

Antonio Salguero	Sound Boats
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Preliminary Weight Estimate

65' Gaff Schooner JUNO

Robert and Melissa Soros: Owners

Nat Benjamin: Designer

Vessel Particulars	
LOA	64' 11"
LWL	52'
BEAM	15' 6"
BEAM LWL	14' 8"
DRAFT	9' 2"
SAIL AREA (UNDER LOWERS)	2,040 sq. ft.
DISPLACEMENT (from Lines)	91,847 lbs
Station Spacing	5.20 = 5' 2 7/16"
Scale of Lines DWG	1/2"=1'0"
Scale Factor (1/scale^2)	4

Notes:

- All units in ft or pounds
- All CG's were measured from an origin determined by the the intersection of FP (Station 0) and the Baseline, 10' below the LWL
- Weights fwd of Station 0 are negative
- Weights to port of the Centerline are negative
- Interior weights based on layout dated 12/18/01

Summary of Weight Catagories

	Weight	LCG	L Moments	VCG	V Moments	TCG	Γ Moments
	lbs	ft from FP	ft-lbs	ft from BL	ft-lbs	ft from CL	ft-lbs
Whole Vessel (Ready for Sea)	90,927	28.63	2,603,270	8.73	794,065	0.00	0
Whole Vessel (Half Range)	89,207	28.52	2,543,988	8.71	777,403	0.00	0
Whole Vessel (Full Range)	88,933	28.36	2,521,756	8.70	773,440	0.00	0
Hull Structure	25,547	30.01	766,644	8.65	221,006	0.00	0
Hull Outfit	1,044	45.47	47,459	9.29	9,701	0.00	0
Deck Structure	9,978	31.91	318,434	14.65	146,140	0.00	0
Deck Outfit	1,400	32.54	45,562	15.78	22,089	0.00	0
Mechanical, Plumbing, Electrical	4,841	34.23	165,714	8.99	43,514	0.00	0
Interior Joinery	5,480	24.28	133,037	9.83	53,882	0.00	0
Spars, Standing, Running Rigging and Rigging Hardware	3,266	25.69	83,910	36.24	118,362	0.00	0
Ground Tackle	2,488	4.34	10,788	11.96	29,760	0.00	0
General Equipment	962	34.41	33,100	11.39	10,960	0.00	0
External Lead Ballast	29,572	27.63	817,074	2.75	81,323	0.00	0
Trim Ballast	500	1.00	500	11.00	5,500	0.00	0
Payload	1,370	24.35	33,365	11.23	15,390	0.00	0
Tankage (Ready For Sea)	4,481	32.96	147,684	8.13	36,437	0.00	0
Tankage (Half Range)	2,760	32.03	88,402	7.16	19,774	0.00	0
Tankage (Full Range)	2,486	26.61	66,169	6.36	15,812	0	0

Trim Analysis

Longitudinal:

LCB from Lines Plan	0.547	=	28.44	ft aft station 0
LCF from Lines Plan	0.550	=	28.60	"

LCG Ready for Sea			28.63	"
LCG Half Range			28.52	"
LCG Full Range			28.36	"

Trim Arm (difference between LCB and LCG)

Ready for Sea			0.19	ft.
Half Range			0.07	"
Full Range			-0.09	"

Longitudinal Trim Moments (trim arm x displacement at that loading condition)

Ready for Sea			17,107	ft-lbs.
Half Range			6,779	"
Full Range			-8,118	"

Moment to Trim 1"	9,000	ft-lbs
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Total Longitudinal Trim:

Distirbution of Trim

Positive=stern down, Negative=bow down

			Bow		Stern	
Ready for Sea	1.90	"	1.05	"	0.86	"
Half Range	0.75	"	0.41	"	0.34	"
Full Range	-0.90	"	-0.50	"	-0.41	"

Transverse:

TCG Ready for Sea	0.000	"
TCG Half Range	0.000	"
TCG Full Range	0.000	"

Tansverse Trim Moments:(trim arm x displacement at that loading condition)

Positive=starboard down, Negative=port down)

Ready for Sea	0	"
Half Range	0	"
Full Range	0	"

Weight Estimate

Hull Structure:

Hull Area between Station 0 and Station 10 determined using Simpson's Rule
 LCG determined by moments

Station	1/2 Girth (ft.)	S. Mult.	S. Function	Station	S. Moment
0	5.00	1	5	0	0.00
1	8.25	4	33	1	33.00
2	10.25	2	21	2	41.00
3	11.50	4	46	3	138.00
4	12.25	2	25	4	98.00
5	12.50	4	50	5	250.00
6	13.00	2	26	6	156.00
7	13.17	4	53	7	368.76
8	13.25	2	27	8	212.00
9	11.33	4	45	9	407.88
10	7.33	1	7	10	73.30
column totals			<u>336.83</u>		<u>1777.94</u>

Calculated area 1167.68 sq. ft.
 Bilge Factor 35.03 sq. ft.
 Total Area 1202.71 sq. ft.
 LCG 0.53 or 27.45 ft aft station 0

Angelique 46lbs/ft³ 15% moisture

Wana 34 lbs/ft³

White Oak 47 lbs/ft³

Locust 48 lbs/ft³

1.75" Hull planking and framing considered as average weight per square foot. A 100' square foot area of hull was analyzed.

100 sq ft planking @ 6lbs/sq. ft.	=	600.00	lbs.	
80 LF framing @ 6.24lbs/LF	=	499.00	lbs.	
320 #24 x 3.5" BFHWS @ 5.3lbs/100	=	17.00	lbs.	
		<u>1,116.00</u>	lbs. divided by 100sq. Ft. =	11.16 lbs.

