

**JUSTIFICATION FOR NON-COMPETITIVE PROCUREMENT**

**COMPLETE THIS SECTION IF NEW CONTRACT**

For contract(s) in this request, answer applicable questions in each of the 4 major subject areas below in accordance with the Instructions for Preparation of Non-Competitive Procurement Form on the reverse side.

Request that negotiations be conducted only with **Safe Boats International** for the product and/or services described herein.  
 (Name of Person or Firm)

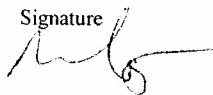
This is a request for  (One-Time Contractor Requisition # , copy attached) or  Term Agreement or  Delegate Agency (Check one). If Delegate Agency, this request is for "blanket approval" of all contracts within the \_\_\_\_\_ (Attach List)  
 \_\_\_\_\_ (Attach List) Pre-Assigned Specification No. \_\_\_\_\_  
 (Program Name) Pre-Assigned Contract No. \_\_\_\_\_

**COMPLETE THIS SECTION IF AMENDMENT OR MODIFICATION TO CONTRACT**

Describe in detail the change in terms of dollars, time period, scope of services, etc., its relationship to the original contract and the specific reasons for the change. Indicate both the original and the adjusted contract amount and/or expiration date with this change, as applicable. Attach copy of all supporting documents. Request approval for a contract amendment or modification to the following:

Contract #: **12228**  
 Specification #: **39136**  
 Mod. #: \_\_\_\_\_ (Attach List, if multiple)


Company or Agency Name: **Safe Boats International**  
 Contract or Program Description: **Purchase of Police Surveillance Boat**

Molly Longanecker	312-745-5599	Signature 	CPD	05-JULY-07
Originator Name	Telephone		Department	Date

Indicate SEE ATTACHED in each box below if additional space needed:

<input type="checkbox"/> <b>PROCUREMENT HISTORY</b> Please see attached	<b>S. S. R. B.</b> DATE <u>7/5/07</u>
<input type="checkbox"/> <b>ESTIMATED COST</b> Please see attached	APPROVED <u>[Signature]</u> CONDITIONALLY APPROVED _____
<input type="checkbox"/> <b>SCHEDULE REQUIREMENTS</b> Please see attached	RETURN TO DEPT. _____ DISAPPROVED _____
<input type="checkbox"/> <b>EXCLUSIVE OR UNIQUE CAPABILITY</b> Please see attached	
<input type="checkbox"/> <b>OTHER</b>	

APPROVED BY:

 07-JULY-07  
 DEPARTMENT HEAD OR DATE  
 DESIGNEE

 07-JULY-07  
 BOARD CHAIRMAN DATE

## **CHIAGO POLICE DEPARTMENT**

### **MODIFCATION TO CURRENT AGREEMENT WITH SAFE BOATS INTERNATIONAL**

### **CPD REQUESTING TO EXERCISE OPTION TO PURCASHE ONE ADDITIOANL VESSEL**

#### **UPDATED PROCUREMETN HISTORY**

The City of Chicago was originally awarded a \$300,000 Port Security grant from the U.S. Transportation Security Administration in February 2004 with which to purchase a vessel that would assist the city in creating a maritime security environment that could effectively differentiate between benign and threatening activities and conduct interdiction an interception efforts. The funds that were recently granted are estimated at \$1.9. CPD has purchased one vessel off of the Safe Boat contract, PO# 12228. With the approval of the Chief Procurement Officer, CPD would like to exercise "9.9 Funding" on page 11, "The City, at its option depending upon funding availability, reserves the right to purchase 1 additional Boat within 1 year after the date of contract award all in accordance with the terms and conditions of this Agreement and for the negotiated price mutually agreed upon by the City and Contractor."

#### **UPDATED ESTIMATED COST**

The total estimated cost for the vessel and equipment is \$337,024.60. This project is fully funded by the Transportation Security Administration; the Port Security Grant Program requires no local match. Additional info is on original that was submitted on the first purchase of vessel.

