CONSTRUCTION SPECIFICATIONS

FOR THE

H.T. GOZZARD 31Mk II

AFT COCKPIT CUTTER

Design By: H. Ted Gozzard

Gozzard Yachts

Commissioned by: GOZZARD YACHTS

Date Written: September 14, 2012

PRINCIPAL NUMBERS

	<u></u>
LENGTH OVERALL	36' – 2"
LENGTH ON DECK	31'-0"
LENGTH AT WATERLINE	26' – 0"
BEAM	11' – 0"
DRAFT	4'-5"
DISPLACEMENT	12,000 Pounds Half Load.
BALLAST	4,800 Pounds (external lead)
MAST HEIGHT ABOVE WATER (no equipment)	46' -0"
SAIL AREA MAINSAIL	251 Square Feet
SAIL AREA TOPSAIL	367 Square Feet
SAIL AREA STAYSAIL	164 Square Feet
SAIL AREA TOTAL 100% FORE TRIANGLE	607 Square Feet
SAIL AREA TOTAL	782 Square Feet
FUEL CAPACITY (MAIN)	55 Gallons
RANGE AT CRUISE	TBA
WATER CAPACITY	TBD
WASTE CAPACITY	TBD
BATTERY CAPACITY	400 Amp Hours
ENGINE	35 HP Diesel
BOW THRUSTER (OPTION)	

EQUIPMENT SPECIFICATONS

TABLE OF CONTENTS:

SECTION	DESCRIPTION	PAGE
1	Design and Concept	4
1.1	Design Data	4
1.2	Concept	4
1.3	Hull	4
1.4	Deck	4
1.5	Sail Plan	4
1.6	Interior	4
1.7	Standards of Construction	4
2	Structural	5
2.1	General	5
2.2	Hull Construction	5
2.3	Deck Construction	6
2.4	Rudder	6
2.5	Skeg	6
2.6	Bulkheads	6
2.7	Rub Rails	6
2.8	Keel	6
3	Deck Hardware	7
3.1	General	7
3.2	Exterior Details	7
3.3	Stainless Hardware	7
3.4	Dinghy and Handling	7
3.5	Deck Hardware	7
3.6	Anchoring Systems	7
3.7	Ventilation	8
3.8	Companionway	8
3.9	Swim Platform	8
4	Mechanical	8
4.1	Main Engine	8
4.2	Drive Train	8
4.3	Engine Room	8
4.4	Steering System	9
4.5	Thru-hulls and Sea Cocks	9
4.6	Refrigeration	9
4.7	Bilge Pumps	9
4.8	Air Conditioning	9
4.9	Stove, Microwave and Propane System	9
4.10	Bow Thruster	10
4.11	Generator	10
5	Electrical	10
5.1	General	10
5.2	DC Electrical System	10
5.3	AC Electrical System	10
5.4	Distribution Panel	10

5.5	Bonding System	10
5.6	Lightning Protection	10
6	Plumbing	11
6.1	General	11
6.2	Fresh Water System	11
6.3	Waste Management System	11
6.4	Grey Water System	11
6.5	Diesel Fuel System	11
	·	
7	Interior	12
7.1	General	12
7.2	Joinery Work	12
7.3	Counters	12
7.4	Upholstery	12
7.5	Canvas	12
7.6	Lighting and Accessories	12
8	Rig and Sailing Hardware	13
8.1	Spars	13
8.2	Sails	13
8.3	Standing Rigging	13
8.4	Running Rigging	13
8.5	Sailing Equipment	13
8.6	Mainsail Furling/Reefing	13
8.7	Headsail Furling	13
9	Electronics	14
9.1	Sailing Instruments	14
9.2	Navigation Instruments	14
9.3	Auto Pilot	14
9.4	Communications	14
10	Other Equipment	14
10.1	Gear	14
10.2	Spares	14
10.3	Manuals	14
11	Commissioning	14
11.1	Delivery Dates	14
11.2	Testing and Sea Trail	15
11.3	Shipping and Final Commissioning	14
11.4	System Inspections	14

RED Highlight represents selected optional equipment

Presenting the 2012 edition of the GOZZARD 31

NOTE: These specifications are subject to change without notice unless contracted.

1. Design and Concept

Design Data – no information currently available.

1.2 Concept

The Gozzard 31 is a solidly constructed, extended range, blue water yacht designed primarily for the live aboard cruising life style. Particular attention has been made towards the needs, comfort and safety of a cruising couple. The quality of the vessel is such that it will have an extended service life and maintain its value.

