

A few thoughts about boat building. A boat is basically a hole in the water. The shape of the boat determines how the boat will interact with the water. The more narrow and longer a boat is the faster it will be; the wider and shorter, the more stable. There is no mystery in building a boat; it's simply a waterproof box. My kits and plans are designed to provide the basics for the novice builder and a starting place for the creative builder. The plans are more assembly illustrations rather than "measured drawings". The biggest problem faced by the first time boat builder is the fear that they will "put the boat in the water and immediately drown" or "make a fool out of themselves". Neither will be the case. Relax and enjoy the experience of building your boat. If you need help, email unclejohn@unclejohns.com we are happy to be of assistance.

For the first time builder it's suggested that you follow the proven plans. For the confident, be encouraged to modify the boat. Look at the boats on our web site www.unclejohns.com and you will see many variations of the same boat. Some individuals build the basic boat as fast and as economical as possible and some as an adventure. We encourage you to see what others have done and then make your boat 'your own'.

Your first major decision is choice of finish. Paint is easy to apply, easy to maintain and will hide many mistakes. A clear finish is beautiful on a wooden boat, but mistakes that can be hidden under paint will show through a clear finish.

Do not fret if everything is not perfect.
Only you will see the imperfections.

Uncle John's

5229 Choupique Road Sulphur, LA 70665

Thank you for purchasing our Bayou Skiff plans.
Have a safe and enjoyable experience building and using your craft.

Should you need any assistance don't hesitate to ask,
email unclejohn@unclejohs.com

Materials needed to build the basic boat

1/4" x 48" x 96" exterior plywood ~ 3 sheets - specify exterior glue.
1 - 3/4" x 24" x 48" exterior plywood ~ transom
2 - 3/4" x 1 1/2" x 168" clear lumber ~ rub rails
6 - 3/4" x 1 1/2" x 120" clear lumber ~ rib sets/runners/seat supports.
glue, screws, wood filler, sand paper, fiber glass and paint

It is difficult to compile a full building list because each builder will choose to build differently. One will use brass screws to show though a clear finish and another will use general purpose screws, pull the screws, fill the holes and paint. The amount of fiberglass supplies will be determined by the areas you choose to cover. At a minimum we recommend all seams and joints be taped. Some choose to cloth the entire boat. The material list is a basic list of lumber. My choice for 3/4" x 1 1/2" is fir, normally found in the molding department. The cost is a bit more than ripped lumber but it is the choice for strength and convenience.

NOTICE: Care should be exercised in the completion of the steps involved in constructing this boat to assure a sturdy craft. The safety of this boat is determined by the builder and user. This craft has not been rated for either number of occupants or maximum weight capacity. The purpose of these plans is to provide the builder with a set of easy to follow building instructions. Uncle John's assumes no liability for the finished project. As with any water-craft, life-jackets should be worn and caution exercised in regard to weather and water conditions.

Sheet #2 ~ cutting the side boards and bottom

By following these simple steps you can be confident that you will successfully build a serviceable boat which will serve you well for years. Take your time, do not "make" things complicated. The strength and durability of your boat will be in the finishing. Never store your boat in contact with the ground.

Plywood: The basic difference between most marine plywood and exterior plywood is that marine plywood does not contain voids. Both contain essentially the same glues. Taping the seams and edges with fiberglass will effectively seal the edges. Exterior plywood is considerably more economical and is a standard stock item at lumberyards. We have had good results with both A/C fir and B/C pine. Lauan mahogany is used by many small boat builders. Lauan is pretty, easy to work with and very economical.

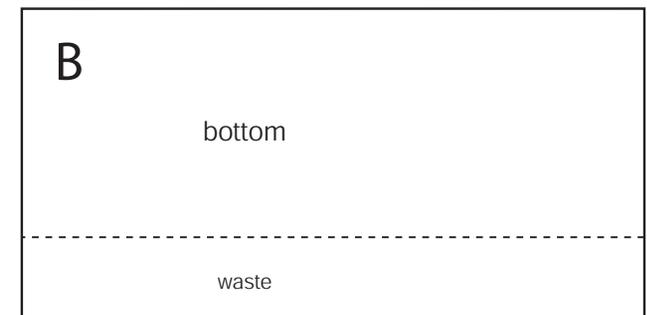
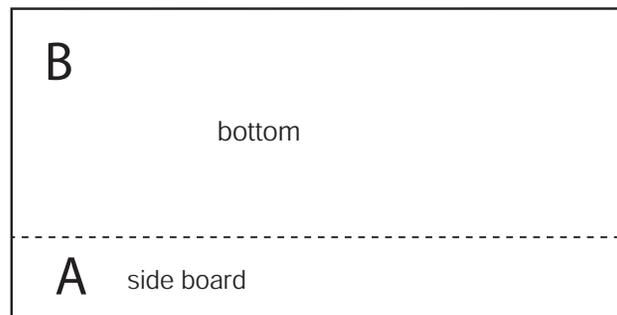
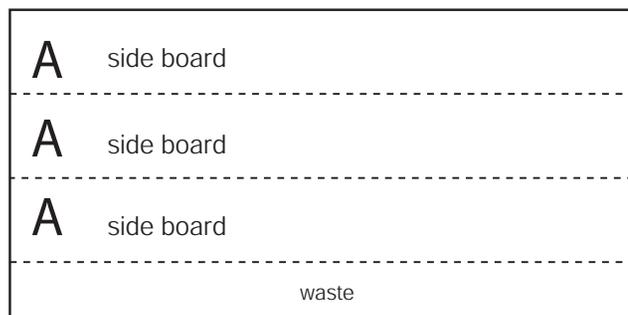
Glue and fasteners: There are numerous waterproof and water resistant glues on the market. For the most part, glues, nails and screws hold the structure together prior to taping the seams with fiberglass. Once the seams are taped, the fiberglass will provide a strong waterproof joint. For this reason, the type of glue is of less importance than taping both sides of all seams and joints with fiberglass.

cutting the side boards and bottom

Although the Bayou Skiff has been designed with 12" side boards, it is possible to raise the side board height to 14", increase the side board height, rib height, transom height and stem length. Increasing the width or length will require changing the angles on the rib sets, transom and stem and is not recommended for the novice builder.

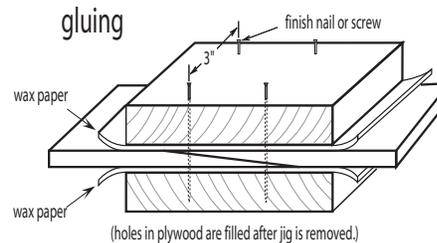
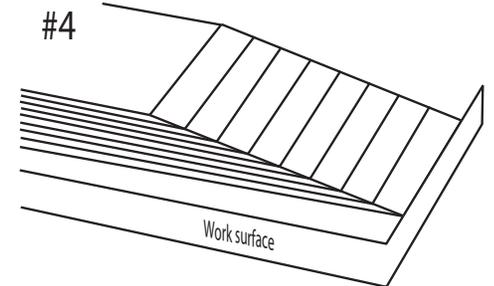
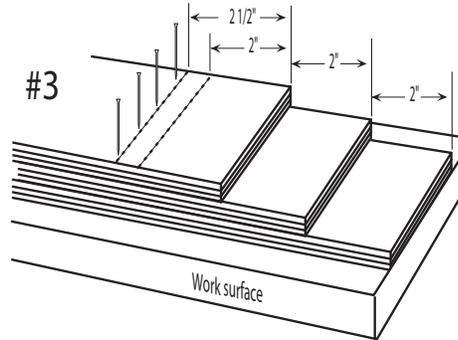
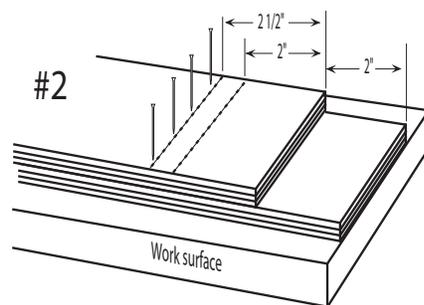
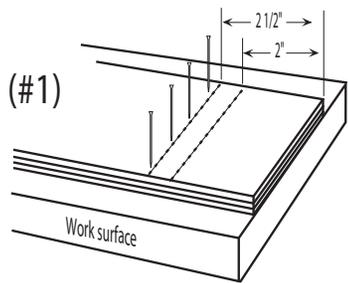
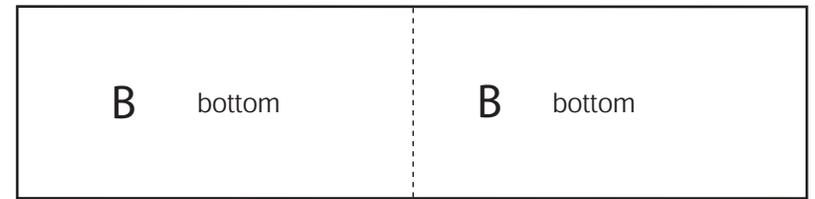
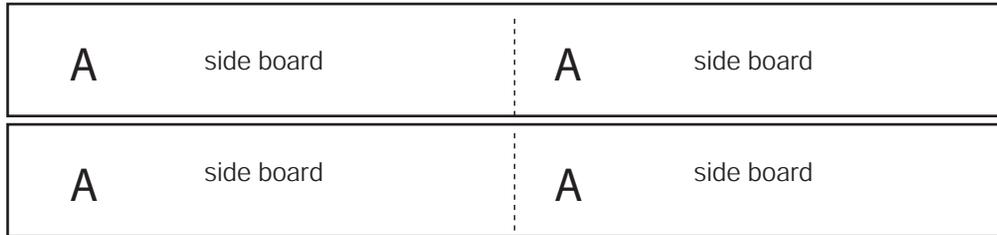
If you choose to use 1/4" plywood for the bottom you will need to attach runners for support,
Should you prefer not to use runners you should use 3/8" plywood for the bottom.

