DIY Cornhole Board Plans

Cornhole Board Requirements

Our cornhole boards meet the dimensional requirements of both the ACA and the ACO. If you visit the rules pages of each organization, one of the first items they address is the board size. Below are the basic regulation boards specifications by both groups, with the exception of item #2. The ACO requires a "cross member" on their boards with ½" plywood tops, but the ACA does not make any reference to the cross member. Our design uses the cross member, which satisfies the requirements of both the ACA and ACO.

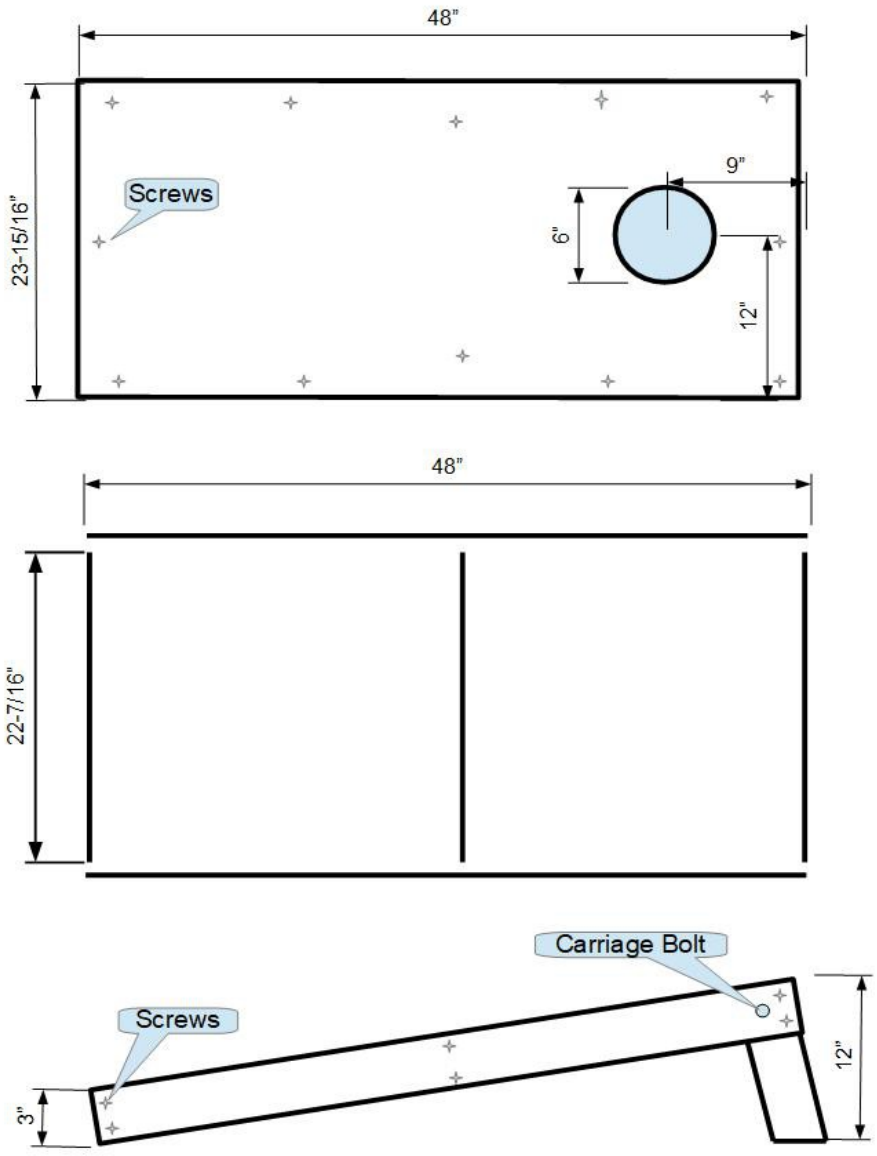
1. Hardwood plywood playing surface measuring 47.5" to 48" x 23.5" to 24".
2. The playing surface has a minimum thickness of 1/2" with cross-section backing, or 3/4" with or without cross-section backing.
3. Each hole is 6" diameter, centered 9" from the top of the board and centered from each side edge.
5. The front of the board is 3" to 4" from the ground to the top of the playing surface.
6. The back of the board is 12" from the ground to the top of the playing surface.
7. The playing surface should be finished – sanded to a very smooth texture. There should be little to no blemishes in the wood surface that may disrupt or distort play.
8. The playing surface can be painted with a high gloss latex paint or varnish. The surface should allow bags to slide when thrown, but not be so slippery that the bags slide back down the platform.