Description	Quantity	Unit	Total	LCG		VCG		TCG		T Moments	
	Sq. Ft. Area Lineal Ft.	Weight lbs	Weight lbs	ft from FP	L Moments ft-lbs	ft from BL	V Moments ft-lbs	ft from CL	T Moments ft-lbs		
Hull Planking (station 0-station10)	1202.71	11.16	13422.22	27.45	368439.87	9.00	120799.96	0.00	0.00		
Planking Topside Bow area	22.50	11.16	251.10	-1.00	-251.10	9.00	2259.90	0.00	0.00		
Planking Counter Area	78.00	11.16	870.48	55.00	47876.40	9.00	7834.32	0.00	0.00		
Floors timbers:											
frame -0A	0.70	10.20	7.14	-1.17	-8.35	9.00	64.26	0.00	0.00		
frame 0A	0.75	10.20	7.65	-0.17	-1.30	12.00	91.80	0.00	0.00		
frame 0B	0.83	10.20	8.47	1.00	8.47	11.00	93.13	0.00	0.00		
frame 0C	0.92	10.20	9.38	2.25	21.11	10.00	93.84	0.00	0.00		
frame 0D	1.00	10.20	10.20	3.50	35.70	9.50	96.90	0.00	0.00		
frame 1A	1.08	10.20	11.02	4.63	51.00	9.00	99.14	0.00	0.00		
frame 1B	1.50	12.25	18.38	6.00	110.25	8.58	157.66	0.00	0.00		
frame 1C	1.83	12.25	22.42	7.25	162.53	8.25	184.94	0.00	0.00		
frame 1D	2.08	12.25	25.48	8.58	218.62	7.83	199.51	0.00	0.00		
frame 2A	2.34	12.25	28.67	9.92	284.36	7.67	219.86	0.00	0.00		
frame 2B	2.46	12.25	30.14	11.25	339.02	7.50	226.01	0.00	0.00		
frame 2C	2.75	12.25	33.69	12.50	421.09	7.25	244.23	0.00	0.00		
frame 2D	3.00	12.25	36.75	13.63	500.90	6.83	251.00	0.00	0.00		
frame 3A	3.31	12.25	40.57	15.17	615.48	6.75	273.86	0.00	0.00		
frame 3B	3.46	12.25	42.39	16.42	695.96	6.58	278.89	0.00	0.00		
frame 3C (bronze)	1.00	32.00	32.00	18.00	576.00	5.75	184.00	0.00	0.00		
frame 3D (bronze)	1.00	32.00	32.00	19.17	613.44	5.67	181.44	0.00	0.00		
frame 4A (bronze)	1.00	32.00	32.00	20.50	656.00	5.58	178.56	0.00	0.00		
frame 4B (bronze)	1.00	32.00	32.00	21.75	696.00	5.50	176.00	0.00	0.00		
frame 4C (bronze)	1.00	32.00	32.00	23.17	741.44	5.42	173.44	0.00	0.00		
frame 4D (bronze)	1.00	32.00	32.00	24.50	784.00	5.33	170.56	0.00	0.00		
frame 5A (bronze)	1.00	32.00	32.00	25.80	825.60	5.25	168.00	0.00	0.00		
frame 5B (bronze)	1.00	32.00	32.00	27.08	866.56	5.17	165.44	0.00	0.00		
frame 5C (bronze)	1.00	32.00	32.00	28.33	906.56	5.08	162.56	0.00	0.00		
frame 5D	2.67	12.25	32.71	30.00	981.23	5.42	177.27	0.00	0.00		
frame 6A	2.50	12.25	30.63	31.50	964.69	5.25	160.78	0.00	0.00		
frame 6B	2.38	12.25	29.16	32.88	958.62	5.17	150.73	0.00	0.00		
frame 6C	2.25	12.25	27.56	34.17	941.81	5.00	137.81	0.00	0.00		
frame 6D	2.13	12.25	26.09	35.50	926.28	4.92	128.38	0.00	0.00		
frame 7A	2.08	12.25	25.48	36.80	937.66	4.75	121.03	0.00	0.00		
frame 7B	1.92	12.25	23.52	38.13	896.82	4.67	109.84	0.00	0.00		
frame 7C	1.88	12.25	23.03	39.25	903.93	4.63	106.63	0.00	0.00		
frame 7D	1.88	12.25	23.03	40.75	938.47	5.25	120.91	0.00	0.00		
frame 8A	1.88	12.25	22.97	42.00	964.69	5.75	132.07	0.00	0.00		
frame 8B	2.00	12.25	24.50	43.38	1062.81	6.33	155.09	0.00	0.00		
frame 8C	2.10	12.25	25.73	44.50	1144.76	6.75	173.64	0.00	0.00		
frame 8D (NO FLOOR-STUFFING BOX)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
frame 9A	2.76	12.25	33.81	47.33	1600.23	9.00	304.29	0.00	0.00		
frame 9B	3.00	10.20	30.60	48.63	1488.08	9.75	298.35	0.00	0.00		
frame 9C	3.00	10.20	30.60	50.00	1530.00	10.25	313.65	0.00	0.00		
frame 9D	3.00	10.20	30.60	51.25	1568.25	10.75	328.95	0.00	0.00		
frame 10A	0.00	0.00	0.00	52.25	0.00	11.08	0.00	0.00	0.00		
frame 10B	2.75	10.20	28.05	53.67	1505.44	11.50	322.58	0.00	0.00		
frame 10C	2.50	10.20	25.50	55.00	1402.50	12.08	308.04	0.00	0.00		
frame 10D	2.50	10.20	25.50	56.38	1437.69	12.50	318.75	0.00	0.00		

Stem (angelique)	1.00	95.00	95.00	-2.08	-197.60	13.67	1298.65	0.00	0.00
Forekeel (angelique)	1.00	480.00	480.00	8.00	3840.00	8.00	3840.00	0.00	0.00
Keel (angelique)	1.00	1500.00	1500.00	29.00	43500.00	4.25	6375.00	0.00	0.00
Sternpost Assembly: (angelique)									
Outer	1.00	275.00	275.00	49.50	13612.50	6.75	1856.25	0.00	0.00
Inner	1.00	325.00	325.00	47.75	15518.75	6.50	2112.50	0.00	0.00
Stuffing box timber	1.00	275.00	275.00	46.33	12740.75	6.25	1718.75	0.00	0.00
Knee	1.00	300.00	300.00	43.00	12900.00	4.75	1425.00	0.00	0.00
Horn Timber	1.00	225.00	225.00	53.00	11925.00	10.75	2418.75	0.00	0.00
Transom Knee w/ 1/2" bolts	1.00	35.00	35.00	58.50	2047.50	13.50	472.50	0.00	0.00
Transom 1 3/4" Wana	22.56	5.60	126.34	59.50	7516.99	13.50	1705.54	0.00	0.00
Fashion Pieces	2.00	45.00	90.00	58.50	5265.00	13.50	1215.00	0.00	0.00
Dead wood/worm shoe	1.00	1300.00	1300.00	40.50	52650.00	2.00	2600.00	0.00	0.00
Collision Bulkhead	30.00	5.50	165.00	5.00	825.00	12.50	2062.50	0.00	0.00
Engine Bedsw/ 1/2" bolts	2.00	50.00	100.00	40.00	4000.00	7.00	700.00	0.00	0.00
Foremast Step w/ 1/2" bolts	1.00	140.00	140.00	14.00	1960.00	7.75	1085.00	0.00	0.00
Foremast step tierod	1.00	15.00	15.00	12.75	191.25	12.00	180.00	0.00	0.00
Mainmast Step w/ 1/2" bolts	1.00	130.00	130.00	32.00	4160.00	6.00	780.00	0.00	0.00
Mainmast step tierod	1.00	15.00	15.00	31.50	472.50	10.50	157.50	0.00	0.00
Samson Post w/ 1/2" bolts	1.00	95.00	95.00	2.50	237.50	14.25	1353.75	0.00	0.00
Quarter Knees w/ 1/2" bolts	2.00	58.00	116.00	59.00	6844.00	14.30	1658.80	0.00	0.00
Sheer Clamps w/ 1/2" bolts	2.00	305.00	610.00	30.50	18605.00	14.00	8540.00	0.00	0.00
Shelves w/ 1/2" bolts	2.00	370.00	740.00	30.50	22570.00	14.00	10360.00	0.00	0.00
Foremast Shelf Doublers w/ 1/2" bolts	2.00	85.00	170.00	14.50	2465.00	14.00	2380.00	0.00	0.00
Mainmast Shelf Doublers w/ 1/2" bolts	2.00	85.00	170.00	32.50	5525.00	13.00	2210.00	0.00	0.00
Bilge Stringers w/ 1/2" bolts	2.00	430.00	860.00	30.50	26230.00	8.50	7310.00	0.00	0.00
Boomkin Bits	2.00	30.00	60.00	54.50	3270.00	14.00	840.00	0.00	0.00
Caulking	1.00	100.00	100.00	30.00	3000.00	9.00	900.00	0.00	0.00
Seam Compound	1.00	75.00	75.00	28.00	2100.00	9.00	675.00	0.00	0.00
Misc. Fasteners	1.00	500.00	500.00	28.00	14000.00	9.00	4500.00	0.00	0.00

Description	Quantity	Unit	Total	LCG	L Moments	VCG	V Moments	TCG	T Moments
	Sq. Ft. Area	Weight	Weight						
	Lineal Ft.	lbs	lbs	ft from FP	ft-lbs	ft from BL	ft-lbs	ft from CL	ft-lbs
3" Hackmatack Hanging Knees:									
Foremast w/ 1/2" bolts	4.00	50.00	200.00	15.25	3050.00	13.50	2700.00	0.00	0.00
Mainmast w/ 1/2" bolts	4.00	50.00	200.00	32.00	6400.00	12.50	2500.00	0.00	0.00
Fwd Cabin house w/ 1/2" bolts	2.00	50.00	100.00	24.50	2450.00	13.00	1300.00	0.00	0.00
Bridgedeck w/ 1/2" bolts	2.00	50.00	100.00	44.50	4450.00	12.50	1250.00	0.00	0.00
Hull Strapping 1/8" x 3" Bronze FB:									
Foremast Area	4.00	22.00	88.00	14.50	1276.00	9.50	836.00	0.00	0.00
Mainmast Area	4.00	22.00	88.00	33.00	2904.00	9.00	792.00	0.00	0.00
Hull Structure Totals:			25546.51		766643.70		221006.49		0.00

