

LAKE COUNTY SHERIFF'S DEPARTMENT
SPECIFICATIONS FOR
SHERIFF'S PATROL BOAT AND TRAILER
(Revised: 08/29/2017)

GENERAL DESCRIPTION:

Marine aluminum law enforcement patrol/rescue boat.

Length: 21-23 feet. (Excluding swim platform/outboard mounting bracket)

Deep-vee bottom

Single 250 horsepower four stroke outboard motor.

Dual console with steering, helm and all controls on starboard side.

GENERAL USAGE:

Law enforcement lake patrol, search and rescue, and general assistance to the boating public, including towing of disabled boats. The patrol boat specified will be operated between eight to ten hours per day during peak boating season. The hull construction must be strong and of commercial grade. The vessel should be well balanced when occupied/operated by a single person and must also allow proper balance and stability for the retrieval of persons from the water. Vessel should perform with a minimum of destructive wake while operating at safe speeds in confined areas. The vessel will be used primarily on Clear Lake. Clear Lake is a large, but shallow lake where wind driven waves are not uncommon. Vessels should be capable of maneuvering in four (4) foot waves, with 15 (fifteen) foot swells between crests. The boat and trailer configuration shall be balanced. Construction should allow stability, maneuverability, and durability on the waterway to be patrolled for the patrol purposes intended.

VENDOR SPECIFICATIONS:

Quotes must include all costs of the finished vessels, including labor, materials, all applicable taxes, delivery, and all other costs for a completely operational vessel upon receipt.

All work done, when and where governed, must comply with current USCG, NMMA, and ABYC regulations.

All materials and equipment shall be new marine grade and shall meet appropriate Federal and industry standards for material and installation. Owner/Service manuals must accompany the vessel upon delivery for any applicable components.

The successful bidder must be a recognized manufacturer of heavy aluminum water craft, who has been in business continuously for a minimum of 24 consecutive months prior to this bid.

The vendor shall list, on a separate sheet, any variations from, or exceptions to, the conditions and

specifications of this quote. This sheet shall be labeled "Exceptions to Quote Conditions and Specifications" and will be attached to the quote. It is not the intent of these specifications to restrict a manufacturer's ingenuity in design.

There will be a monetary penalty for each day beyond the set delivery date. This penalty will be discussed and agreed upon between the builder and purchaser at the time of the order.

A representative of Lake County Sheriff's Department will have advanced notice, from manufacturer, of various stages of construction. We request the opportunity to make three (3) on site inspections, by two representatives during the construction period. The primary purpose of the inspections will be to assure compliance with all designs, specifications and installation instructions. Any cost incurred by Lake County Sheriff's personnel will be paid by the Lake County Sheriff's Department.

The manufacturer or vendor awarded this bid, without additional charges, will be expected to spend the proper amount of time necessary to instruct personnel how to operate and maintain this boat, at a location agreed upon by manufacturer and purchaser.

Owner/service manuals for the boat and any applicable components are to accompany the boat upon delivery.

Bidders must note any and all deviations from the specifications in order that the Department may evaluate the equipment being offered.

HULL:

The hull shall be constructed of heavy duty, marine grade aluminum with a minimum of .1875' bottom thickness, .125' side thickness and .250' transom thickness. The deep vee hull shall measure 21 -23 feet center-line length. Dead rise of 18 degrees at the transom, bow maximum 35 degrees. The construction of the hull shall be welded. All welds are to be continuous inside and outside on all seams. No rivets. All fastenings to/through the hull shall be aluminum or 300 series stainless steel. If stainless steel, they shall be isolated from aluminum.

The front bow area is to have a lower foredeck area, flat with drains port and starboard, forward of the walk-through windshield. The walk through windshield shall be a minimum of 24 inches wide. There will be an upper deck with storage under the upper deck with a lockable aluminum door. This compartment will be of appropriate size to accommodate the proper anchor for the boat.

Bottom should be hard chined with fully welded one piece bottom at planing surface with full transverse stringers no more than 12 inches apart, and multiple longitudinal stringers, no more than 12 inches apart.

The bow keel area to be reinforced to stop abrasion to hull when beaching,

Side height to be 32 inches to 36 inches. Sides and bottom to meet at pointed bow. Top of gunwale approximately 8 inches wide with a beam of 102 inches. Bottom width 84 inches between chines.

All doors and hatch covers to be framed with one inch aluminum alloy channel, full piano hinge and double stops. Hull to be assembled by using a shaped and slotted extrusion between sides and bottom (chine) and sides and top combing. All welds on both sides in hull structure to be continuous and stress free, with no skip welds or use of rivets.