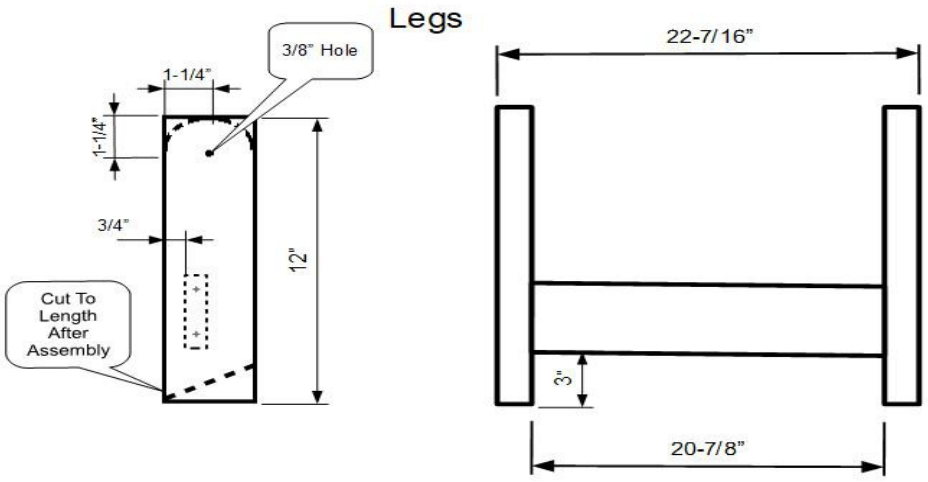
Remember, these are the official, regulation requirements. If you are building a cornhole game to be

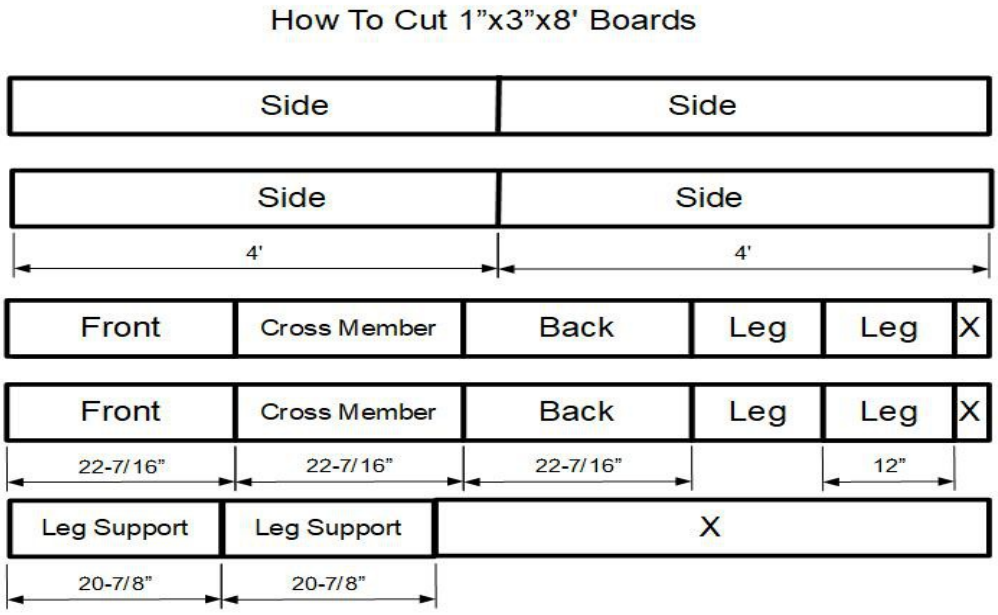
used at your home for backyard barbeques, you can make slight adjustments as needed. For example, if you had a sheet of ⅜" plywood leftover from a project, I believe it would work just fine for the top. I would definitely recommend using the cross member in that case. But, because of the overall construction of our board design, I don't think it would affect the performance of the boards at all.

Free Cornhole Board Plans

Below are the plans for our cornhole boards. We've built a couple of sets now and are very happy with how they've turned out. Feel free to share the plans with your family and friends.







Materials Needed To Make A Cornhole Game

Many plans call for using 2x4 lumber to build their boards, but we chose to use 1x3 inch lumber to construct our board's frame and legs. This was done in an effort to help keep the overall weight of the boards down. The finished project is still very sturdy and doesn't affect the playing of the game. Let's take a look at what you'll need for this project.

Plywood - 1 sheet of plywood, smooth finish on one side. You only need half of this (4'x4') for one cornhole set.

