Gentry Bill of Materials

LUMBER & PLYWOOD: All plywood must be intended for marine or exterior use; interior grades are not acceptable. The marine grade panel features higher grade inner ply cores, while the exterior grade cores may have voids not apparent to the eye, use cores made from woods not as suitable for marine applications, and be less than the specified thickness. In most cases, the glues used in both the marine and exterior panels are the same waterproof type. However, the decision to use exterior panels in lieu of marine panels must lie with the builder, considering the particular use of the panel in the boat and the expected service. The letters A, B and C designate the grade of the exterior veneers with A grade the best, etc. Douglas-fir plywood is acceptable for all plywood, although mahogany or other attractive veneers are preferable in many instances as described in these instructions. All lumber used should be first grade, free from knots, shakes, checks, or other defects. Grouping lumber and purchasing "random-random" material to resaw to the required size will result in considerable savings. All lumber sizes should be checked to the work before purchasing wherever possible. Lumber typical to the locale and proven in use in boats of similar type can be used as long as the weight, strengths, and characteristics are similar. Suitable boatbuilding woods include white oak, mahogany (Mahog.- Philippine dark red, American, or African types commonly used in boats), Sitka spruce, Alaskan cedar, Port Orford cedar, Douglas-fir (DF), longleaf yellow pine, and apitong.

HULL MATERIAL LISTING: The following material listing is an estimate of the materials required to build the basic hull. The listing is intended to serve as a general guide only and should not be used to purchase materials until the various options and alternatives have been checked to the plans, to the work, and to the materials which may be available in the area in which the hull will be built. The listing may vary due to the amount of waste and other variables that cannot be controlled. Lumber listed as 1" is to be "four quarters" stock milled; this usually results in a 3/4" thickness. DO NOT BUY 1" NET LUMBER. Lams listed as 1" x 5/8" are ripped from 1" stock and will be 3/4" x 5/8". All widths are net and lengths allow for fitting. All 2" lumber is to be "lumberyard size" in both thickness and width. Thus a 2" x 6" will probably net 1 1/2" x 5 1/2".

ITEM	MATERIAL	NO. PCS.	SIZE
LUMBER:			
Transom #0			
Uprights	*¥ Mahog	1	1" x 3" x 24" makes 2
Center upright	*¥ Mahog	1	1" x 1 1/2" x 18"
Floor timber 2"	*¥ DF or Mahog	1	2" x 3" x 18"
Floor timber 1"	*¥ Mahog	1	1" x 1 1/2" x 18"
Bottom	*¥ Mahog	1	1" x 8" x 5' makes 4
Horizontal shelf	*¥ Mahog	1	1" x 6 1/2" x 5' makes 2
Sides	*¥ Mahog	1	1" x 6" x 3'
Frame #1			
Frame #1 - Sides	* Mahog	1	1" x 9 1/2" x 28" makes 2

Bottom	* Mahog	1	1" x 7" x 5' 6"
Frame #2			
Frame #2 - Sides	* Mahog	1	1" x 9 1/2" x 2' 6" makes 2
Bottom	* Mahog	1	1" x 8" x 5' 6"
Frame #3			
Frame #3 - Sides	* Mahog	1	1" x 8" x 2' makes 2
Bottom	* Mahog	1	1" x 8" x 3' makes 2
Deck Beam	* Mahog	1	1" x 8" x 7' makes #3 & #6
Frame #4			
Frame #4 - Sides	* Mahog	1	1" x 8" x 2' 2" makes 2
Bottom	* Mahog	1	1" x 6" x 2' 7" makes 2
Deck Beam	* Mahog	1	1" x 7" x 6' 8"

Frame #5			
Frame #5 - Sides & bottom	* Mahog	1	1" x 6 1/2" x 7' 6" makes 2
Deck beam	* Mahog	1	1" x 6" x 6'
Frame #6			
Frame #6 - Side & Bottom	* Mahog	1	1" x 7" x 4'
Deck Beam	* Mahog	See #3	
-			
Keel	Mahog	2	1" x 5 1/2" x 14'
Chine	Mahog	2	1" x 1 1/2" x 17'
Sheer	Mahog	4	5/8" x 1 1/4" x 18'
Bottom Battens	Mahog Mahog Mahog	4 2 2	1" x 1 1/2" x 17' 1" x 1 1/2" x 14' 1" x 1 1/2" x 12'