Hull Outfit:									
Description	Quantity	Unit	Total	LCG	L Moments	VCG	V Moments	TCG	T Moments
	Lineal Ft.	lbs	lbs	ft from FP	ft-lbs	ft from BL	ft-lbs	ft from CL	ft-lbs
Rudder Stock (2.5" Silicon Bronze Rod)	6.25	19.00	118.75	52.50	6234.38	10.50	1246.88	0.00	0.00
Rudder Tube/Flange	1.00	35.00	35.00	52.50	1837.50	11.00	385.00	0.00	0.00
Rudder Stuffing Box	1.00	20.00	20.00	53.25	1065.00	12.08	241.60	0.00	0.00
Rudder Stock Strap	1.00	50.00	50.00	52.00	2600.00	8.50	425.00	0.00	0.00
Gudgeon and Pintel	2.00	30.00	60.00	50.00	3000.00	5.50	330.00	0.00	0.00
Heel Fitting	2.00	45.00	90.00	48.00	4320.00	1.50	135.00	0.00	0.00
Rudder	1.00	250.00	250.00	51.75	12937.50	5.70	1425.00	0.00	0.00
Edson Worm Gear Robinson	1.00	270.00	270.00	54.50	14715.00	13.75	3712.50	0.00	0.00
Water Tight Door	1.00	150.00	150.00	5.00	750.00	12.00	1800.00	0.00	0.00
Hull Outfit Totals:			1043.75		47459.38		9700.98		0.00

Deck Structure:

Deck Area Determined Using Simpson's Rule
 LCG determined by paper cut-out

Station	1/2 Breadth (ft.)	S. Mult.	S. Function
0.00	1.75	1.00	1.75
1.00	3.92	4.00	15.68
2.00	5.67	2.00	11.34
3.00	6.75	4.00	27.00
4.00	7.50	2.00	15.00
5.00	7.75	4.00	31.00
6.00	7.75	2.00	15.50
7.00	7.50	4.00	30.00
8.00	7.00	2.00	14.00
9.00	6.33	4.00	25.32
10.00	5.33	1.00	5.33

column totals 191.92

Calculated area 665.32

Area Fwd of Station 0 4.25

Area Aft of Station 10 69.75

Deductions: 19.96

Foc'scle Scuttle opening -9.00

Fwd Cabin House Opening -69.00

Aft Cabin House Opening -64.00

Footwell Opening -28.00

Helm Box opening -1.00

Lazarette Hatch Opening -4.00

Total Area 584.28 sq. ft.

Description	Quantity	Unit	Total	LCG	L Moments	VCG	V Moments	TCG	T Moments
	Sq. Ft. Area	Weight	Weight						
Deck Structure:	Lineal Ft.	Lbs	Lbs	ft from FP	ft-lbs	ft from BL	ft-lbs	ft from CL	ft-lbs
1 7/8" Teak Deck (incl. fast, caulk, & p'sul.)	584.28	7.30	4265.26	29.50	125825.20	14.50	61846.29	0.00	0.00
Deck Beams:									
Heavy Beams 4.7 lbs/LF									
Light Beams 3.5 lbs/LF									
Number									
1	3.34	3.50	11.69	0.08	0.94	15.58	182.13	0.00	0.00
2.00	4.50	4.70	21.15	1.33	28.13	15.58	329.52	0.00	0.00
3.00	4.00	3.50	14.00	2.33	32.62	15.50	217.00	0.00	0.00
4.00	6.50	4.70	30.55	3.50	106.93	15.42	471.08	0.00	0.00
5.00	7.50	3.50	26.25	4.92	129.15	15.33	402.41	0.00	0.00
6.00	8.50	4.70	39.95	6.33	252.88	15.25	609.24	0.00	0.00
7.00	9.16	3.50	32.06	7.25	232.44	15.08	483.46	0.00	0.00
8.00	10.00	4.70	47.00	8.42	395.74	15.00	705.00	0.00	0.00
8 Doubler	4.00	4.70	18.80	8.08	151.90	15.00	282.00	0.00	0.00
9.00	8.00	3.50	28.00	9.75	273.00	14.92	417.76	0.00	0.00
10.00	11.50	4.70	54.05	11.38	615.09	14.75	797.24	0.00	0.00
10 Doubler	4.00	4.70	18.80	11.63	218.64	14.75	277.30	0.00	0.00
11.00	12.00	4.70	56.40	12.67	714.59	14.50	817.80	0.00	0.00
12.00	10.50	3.50	36.75	13.67	502.37	14.50	532.88	0.00	0.00
13.00	11.00	3.50	38.50	15.00	577.50	14.42	555.17	0.00	0.00
14.00	13.50	4.70	63.45	16.58	1052.00	14.42	914.95	0.00	0.00
15.00	14.00	4.70	65.80	18.00	1184.40	14.25	937.65	0.00	0.00
15 Doubler	7.00	4.70	32.90	17.58	578.38	14.25	468.83	0.00	0.00
16.00	8.00	3.50	28.00	19.50	546.00	14.00	392.00	0.00	0.00
17.00	8.50	3.50	29.75	20.75	617.31	14.00	416.50	0.00	0.00
18.00	15.00	4.70	70.50	22.08	1556.64	14.00	987.00	0.00	0.00
19.00	8.50	3.50	29.75	23.50	699.13	14.00	416.50	0.00	0.00
20.00	15.00	4.70	70.50	24.50	1727.25	14.00	987.00	0.00	0.00
21.00	9.00	3.50	31.50	26.08	821.52	14.00	441.00	0.00	0.00
22.00	9.00	3.50	31.50	27.42	863.73	13.92	438.48	0.00	0.00
23.00	9.00	3.50	31.50	28.67	903.11	13.92	438.48	0.00	0.00
24.00	15.00	4.70	70.50	29.88	2106.54	13.75	969.38	0.00	0.00
24 Doubler	6.00	4.70	28.20	29.50	831.90	13.75	387.75	0.00	0.00
25.00	13.00	3.50	45.50	31.00	1410.50	13.75	625.63	0.00	0.00
26.00	13.00	3.50	45.50	32.50	1478.75	13.67	621.99	0.00	0.00
27.00	15.00	4.70	70.50	34.00	2397.00	13.70	965.85	0.00	0.00
28.00	15.00	3.50	52.50	35.00	1837.50	13.70	719.25	0.00	0.00
29.00	14.50	4.70	68.15	36.63	2496.33	13.70	933.66	0.00	0.00
29 Doubler	9.00	4.70	42.30	36.25	1533.38	13.75	581.63	0.00	0.00
30.00	6.50	3.50	22.75	37.75	858.81	13.75	312.81	0.00	0.00
31.00	6.17	3.50	21.60	39.00	842.21	13.75	296.93	0.00	0.00
32.00	6.00	3.50	21.00	40.25	845.25	13.75	288.75	0.00	0.00
33.00	5.50	3.50	19.25	41.58	800.42	13.75	264.69	0.00	0.00
34.00	5.42	3.50	18.97	42.92	814.19	13.75	260.84	0.00	0.00
35.00	6.50	4.70	30.55	44.50	1359.48	13.75	420.06	0.00	0.00
35 Doubler	9.00	4.70	42.30	45.00	1903.50	13.75	581.63	0.00	0.00
36.00	12.50	4.70	58.75	46.00	2702.50	13.75	807.81	0.00	0.00
37.00	8.00	3.50	28.00	47.42	1327.76	13.67	382.76	0.00	0.00
38.00	7.50	3.50	26.25	48.75	1279.69	13.67	358.84	0.00	0.00
39.00	7.00	3.50	24.50	50.17	1229.17	13.70	335.65	0.00	0.00
40.00	6.50	3.50	22.75	51.42	1169.81	13.70	311.68	0.00	0.00
41.00	6.00	3.50	21.00	52.50	1102.50	13.70	287.70	0.00	0.00
42.00	9.66	4.70	45.40	53.42	2425.37	13.80	626.55	0.00	0.00
43.00	9.16	4.70	43.05	54.75	2357.10	13.80	594.12	0.00	0.00
44.00	6.67	3.50	23.35	55.75	1301.48	14.00	326.83	0.00	0.00
45.00	8.00	4.70	37.60	57.00	2143.20	14.00	526.40	0.00	0.00
46.00	6.50	3.50	22.75	58.00	1319.50	14.00	318.50	0.00	0.00