1x3 boards - 5, 8-foot boards

Wood screws - 1-1/4" for the top and 1-5/8" for the frame. Drywall screws or similar stainless steel wood screws work well for putting the boards together. Use whatever works best with your color scheme.

Bolts - Carriage bolts, washers, and locknuts - ⅜”x2-½” bolts work well. The locknuts should be adjusted to hold the legs snuggly, yet allow them to be folded up easily.
Glue - Optional, but highly recommended. Helps hold all component together tightly for years of trouble-free use.
Hardware - Hinges (separable), latches, and handles (Optional).

Tools Needed To Make A Cornhole Game

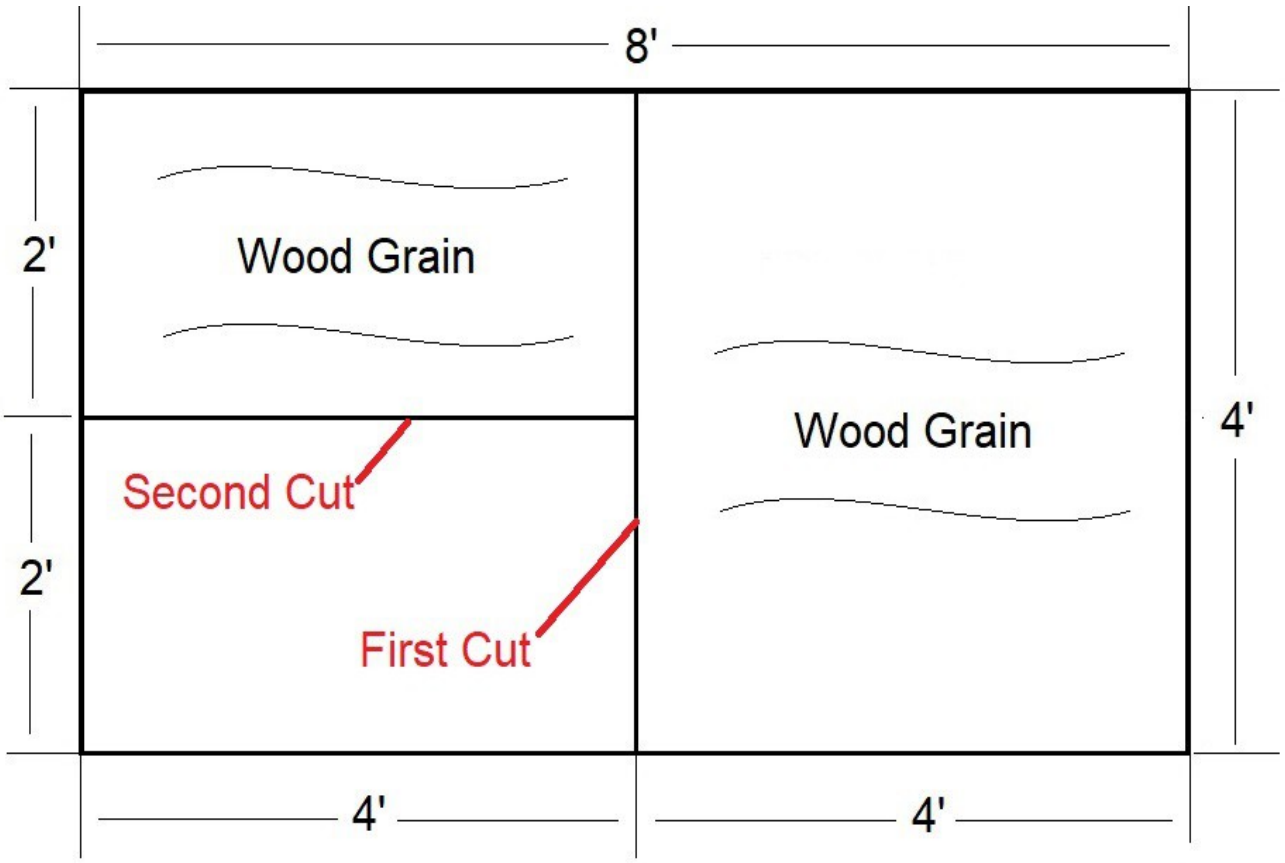
Safety glasses and hearing protection (for more info on home project safety, please consider reading our article on personal protective equipment, (PPE))
Tape measure
Saw (table/circular)
Drill, drill bits, and countersink bit
Jigsaw
6” hole saw (or jigsaw)
Sander (or sandpaper and sanding block)
Carpenters square

Step by Step Instructions

Because most table or circular saw blades are about ⅛” wide, the exact dimension of your plywood will be approximately 1/16th of an inch under 2’. However, with the large tolerances mentioned above, this is fine. You just need to make sure to make those minor adjustments when cutting the 1x3 boards. We did our best to reflect this in our plans, but because not all cuts are exact it doesn’t hurt to take a quick measurement before cutting.

