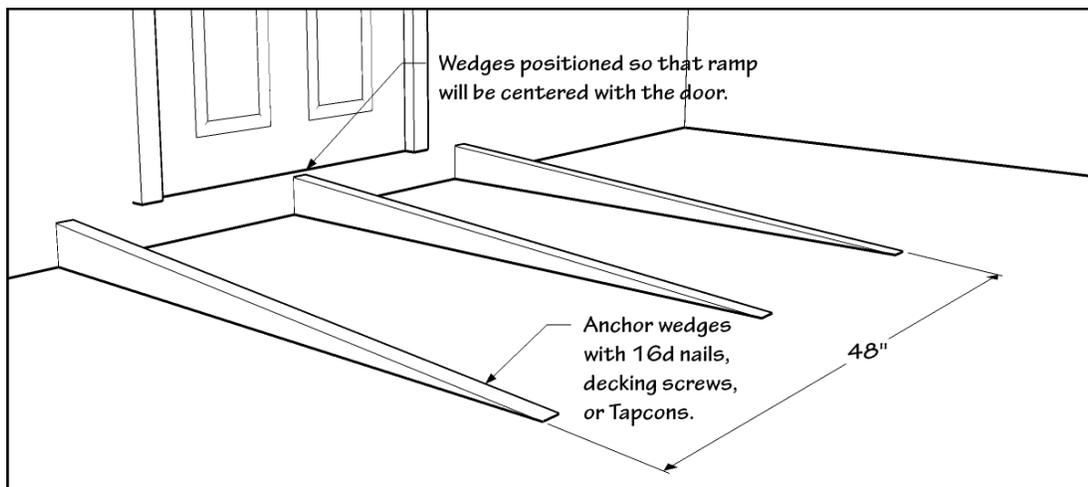


3. Use a chalk line to mark two straight diagonal lines as shown in the diagrams below.
4. Carefully cut on the line, using a power saw. Keep the blade exactly on line with the chalk line. You should now have 2 long triangular wedges. Measure the distance of the sloped side of a wedge. It should be fairly close to 48". This distance is the length of your ramp. Repeat this process to make 2 more wedges. You should have a total of 4 wedges.

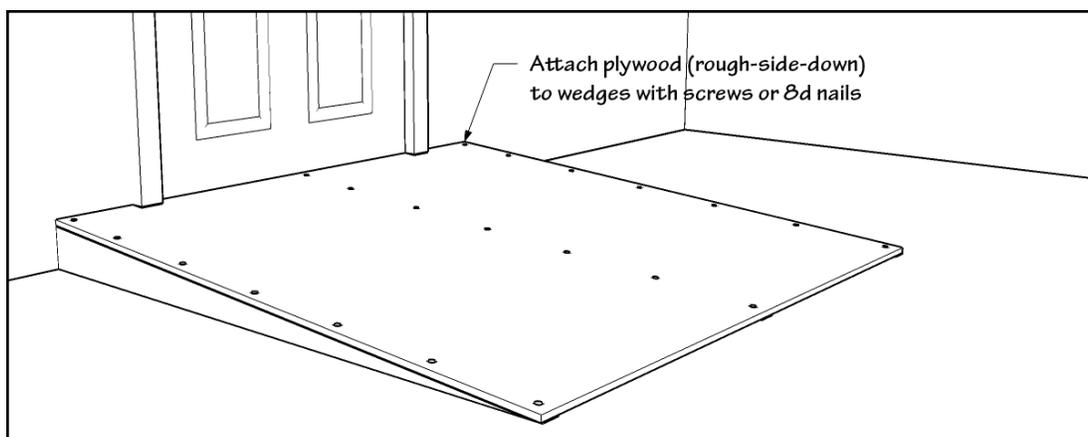


5. Attach three wedges to the porch, using 16d or decking screws (or Tapcons, if the porch is concrete or masonry). The two outside wedge joists should be 48" apart, outside-to-outside. Make sure the wedges are positioned so that the wedge ramp will be centered with the door. (You can also attach the fourth wedge, if you like, or it can just be an extra in case you make a mistake.)

Wedge Ramps



6. Attach the 48" x 48" plywood panel to the wedge joists. The "rougher" side of the plywood should face down. Use screws or 8d nails.



7. Measure and cut two 2x4s at 48" long. Attach these two pieces to the edges of the ramp using screws or 16d nails (you may have to "toe-nail" some of these into the ramp). These are "toe boards" that will keep the wheelchair from falling off the ramp.