The side boards are cut from 1/4" plywood.



Sheet #3 ~ scarf joining the sideboards and bottom

Scarf all of the pieces of the same width at the same time. By doing them all at the same time, they will all have the same angle. Stack the pieces offsetting each from the one below by 2". A piece of scrap placed on top and bottom will aid in achieving a smooth bevel. Tacking the pieces to a flat work surface will stabilize the pieces while you are scarfing. (#1) Place the first piece on the work surface and tack it down at least two and one half inches from the end. (#2) Place the second piece on top offsetting by 2" and tack it down. The tacks should be placed so as not to be in the area that is to be worked. (#3) Continue to stack the pieces as shown. (#4) Using an electric plane, belt sander, random orbit sander or even a piece of coarse sandpaper wrapped around a piece of two by four "grind" the pieces until a smooth uniform surface is achieved.



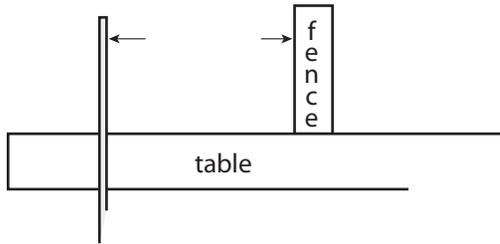
Some individuals prefer to use a butt joint. Quicker and easier but not as pretty. It is also more difficult to hide. To use a butt joint, simply butt the two ends together and fiber glass both sides with cloth four to five inches wide.

Sheet #4 ~ cutting the bow stem and transom

Cutting the bow stem.

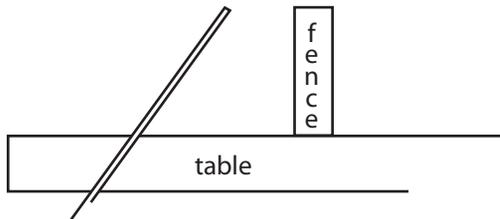
The stem is cut from " x " x " stock

set fence

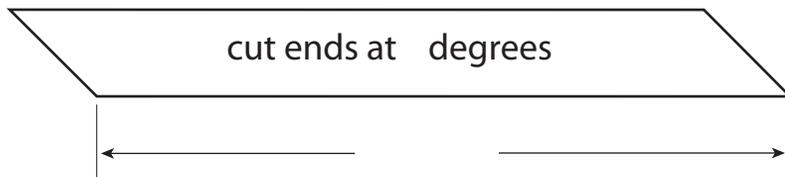


tilt blade to degrees.

flip end for end and rip second side.

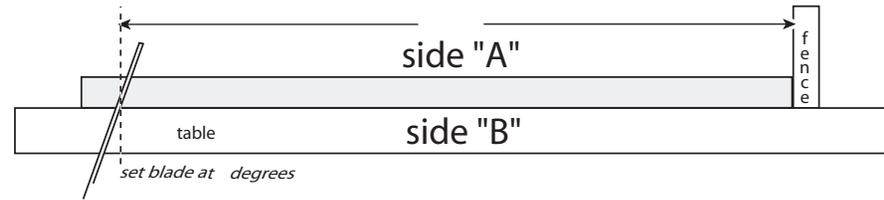


trim to length

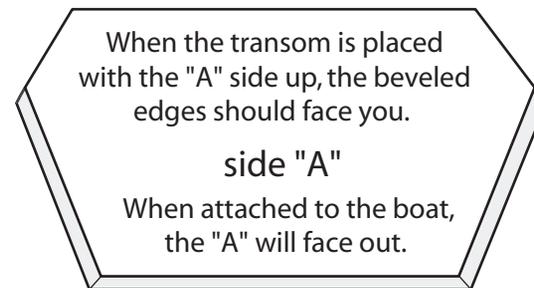
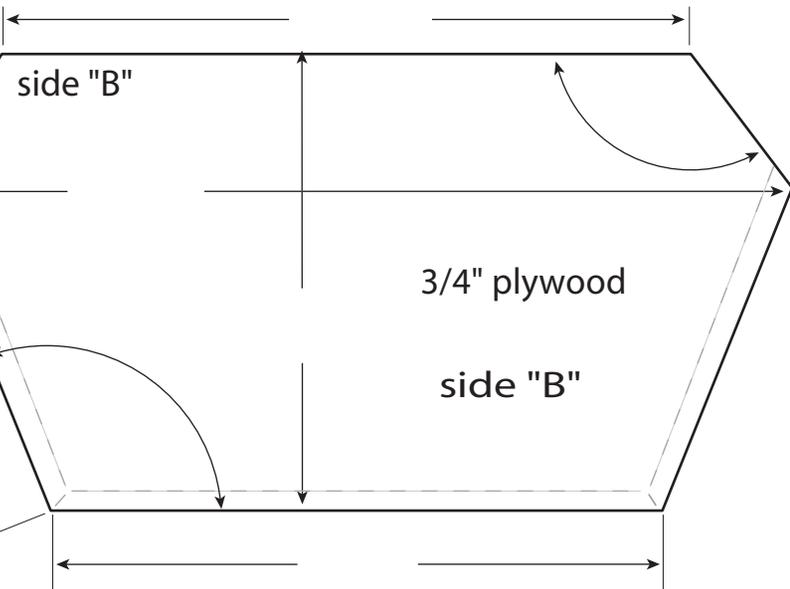
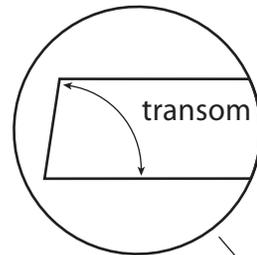


Cutting the transom.

Set Blade on table saw at degrees and rip a piece of " plywood, " wide, " long.

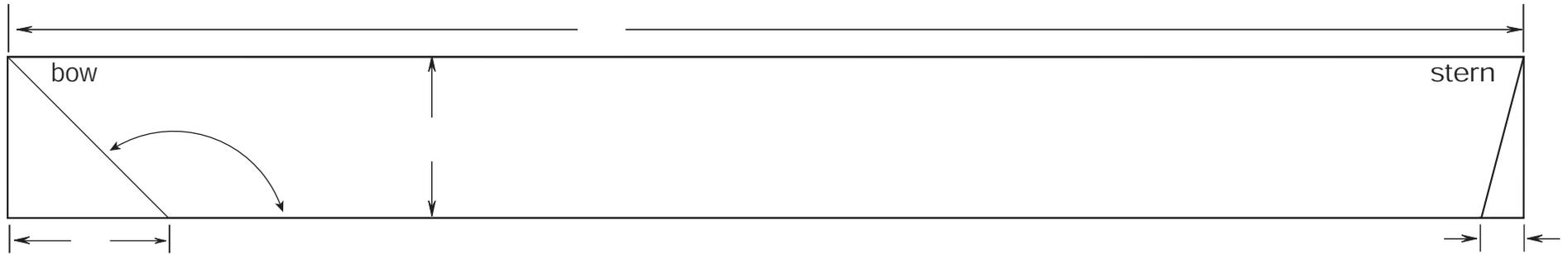


Cut compound angles on the ends of the transom.