Breast Hook w/ 1/2" bolts	1.00	28.00	28.00	-2.00	-56.00	15.75	441.00	0.00	0.00
Samson Post Partners	2.67	13.25	35.38	2.50	88.44	15.70	555.43	0.00	0.00
Windlass Blocking	3.75	13.25	49.69	5.00	248.44	15.67	778.60	0.00	0.00
Foc'sle Scuttle Ventilator Box w/ ventilator	1.00	30.00	30.00	7.00	210.00	16.00	480.00	0.00	0.00
Foc'sle Scuttle	1.00	150.00	150.00	9.50	1425.00	16.00	2400.00	0.00	0.00
Foc'sle Scuttle Sills	12.00	2.50	30.00	10.00	300.00	15.08	452.40	0.00	0.00
Foc'sle Carlines	2.00	12.00	24.00	10.00	240.00	15.08	361.92	0.00	0.00
ForeMast Partners	8.30	12.00	99.60	15.00	1494.00	14.63	1457.15	0.00	0.00
Fwd Cabin Trunk (4 sides)	40.00	7.00	280.00	24.00	6720.00	15.00	4200.00	0.00	0.00
Fwd Cabin Top (incl. beams)	60.50	4.67	282.54	24.50	6922.11	16.00	4520.56	0.00	0.00
Fwd Cabin Sills	36.00	2.50	90.00	24.00	2160.00	14.25	1282.50	0.00	0.00
Mainmast Partners	9.34	12.00	112.08	31.75	3558.54	14.00	1569.12	0.00	0.00
Pilot House Trunk	50.00	6.70	335.00	40.50	13567.50	15.00	5025.00	0.00	0.00
Pilot House Top	40.60	4.67	189.60	40.00	7584.08	16.58	3143.60	0.00	0.00
Pilot House Crown	24.00	11.40	273.60	39.00	10670.40	16.00	4377.60	0.00	0.00
Pilot House Sills	32.00	2.50	80.00	40.50	3240.00	14.08	1126.40	0.00	0.00
Cockpit Carlines	2.00	32.00	64.00	49.75	3184.00	14.17	906.88	0.00	0.00
Footwell Sole and Framing	30.00	7.50	225.00	50.00	11250.00	12.75	2868.75	0.00	0.00
Footwell Sides	29.00	4.37	126.73	50.00	6336.50	13.50	1710.86	0.00	0.00
Helm Box	1.00	35.00	35.00	54.00	1890.00	14.75	516.25	0.00	0.00

Description	Quantity	Unit	Total	LCG	L Moments	VCG	V Moments	TCG	T Moments
	Sq. Ft. Area	Weight	Weight						
	Lineal Ft.	Lbs	Lbs	ft from FP	ft-lbs	ft from BL	ft-lbs	ft from CL	ft-lbs
Deck Strapping 1/8" x 3" Bronze FB:									
Foremast Area	29.00	1.38	40.02	13.50	540.27	15.00	600.30	0.00	0.00
Mainmast Area	32.50	1.38	44.85	31.33	1405.15	14.75	661.54	0.00	0.00
Pilot House Companionway Hatch	9.38	6.50	60.94	42.00	2559.38	16.75	1020.70	0.00	0.00
Fwd Cabin Companionway Hatch	8.75	6.50	56.88	27.25	1549.84	16.00	910.00	0.00	0.00
Fwd Cabin Skylight	1.00	80.00	80.00	200.00	16000.00	16.00	1280.00	0.00	0.00
Skylight/ventilators	2.00	50.00	100.00	35.00	3500.00	14.50	1450.00	0.00	0.00
Cockpit Coamings	25.50	5.62	143.31	50.50	7237.16	14.50	2078.00	0.00	0.00
Lazarette Hatches	1.00	45.00	45.00	56.00	2520.00	14.75	663.75	0.00	0.00
Bulwarks w/ 1/2" drifts	87.00	6.00	522.00	31.33	16354.26	15.00	7830.00	0.00	0.00
Caprails	129.00	1.30	167.70	31.33	5254.04	15.50	2599.35	0.00	0.00
Taff Rail									
Deck Structure Totals:			9978.23		318433.51		146139.96		0.00

Deck Outfit:									
Description	Quantity	Unit	Total	LCG	L Moments	VCG	V Moments	TCG	T Moments
	Sq. Ft. Area	Weight	Weight	ft from FP	ft-lbs	ft from BL	ft-lbs	ft from CL	ft-lbs
Foremast Pinrail	1.00	30.00	30.00	14.00	420.00	16.00	480.00	0.00	0.00
Foremast Boot	1.00	5.00	5.00	14.00	70.00	15.00	75.00	0.00	0.00
Foc'sle Scuttle Port Lights 6"	2.00	8.00	16.00	10.50	168.00	16.00	256.00	0.00	0.00
Fwd Cabin Port Lights 6"	6.00	8.00	48.00	24.00	1152.00	15.00	720.00	0.00	0.00
Fwd Cabin Handrails	2.00	15.00	30.00	23.50	705.00	16.25	487.50	0.00	0.00
Pilot House Handrails	2.00	8.00	16.00	40.50	648.00	16.75	268.00	0.00	0.00
Pilot House Portlights	4.00	35.00	140.00	40.25	5635.00	14.75	2065.00	0.00	0.00
Mainmast Pinrail	1.00	30.00	30.00	32.50	975.00	15.00	450.00	0.00	0.00
Mainmast Boot	1.00	5.00	5.00	32.50	162.50	14.50	72.50	0.00	0.00
Mainsail Traveler	1.00	15.00	15.00	58.50	877.50	14.75	221.25	0.00	0.00
Mainsheet Winch	1.00	25.00	25.00	55.50	1387.50	14.75	368.75	0.00	0.00
Mainsheet lead blocks	1.00	20.00	20.00	58.50	1170.00	17.00	340.00	0.00	0.00
Primary Sheet Winches	2.00	40.00	80.00	48.20	3856.00	15.50	1240.00	0.00	0.00
Secondary Sheet Winches	2.00	30.00	60.00	51.00	3060.00	15.50	930.00	0.00	0.00
Steering Wheel	1.00	50.00	50.00	52.50	2625.00	14.75	737.50	0.00	0.00
Footwell drains	2.00	5.00	10.00	46.50	465.00	12.75	127.50	0.00	0.00
Bow pulpit	1.00	75.00	75.00	-1.00	-75.00	18.00	1350.00	0.00	0.00
Stern pulpit	1.00	75.00	75.00	60.00	4500.00	16.50	1237.50	0.00	0.00
Stanchions/Lifelines	24.00	15.00	360.00	30.00	10800.00	16.00	5760.00	0.00	0.00
Staysail Traveler	1.00	20.00	20.00	12.50	250.00	15.50	310.00	0.00	0.00
Bowsprit	1.00	150.00	150.00	-6.00	-900.00	17.00	2550.00	0.00	0.00
Boomkin	1.00	110.00	110.00	61.00	6710.00	14.75	1622.50	0.00	0.00
Docking Cleats	6.00	5.00	30.00	30.00	900.00	14.00	420.00	0.00	0.00
Deck Outfit Totals:			1400.00		45561.50		22089.00		0.00