Cutting The Plywood

You only need half a sheet (4’x4’) for one cornhole game set. You can purchase 4’x4’ sheets from most of the home supply stores. However, if you have a use for the other half sheet of plywood (a second cornhole game maybe?), it’s normally more cost effective to buy a full sheet. Mark and cut the 4’x4’ plywood into two equal pieces measuring roughly 2’x4’. We recommend cutting the plywood with the grain, as shown in the diagram, especially if you’re going to stain the wood. We feel the finished product just looks better.



Cutting The 1x3 Boards

We recommend getting the exact measurements of the 2'x4' plywood top and adjust the 1"x3" measurements accordingly. In general, these are the measurements you should have following our plans. (see the plans above)
The **sides** will be 47-15/16" (±1/16").
The **front, back, and cross member** boards should be 21-7/16" (±1/16").
Cut the **leg boards** to 12". They are a little long, but will be trimmed to the exact length later in the project.
The **leg cross members** should be cut to 19-15/16" (±1/16").

Layout The 1x3

On a flat, level surface dry fit all the 1x3 boards together. Make sure the cross member board fits snugly between the side boards. We like to do this to make sure the overall dimensions of the frame are the same as the plywood top. This helps ensures all the piece fit together nicely. If not, now is the time to make those minor adjustment before you begin the assembly.

Drill Relief, Pilot, and Countersink Holes

This is important when using thinner material on any project. Pre-drilling these holes helps prevent cracking and splitting the boards, yet makes for tight secure joints. For more information on pilot and clearance hole sizing, visit the DIYDATA.COM website. They have good reference information.

Pilot holes are drilled in the board that the screw will anchor into and should be smaller than the screw diameter.

Clearance holes are drilled through the board that the screw passes through and is about the same size as the outside diameter of the screw threads. This allows the board to be pulled tightly against the board it's being anchored to.

The countersink ensures the screw heads are flush with the finished surface. This is very important for the screws holding the top in place.

The relief holes, with a countersink, will be drilled in the 4' side pieces. Two holes at each end of the boards at ⅜" in from the ends and two holes in the middle boards at 2'. This will put the screws in the center of the front, back, and cross member boards when assembled. See the board diagram for more detail.

For the pilot holes, start with one of the side boards and the front board. Hold the ends of the two boards together and drill the pilot holes using the relief holes as a guide. This ensures the holes are aligned perfectly. Repeat this with cross members, the back boards, and the other side boards.

Assembling Your Cornhole Board

At this point it’s time to add a little glue to the joints and screw the 1”x3” boards together. Make sure the screws are tight and the screw heads are slightly recessed into the countersink. Continue securing all the boards in the same fashion.

With the 1”x3” frame assembled it's time to attach the plywood top. Apply a small bead of glue to the top of all the frame boards, including the cross member. Carefully set the plywood top onto the frame. Adjust until all edges are evenly spaced. Nows a good time to verify that the frame and top are square, using the carpenters square. You can tweak the frame a little while the glue is still wet, then screw the top to the frame.

Along with the glue, we used a total of 12 screws to secure the top. Five screws on each side and one screw centered on the front and back boards. The middle screws on the side boards were set in 2”, so they are anchored into the cross member board. This just helps tie all the pieces together for a stronger overall design.

Cutting The "Target" Hole

With the board assembled, it's time to cut the target hole. The target is a 6" hole that is center in the cornhole board, 6" in from the back board. The diagram shows the location and dimensions.

This hole can be cut in a couple different ways. The first way is to use a jigsaw. Once the center location of the hole is marked you'll need to mark the line to cut using a drafting compass. Then drill a pilot hole inside the piece that is being cut out to insert the jigsaw blade. Cut the 6" hole following the line. After cutting the hole you will want to sand the inside of the hole making it as round as possible.

We chose to use a 6" arbor type hole saw to cut our target. This gives you a very clean, round hole, and the process is much simpler. Just find the center mark for the hole, as described above, and drill the hole. To get a clean hole on both sides, there is an extra step you need to take.

Start by drilling approximately half way through the plywood. Make sure the center drill went all the way through the plywood. Then flip the board over, place the center drill in the hole just made, and finish drilling the hole. Just a little light sanding and you're done. If you are planning on making more than one board, I would consider investing in a hole saw. Watch this short video on how to drill the hole.