1.3 Hull

Originally designed in 1989, the hull design has remained unchanged over the course of the production run. For 2012 our plan is to update the keel and the rudder to more closely reflect our current thinking as demonstrated on the G37, G41 and G44 Mk2 underwater appendages. The design parameters remain unchanged however with a final draft well under 5' and to be one of the most stable yachts in her size range. The G31 is built and designed to go anywhere with multiple Trans-Atlantic passages already to her credit.

1.4 Deck

The decks are designed with ease of use in mind. They feature wide low cambered side decks with substantial bulwark for sure footing in heeled conditions. These bulwarks also build substantial strength into the Hull/Deck joint area. The cabin truck is low profile to reduce windage and increase visibility from the cockpit. The cabin sides are sloped to allow opened ports to be drip free. The multi leveled cockpit permits good access to the side decks, a sizable bridge deck and excellent draining characteristics. All sail controls are designed to be led aft.

1.5 Sail Plan

The Gozzard 31 utilizes an optimized traditional cutter rig. To eliminate having to manually tack both head sails or the need for a club footed staysail, we utilize a self-tending staysail on a curved traveler track forward of the mast. To simplify things further, the typical mainsail traveler has been eliminated; instead the mainsail leach control is maintained with the use of the solid boom vang with a cascade purchase system which is led aft into the cockpit. With the extremely wide chain plate, the slots can be more open reducing back winding and the need to centerline the boom while sailing upwind.

The combination of the self tending staysail and mainsail makes the G31 very easy to sail in the higher wind ranges while being very powerful in the lighter air conditions when all sails can be utilized.

Selected Option:

1.5.1 Solent Rig

1.6 Interior

Based in part on Ted's own life experiences, his interiors reflect an open concept. Having lived in the Caribbean coupled with a successful career in modular house design and three decades of yacht building, his interiors tend to focus on function and the feeling of open space.

The true nature of a semi custom boat allows for the continuing evolution of interior design. Each new customer brings different ideas and needs to the design and we tend to incorporate the best of these into our standard plans.

1.7 Standards of Construction

Since our inception in 1983, our company policy has been to build the finest boat possible within the constraints of our price range. Over time our products have acquired an excellent reputation, based in no small part to the obvious quality. This goal is ongoing and we are constantly upgrading materials and techniques as the new technology becomes available. Today we build one of the finest quality

boats currently available; not only in terms of workmanship but also in terms of the quality of the materials used. Currently our vessels are manufactured to excess Transport Canada requirements for construction standards for small craft (2010) TP 1332. Typically however we are using the America Boating and Yachting Council (ABYC) and the International Marine Certification Institute (IMCI) as our standards of construction.

2. Structural.

2.1 General.

The builder's workmanship is to be done at a level equal or superior to that exhibited by a current Gozzard (2011 Vintage). All FRP calculations are based on a hand lay-up of knitted double bias E-Glass cloth using marine grade resins. All laminated schedules are recommended and approved by the material suppliers and are based initially on existing technology and known successful examples of comparably sized vessels, then adapted and modified to suit our renowned level of construction and quality.

2.2 Hull Construction.

The hull is molded FRP from female production tooling. The laminate, as with all Gozzard Yachts, is a "sandwich" cored construction. The A550 Core Cell foam core increases panel stiffness, strength, impact resistance and sound/thermal insulation while maintaining an excellent weight to strength ratio. Most of the weight saved by designing the cored laminate is then re-applied in extra skin thickness either side of the core making the laminate schedule, in the words of the Core Cell engineers, "robust in the Gozzard tradition". Only marine grade Hydrex-100 vinyl ester laminating resins are used in the hull.

The gelcoat is CCP's #953 NPG/ISO "buff-back". It is backed with a relative rich layer Hydrex-100 for cosmetic and osmotic protection before the structural laminates are laid. Only white gelcoat is used below the waterline for better quality control.

The hull laminate is constructed of knitted double bias E-glass CM cloth and is built up to a thickness shown on the following chart. Additional XM cloth reinforcing is utilized in the bow, trail-board, chainplate, mast step and transom areas.

The core material measures ½"in thickness, has a density of 5 pounds per cubic foot. The core is installed using both Vacuum bagging and hand laid techniques. The core runs from the cove stripe to approximately 10"from the centerline. The coring material is eliminated and replaced with a solid glass laminate in the areas of the sheer line, centerline, keel, rudderpost, and thru-hulls.