Description	Quantity	Unit	Total	LCG	L Moments	VCG	V Moments	TCG	T Moments
	Sq. Ft. Area	Weight	Weight						
Spars, Standing, Running Rigging and Rigging Hardware:									
Staysail Club	1.00	37.00	37.00	-2.42	-89.54	15.25	564.25	0.00	0.00
Foremast	1.00	630.00	630.00	15.50	9765.00	37.00	23310.00	0.00	0.00
Fore Boom	1.00	122.00	122.00	23.50	2867.00	19.00	2318.00	0.00	0.00
Fore Gaff	1.00	89.00	89.00	22.75	2024.75	55.33	4924.37	0.00	0.00
Mainmast	1.00	810.00	810.00	34.25	27742.50	43.00	34830.00	0.00	0.00
Main Boom	1.00	250.00	250.00	48.00	12000.00	20.00	5000.00	0.00	0.00
Main Spreaders	2.00	30.00	60.00	34.25	2055.00	46.75	2805.00	0.00	0.00
Fore Spreaders	2.00	25.00	50.00	16.25	812.50	54.67	2733.50	0.00	0.00
Bowsprit Strut	2.00	8.00	16.00	-2.00	-32.00	16.00	256.00	0.00	0.00
Boomkin Strut	1.00	8.00	8.00	60.00	480.00	13.00	104.00	0.00	0.00
Bowsprit Cranze	1.00	54.00	54.00	-12.75	-688.50	17.50	945.00	0.00	0.00
Gammon	1.00	50.00	50.00	-2.75	-137.50	16.25	812.50	0.00	0.00
Bobstay Fitting	1.00	20.00	20.00	-1.00	-20.00	11.00	220.00	0.00	0.00
Staysail Gooseneck	1.00	10.00	10.00	-2.25	-22.50	18.50	185.00	0.00	0.00
Staysail Bale	1.00	10.00	10.00	13.50	135.00	20.00	200.00	0.00	0.00
Fore Gooseneck	1.00	45.00	45.00	15.25	686.25	18.75	843.75	0.00	0.00
Foresail Traveler	1.00	15.00	15.00	12.00	180.00	13.00	195.00	0.00	0.00
ForeGaff Saddle	1.00	30.00	30.00	16.50	495.00	49.33	1479.90	0.00	0.00
Fore Throat Band	1.00	30.00	30.00	16.50	495.00	54.67	1640.10	0.00	0.00
Fore Peak Bands	1.00	45.00	45.00	16.50	742.50	58.67	2640.15	0.00	0.00
Fore Top Band	1.00	20.00	20.00	17.00	340.00	68.00	1360.00	0.00	0.00
Main Gooseneck	1.00	45.00	45.00	34.00	1530.00	19.25	866.25	0.00	0.00
Main Jumper/Band	1.00	20.00	20.00	35.00	700.00	64.67	1293.40	0.00	0.00
Main Spreader Band	1.00	30.00	30.00	34.50	1035.00	47.33	1419.90	0.00	0.00
Main Top Band	1.00	20.00	20.00	38.25	765.00	84.67	1693.40	0.00	0.00
Boomkin Stay Fitting	1.00	20.00	20.00	55.50	1110.00	11.25	225.00	0.00	0.00
Running Rigging and Sails:									
Main Halyard	1.00	25.00	25.00	35.00	875.00	43.00	1075.00	0.00	0.00
Main Sheet	1.00	25.00	25.00	58.50	1462.50	16.00	400.00	0.00	0.00
Main Topping Lift	1.00	25.00	25.00	44.00	1100.00	40.00	1000.00	0.00	0.00
Main Sail (set)	1.00	140.00	140.00	44.00	6160.00	41.00	5740.00	0.00	0.00
Fore Peak Halyard	1.00	25.00	25.00	15.50	387.50	37.00	925.00	0.00	0.00
Fore Throat Halyard	1.00	25.00	25.00	15.50	387.50	37.00	925.00	0.00	0.00
Fore Topping Lift	1.00	25.00	25.00	23.00	575.00	37.00	925.00	0.00	0.00
Fore Vang	1.00	20.00	20.00	28.00	560.00	37.00	740.00	0.00	0.00
Fore Sheet	1.00	25.00	25.00	31.00	775.00	14.00	350.00	0.00	0.00
Fore Sail	1.00	100.00	100.00	23.25	2325.00	37.33	3733.00	0.00	0.00
Fisherman Halyards	1.00	50.00	50.00	26.00	1300.00	45.00	2250.00	0.00	0.00
Fisherman Tack line	1.00	25.00	25.00	16.00	400.00	30.00	750.00	0.00	0.00
Staysail Sheet	1.00	30.00	30.00	21.00	630.00	16.00	480.00	0.00	0.00
Staysail Halyard	1.00	25.00	25.00	16.00	400.00	32.00	800.00	0.00	0.00
Stay Sail (set)	1.00	50.00	50.00	9.00	450.00	32.00	1600.00	0.00	0.00
Jib Halyard	1.00	25.00	25.00	16.00	400.00	40.00	1000.00	0.00	0.00
Jib Sheet	1.00	25.00	25.00	21.00	525.00	16.00	400.00	0.00	0.00
Jib (set)	1.00	65.00	65.00	3.50	227.50	37.00	2405.00	0.00	0.00
Spars, Standing, Running Rigging Totals:			3266.00		83910.46		118362.47		0.00
Ground Tackle:									
Ideal Size 6 Windlass	1.00	275.00	275.00	4.50	1237.50	16.25	4468.75	0.00	0.00
175lb Fisherman	1.00	175.00	175.00	17.00	2975.00	15.00	2625.00	0.00	0.00
100lb Bruce	1.00	100.00	100.00	-5.00	-500.00	16.75	1675.00	0.00	0.00
75lb CQR	1.00	75.00	75.00	-5.00	-375.00	16.75	1256.25	0.00	0.00
600' 1/2" BBB Chain	600.00	2.85	1710.00	4.00	6840.00	10.50	17955.00	0.00	0.00
300' 1 1/4" Nylon Rode	300.00	0.34	102.00	4.00	408.00	11.00	1122.00	0.00	0.00
200' 1" Nylon Rode	200.00	0.25	50.60	4.00	202.40	13.00	657.80	0.00	0.00
Ground Tackle Totals:			2487.60	4.34	10787.90	11.96	29759.80	0.00	0.00