Note: Hole saws can grab the material you are cutting in. When cutting wood keep the drill speed down, hang on to the drill tightly, and be prepared to release the drill trigger. Hole saws are a great tool, just be prepared when using them.

Preparing The Legs

Start by marking the location ⅜” hole that will be used to attach the leg to the assembled cornhole board. Put a pencil mark on the leg board centered on the board (1-¼”) and a 1-¼” in from the end of the board. Before drilling the hole use a drafting compass to mark the radius on the end of the leg boards that will need to be cut. You could also use a soup can or some other round object that is approximately 2-½” in diameter to trace the radius on the end of the board too. The accompanying diagram has more location and radius detail. With the radius marked go ahead and drill the ⅜” hole in the leg boards.

The legs get attached to the underside end of the cornhole board with the 6” target. Place the end of the leg board, with the hole in it, against the side board and snuggly in the corner against the back board. Mark the location of the hole on the side board with a pencil. Repeat this on the other side.

Next drill a ⅜” hole in the side board on the pencil mark you just made. Using a jigsaw round off the end of the leg boards by cutting on the radius marks made above. Sand the rounded off ends smooth. Temporarily attach the legs to the cornhole board. Make sure each leg moves freely. You may need to remove them and sand the ends a few times to make sure the move smoothly.

Cut The Legs To Length

With the legs cut and attached, this is the best way we found to cut the legs to length. This method allows you to get the exact 12” height for the back of the cornhole board. It works best with a couple sawhorses and a piece of plywood at least 4’ long.

Set the cornhole board on the sawhorses. Position the board so one of the legs hangs down over the edge of the plywood on the saw and leave the second leg folded up. Block the back end of the cornhole board up to get exactly 12” to the top of the board. Now mark a line on the leg where it meets the top edge of the plywood. Reposition the cornhole board and do the same to the other leg. Cut both legs on the lines you drew. When reassembled, the board is set on a flat, solid surface the back of your board will be exactly 12” high.

Attaching The Leg Cross Member Support

We chose to add a cross member to our legs for added strength and stability. In the diagram you can see that the 1x3 is oriented vertically. This gives it more “side to side” movement strength. Why you ask? Well... eventually little Sean or Kendra (our children’s names) will climb on top of the game while playing. Although not recommended, these boards will take some abuse.

The exact location of the support is not critical. I would keep it closer to the ground and somewhere in

the middle of the legs. Our plans call for it placed 3” from the ground and set in ¾”. The most important part will be to drill the clearance holes in the legs at the exact same location. This is done easiest by clamping the two legs together and drilling both of them at once. You’ll want to remove the legs to add the cross member. It’s much easier.

After assembling the legs, make sure they swing freely before finishing. If you notice we call for the support to be 1/16” of an inch smaller than you might expect. This extra space allows for the finish on the board and so it will swing freely.

Sand All Surfaces Smooth

After the board is fully assembled, sand all the surfaces. That completes the construction of your cornhole board!

Cornhole Board Finishes

To fully complete it all you have to do is put a finish on it. The finish on your cornhole boards are a matter of personal preference. They can be painted, stained, or embossed with your favorite college or company logo. It’s up to you, so be creative! Remember, the only stipulations per the ACO are “the surface should allow bags to slide when thrown, but not be so slippery that the bags slide back down the platform”.

Staining Tip - If you are staining your boards, with a design, we would like to offer one very important tip. Before staining, score all the lines with a thin bladed razor bladed razor knife. This X-Acto knife from Amazon is a perfect example of what to use. You’ll need to make the score lines at least 1/16” deep. These score lines will help prevent the stain from “bleeding”. This will give you a nice clean line between two different colors of stain.

How To Make Your Own Cornhole Bags

According to the ACA and ACO, the finished bag dimensions should be 6” square. They shall have stitched seams on all four sides and weigh between 14oz. and 16oz. That’s approximately 2 cups of dried corn. Dried beans can be used too. The bags are to be made of a durable material such as duck cloth, canvas, or suede.

We chose to purchase a set of bags only because we wanted something with patterns that fit with our board design. That may be one of the biggest limiting factor for not making your own boards. If you want bags with custom designs, check out Amazon and Etsy. They both have good selections.

Conclusion

By following these plans you can easily make a nice, sturdy set of cornhole boards that will provide you with years of enjoyment. Feel free to share these plans with your family and friends and visit us at “ourrecipesforsuccess.com” for more DIY home projects.