The solid and cored laminate areas are built up to approximately the following thickness:

Area	Thickness
Centerline – forward of keel	0.75"
Centerline – aft of keel	0.625"
Keel	0.875"
Sheer – above core	0.5"
Hull Flange	0.5"
Thru-hull platforms	0.625"
Hull below waterline at main	0.875"
bulkhead	
Hull below water	0.755"
Hull above waterline	0.755"

Finish above the waterline is Off White gelcoat with the standard broad stripe "Traditional" configuration in any standard Awlgrip color. Below the waterline is finished with 2.5 mils (dry) of INTERPROTECT 2000 barrier coat to create a "primed" surface for the (optional) bottom antifouling paint of your choice.

Selected Option:

2.2.2 OPTION: Anti-fouling Paint (MICRON CSC)

2.3 Deck Construction.

The deck is a molded FRP sandwich construction with ½" A500 Core Cell. The deck, like the hull, is finished with CCP's "buff-back" Off White gelcoat. In areas where equipment is to be installed the coring material is eliminated creating a solid laminate. The outer and inner skins are built up to a thickness of approximately 3/16". The deck flange is solid and built up to ½" in thickness. Extra reinforcing is added to cleat, mast step and winch attachment areas as well as high stress areas and corners.

The hull deck joint is bedded in 3M 5200 and bolted on 6" centers with 5/16" Stainless Steel machine screws with ny-lock (aircraft) nuts.

2.4 Rudder.

The rudder shaft is 1.5" diameter 316 stainless steel. The rudder is built from two molded ¼" thick FRP half foils (skins). Stainless steel webs are welded to the shaft forming a stiff back that is heavily glassed to one of the foils. The foils are then cored and assembled together. 3M 5200 is used around the stainless shaft where it exits from the rudder to help prevent water from migrating into the rudder along the shaft. The cosmetic joint between the two halves is glassed over and faired. The entire rudder is coated with Interprotect 2000 epoxy barrier coat. Once completed, the rudder is essentially a solid structure with no voids. However, it should be noted that because of the different materials used in the construction, confusing readings may occur on some moisture meters.

The lower bearing surface is bronze and secured to the skeg. A bronze Edson shaft seal is integrally mated to the filament wound glass stern tube. This assembly (tube) is then heavily glassed with gussets to the hull. The shaft seal is positioned above the static waterline so that it cannot leak when the boat is stationary.

The emergency steering handle is conveniently stored in a specially designed holder located under the aft cockpit locker lid where you can find it if you need it. Access is gained through a removable deck plate in the cockpit sole.

2.5 Skeg

The FRP skeg is designed to protect and support the rudder in the event of grounding. This area is substantially reinforced and fitted with a bronze heel casting serving as the lower bearing for the rudder shaft.

2.6 Bulkheads.

All main or structural bulkheads are constructed using cored FRP laminates for superior strength, low relative weight and total rot resistance. All bulkheads are glassed to the hull and deck before the interior trims are installed. Where possible, all wooden furnishings, shelves, seat tops, dividers, etc., are glassed to the hull or deck to minimize unsupported panel size.

2.7 Rub Rails.

Full-length FRP rub rails are installed approximately 18" below the cap rail with a 316 Stainless Steel cap. The rails are secured to the hull with self-tapping screws into an area of the hull that has been specially prepared for that purpose. The rails are intended to be replaceable should they be damaged protecting the hull.

2.8 Keel.

The extended fin keel is constructed using an extremely heavy duty solid laminate. For 2012 and because we no longer have the original lead ballast mold available, we reserve the right to build the vessel using encapsulated ballast system where the ballast where the ballast is placed within a full size entirely GRP structure (one piece hull with internal ballast) in lieu of our more common externally mounted lead ballast. In the case of the internal ballast we will fit a Dyna Plate for the external grounding plate.

3. Deck and Hardware.

3.1 General.

All horizontal surfaces (walkways) have a molded sand type non-skid.

3.2 Exterior Details.

Only genuine Asian Teak is used for the exterior woodwork.

The hull-deck joint is covered with a solid teak cap rail. In addition to being visually attractive, it provides a second and completely independent seal for the hull to deck joint creating as dry a joint as possible. The teak cap rail itself is made up of smaller sections. Where visible, the sections are joined using a "Murphy" scarf joint. All other joints are made utilizing a flexible caulking (Sikaflex 290DC) and covered with chocks so that the rail can be repaired in sections instead of in its' entirety if damaged.

Stylized bronze dolphins, which are clear coated to protect the polished finish, are installed over the break in the rail known as the "hansing" become a signature piece.