The interior sides of the hull will be lined with marine grade carpet for sound deadening purposes. The carpet used must be made of flame retardant material.

There will be gunwale storage shelves on both sides This gunwale storage will be 7' to 10' long.

There will be a plastic rub rail running from the bow to the transom. The 2"D" rail made of plastic runs from the bow astern to the transom along the gunwale edge and shall be bolted through the hull with stainless steel bolts (300 series or better) and nylon lock nuts. There shall be an additional rail located between the gunwale edge and the chine. This "D" rail shall run from the transom forward approximately 12' X, 2" in size.

There will be a welded bow eye and two stern eyes.

A 3" high heavy duty, schedule 40 aluminum tubing, safety rail will run from the transom area to the rear of the windshield, with an opening on both the port and starboard sides aft of the passenger seats. The rail will continue from the front of the windshield to a proximity near the bow. There is to be an opening at the extreme bow for access. This safety rail will be welded to the gunwale.

Aluminum diamond plate shall be attached to the flat gunwale at each of the four entry points on the vessel.

A convex ski type rear view mirror, or equivalent, mounted at the helm for maximum visibility, approximately 4" by 8" securely mounted to the upper frame of the windshield, near helm.

All electrical wire harnesses must run in a conduit, encasing the wiring.

All electrical wire harnesses must be encased in a small appropriate size conduit before inserting into large conduit. All harnesses in the engine compartment will be tied up as high as possible and heat-shielded as required. The instrument panel's electrical harness must be designed with a plug to allow the dash panel to be removed without detaching each wire from each instrument.

All wiring harnesses must meet ABYC and BMMA color code for NMMA certification.

Vessel to meet level flotation requirements.

Decking to be sealed marine grade ply board, 3/4" thickness minimum with gray vinyl decking material.

Ten year manufacturer's warranty on hull. Manufacturer shall absorb all transportation costs to and from the factory for warranty repairs.

SWIM PLATFORM/OUTBOARD MOUNTING BRACKET:

Swim platform/outboard motor bracket shall be full length and full width. There will be two aluminum handles, minimum 12" X 1 " welded to the port and starboard side of the transom. Handles to be welded at a diagonal.

OUTBOARD MOTOR SAFETY GUARD

An outboard motor safety guard, constructed of 2"diameter heavy duty, schedule 40 aluminum tubing shall be installed on the transom. The safety guard shall be constructed in such a way that it does not interfere with the proper operation of the outboard motor or with access to the rescue door.

CONSOLES:

Port and starboard console to have windshield for operation during winter months, with center portion to be hinged with a walk-through opening to the bow. This opening is to be a minimum of 24 inches wide. The glass panes are to be rubber mounted, tinted, safety glass only. Glass to be oversized to avoid implosion from waves. Windshield shall be constructed of safety glass.

Port console will have, a minimum of two lockable storage compartments. There will be compartments to accommodate radio and/or other equipment. Compartments will have locking, water-tight doors.

Starboard console will have a lockable compartment for the GPS/Sonar navigation device to prevent theft. This compartment will be mounted to the top of the console..

STEERING AND CONTROL::

All steering and controls are to be at the starboard console. Morse 290 (or approved equal), tilt helm, with new soft, deluxe wheel, (Atwood or equal).

A three-way, water proof ignition switch, key operated, will be installed in the dash of the operator's console.

GAUGES:

Faria brand with internal lighting or approved equivalent. Speedometer, tachometer, volt meter, water temperature, hour meter to read to tenths, audible alarm, with red light, on oil pressure and water temperature. The oil pressure gauge shall include an oil temperature gauge with oil pan sending unit. Electrical fuel gauge. Dimmer switch for gauge lighting. All gauges to be on driver's side.

Digital multi-function gauge or gauges may be substituted for the aforementioned gauges, as long as the digital gauge(s) provide the same monitoring capability.

THROTTLE AND SHIFT:

Morse SL-3 or approved equivalent, side mount, with trim and tilt, and Morse red jacket stainless steel control cables, or approved equivalent.

HEATERS:

Two 12 volt DC heaters, rated at 30 Amps, 360 Watts and 6012 BTU's (DC Thermal brand, Model SA12-3000 or approved equivalent). The heaters shall be installed underneath the console on both sides.

TOW BIT/SAMSON POST

A welded and reinforced tow bit on mid aft transom sized to retain maximum dead pull capability of the vessel. The tow bit shall be removable and of a height that will assure the tow line will not interfere with the operation of the outboard motor.

RESCUE DOOR

A hinged rescue or access door shall be installed on the starboard side of the transom. This door should measure a minimum of twenty four (24") inches wide and shall be even with the top of the outboard motor mounting/swim platform and open into the deck of the boat.