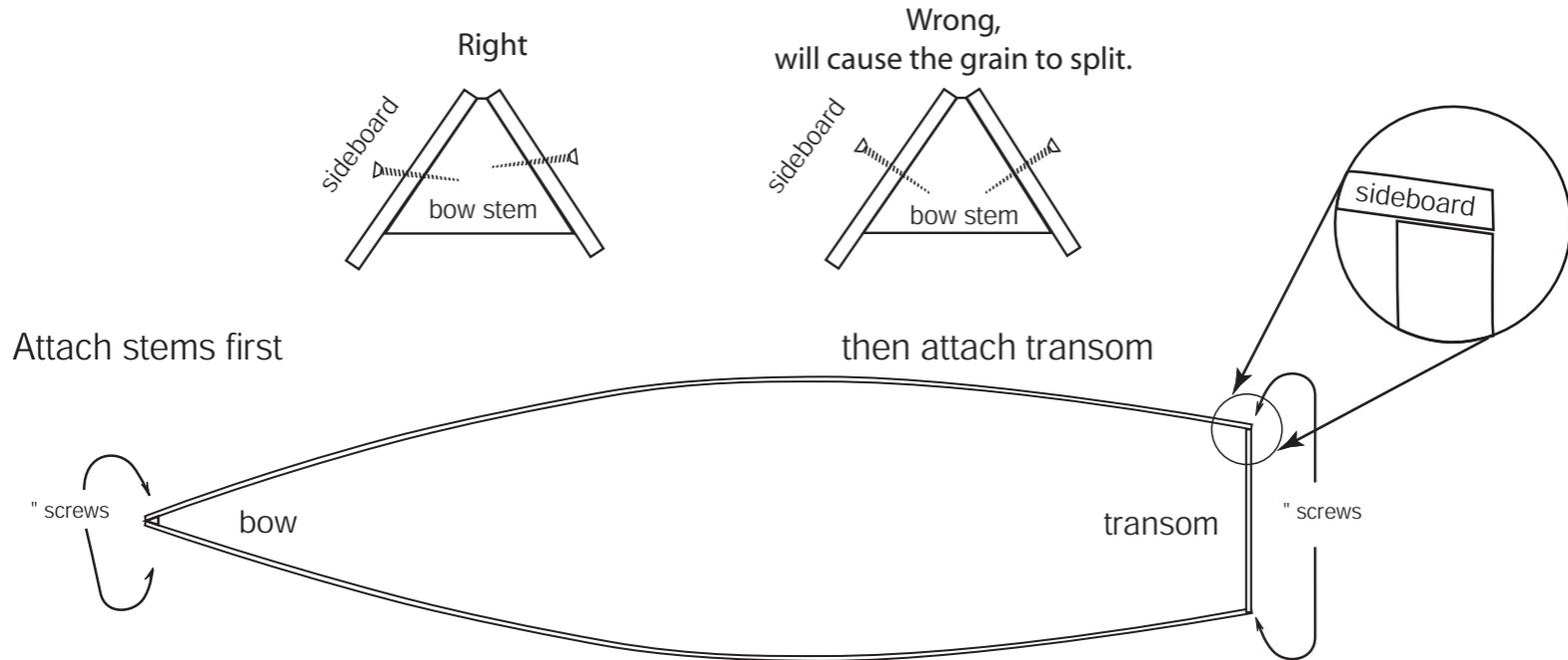
Sheet #5 ~ attaching the side boards

LAY OUT AND CUT THE SIDEBOARDS. Mark off the bow and stern angle.
Stack the sideboards and cut both at the same time, this will assure that they are identical.



Use screws as shown to attach the sideboards to the stem. It is very important to attach the sideboards to the bow stem first and then to the transom. After the glue is dry remove the screws and fill the holes.

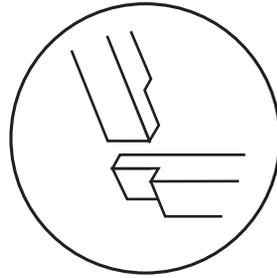
Use both a waterproof glue and " screws to attach sideboards to bow stem first, then attach sideboards to transom.



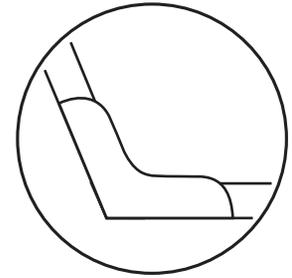
Sheet #6 ~ building the rib sets

The rib sets are constructed from " x " stock using a lap joint

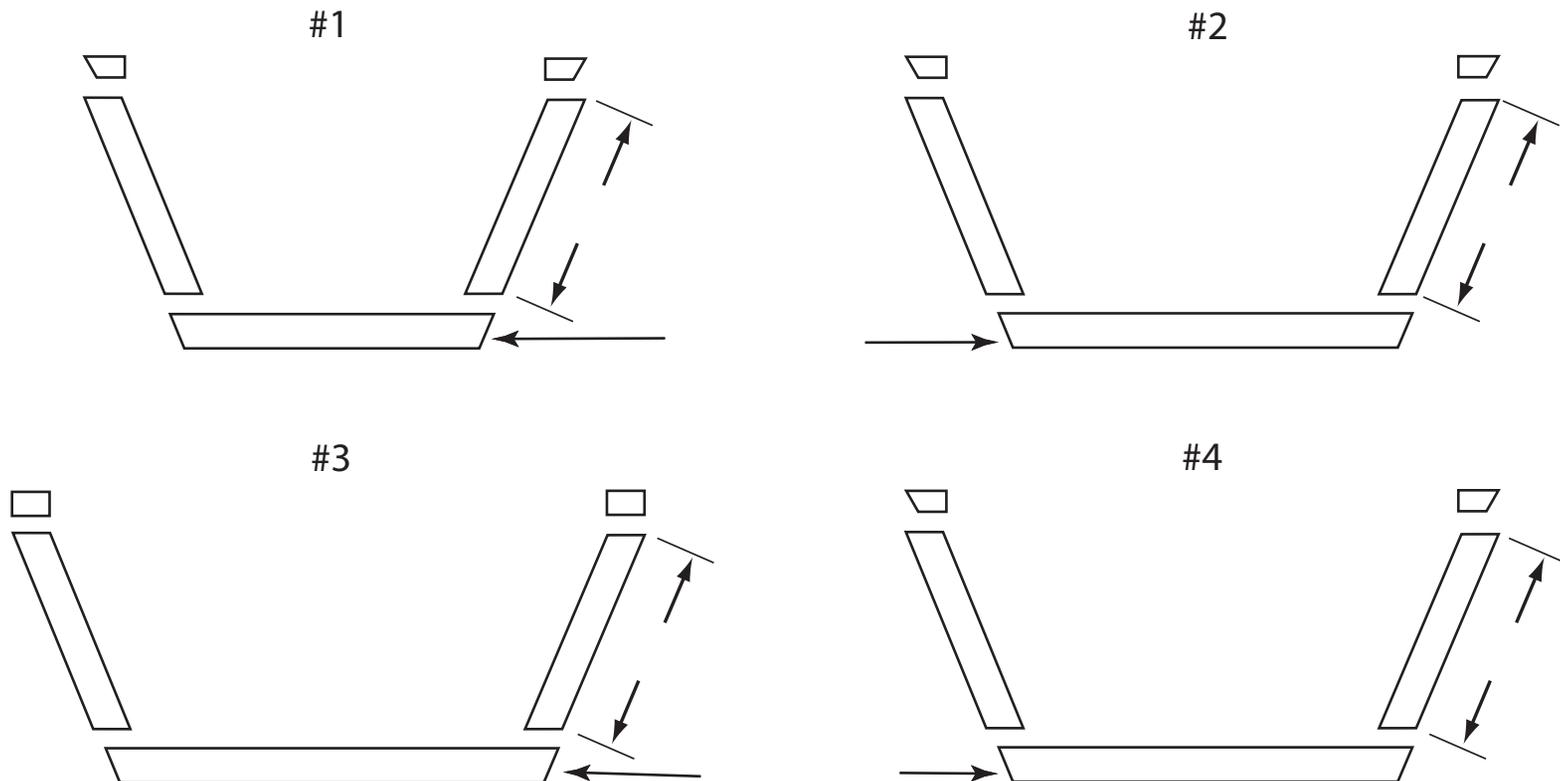
The ends are cut on 45° and joined using a lap joint.



Gussets should be added to the joints for increased strength.



The bevel on the sides of the ribs allows the rib to follow the curve of the side board when attached. See Sheet #7



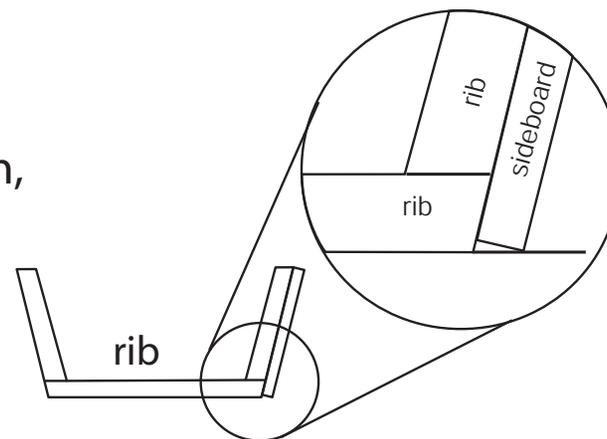
weep holes may be cut into the of the rib sets to provide drainage