Selected Option:

3.2.2 Cetol exterior teak

3.3 Stainless Hardware

All pulpits, davits, stanchions, etc. are manufactured (welded) using hand polished 316 Stainless Steel. All assemblies are designed to be removable. The bow pulpit is fitted on the sprit platform with the aft most legs secured to the bulwarks of the deck. The forward center leg secured to the bow weldment and has the bow Bi-color light integrated.

The stanchion bases are mounted to the side of the bulwark (not on the teak) for improved rigidity with SS backing plate. Where access to the standard backing plates is difficult due to interior confines, such as behind the icebox, the backing plate is permanently installed with tapped holes so the bases can be removed from outside.

The large diameter upper portion of the double lifeline is located 27" above the deck. with port and starboard boarding gates with adjustable pelican hooks.

The chain plates are bolted through hull with SS backing plates complete with dedicated lightning ground attachment point.

Stainless steel handrails (3 Loop and 2 Loop) are positioned near the side decks on the coach roof.

3.4 Dinghy Davits - None

3.5 Deck Hardware. (See Rig Section for Sailing Hardware)

The Ritchie SP5C compass is mounted on the integral center mounted steering cockpit pod which also makes the base for the GRP cockpit table leaves which are stored folded on the sides. Six custom bronze chock/cleats are strategically positioned for correct mooring at the bow, amidships and the stern, mounted on the bulwarks for ¾" dock lines keeping the side decks clear. Two safety harness pad eyes are located in cockpit in addition to Jack Line pad eyes for the side decks.

Selected Option:

3.5.2 Chrome Exterior Bronze

3.6 Anchoring System.

The G31 is equipped to handle 2 bow anchors in roller assemblies located at the end of the sprit (not through the sprit). This position allows the anchors to be deployed without fouling or chafing on the sprit stays when a bridal is not required. The rode locker which is located in the front half of the sail locker is divided and can handle 150' of 5/16" HT chain on the primary and 60' on the secondary in addition to rope rodes. Provision can be made for additional chain on the primary. Dead end attachment points are provided for the anchor rode. The recommended maximum primary anchor size is a 35-lbs. Plow if permanently carried on the sprit.

Deck hatches provide access to sail and equipment locker. The entire anchor/sail locker is drained aft through the side of the hull and is considered part of the exterior (not the interior) of the boat.

Selected Options:

- 3.6.2 Anchor rode 150 of 5/8" twist
- 3.6.3 Fortress FX23 primary anchor with swivel

3.7 Ventilation

The G31 is fitted with above average ventilation with two (2) stainless steel Hood 24"x 18" opening deck hatches with screens and blinds, two (2) SS 3" solar day/night ventilators, one solar/12 volt power shower vent, four (4) SS opening 8"x15" ports c/w screens and five (5) SS opening 5"x12" ports c/w screens.

3.8 Companionway.

The G31 is equipped with teak hinged companionway doors with louvers and built-in keyed lock set (not a pad lock). The interior locking bolts allow the doors to be secured from inside whilst on board. Built-in storm panel tracks allow for (optional) drop panels to be mounted inside the companionway doors and an overhead sliding screen and screened companionway doors allows for maximum ventilation while keeping insects out.

3.9 Reboarding and Scuppers.

The G31 is fitted with a six step folding swim ladder mounted to the transom which is deployable from the water. The cockpit is fitted with two 2" scupper drains in addition to the 6"x12" spring loaded storm drain (blast gate) is built into the transom. This drain has over 8 times the capacity of the more traditional 2" scupper drains normally found in modern cockpits.

4 Mechanical.

4.1 Main Engine

The G31 is fitted with the Westerbeke 35B3 – 3 cylinder marine diesel rated at 31HP at 3000 RPM and 59 foot pounds of torque at 1940 RPM. It is a pre-combustion design for quieter operation and is fitted with glow plugs to aid cold weather starting. The engine has a fresh water enclosed cooling system with raw water heat exchanger. The fuel delivery system is self-priming with electric pump. The 2"wet exhaust includes a custom-made oversized water lock with drain and the engine exhaust is discharged through the side for a cleaner transom. Instrumentation includes gauges for tachometer, hour meter, oil pressure, voltmeter and water temperature with an audible alarm for low oil pressure and high water temperature. An automatic shut down system is included for low oil pressure and hi water temperature.

The engine is equipped with a 55 Amp alternator and water connection for domestic water heating. The raw water cooling system includes a Perko clear glass bowl type strainers and a Forespar engine flush out valve. This specially designed valve allows you to easily run fresh water through the engine for storage or winterizing and it can be used to turn your engine intake into an emergency bilge pump.