RADAR ARCH/EMERGENCY LIGHT BAR:

The radar arch shall be 2.5" schedule 40 tubing. The bottom of the radar arch mounting surface shall be no higher than 2" above the canvas top. The rear support tubes shall have a vertical orientation and be fully gusseted at the base and top, so as to resist vibration and withstand rough water conditions. There will be an approx. 12" square raised platform to accommodate mounting of the Radar array. The mounting base shall be a minimum of 16" wide and 70" long.

ELECTRONICS:

All electronics items shall be of new manufacture.

GPS/Sonar navigation device, Lowrance HDS-9 Gen3 Touchscreen, with multi-function display. Includes external antenna (Lowrance Point one, or equivalent) and transom mounted structure scan transducer..

Broadband 3G Radar, Lowrance HDS or approved equivalent.

100 watt Siren/Public Address Amplifier and control unit. Federal Signal Model PA300 or approved equivalent. Includes concealment style, all weather speaker. Speaker to be mounted on radar arch of boat.

Low profile mini LED light bar. Blue lenses. Whelen Mini Justice YJ Series, 22" in length or approved equivalent. To be mounted on aluminum radar arch of boat.

CANVAS:

A winter top with (five piece/full closure) backdrop curtain, and two side curtains. The two sides and backdrop are to be removable, utilizing aluminum swivel connectors and stainless steel snaps. Vinyl zippers are to be used where the enclosure/top pieces attach to each other. The length of the top will run from the windshield just aft of the side seat. All canvas will be gray color, heavy duty, marine grade canvas. The canvas will taper to a 6' minimum head clearance at the operator's station and aft section of top. Clear plastic must be used in the design to ensure maximum visibility, all framing and fittings to be rigid all welded aluminum and hard fastened with stainless steel bolts.(Rigid frame)

All canvas to withstand highway towing pressures and adverse weather.

ENGINE/OUTDRIVE:

New marine 250 horsepower four stroke outboard motor. Mercury Four Stroke model, or approved equivalent. Engine must meet California State engine exhaust limitations at 50'. Maximum of 90' dBA at operator's console.

FUEL TANK:

Single fuel tank 60 gallon minimum, mounted centerline either on or just aft of the 50 percent line. Tank material is to be marine grade aluminum, baffled, pressure tested and certified. Tank to have dual vented

system with Attwood shelf venting cap, or approved equal. All installation and materials to meet minimum Federal specifications. Easily accessible gas fill inlet in the gunwale.

BATTERIES:

Two (2) twelve volt, negative ground, heavy duty RV marine grade batteries with a minimum of 490 amperes cold cranking power. Group 24 or 27 Interstate or equivalent..

BATTERY SELECTOR:

Four position (off-l-both-2) Perko brand dual battery switch, or approved equal. Switch will be easily accessible behind a lockable door in the transom.

BATTERY STORAGE:

Batteries are to be stored in an accessible compartment at the transom area. The batteries shall be housed in plastic boxes, secured in lockable compartment(s) in transom, with a safety lip to prevent sliding forward.

BATTERY CABLE:

#4 size copper battery cable, both positive lead and ground lead.

WINDSHIELD WIPERS:

Dual heavy-duty windshield wipers with 18 inch blades and full panoramic capabilities. Two speed minimum.

DOCKING LIGHTS:

Ray-Line docking lights (two total) with fused switch at dash, or approved equal.

SPOTLIGHT

A single Golight Model 2020, remote controlled spotlight, or equivalent, shall be mounted on the starboard side of the radar arch. The control unit shall be mounted on the console at the helm.

NAVIGATIONAL LIGHTING:

International rules LED navigational lighting, marine grade, USCG approved. Folding "all round" light to be installed on the radar arch. Stern light and/or anchor light to be installed on transom above swim platform.

ROCKER SWITCHES:

All rocker switches used will be euro style heavy duty switches, rated 30 AMP resistive, with lighted indicators for the "on" position. Each switch shall be clearly labeled to designate function.

BILGE PUMP:

There will be two (2) heavy duty bilge pumps with a minimum of 1275 to 2000 gph each. One will be wired directly to the batteries to afford automatic operation with an automatic system. The second pump switch will be momentary type, Rule brand #39 with auto-float switch, or approved equal.

BILGE BLOWER:

Air outlet minimum 135 CFM, dash mounted control switch with light, Attwood model #4201 or approved equal.

HORN:

AFI model high pitch, black, 12 volt or approved equivalent.

DECK CLEATS:

Seven (7) eight inch deck cleats installed, three port side, three starboard side, and one in the bow.