Side Battens	Mahog	4	1" x 1 1/2" x 18'
Motor Stringers	DF	2	2" x 6" x 13'
Motor Stringer Clips	DF or Mahog	1	2" x 2" x 6' makes 8
Strongbacks	Mahog	1	1" x 1 1/2" x 9'
Battens - Foredeck	Mahog	2	1" x 1 1/2" x 4'
Foredeck	Mahog	2	1" x 1 1/2" x 5'
Aft deck	Mahog	1	1" x 1 1/2" x 6' makes 2
Cowl & hatch (vertical)	Mahog	4	1" x 2" x 6'
Carlings	Mahog	2	1" x 6" x 14'
Hatch fwd. canted beam	Mahog	1	1" x 8" x 5' 6"
Hatch aft beam	Mahog	1	1" x 5" x 6'
Aft deck canted beam	Mahog	1	1" x 7" x 4' 6"
Cowl fwd beams	Mahog	1	1" x 5" x 6' makes 2

Hatch & deck cowl cleat	Mahog	2	1" x 1/2" x 9'
Coamings	Mahog	2	1" x 7" x 12'
Clamps	Mahog	2	1" x 4" x 12' [1]
Finishing board/deck batten	Mahog	2	1" x 3/4" x 14'
Finishing board lams	Mahog	24	1" x 5/8" x 18' [2]
Transom finishing cap	Mahog	1	1" x 5/8" x 6'
Transom finishing cap	Mahog	1	5/8" x 5" x 5'

Notes:
Misc. blocking and cleats not listed.
* Not required when Frame Kit has been purchased.
¥ Not required when Transom Kit has been purchased.
[1] Clamp is segmented and molded 2 1/2" wide; will not require 4" wide stock for most members.
[2] May be butt joined per instr. Assumes 12 lams.

PLANKING: These instructions give several options for planking. e.g., The inner veneers may be less expensive lumber than the outer layer, and plywood can be used optionally on the bottom. Thus, the following quantities are given in square footage of area to be covered. The bottom is to be a total of 5/8" thick, the sides a total of 1/2" thick. Veneer thickness will vary, depending on the number of laminates used. If four laminations of veneers are used, multiply the area to be covered by four to obtain the total square footage required. Cold-molded construction results in considerable waste; most add 20% to the square footage of the veneer to obtain the total required.

Mahogany, dark red Philippine, or Honduras is advised for the outer lams.

- Total area for both sides = 55 sq. ft.
- Total bottom area = 90 sq. ft.
- Total transom area = 10 sq. ft.

These instructions give several options for planking. e.g., The inner veneers may be less expensive lumber than the outer layer, and plywood can be used optionally on the bottom. Thus, the following quantities are given in square footage of area to be covered. If two laminations are used, multiply the area to be covered by two to obtain the total square footage required. Cold-molded construction results in considerable waste; add 20% to the square footage of the veneer to obtain the total required. Mahogany, dark red Philippine, or Honduras is advised for the outer lams.

- Total area for both sides = 55 sq. ft.
- Total bottom area = 90 sq. ft.
- Total transom area = 10 sq. ft.

PLYWOOD: Minimum plywood grades are listed. Exterior (ext.) grade plywood is specified, however, a full marine panel is preferable. The letters "AB" designate the quality of the exterior veneers, however "AA" panels are better. Douglas-fir (DF)* veneers are acceptable, but mahogany or similar veneer surfaces are desirable for a natural finish and some imports are of higher quality than U.S. specifications.

ITEM	MATERIAL	NO. PCS.	SIZE
**Gussets & transom deck beams	DF Ext AB	1	3/8" x 4' x 4'
Foredeck 1st lam	DF Ext. AB	2	1/4" x 4' x 8'
** Floor timbers, stem, & breasthook	DF Ext. AB	1	3/4" x 4' x 6'

Cowl, aft deck, & hatch	Mahog ribbon grain AB	2	1/4" x 4' x 8'

NOTE: See instr. "Decking Comments" regarding 8' length.
** Not required when Frame Kit has been purchased.

FASTENINGS:

- Screws: Flathead wood type, bronze or hot dipped galvanized
- NAILS: Bronze ring type boat nails.
- 3/4" #14 = 1/2 lb.
- 1" #12 = 2 lbs.
- 1-1/4" #12 = 1 lbs.
- SCREWS: Flat head wood screws, hot dipped galvanized or bronze.
- 1 1/4" #8 = 5 gross
- 1 1/2" #8 = 2 gross
- 2" #10 = 4 0nly
- 3" #14 = 3 dozen
- CARRIAGE BOLTS: Hot dipped galvanized or bronze with nut and washer; lengths to be taken from the work.
- 3/8" = 2 required at stem/keel junction.
- 1/4" = 40 required for clips
- 1/4" = 20 required for frames to deck beams

Adhesives: Epoxy adhesives are advised throughout the construction either an epoxy glue or epoxy resin. Epoxy resins should be used with thickeners (wood flour, microspheres and silica or equal) per the instructions with the resin and/or thickening agent. Wood flour with epoxy will dry to a brown color and is preferable for bedding final mahogany laminates in place. Due to the noted options and the probable waste the amount required is difficult to estimate. Start with a five gallon container of epoxy and after use you will be better able to estimate the total amount required.