Description	Quantity	Unit	Total	LCG	L Moments	VCG	V Moments	TCG	T Moments
	Sq. Ft. Area	Weight	Weight						
	Lineal Ft.	lbs	lbs	ft from FP	ft-lbs	ft from BL	ft-lbs	ft from CL	ft-lbs
Interior Joinery:									
Based on Interior Layout Version dated 12/18/01									
Soles (1" Bali w/ 1 1/2" x 3" framing):									
Main Sole	77.00	3.90	300.30	26.50	7957.95	7.50	2252.25	0.00	0.00
Pilot House Sole	42.00	3.90	163.80	40.50	6633.90	9.75	1597.05	0.00	0.00
Foc'sle Sole	20.00	3.90	78.00	9.00	702.00	8.50	663.00	0.00	0.00
Foc'sle Joinery									
Ceiling	56.00	1.54	86.24	9.00	776.16	8.50	733.04	0.00	0.00
Bhd at frame 2A incl. Door	66.00	3.50	231.00	11.75	2714.25	12.00	2772.00	0.00	0.00
Double Berth	1.00	75.00	75.00	9.00	675.00	10.00	750.00	0.00	0.00
Single Berth	1.00	50.00	50.00	9.00	450.00	10.00	500.00	0.00	0.00
Stbd Drawers	4.00	8.00	32.00	9.00	288.00	9.00	288.00	0.00	0.00
Port drawers	4.00	8.00	32.00	9.00	288.00	9.00	288.00	0.00	0.00
Ladder	1.00	25.00	25.00	11.50	287.50	12.00	300.00	0.00	0.00
Varnish / Paint	1.00	10.00	10.00	8.00	80.00	12.00	120.00	0.00	0.00
Misc	1.00	20.00	20.00	8.00	160.00	12.00	240.00	0.00	0.00
Fwd Head Joinery									
Ceiling	16.00	1.54	20.00	13.50	270.00	10.00	200.00	0.00	0.00
Bhd at frame 2D	25.00	3.00	20.00	8.00	160.00	12.00	240.00	0.00	0.00
Long. Bhd incl door	23.00	3.50	20.00	8.00	160.00	12.00	240.00	0.00	0.00
Locker/Shelves	1.00	40.00	40.00	13.50	540.00	12.50	500.00	0.00	0.00
Vanity	1.00	40.00	40.00	14.50	580.00	9.50	380.00	0.00	0.00
Varnish / Paint	1.00	10.00	10.00	13.50	135.00	10.00	100.00	0.00	0.00
Misc	1.00	15.00	15.00	13.50	202.50	10.00	150.00	0.00	0.00
Galley Joinery									
Ceiling	45.00	1.54	69.30	15.50	1074.15	11.00	762.30	0.00	0.00
Sink Counter/cabinet	1.00	50.00	50.00	17.00	850.00	9.50	475.00	0.00	0.00
Fridge. enclosure	1.00	100.00	100.00	14.00	1400.00	9.50	950.00	0.00	0.00
Port lockers/shelves	1.00	45.00	45.00	15.50	697.50	13.00	585.00	0.00	0.00
Stbd Locker	1.00	30.00	30.00	17.00	510.00	13.00	390.00	0.00	0.00
Varnish / Paint	1.00	10.00	10.00	18.00	180.00	12.00	120.00	0.00	0.00
Misc	1.00	25.00	25.00	18.00	450.00	12.00	300.00	0.00	0.00
Saloon Joinery									
Ceiling	100.00	1.54	154.00	21.00	3234.00	11.00	1694.00	0.00	0.00
Port Pilot Berth	1.00	50.00	50.00	22.00	1100.00	11.00	550.00	0.00	0.00
Port Book shelves	1.00	35.00	35.00	22.00	770.00	12.50	437.50	0.00	0.00
Stbd pilot Berth	1.00	50.00	50.00	22.00	1100.00	11.00	550.00	0.00	0.00
Stbd Book shelves	1.00	35.00	35.00	22.00	770.00	12.50	437.50	0.00	0.00
Settee Berths	2.00	65.00	130.00	22.00	2860.00	8.50	1105.00	0.00	0.00
Table	1.00	70.00	70.00	23.00	1610.00	9.00	630.00	0.00	0.00
Stbd Hanging Locker incl. Fwd Bhd	1.00	70.00	70.00	28.00	1960.00				
Companionway Ladder	1.00	75.00	75.00	28.00	2100.00	11.00	825.00	0.00	0.00
Port Hanging Locker/table incl. Fwd Bhd	1.00	50.00	50.00	27.00	1350.00	10.50	525.00	0.00	0.00
Varnish / Paint	1.00	10.00	10.00	23.00	230.00	12.00	120.00	0.00	0.00
Misc	1.00	35.00	35.00	23.00	805.00	12.00	420.00	0.00	0.00
Master Stateroom:									
Ceiling	35.00	1.54	53.90	34.00	1832.60	11.00	592.90	0.00	0.00
Double Berth	1.00	75.00	75.00	34.00	2550.00	9.50	712.50	0.00	0.00
Stbd Hanging Locker	1.00	60.00	60.00	30.00	1800.00	11.00	660.00	0.00	0.00
Stbd Lockers/ Bookshelves	1.00	35.00	35.00	34.50	1207.50	13.00	455.00	0.00	0.00
Fwd Bhd.	25.00	3.00	75.00	29.00	2175.00	11.00	825.00	0.00	0.00
Long. Bhd. Incl. Door	46.00	3.50	161.00	33.00	5313.00	11.00	1771.00	0.00	0.00
Master Stateroom Shower:									
Shower enclosure	1.00	65.00	65.00	30.00	1950.00	11.00	715.00	0.00	0.00
Shower Pan	1.00	10.00	10.00	33.00	330.00	8.00	80.00	0.00	0.00
Master Stateroom Head:									
Ceiling	20.00	1.54	30.80	34.00	1047.20	11.00	338.80	0.00	0.00
Fwd. Bhd.	25.00	3.00	75.00	31.50	2362.50	11.00	825.00	0.00	0.00
Long. Bhd. Incl. Door	23.00	3.50	80.50	33.00	2656.50	11.00	885.50	0.00	0.00
Lockers/Shelves	1.00	45.00	45.00	34.00	1530.00	12.00	540.00	0.00	0.00
Midship Head Joinery:									
Ceiling	20.00	1.54	30.80	29.00	893.20	11.00	338.80	0.00	0.00
Fwd. Bhd.	25.00	3.00	75.00	27.75	2081.25	11.00	825.00	0.00	0.00
Long. Bhd. Incl. Door	23.00	3.50	80.50	21.00	1690.50	11.00	885.50	0.00	0.00
Vanity	1.00	45.00	45.00	29.00	1305.00	11.00	495.00	0.00	0.00
Lockers/shelves	1.00	45.00	45.00	29.00	1305.00	11.00	495.00	0.00	0.00
Pilot House Joinery:									
Ceiling	72.00	1.54	110.88	42.00	4656.96	11.50	1275.12	0.00	0.00
Stbd Quarter Berth	1.00	50.00	50.00	42.00	2100.00	11.00	550.00	0.00	0.00
Port Quarter Berth	1.00	50.00	50.00	42.00	2100.00	11.00	550.00	0.00	0.00
Stbd Settee	1.00	65.00	65.00	42.00	2730.00	11.00	715.00	0.00	0.00
Port Settee	1.00	65.00	65.00	42.00	2730.00	11.00	715.00	0.00	0.00
Chart Table	1.00	60.00	60.00	38.00	2280.00	12.00	720.00	0.00	0.00
Wet locker	1.00	65.00	65.00	38.00	2470.00	12.00	780.00	0.00	0.00
Companionway Ladder	1.00	75.00	75.00	44.00	3300.00	12.00	900.00	0.00	0.00
Steps to main sole	1.00	35.00	35.00	38.00	1330.00	8.50	297.50	0.00	0.00

additional margin	1.00	1500.00	1500.00	20.80	31200.00	8.50	12750.00	0.00	0.00
Interior Joinery Totals:			5480.02		133037.12		53882.26		0.00