SEATS:

Two (2) heavy duty Bentley Mariner style suspension seats with arms, or approved equivalent. Marine grade vinyl upholstery. Both seats to be mounted on a 4.5" high riser boxes. Both seats must swivel. Two (2) 18" x 36" bench seats with folding backs and storage boxes underneath, installed behind the console seats lengthwise on the port and starboard sides. Storage boxes shall have marine grade hasps for locking.

SWIM/DIVE LADDER:

Removable/Stowable four step swim/dive ladder (Garelick Model #19804:1 ladder or equivalent) and corresponding mounting bracket. Mounting bracket to be welded to edge of swim platform/outboard mounting bracket, on Port (left) side.

PAINT:

Hull sides and transom will be painted white between the top of the gunwale rub rail and the bottom of the lower rub rail (approximately 12" high).

The hull shall not have bottom paint.

12 VOLT POWER PLUG SOCKETS:

Four (4) heavy duty 12 volt power plug sockets. One mounted port side near gunwale in rear, one mounted starboard side near gunwale in rear, one mounted on passenger's console, one mounted on operator's console.

DECK LIGHTS:

Four (4) interior deck lights to be installed at all four inside corners of the passenger area. Morse brand 22401, or approved equivalent. Deck light switch installed on operator's console.

Two rear facing deck lights, to be mounted on rear of radar arch, facing rearward.

TRIM TABS:

Vessel will be equipped with appropriate size hydraulic trim tabs. Trim tab controls, and position indicators will be mounted at the operators console.

ACCESSORIES:

Appropriate size anchor and 100 feet of 1/2 " braided anchor line with 10' galvanized chain leader. Two mounted fire extinguishers, 5 lbs each, USCG approved, marine grade, accessible from the helm area.

TRAILER:

Tandem axle, rectangular tube, welded galvanized steel, bunk style trailer to accommodate the size and weight of this vessel, fuel and equipment. Wheel bearings are to be equipped with "bearing buddies" or approved equal. Welded tube bunks with UHMW mounted on contact surface, removable-at-base sideboards to be used to assist in trailering the vessel. Two inch coupler with safety chain, stainless steel disc surge brakes. Fenders to be used as steps with non-skid abrasive on top. Tires to be four-ply radials, sufficient-to accommodate the weight of the boat, fuel and equipment. Serial number to be cold stamped on front of tongue of trailer. Trailer must meet all applicable California Vehicle Code, Department of Transportation requirements, Federal and S.A.E requirements. Trailer must have folding tongue jack, with wheel and a matching, lockable spare tire placed on tongue.

GENERAL SPECIFICATIONS:

All materials and equipment shall be new marine grade and shall meet appropriate federal and industry standards for material and installation. All fasteners through the hull shall be aluminum or 300 series stainless steel or better.

All sound deadening material shall be fire retardant.

SPECIAL CONSIDERATION AND EQUIPMENT SPECIFICATIONS:

It is intended that the manufacturer, when selecting components, materials and design practices for the-specified vessel, will use those which are the best available in the industry for type and operation and conditions for which the vessel will be subjected. All components, materials and design practices will be subjected to give maximum performances, service life and safety and do not merely reflect the minimum requirements of this specification.

All compartments shall be lockable and keyed alike.

The manufacturer or vendor awarded this quote, without additional charges, will deliver to where specified.

DELIVERY DATE:

Vessel is to be delivered, where specified, within ninety (90) to one hundred and twenty (120) days from date of order.

TRIALS:

All performance and sound specifications are to be demonstrated prior to acceptance.

The successful bidder shall make repairs, corrections, or redesigns, as appropriate, at no additional cost, if the boat fails the test. The successful bidder will be responsible for transporting the boat back to the original place of manufacture for any work or modifications needed after trials.

Sea trials will be performed while carrying all the specified equipment and payload which would be-carried on patrol, e.g. full fuel tanks, and the equivalent weight of rescue equipment and personnel.

The performance trials should demonstrate constant, stable, and safe control of the boat through all of its tested operations.

WARRANTY:

Engine, full manufacturer's warranty.

Hull, minimum 10 years, material and workmanship. (FOB the factory)

Equipment, manufacturer's warranty or California law.

Vendor is to describe/outline procedure for which warranty work is to be completed, i.e.; state time frame for which work is to be completed, party responsible for transportation costs to and from repair center(s), list repair center(s) authorized to. perform warranty work, including manufacturer defects, etc.

As an option manufacturer/vendor may include cost for extended warranty.

Any changes or substitutions to the specifications shall have prior approval of the Lake County Sheriff's Department.

dwo 8/27/17