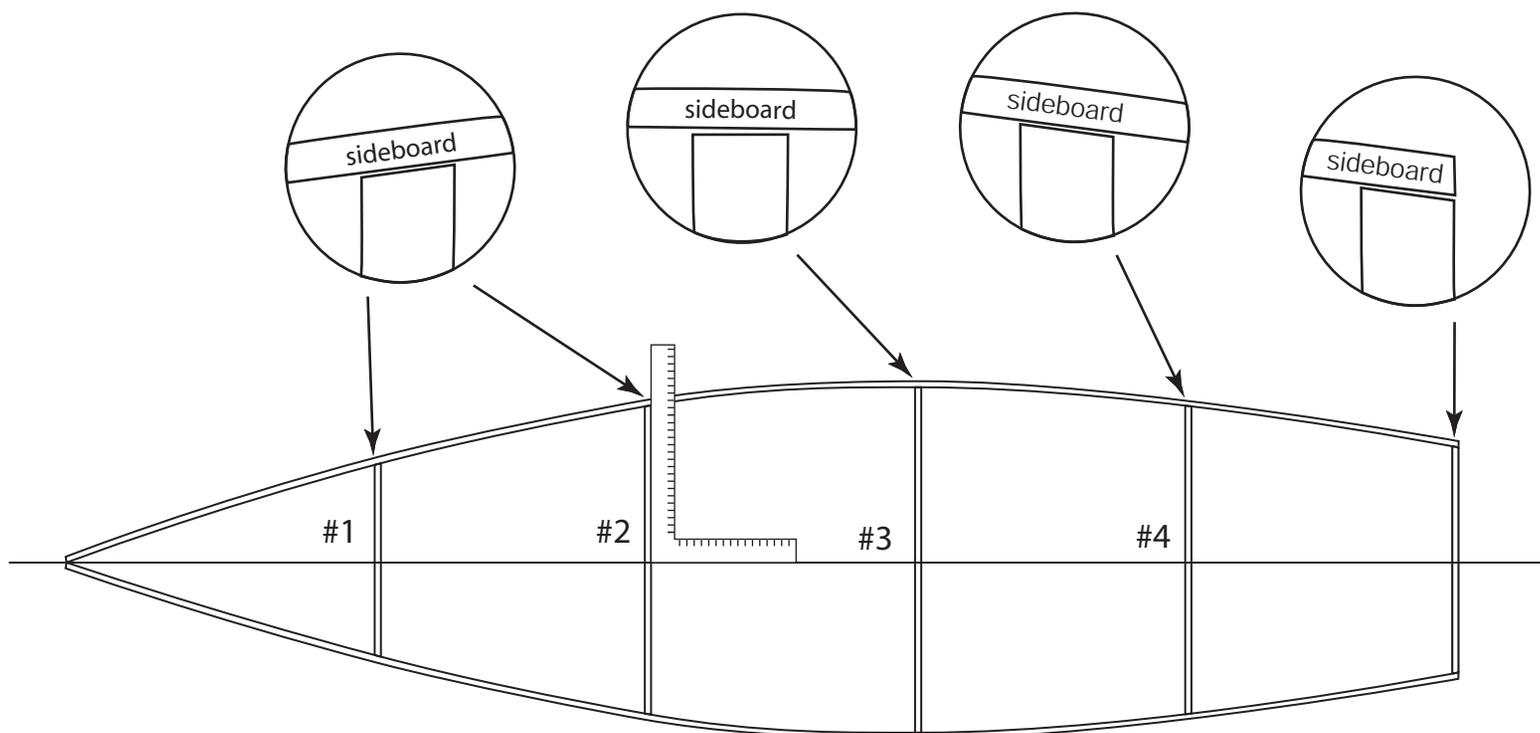
Sheet #7 ~ installing the rib sets

The rib sets are spaced 1" on center.

Align the bottom of the sideboards as shown,
glue and fasten with 1" screws.



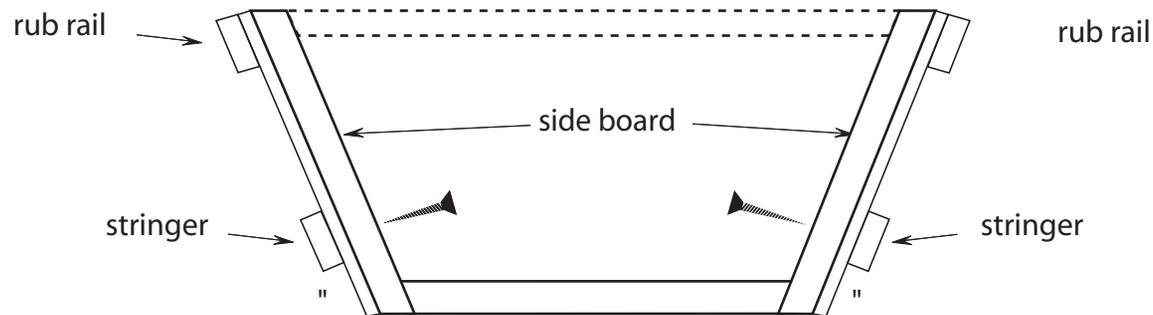
Insert rib set #3 first, then #2 followed by #4 and #1.



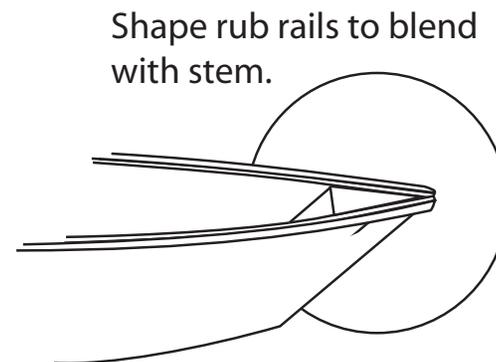
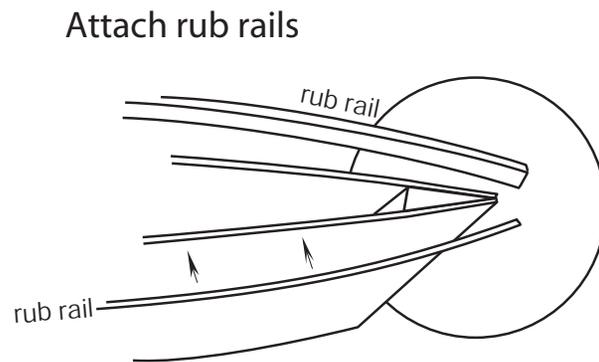
Sheet #8 ~ attaching the rub rails

The rub rails should be made from clear (no knots) lumber up to 2" thick and 4" wide. The quickest, easiest material to use is fir. Attach outer rub rails flush with the top of the sideboards. Rub rails may be attached simply by gluing (if you have enough clamps) or using glue and screws. Begin in the middle of the boat and work to each end. Should you find it necessary to join lumber to gain length, use the standard scarfing formula of 8:1.

prior to attaching the rub rails, place a temporary support across the top of rib set #3

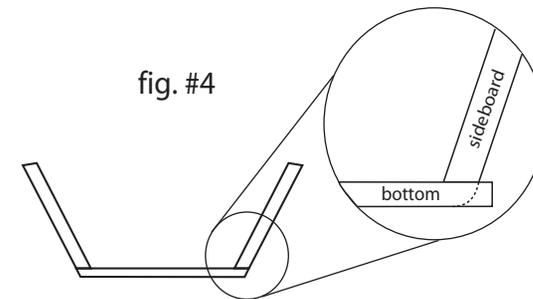
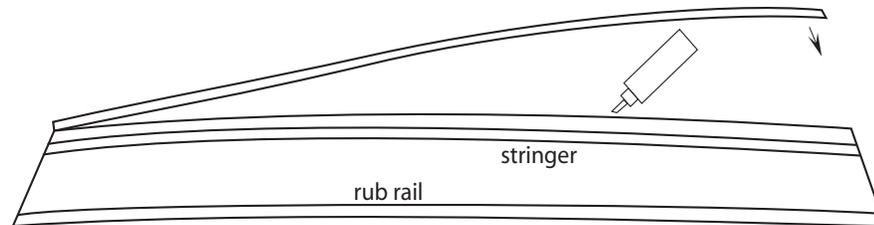


After attaching rub rails but prior to attaching the bottom, temporarily attach stringers (using only screws) 2" above the bottom of the sideboards to shape the boat prior to attaching the bottom. After the bottom is attached the stringers are removed and the screw holes are filled.

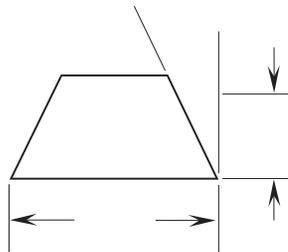


Sheet #9 ~ attaching the bottom

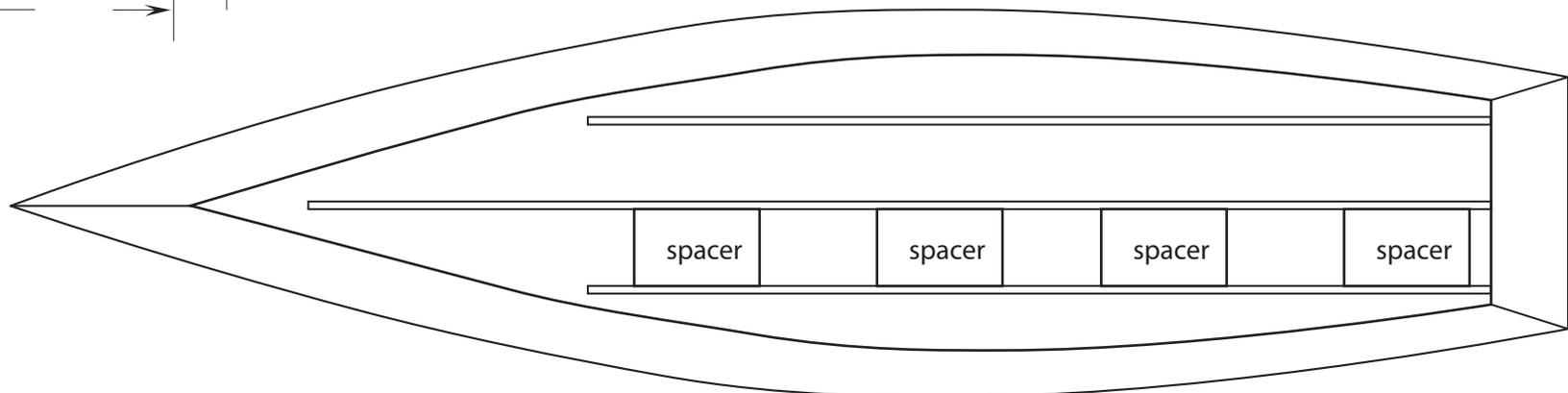
ATTACH BOTTOM. Tack bottom in place and mark hull shape. Add 1/2" all around, remove and cut bottom to shape. Attach bottom using waterproof glue, 1/4" brads into sideboards where needed and 1/4" screws into transom, stem, and rib bottoms. Trim bottom flush with sideboards and ease the corner, (fig. #4). After attaching bottom, fiberglass seams on both sides. If you don't have a "perfect" joint, don't be overly concerned. The fiberglass resin will fill small voids.