4.2 Drive Train

The transmission is a HBW marine gear with 2.7:1 reduction ratio. A Vetus Bull-Flex joint is used to reduce engine noise, vibration and the need to align the engine mounts and attach the 316 SS 11/4" drive shaft. A PSS No-Drip is used as the shaft seal system. A 16"x 14" RH 3 bladed bronze MP Michigan Wheel Propeller is fitted for superior range and thrust.

4.3 Engine Room and Equipment Room

All efforts are be made to provide a maintainable and easy to clean area. The engine room is heavily sound insulated. The sodium filled sound deadening foam is Mylar covered and trimmed with aluminum. All removable panels have neoprene gaskets to further reduce noise levels. All access panels to the engine are hinged which allows instant access without having to remove panels or furniture. The engine can be completely removed in less than 6 hours by two people without damaging the boat.

4.4 Steering System and Controls

The engine transmission and throttle are controlled using a single lever control shifter. The steering system is manufactured by Edson with 3 turn lock to lock with center brake. A 28" Wood rim Stazo traditional type steering wheel is fitted. An emergency tiller is located under one of the cockpit locker lids which accessed the steering shaft through a deck access plate.

4.5 Thru-Hulls and Seacocks

All Thru-hulls below the waterline have Forespar ball type seacocks. Made from glass re-inforced Marelon and exceeding both UL and ABYC standards, these valves are totally impervious to corrosion and electrolysis. Installed with ease of access in mind, each valve has an independent function and is clearly identifiable (tagged). All hoses are manufactured by Shields and are USCG/ABYC approved for their particular application. All connections are double clamped.

4.6 Refrigeration

The G31 utilizes a small freezer box located inside the refrigerator (5 cu/ft) space. The refrigeration unit is an air-cooled 12-volt Nova Cool which is vented to the exterior to dissipate heat in the compressor locker. The top loading GRP ice box is heavily insulated using closed cell foam with no voids to minimize condensation. The box is drained with a water trap into a remote containment system, not the bilge. The access lid has twin gaskets that mate on a wide seal plate to prevent cold loss. The lid is latch able with a supporting gas ram when open.

4.7 Bilge Pumps

The main bilge water pickups are located at the aft end of a heavily raked deep keel sump. A Whale Gusher 10 manual pump is positioned so it can be accessed from the helm position. The main electric bilge pump is a Rule 1100 GPH with built in float switch and is equipped with a manual and automatic selector switch with an indicator light. Both main pickups can be lifted out of the bilge for easier servicing.

An independent shower sump pump is supplied for the shower and icebox. This pump can be brought on-line as a bilge pump by removing or smashing the lid. In addition, the engine is equipped with a custom flush out valve that can be brought on-line in an emergency at 11 GPM.

4.8 Air Conditioning (Optional)

The G31 will be fitted with a centrally mounted $12000\ BTU$ unit with ducting into the aft and forward cabins. This unit can be reverse cycle which will also make heat when the water temperature is above 60F.

4.9 Stoves and Propane System

The Force 10 stainless steel 2-burner propane stove with oven is gimbaled (with lock). A counter extension covers the cook-top when not in use and bi-folds back out of the way protecting the cherry doors. The stove is equipped with a thermal couple on each burner that automatically shuts the propane supply off if the flame is extinguished for any reason. Lighting the burner is simply achieved by the push of an ignition button.

Storage is provided for a 20 pound propane tank in a custom isolated and drained container located in the cockpit. Installation includes one 20 LBS. aluminum propane tank, a pressure regulator, gauge and electric shut-off valve controlled by a propane leak detector. The pressure gauge allows you to confirm if the tank if hooked in correctly and monitor the system for extremely small leaks. A Xintex propane detector is included with the system with a sensor located behind the stove and

another in the bilge. If a leak is detected an alarm is set off and the propane supply is automatically shut off by the solenoid. The system is wired so it can be manually by-passed should a sensor go off line.

4.10 Bow Thruster pre-install.

The pre-installation for this option is standard with the modification of the hull laminate, including the removal of the core in the area of the thruster tube. This will allow the addition of this option much easier and less expensive at a later date.

4.11 Generator – Not available

5 Electrical.

5.1 General

All ship's wiring is marine grade tinned copper including primary battery runs and is installed in accordance with ABYC specifications. All wires are coded and colored for easy identification. Schematics and a legend are supplied for each system for servicing. All connections are crimped using tinned fittings with colored heat shrink covers for stress relief and easy identification. All circuits are fused, except the main engine starter, in accordance with manufacturer's specs and ABYC recommendation.