Description	Quantity	Unit	Total	LCG	L Moments	VCG	V Moments	TCG	T Moments
	Sq. Ft. Area	Weight	Weight						
	Lineal Ft.	Ibs	Ibs	ft from FP	ft-lbs	ft from BL	ft-lbs	ft from CL	ft-lbs
Mechanical, Plumbing and Electrical:									
Yanmar 4LHA-THE	1.00	830.00	830.00	40.00	33200.00	8.50	7055.00	0.00	0.00
ZF Hurth 630 reduction gear	1.00	103.00	103.00	41.50	4274.50	7.25	746.75	0.00	0.00
Engine & Gear Controls	1.00	20.00	20.00	51.00	1020.00	14.00	280.00	0.00	0.00
Propeller - 25" D x 22" P 3 Blade	1.00	40.00	40.00	51.00	2040.00	7.00	280.00	0.00	0.00
Shaft (1.75" Aquamet 22)	9.25	8.18	75.64	46.50	3517.13	7.00	529.46	0.00	0.00
Flexible Mounts	4.00	8.00	32.00	40.00	1280.00	7.50	240.00	0.00	0.00
Stuffing Box	1.00	20.00	20.00	46.00	920.00	7.00	140.00	0.00	0.00
Stern Bearing (babbit)	1.00	5.00	5.00	50.00	250.00	7.00	35.00	0.00	0.00
Flexible Coupling	1.00	5.00	5.00	42.00	210.00	7.00	35.00	0.00	0.00
Racor 75/500 Filter & Valves	1.00	8.00	20.00	45.50	910.00	9.50	190.00	0.00	0.00
Fuel Hose	1.00	15.00	15.00	45.00	675.00	10.00	150.00	0.00	0.00
Fuel Fittings	1.00	10.00	10.00	45.00	450.00	10.00	100.00	0.00	0.00
Muffler w/ exhaust hose	1.00	45.00	45.00	42.50	1912.50	6.00	270.00	0.00	0.00
Exhaust T-hull w/ valve	1.00	30.00	30.00	56.25	1687.50	11.75	352.50	0.00	0.00
Sound Insulation	1.00	100.00	100.00	39.50	3950.00	8.50	850.00	0.00	0.00
Raw Water Strainer, T-hull, hose	1.00	20.00	20.00	34.50	690.00	8.50	170.00	0.00	0.00
Panda 6KW genset	1.00	240.00	240.00	42.60	10224.00	8.50	2040.00	0.00	0.00
Genset exhaust	1.00	35.00	35.00	48.00	1680.00	8.50	297.50	0.00	0.00
Watermaker	1.00	75.00	75.00	36.40	2730.00	8.52	639.00	0.00	0.00
Refridge.	1.00	100.00	100.00	25.17	2517.00	9.50	950.00	0.00	0.00
Galley Stove	1.00	135.00	135.00	23.17	3127.95	9.50	1282.50	0.00	0.00
Galley Faucets	2.00	4.00	8.00	17.50	140.00	10.50	84.00	0.00	0.00
Galley Sink	1.00	5.00	5.00	17.50	87.50	10.50	52.50	0.00	0.00
Diesel Cabin heater/flue	1.00	30.00	35.00	19.00	665.00	10.00	350.00	0.00	0.00
Fwd Head w/T-hulls, hose	1.00	90.00	90.00	13.00	1170.00	9.00	810.00	0.00	0.00
Fwd Head Faucet	1.00	2.00	2.00	14.50	29.00	10.50	21.00	0.00	0.00
Fwd Head Sink	1.00	3.00	3.00	14.50	43.50	10.50	31.50	0.00	0.00
MS Head w/T-hulls, hose	1.00	90.00	90.00	32.25	2902.50	9.00	810.00	0.00	0.00
MS Head Faucet	1.00	2.00	2.00	34.00	68.00	10.00	20.00	0.00	0.00
MS Head Sink	1.00	3.00	3.00	34.00	102.00	10.00	30.00	0.00	0.00
Midship Head w/T-hulls, hose	1.00	90.00	90.00	30.50	2745.00	9.00	810.00	0.00	0.00
Midship Head Faucet	1.00	2.00	2.00	28.60	57.20	10.00	20.00	0.00	0.00
Midship Head Sink	1.00	3.00	3.00	28.60	85.80	10.00	30.00	0.00	0.00
Water Pressure Pump Unit w/ hose	1.00	15.00	15.00	25.50	382.50	8.00	120.00	0.00	0.00
Hot Water Heater	1.00	30.00	125.00	39.00	4875.00	8.50	1062.50	0.00	0.00
Shower Faucet & Shower Head	1.00	5.00	5.00	30.25	151.25	12.00	60.00	0.00	0.00
Magnetic Compass	1.00	10.00	10.00	50.00	500.00	15.00	150.00	0.00	0.00
Man. Bilge Pump w/T-hull, hose	1.00	45.00	45.00	41.00	1845.00	13.00	585.00	0.00	0.00
Misc T-hulls and valves	6.00	5.00	30.00	42.00	1260.00	7.00	210.00	0.00	0.00
Misc. Plumbing	1.00	50.00	50.00	26.00	1300.00	7.00	350.00	0.00	0.00
Misc. Plumbing Fittings	1.00	45.00	45.00	26.00	1170.00	7.00	315.00	0.00	0.00
Macerator Pump	1.00	10.00	10.00	36.00	360.00	7.00	70.00	0.00	0.00
Shower Sump System	1.00	30.00	30.00	36.00	1080.00	7.00	210.00	0.00	0.00
Other Mechanical	1.00	45.00	45.00	26.00	1170.00	7.00	315.00	0.00	0.00
Tankage:									
Fwd Fresh Water Tank 10 ga. 316 SS	1.00	275.00	275.00	19.35	5321.25	6.00	1650.00	0.00	0.00
Aft Fresh Water Tank 10 ga. 316 SS	1.00	375.00	375.00	23.80	8925.00	6.00	2250.00	0.00	0.00
Black Water Tank 10 ga 316 SS	1.00	170.00	170.00	28.00	4760.00	6.00	1020.00	0.00	0.00
Diesel Tank 3/16" Aluminum	1.00	300.00	300.00	46.50	13950.00	10.50	3150.00	0.00	0.00
Electrical System Components:									
Engine Gauges / Panel / Loom	1.00	20.00	20.00	46.00	920.00	11.00	220.00	0.00	0.00
24 v DC Electrical System Wiring	1.00	100.00	100.00	36.00	3600.00	10.00	1000.00	0.00	0.00
24v DC Breaker Panel	1.00	15.00	15.00	38.00	570.00	13.00	195.00	0.00	0.00
12 v DC Electrical System Wiring	1.00	30.00	30.00	38.00	1140.00	13.00	390.00	0.00	0.00
12v DC Breaker Panel	1.00	15.00	15.00	38.00	570.00	13.00	195.00	0.00	0.00
AC Electrical System Wiring	1.00	100.00	100.00	38.00	3800.00	12.00	1200.00	0.00	0.00
AC Breaker Panel	1.00	5.00	5.00	38.00	190.00	13.00	65.00	0.00	0.00
Heavy Duty Alternator	1.00	20.00	20.00	31.50	630.00	8.00	160.00	0.00	0.00
House Batteries 24v	2.00	110.00	220.00	35.00	7700.00	8.00	1760.00	0.00	0.00
Engine Start Battery 12v	1.00	40.00	40.00	38.00	1520.00	9.00	360.00	0.00	0.00
Windlass Battery 24v	1.00	137.00	137.00	6.00	822.00	9.50	1301.50	0.00	0.00
Battery Charge Select Switch	1.00	4.00	4.00	38.00	152.00	13.00	52.00	0.00	0.00
Shore Power Inlet	1.00	5.00	5.00	52.00	260.00	13.50	67.50	0.00	0.00
Shore Power Cord (Lazarette)	1.00	18.00	18.00	56.00	1008.00	13.00	234.00	0.00	0.00
Bhd Mount Interior Lights	20.00	1.00	20.00	33.00	660.00	14.00	280.00	0.00	0.00
Ov'h'd Mount Interior Lights	10.00	1.00	10.00	33.00	330.00	14.00	140.00	0.00	0.00
Red Night Lights	2.00	1.00	2.00	33.00	66.00	14.00	28.00	0.00	0.00
Nav Lights & Mounts	3.00	5.00	15.00	33.00	495.00	14.00	210.00	0.00	0.00
Steaming Light / Deck Light Combo	1.00	5.00	5.00	33.00	165.00	14.00	70.00	0.00	0.00
Anchor Light	1.00	5.00	5.00	33.00	165.00	14.00	70.00	0.00	0.00
Electric Bilge Pumps w/ hose	1.00	15.00	15.00	33.00	495.00	14.00	210.00	0.00	0.00
Other Electrical	1.00	50.00	50.00	33.00	1650.00	14.00	700.00	0.00	0.00
Electronic Equipment:									
Radar	1.00	35.00	35.00	38.00	1330.00	14.00	490.00	0.00	0.00
Radar Array	1.00	25.00	25.00	33.50	837.50	45.00	1125.00	0.00	0.00
Chart Plotter	1.00	8.00	8.00	38.00	304.00	14.00	112.00	0.00	0.00