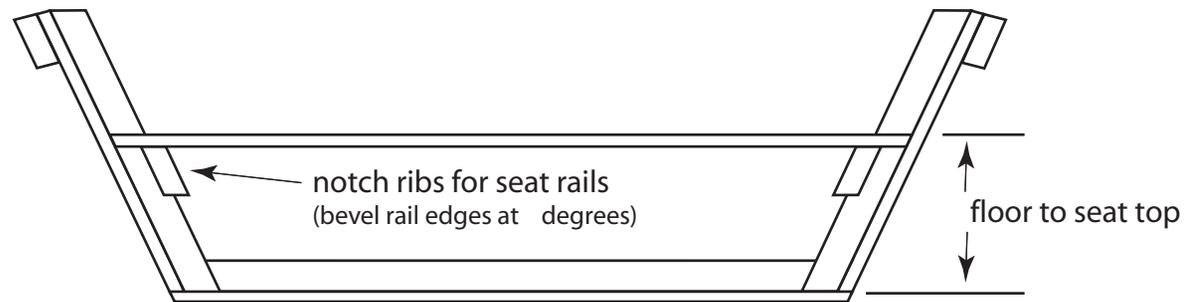
Attach bottom runners



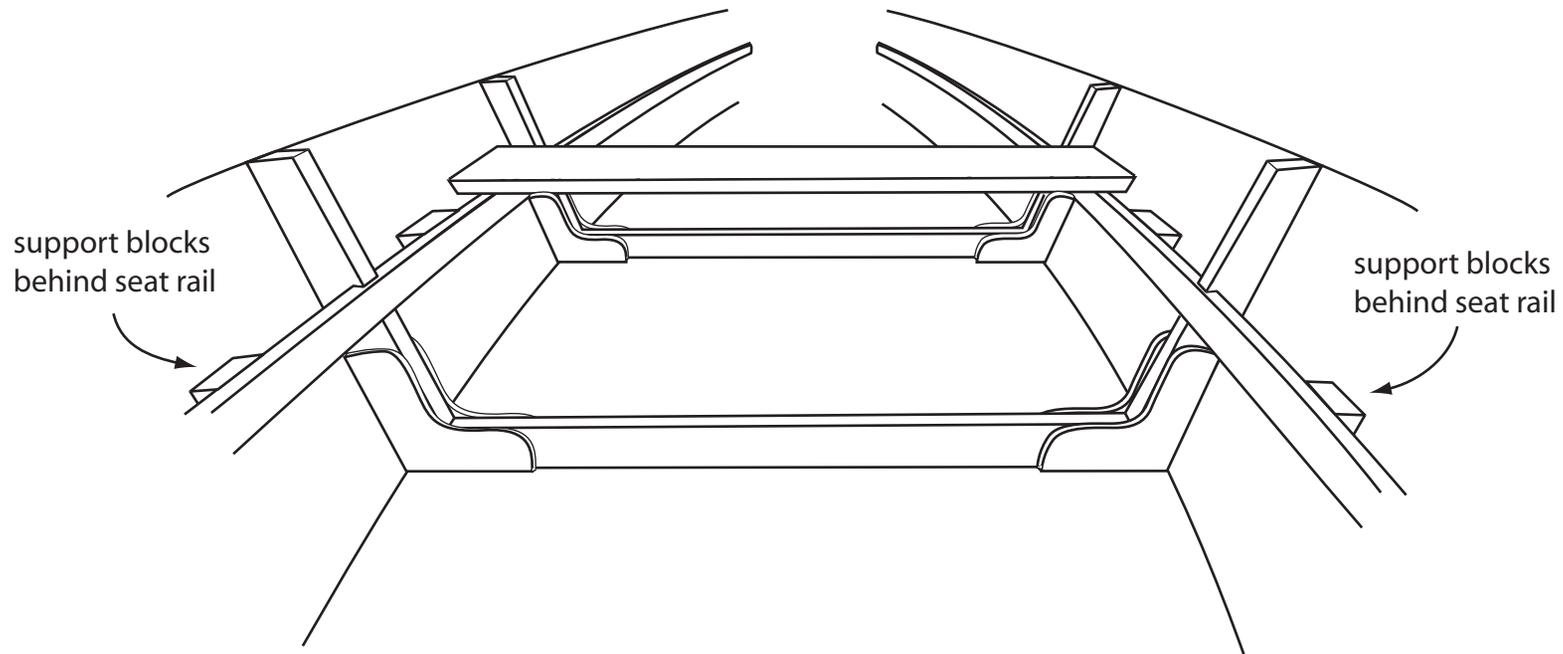
Bottom runners should be added after fiber glassing the bottom to strengthen the bottom and to aid in tracking. Use resin in place of 'glue' then cloth over with 1/2" strips. Attach the center runner first and use 1/2" spacers cut from 1/2" scrap to align the outboard runners.



Sheet #10 ~ installing seats

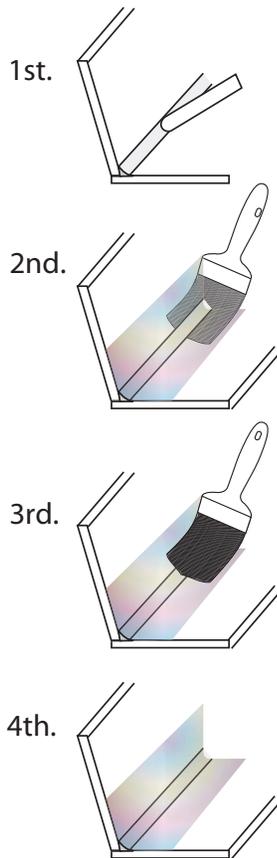


The seat placement is best determined with the boat in the water. Weight distribution will change the balance of the boat as will number of occupants. After your boat is finished, place seat boards in place, check the balance and adjust seats to the best position. The seat tops may be attached to the seat rails with either screws or lag bolts through the seat top and rail, secure with wing nuts. Using bolts will allow you to remove or change seat positions to best meet changing situations.



Sheet #11 ~ fiber glassing

All seams and joints should be fiber glassed inside and out with " wide cloth for strength and to seal the edges. Epoxy resin is the best, polyester is the most economical and the easiest to obtain. Polyester resin can be found at lumberyards and auto parts stores. A good source for epoxy may be found from www.raka.com



Use a tongue depressor to create a cove on inside seams with a mixture of fiberglass resin mixed with filler or fine sawdust.

Paint resin on the area to be glassed. If you use polyester resin, for the first application, add one tablespoon of acetone to each ounce of resin, thinning the resin to increase penetration into the wood fiber and holding strength. This is not necessary when using epoxy and is only for the first coat using polyester.

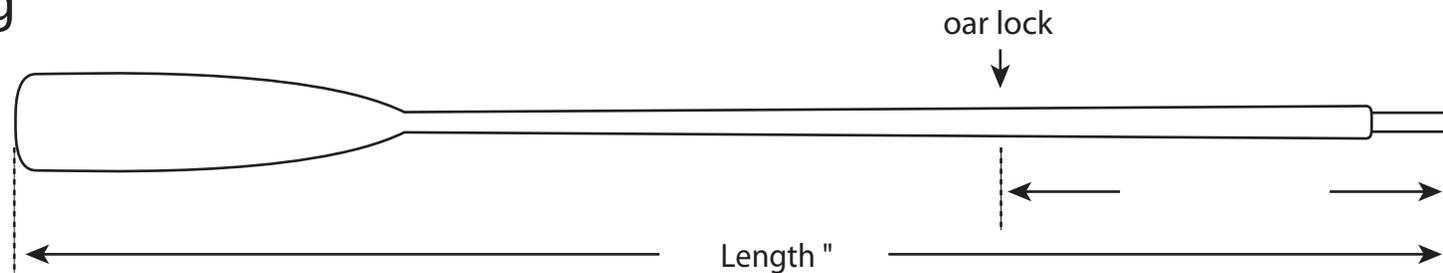
Put cloth in place and saturate with resin. When the cloth is saturated it will become virtually invisible. It is important to saturate the cloth but not to the extent to "float" the cloth off the surface. The texture of the weave may be floated with a second coat of resin. Overlap cloth by " where needed.

After the resin has cured, puncture any bubbles and re-glass. The edges of the cloth may be feathered by sanding to blend the cloth into the wood.

Resin must be protected from sunlight or it will degrade. Painting is easy and durable. 100% acrylic exterior latex (water based) house paint works well with epoxy resin. It is economical, fast drying and very durable. With polyester resin you should use an oil base paint. Prior to painting wipe the hull with acetone to assure a good bond. If you wish to stain your boat and use a clear finish you should use a water or alcohol not an oil based stain. Allow the stain to dry thoroughly before applying the resin. A good marine varnish will protect the resin and show the beauty of the wood. Allow 7 to 10 days for the paint to fully cure before launching your boat.