5.2 DC Electrical System

The ship's main DC Voltage system is 12 Volt. There are 2 separate battery groups – one for the deep cycle house consumption and the other dedicated to starting the engine. The house bank consists of two (2) premium quality AGM 12-Volt batteries. This bank (2 group 27s) gives a combined total capacity of 250-amp hours. The engine has a dedicated Optima Red Top maintenance free AGM diesel starting battery.

The primary DCV system is wired for total redundancy. Each battery bank is equipped with a main disconnect switch and each of these switches can be linked in parallel or in isolation to the other battery banks for emergency access. For example - emergency starting the main engine can be done from the house battery or the VHF can be powered from the starting battery...total flexibility To charge the batteries, the engine is fitted with a 55 amp 12-volt alternator that charges the house battery bank directly. Alternatively, when the vessel has access to a 120 volt AC shore power source, the batteries may be charged from the 35 amp shore charger. The engine battery is charged with a Blueseas ACR battery combiner which connects the banks together only when a charge is present. The DCV system is monitored (volts and amps) by a digital battery monitor for the house battery bank.

5.3 AC Electrical System

The ship's ACV system is 120-volt single-phase 60 cycle. ACV power is supplied by ship to shore connection. GFI protected duplex outlets with SS covers are located in convenient locations throughout the cabins. The system also equipped with a galvanic isolator to control stray electrolysis. The ship to shore connection is made via a 50'- 30 Amp 120-volt shore cord. The connection is normally located at the stern. There is a primary disconnect switch within 6' of the deck connection and a secondary disconnect at the distribution panel.

5.4 Distribution Panel

The main DC and AC distribution panels are located in the navigation station. The Bass distribution panels use magnetic circuit breakers with indicators and back lighting. An analog voltmeter is integrated into the DC panel allowing you to test the voltage at the house bank, main engine starting battery. An analog DC amp meter measures amp draw at the panel. Similar meters are installed for the AC side. A reverse polarity light is included.

5.5 Bonding System

The vessel is fully bonded and is equipped with a Canada Metal ZC-5 external zinc anode located aft. The optional thruster is equipped with separate zinc. The propeller shaft is also protected by a clamp on shaft zinc.

5.6 Lightning Protection

The lightning protection system has all pulpits, lifelines and antenna arch grounded with 4 gauge tinned copper braid to a large Dyna-Plate (est.64sq.ft.)

6 Plumbing.

6.1 General

All hoses are premium quality marine grade and are UL and CG approved for specific application. The fresh water system uses the Whale 2000 tubing system. Made of hard plastic and colored blue for cold and red for hot, this system does not use hose barbs and clamps, rather quick disconnect fittings that are much easier to service.

The location, number and size of the tanks can be adjusted to suit the owner's needs. The following is the standard configuration: one bow tank useable as fuel or waste at 45 gallons, one keel tank useable as fuel or water at 45 gallons, one quarter berth tank useable as fuel, water at 51 gallons.

6.2 Fresh Water System

The potable water tank is typically located under the quarter berth. The vent is routed to the transom to prevent seawater from contaminating the system. Custom made to maximize the available space; the FRP tank is made from FDA approved post cured Vinylester resin to ensure no taste transfer and has removable lids with access panels for easy maintenance or service.

The 3.7 US gallon/min. Jabsco Sensor Max VSD pump offers variable water flow lowering amp draw and sound levels. Equipped with pre-filter, it supplies water pressure at 35 PSI. Hot and cold water is run to the head vanity/shower, galley sink and optional cockpit shower.

A 6 gallon Force 10 hot water heater supplies hot water. This heater can make hot water using a 120-volt electric heating element or a built-in heat exchanger using the closed loop engine coolant system. A thermostatic mixer valve is installed at the hot water heater to regulate the water temperature at the desired maximum temperature to prevent the 190-degree engine coolant in the heat exchanger from overheating the water.

6.3 Waste Management System

The G31 is equipped with a single Raritan PH2 marine head. The discharge is pumped via a vented loop to a Forespar combination thru-hull/Y-Valve that directs the flow either overboard or to the onboard holding tank. Premium Shields sanitation hose is double clamped.

The FRP holding tank has the lid permanently glassed on so the tank can withstand the pressure of being overfilled. Clean out panels are provided. The tank can be emptied using a deck fitting or the optional onboard macerator system.

6.4 Grev Water Systems

All sinks drain directly overboard through a seacock installed in close proximity and within easy reach. The galley has a single 18"- 16"- 7" standard stainless steel sink that will easily hold a frying pan or large pot. Different arrangements are available, including a more traditional deep and narrow marine sink, depending on the galley design and space constraints. The head has an oval shaped stainless vanity sink.