Depth Sounder	1.00	8.00	8.00	44.50	356.00	15.00	120.00	0.00	0.00
Depth Sounder Transducer	1.00	5.00	5.00	12.00	60.00	7.00	35.00	0.00	0.00
GPS	1.00	4.00	4.00	38.00	152.00	14.00	56.00	0.00	0.00
GPS Antenna	1.00	5.00	5.00	61.00	305.00	17.00	85.00	0.00	0.00
VHF	1.00	12.00	12.00	38.00	456.00	14.00	168.00	0.00	0.00
VHF Antenna	1.00	3.00	3.00	34.00	102.00	88.00	264.00	0.00	0.00
EPIRB & Mounting Brackets	1.00	8.00	8.00	36.00	288.00	15.00	120.00	0.00	0.00
12v Radio / Tape / CD player	1.00	8.00	8.00	38.00	304.00	14.00	112.00	0.00	0.00
Electronics Wiring	1.00	50.00	50.00	38.00	1900.00	14.00	700.00	0.00	0.00
Mechanical, Plumbing and Electrical Totals:			4840.64		165713.58		43514.21		0.00

Description	Quantity	Unit	Total	LCG	L Moments	VCG	V Moments	TCG	T Moments
	Sq. Ft. Area Lineal Ft.	Weight lbs	Weight lbs	ft from FP	ft-lbs	ft from BL	ft-lbs	ft from CL	ft-lbs
General Equipment:									
Galley Utensils	1.00	35.00	35.00	17.00	595.00	11.00	385.00	0.00	0.00
Galley Glasses; Dishes	1.00	75.00	75.00	17.00	1275.00	12.00	900.00	0.00	0.00
Galley Cookware	1.00	65.00	65.00	17.00	1105.00	10.00	650.00	0.00	0.00
Galley Small Appliances	1.00	55.00	55.00	17.00	935.00	10.00	550.00	0.00	0.00
Charts, Books & Nav Gear	1.00	85.00	85.00	38.00	3230.00	13.00	1105.00	0.00	0.00
Flashlights & Batteries	1.00	15.00	15.00	38.00	570.00	13.00	195.00	0.00	0.00
Flares, Signal Kit, Portable EPIRB	1.00	15.00	15.00	38.00	570.00	13.00	195.00	0.00	0.00
Life Vests / PFD's	15.00	4.00	60.00	48.00	2880.00	13.00	780.00	0.00	0.00
Survival Kit	1.00	20.00	20.00	45.00	900.00	11.00	220.00	0.00	0.00
Medical Kit	1.00	10.00	10.00	45.00	450.00	11.00	110.00	0.00	0.00
Fire Extinguishers	4.00	8.00	32.00	45.00	1440.00	10.00	320.00	0.00	0.00
Bedding & Linen	1.00	90.00	90.00	33.00	2970.00	10.00	900.00	0.00	0.00
Engine Spares	1.00	100.00	100.00	39.00	3900.00	9.00	900.00	0.00	0.00
Fenders	5.00	5.00	25.00	48.00	1200.00	12.00	300.00	0.00	0.00
Propane Tanks & Regulators	2.00	15.00	30.00	36.00	1080.00	15.00	450.00	0.00	0.00
Misc. Vessel Outfit	1.00	125.00	125.00	40.00	5000.00	12.00	1500.00	0.00	0.00
Misc. Tools, Etc.	1.00	125.00	125.00	40.00	5000.00	12.00	1500.00	0.00	0.00
General Equipment Totals:			962.00		33100.00		10960.00		0.00
Payload:									
Foc'sle:									
Food	1.00	40.00	40.00	9.00	360.00	11.00	440.00	0.00	0.00
Books	1.00	20.00	20.00	9.00	180.00	13.00	260.00	0.00	0.00
Clothes	1.00	150.00	150.00	9.00	1350.00	11.00	1650.00	0.00	0.00
Mattresses	2.00	35.00	70.00	9.00	630.00	11.00	770.00	0.00	0.00
Fwd Head:									
Linens	1.00	20.00	20.00	13.50	270.00	12.00	240.00	0.00	0.00
Cleaning Supplies	1.00	10.00	10.00	13.50	135.00	12.00	120.00	0.00	0.00
Galley:									
Food	1.00	100.00	100.00	17.00	1700.00	10.00	1000.00	0.00	0.00
Beverages	1.00	50.00	50.00	17.00	850.00	10.00	500.00	0.00	0.00
Saloon:									
Books	1.00	75.00	75.00	22.00	1650.00	13.00	975.00	0.00	0.00
Linens	1.00	20.00	20.00	22.00	440.00	9.50	190.00	0.00	0.00
Mattresses	2.00	35.00	70.00	22.00	1540.00	11.00	770.00	0.00	0.00
Cushions	2.00	35.00	70.00	22.00	1540.00	9.50	665.00	0.00	0.00
Stbd Midship Hanging Locker									
Misc.	1.00	150.00	150.00	28.00	4200.00	12.00	1800.00	0.00	0.00
Master Stateroom:									
Clothes	1.00	150.00	150.00	30.00	4500.00	11.00	1650.00	0.00	0.00
Linens	1.00	20.00	20.00	34.00	680.00	10.00	200.00	0.00	0.00
Books	1.00	30.00	30.00	34.00	1020.00	13.00	390.00	0.00	0.00
Mattress	1.00	70.00	70.00	34.00	2380.00	10.00	700.00	0.00	0.00
Midship Head:									
Linens	1.00	20.00	20.00	29.00	580.00	13.00	260.00	0.00	0.00
Cleaning Supplies	1.00	10.00	10.00	29.00	290.00	12.00	120.00	0.00	0.00
Master Stateroom Head:									
Linens	1.00	20.00	20.00	34.00	680.00	13.00	260.00	0.00	0.00
Cleaning Supplies	1.00	10.00	10.00	34.00	340.00	11.00	110.00	0.00	0.00
Pilot House:									
Cushions	2.00	35.00	70.00	42.00	2940.00	11.00	770.00	0.00	0.00
Mattresses	2.00	35.00	70.00	42.00	2940.00	12.00	840.00	0.00	0.00
Linens	1.00	20.00	20.00	42.00	840.00	11.00	220.00	0.00	0.00
Books	1.00	35.00	35.00	38.00	1330.00	14.00	490.00	0.00	0.00
Payload Totals:			1370.00		33365.00		15390.00		0.00
Tankage:									
Ready For Sea:									
Diesel Tank (270 gal) full	270.00	7.35	1984.50	46.35	91981.58	10.50	20837.25	0.00	0.00
Fwd Fresh Water Tank (100 gal) full	100.00	8.32	832.00	19.35	16099.20	6.25	5200.00	0.00	0.00
Aft Fresh Water Tank (200 gal) full	200.00	8.32	1664.00	23.80	39603.20	6.25	10400.00	0.00	0.00
Black Water Tank (125 gal) empty	0.00	8.32	0.00	28.00	0.00	6.00	0.00	0.00	0.00
			totals		147683.98		36437.25		0.00
Half Range:									
Diesel Tank (270 gal) @ 50% full	135.00	7.35	992.25	46.35	45990.79	9.50	9426.38	0.00	0.00
Fwd Fresh Water Tank (100 gal) @ 50% full	50.00	8.32	416.00	19.35	8049.60	6.00	2496.00	0.00	0.00
Aft Fresh Water Tank (200 gal) @ 50% full	100.00	8.32	832.00	23.80	19801.60	6.00	4992.00	0.00	0.00
Black Water Tank (125 gal) @ 50% full	62.50	8.32	520.00	28.00	14560.00	5.50	2860.00	0.00	0.00
			totals		88401.99		19774.38		0.00