Sheet #12 ~ Outfitting your Bayou Skiff to row, motor or sail . . .

Rowing



The best way to determine where to mount the oarlocks is to sit in the boat and see what feels 'right'. Attaching the oar locks is the last thing you would do to finish the boat so find the sweet spot with the boat in the water. Hold the oar locks in place with c-clamps and try different locations. When you find what feels right, run in the screws. Depending on the type of oar lock you purchase, you may or may not need to add a pad to attach the oar lock. Just do what seems right. After all, at that point you will have built a boat.

Motor

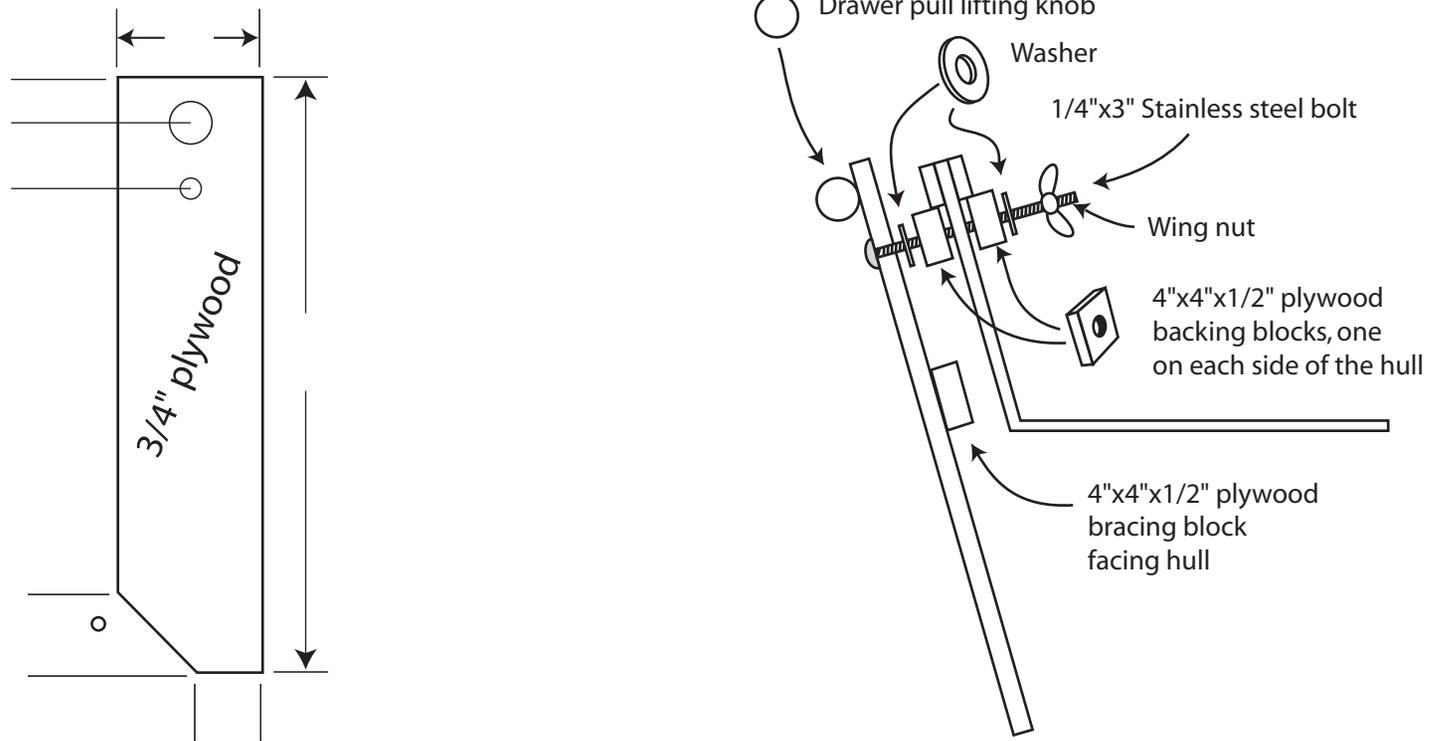
We do not rate our boats for motor size. Builders have different degrees of experience and operate in vary different water conditions. Electric trolling motors are highly recommended. With modern batteries you can expect to have an abundance of range. Electric motors are quiet, easy to operate and maintain. Flat bottom boats offer less resistance in the water when compared to a v-hull.

Sailing

If you do not wish to dedicate your boat to sailing, a lee board and clamp on mast step is the best choice. This will allow you to remove all sailing gear when motoring or rowing. A dagger board, a fixed lee board or a removable lee board, each has distinct advantages and disadvantages. The dagger board will give you the best 'bite' to prevent slide slip. A fixed lee board does not require building a 'trunk' which takes up space in the boat. Lee boards also allow you to beach your boat in that a lee board will swing up when contacting the bottom in shallows. If you are going to use your boat in all configurations a clamp on lee board and mast step is the best choice.

Sheet #13 ~ building a fixed lee board

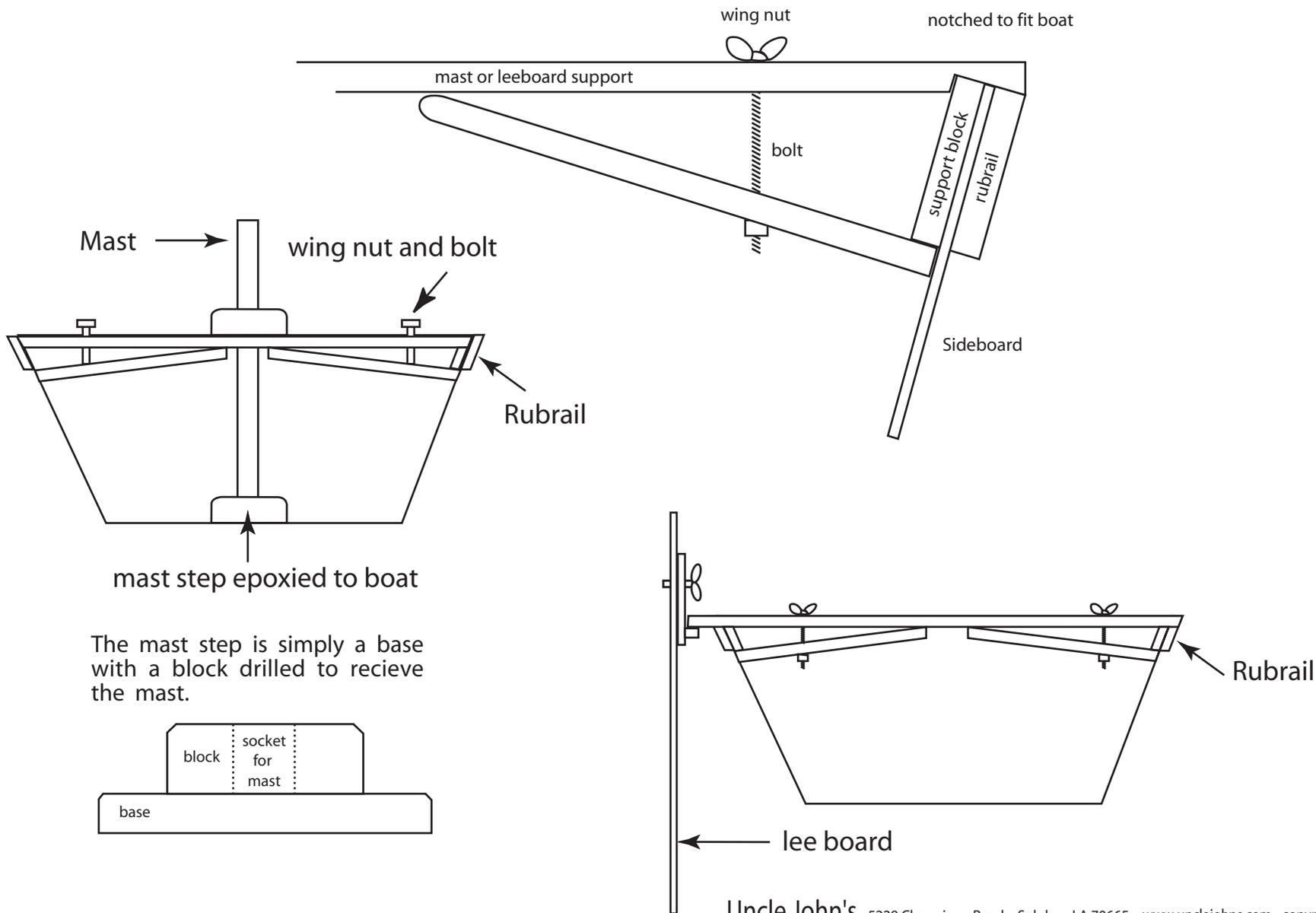
A good alternative to a dagger board is a lee board. The lee board is attached to the outside of the boat and pivots up when it contacts the bottom, making it attractive when beaching the boat.



The positioning of the lee board in general is at the widest beam of the hull and at the middle of the sail area. These two points will be pretty close to one another. You might consider clamping the board in place with C-clamps your first few outings. Move it fore and aft to find the best place. As you move it you will experience a change in the steering characteristics of the boat. When you find the "sweet" place, attach it with the bolt. Which side to place the board is builder's choice. Some individuals use only one board and do not change sides when tacking and some use two boards. Just be sure you have not over-tightened the wing nut so that the board will pivot when it contacts the bottom. How tight you make the bolt is experimental.