A self-contained sump pump is supplied for the shower and icebox drain that discharges overboard. This unit is automatic and has a strainer built-in.

6.5 Diesel Fuel System

Diesel fuel is stored in a baffled FRP Vinylester tank. The tank is custom made to maximize capacity. The Westerbeke engine is the use of an electric fuel pump that moves approximately twice as much fuel as can be burned by the diesel and the extra fuel is cycled through the system cooling the injection pump and re-filtering or "polishing" the fuel back into the tank.

Large clean outs are built in to the tank top for easy servicing. A dedicated clean out tube is installed to the very lowest section of the tank so you can check the condition of the fuel and when required pump it out without having to open the tank. Note: Fuel capacities are approximate and will be finalized and maximized when constructed.

Fuel filtering is achieved with a Racor 500 primary filter. Fluid levels are measured with the fuel gauge located near the helm station.

7 Interior.

7.1 General

As with all Gozzard Yachts, all usable space is made accessible for storage or machinery. Where necessary, overhead panels, hull lining, nut covers, etc., are made removable for easy access to wiring and deck hardware. The style and level of fit and finish is to Gozzard 2011 standards as shown by boats displayed at the 2011/2012 Boat Show Circuit.

7.2 Joinery Work

The standard interior wood is American cherry finished with a rubbed effect varnish. The louvered cabinet doors feature a 4-way adjustable hinge to allow easy adjustment to compensate for wood movement. All drawers are dove tailed and are installed on sliders.

All ply-woods are made with marine grade cores and waterproof glues. All main bulkheads are FRP cored structures with cherry veneer faces. All trims, fiddles, face frames, kicks and doors are solid cherry and have the backside and end grain cuts sealed. All furniture and cabinets constructed with plywood have the end cuts finished with solid stock so they can not absorb water. All end grains are sealed

Cabin soles are teak and holly laminated marine plywood that is trimmed out with solid edging and finished to a full gloss. The sole is glued to a structural FRP structure and access panels are provided where required. All bilge panels have locks or are fastened securely.

7.3 Counters

All counters are made of cultured marble. Sinks are recessed and back splashed are provided. Color is the owner's choice.

7.4 Upholstery and Cushions

The owner may choose from a large in house selection of fabrics or purchase them independently with a credit equal to the cost of the standard material. Ultra Swede or the Ultra Leather is a popular optional upgrade. Cabins can be done in different materials, bearing in mind that some materials are only available in minimum length orders. The style and look of the cushions can be tailored to suit the owner's tastes.

Selected Options:

- 7.4.1 Ultra Suede Upgrade
- 7.4.2 Curtain, shades or blinds
- 7.4.3 Cockpit Cushions

7.5 Canvas

All canvas is made with Sunbrella fabric for long life and resistance to sun fading. Covers and canvas include, helm pod cover including the cockpit table, instruments and wheel, mainsheet and halvard bags.

The navy top/dodger comes complete with heavy weather dodger panels is fitted to the fixed hard windshield. In the dodger mode, clear vinyl panels are zipped in the front and sides in a low profile position allowing low windage and excellent visibility both through and over. In the navy top position, the vinyl panels are removed and the remaining bimini portion slides up and forward on a track mounted on the hard windshield to increase head room and move the bimini directly over the companionway for sun and rain (drizzle) protection. Aft is a bimini covering the helm with a mid section which fastens to the navy top to cover the cockpit.

7.6 Lighting and Accessories

The G31 is equipped with 12VDC interior lighting including fluorescent lights in the galley and head, courtesy floor lights in galley kick with the switch at the companionway, halogen reading lights in the forward and aft cabins, overhead lights in the main forward and aft cabins and navigation station night light. The boat is pre-wired for optional fans.

Selected Options:

7.6.1 Fan package – Forward, galley and aft cabin.

8 Rig and Sailing Hardware

8.1 Spar

The G31 is fitted with a Selden Spars single spreader anodized aluminum mast and boom. The spar is equipped with a masthead anchor light, steaming light and deck light (controlled for the helm) in addition to burgee halyards on both spreaders.

8.2 Sails

The sails are designed and built to fit the boat's intended operating parameters by Evolution Sails in Toronto. With the G31 having a moderate displacement and being relative stiff, the sails are built to withstand the higher wind ranges the boat is capable of being used in. Careful detail has been given to correctly position reinforcing and chafe patches to increase the sail life span. The standard inventory includes a vertically battened Dacron in mast furling mainsail and a furling cross-cut Dacron headsail with White UV strip.

8.3 Standing Rigging

All wire is 1x19 316 SS. All upper terminals are swaged except for the fore stays and sprit shrouds, which are Sta-lok. All bottom terminations are open bronze body Sta-lok turnbuckles. Rigging includes swept back upper and lowers, prevision for the cutter staysail and split twin backstays.

8.4 Running Rigging

All running rigging is color coded for easy identification. All lines are sized for load, ease of use and storage. The halyards are triple cored Plate 24 Dynemma with virtually no stretch. All other sheets and controls are standard premium quality double yacht braid.

8.5 Components and Hardware

Halyards - All halyard and controls are lead aft to sheet stoppers. The G31 is fitted with port and starboard Lewmar 16 chrome self tailing halyard/control winches mounted on the cabin top. Replace 16 with 40.

Mainsheet - The mainsheet has a 2:1 purchase run directly to a pod mounted Lewmar 16 chrome self tailing winch. The main sheet is designed to be at the end of the boom where the moment arm is at its' greatest. This is the best, safest and by far the strongest way to attach the main sheet to the boom. Mid boom sheeting increases the loads on the boom and the boat by 4 times over end boom sheeting.

Winch Handles – two 8" and one 10" Lewmar alloy locking winch handles are conveniently stored in custom holders under a cockpit locker lid.

Boom Vang – a Selden rigid boom vang with a cascade 4:1 purchase system leads aft to a sheet stopper. A unique feature of this vang arrangement is the live end. Instead of the rope simply being tied to the block, it is led through an extra block on the boom with a snap shackle. When the vang is being used normally the snap shackle is pulled hard into the block, essentially being dead-ended. If you release the vang, you can move the snap shackle down to a pad eye on the port or starboard bulwark and set up a preventor, all still being led aft to the cockpit.

Primary Winches - The headsail sheets are run aft to outboard mounted Lewmar 40 chrome self tailing primary winches. The headsail sheets to an inboard mounted 1" T-track with Schaefer jib fairlead cars.

8.6 Mainsail Furling/Reefing

All mainsail furling controls lead aft to the port halyard winch area. Controls can be operated facing the sail with a minimum amount of friction and can be tailed to a winch if necessary.

8.7 Headsail Furling

The headsail is furled by a Selden 200 furler. Controls are lead aft over the cabin top to port halyard winch area. Controls can be operated facing the sail with a minimum amount of friction and can be tailed to a winch if necessary. Leads run from the furling drums neatly under the fore deck, exit up the cabin face and along the coach roof to labeled sheet stoppers.

9 Electronics.

9.1 Sailing Instruments

Raymarine ST60 Tridata (speed and depth) at helm station

9.2 Navigational Instruments (Optional)

None

9.3 Auto Pilot (Optional)

None

9.4 Communications

The G31 is fitted with a Raymarine 55 Class D VHF radio in the nav station with masthead antenna.

10. Other Equipment.

10.1 Gear

The G31 is fitted with three (3) fire extinguishers, one on the cockpit under a locker lid, one in the aft cabin, and one in the main cabin. The engine space is fitted with a fire port. A 36" flag pole and base are provided to display national colors.

10.2 Spares (Optional).

None

10.3 Manuals

- Owner's manual complete with user's guide, specification and equipment literature
- As-built schematics for the electrical and plumbing systems
- Electrical legend and color code
- Manuals for main engine and generator

11. <u>Commissioning.</u>

11.1 Delivery Dates

Gozzard Yachts will make every effort to complete the project in a timely fashion. However, considering the complexity of the project, we are only prepared to estimate the delivery date. We will, via email, be able to send digital photographs of the weekly progress, and through full disclosure, keep the owner in the loop as to the timing. Our past experience indicates we are never more than a month behind (or ahead) of schedule.

11.2 Testing and Sea Trails

The boat will be launched, rigged and tested fully at a location to be determined by the owner. The owner is encouraged to make a thorough inspection of the vessel, either by surveyor or personally, as this will represent the end of construction and related work. The final payment will be due at the owner's acceptance of the boat. All electronic systems will be tested and calibrated.

11.3 Delivery

The boat can be launched and commissioned in Goderich or at another location. The cost of the transportation of the boat from Goderich will be the responsibility of the owner or dealer.

11.4 Systems Inspection

All major systems will be inspected and have the installation approved (signed off for warranty) by their manufacturers or authorized representatives either during construction or at time of sea trials.