Sheet #14 ~ building a removable lee board and mast step . . .

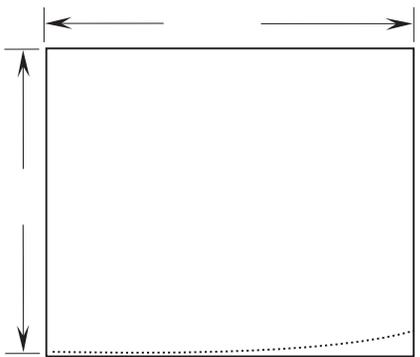
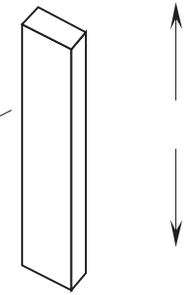
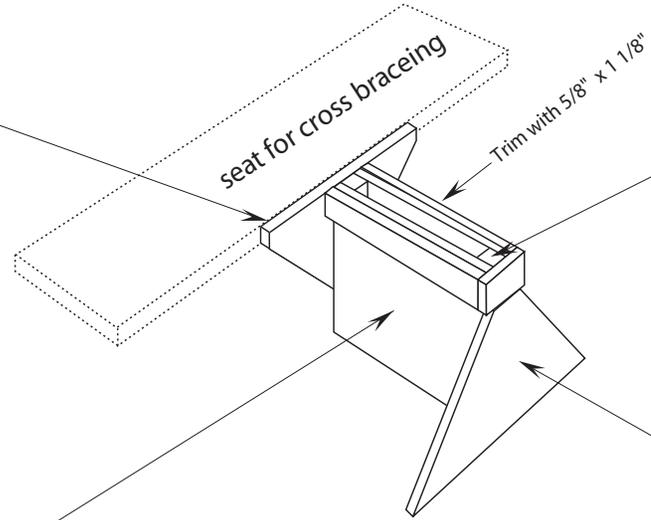
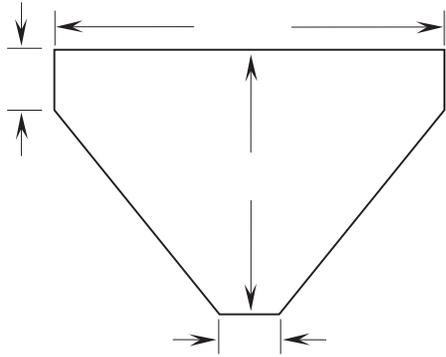
Everything is a clamp or pressure fit except for the mast step which is screwed or epoxied to the hull. It is necessary to use an inside support block to provide a clamping surface.



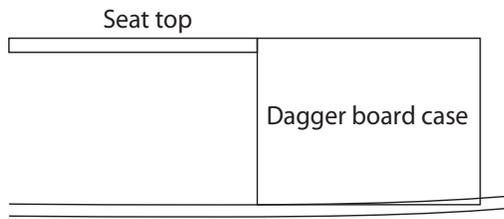
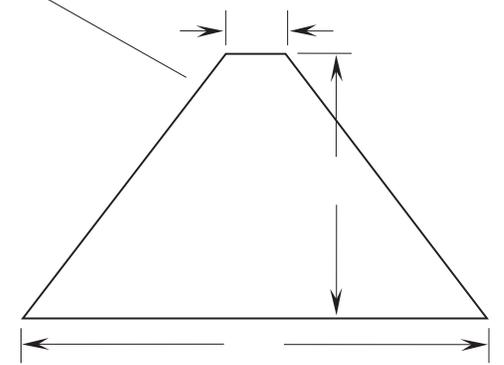
The mast step is simply a base with a block drilled to receive the mast.

Sheet #15 ~ building a dagger board trunk

Build and install the dagger board case
Use assembled case to locate slot through hull.
Extend height of case by " for each 100 pounds
over 400 pounds of load.

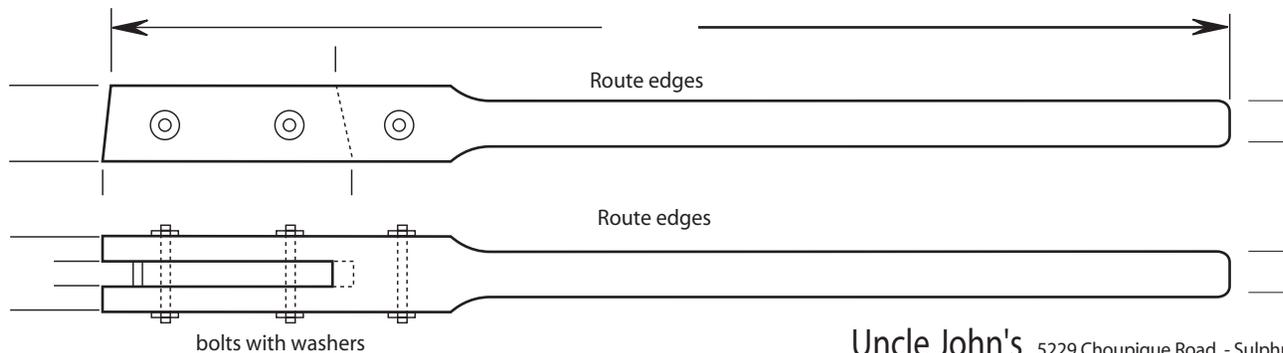
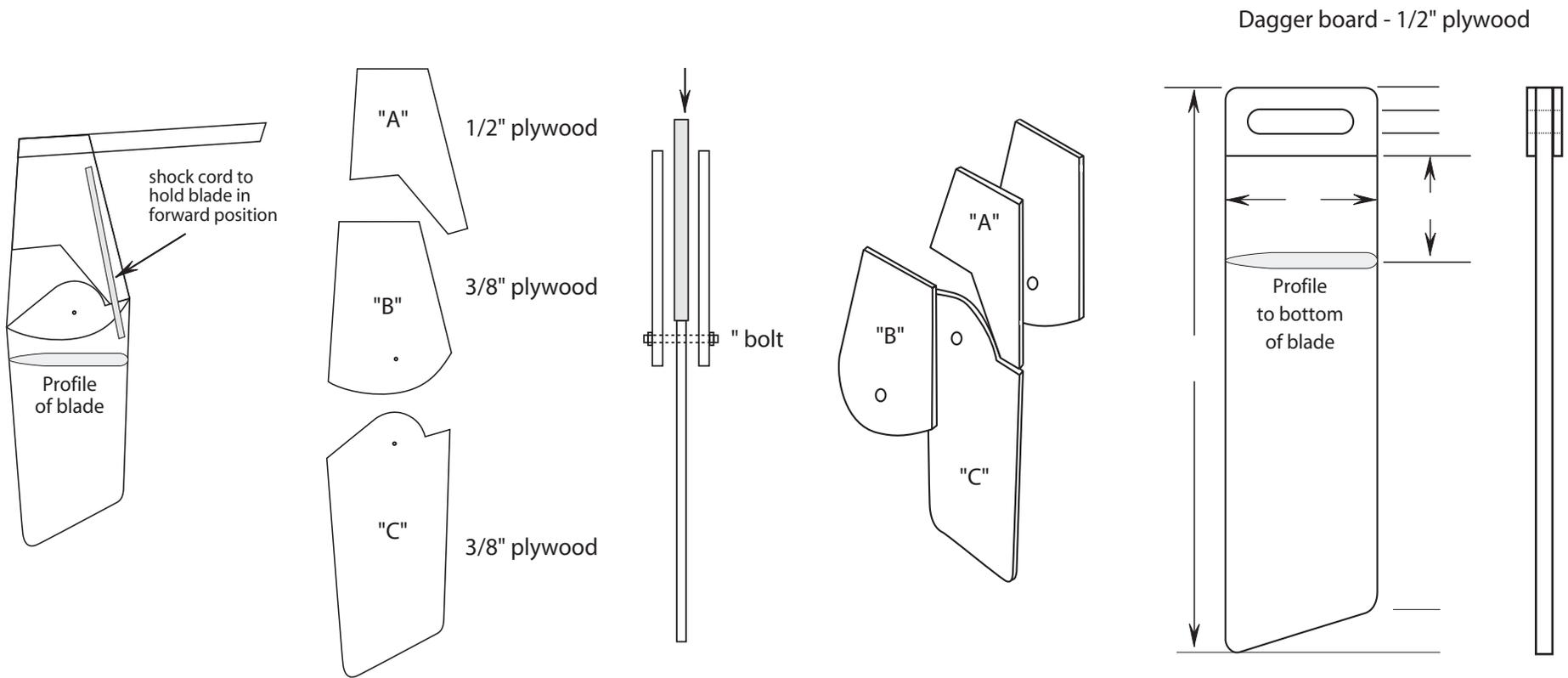


NOTE: The dagger board case must be installed perpendicular to the seat top. The bottom of the case must be trimmed to fit.



Sheet #16 ~ building the rudder and dagger board

If you are building the sail rig we are happy to supply our rudder pattern free of charge. Simply download the rudder pattern at www.unclejohns.com/bysk14/rudder.pdf The rudder is constructed from separate pieces sandwiched together.

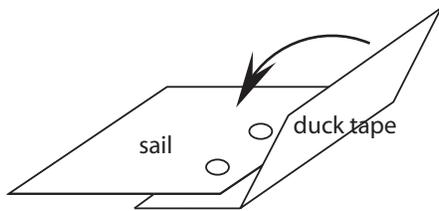


Sheet #17 ~ building a sail

The easiest and most economical sail to construct is a spirit rig, made using poly-tarp for the sail, " chain-link fence tubing for the mast and " conduit for the spirit boom. The optimum size sail depends upon the experience of the sailor and the weather conditions. Because of the ease of construction, it is convenient to have more than one size. Start conservative and work up.

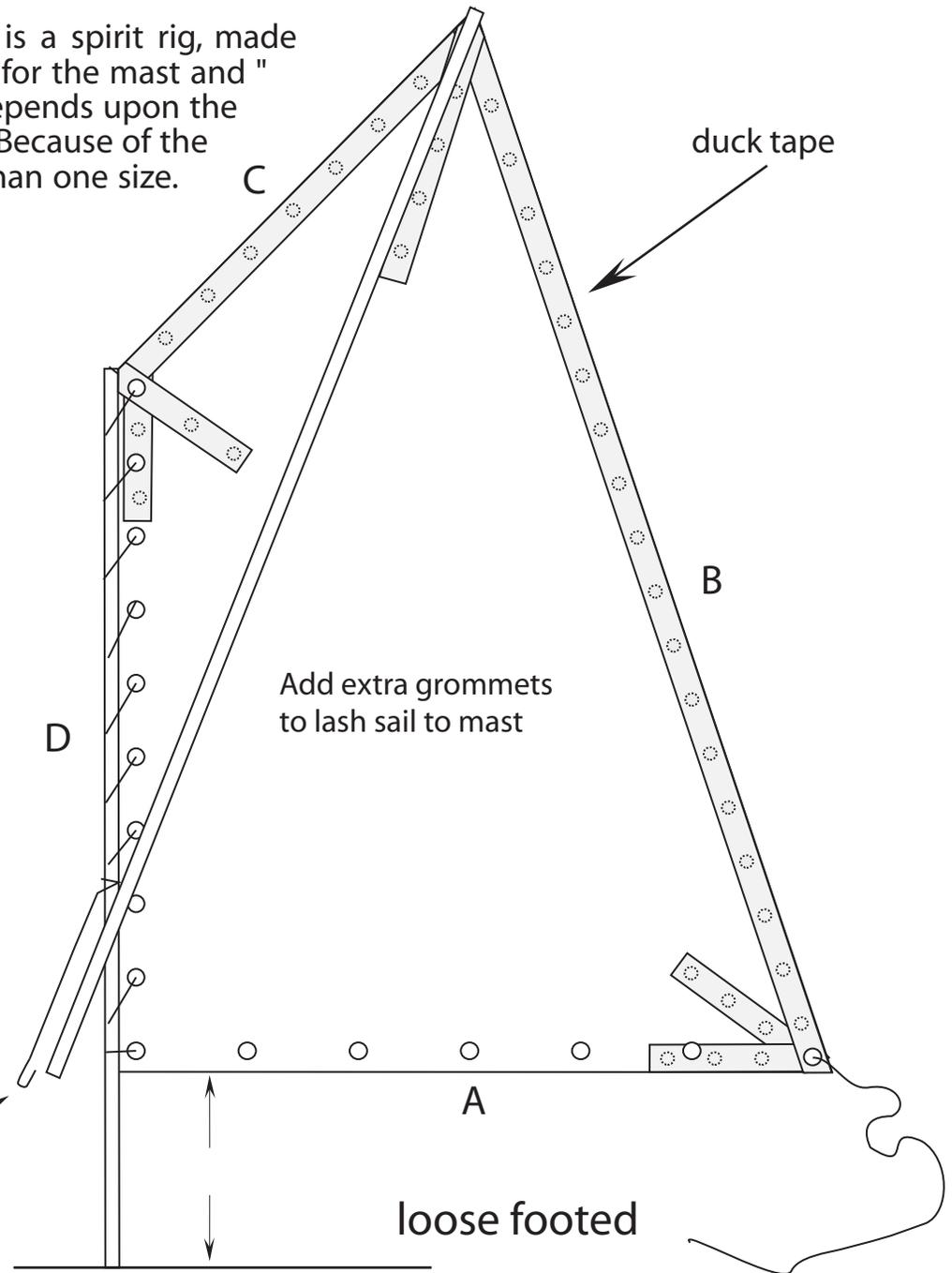
A	B	C	D	Sail Area
"	"	"	"	16 sq. ft.
"	"	"	"	25 sq. ft.
"	"	"	"	36 sq. ft.

Layout sail then cut mast and spirit boom to fit.



Reinforce cut edges with duct tape. punch " holes " apart on cut edge of sail and trim with folded duct tape. When the adhesive of the tape contacts through the hole, the tape will permanently stick. After applying tape, rub tape briskly to assure contact.

Hook on end of line to hold spirit boom



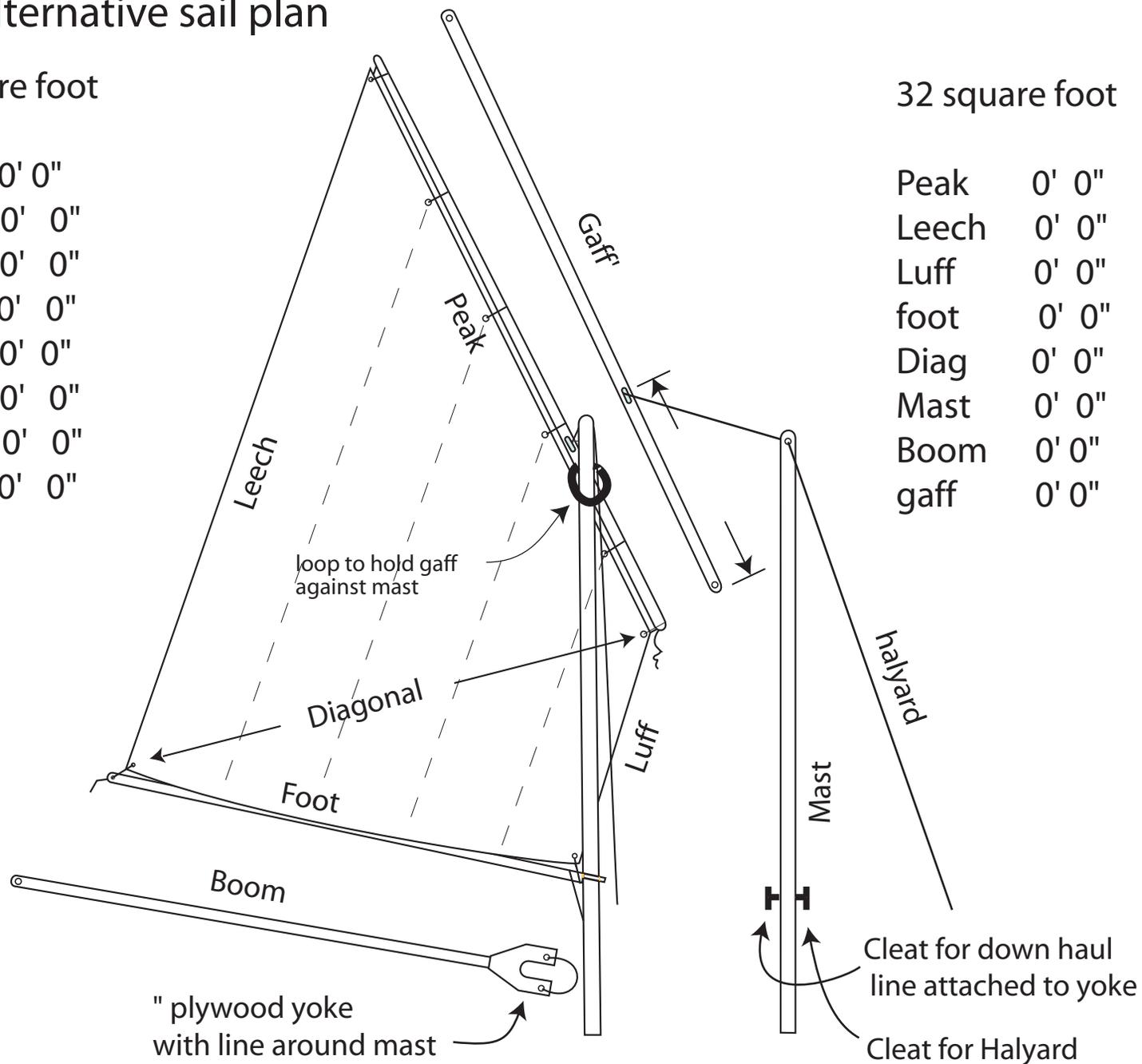
Sheet #18 ~ an alternative sail plan

26 square foot

Peak	0' 0"
Leech	0' 0"
Luff	0' 0"
foot	0' 0"
Diag	0' 0"
Mast	0' 0"
Boom	0' 0"
gaff	0' 0"

32 square foot

Peak	0' 0"
Leech	0' 0"
Luff	0' 0"
foot	0' 0"
Diag	0' 0"
Mast	0' 0"
Boom	0' 0"
gaff	0' 0"



There are many materials from which the spars can be made, including full round closet rod, available at lumber yards.