## **OFFICE OF EMERGENCY MANAGEMENT AND COMMUNICATIONS**

### **JUSTIFICATION FOR NON-COMPETITIVE PROCUREMENT**

#### **CHICAGO POLICE DEPARTMENT SAFE BOATS, INTERNATIONAL SURVEILLANCE WATERCRAFT**

#### **PROCUREMENT HISTORY**

The City of Chicago was awarded a \$300,000 Port Security grant from the U.S. Transportation Security Administration in February 2004 with which to purchase a vessel that would assist the city in creating a maritime security environment that could effectively differentiate between benign and threatening activities and conduct interdiction and interception efforts. The funds granted, however, were significantly less than the City requested and consequently the project had to be revised. Fortunately, the Transportation Security Administration has granted the City special permission to proceed with the purchase of the vessel and equipment, with an understanding that the project will proceed expeditiously. The Office of Emergency Management, in conjunction with the Chicago Police Department Marine Unit, has spent over one year analyzing its requirements for a vessel capable of gathering intelligence, conducting surveillance and reconnaissance of vessels, cargo and people that operate in the maritime domain, and responding effectively to mitigate an incident should it occur. A vessel manufactured by SAFE Boats International, LLC meets both the performance requirements articulated above and the financial constraints imposed by grant funding available for this project. This is a one-time sole source procurement request to purchase the identified vessel.

#### **ESTIMATED COST**

The total estimated cost for the vessel and equipment is \$294,354. The project is fully funded by the Transportation Security Administration; the Port Security Grant Program requires no local match. The proposed vessel is currently listed on the United States General Services Administration Marine Craft and Equipment Schedule. In order to be included in that program, the manufacturer must disclose that they have substantial commercial sales and that the price offered through GSA is discounted to be equal to or better than the prices available to the best commercial customer. SAFE Boats International has agreed to offer the vessel and equipment to the City of Chicago at the GSA discounted price. Please see attached drawing and detailed vessel and equipment cost breakdown.

#### **SCHEDULE REQUIREMENTS**

The finalized Grant Agreement between the City of Chicago and the Transportation Security Administration stipulates that the budget period extends one year from the effective date of the award. The effective date of the award is February 25, 2004, but permission has been given to extend the period with the expectation that the

project will proceed expeditiously. SAFE Boats International currently manufactures a 31' full cabin boat that along with the proposed surveillance and tactical equipment will help detect and mitigate threats for the Port of Chicago. The company has a demonstration unit in stock and has stipulated that the vessel could be outfitted according to City of Chicago specifications and available within 180 days from the date of purchase, whereas the time to acquire a vessel not currently available would take nine months to one year, not inclusive of the time required for competitive bid, review, and award. Granting sole source procurement will preclude the loss of grant funds due to failure to expend in a timely manner.

### **UNIQUE CAPABILITIES**

The specific vessel sought by the Office of Emergency Management and Communications is the primary small boat utilized by the USCG nationwide. Because SAFE Boats International is the exclusive patent holder of several patents, all of which pertain to foam stabilized watercraft, no other manufacturer can legally produce a foam stabilized watercraft with the following properties:

1. Mechanical and chemical attachment systems;
2. Full buoyancy flotation collars which enable the boat to remain afloat with no additional flotation in the event of a catastrophic hull breach;
3. Collar size and dimensions provide the ultimate in stabilization and displacement when the watercraft executes a tight turn or when it is loaded heavy;
4. SAFE Boats also provides a full sided hull, unlike many other manufacturers.

The vessel is designed to perform safely and effectively in the worst weather conditions, and will move the city toward 12-month surveillance capability. The surveillance equipment is designed to enhance safety and security by improving ability to detect, observe and identify all types of activity and objects in total darkness, daylight, or mixed light settings. The Chicago Police Department currently does not have a boat with these capabilities and has determined that this vessel will enhance its ability to secure the Jardine Water and South Water Filtration Plants, Navy Pier and river, bridge and building assets.

customer similar services at a price materially lower or a discount materially greater than the applicable fees charged to City hereunder, then such fees shall simultaneously be lowered by Contractor to the extent necessary to match such lower price or greater discount (or, to the extent such fees have already been paid, Contractor must promptly refund to City the difference between the fees already paid and the lower price for the time period during which such lower price has been in effect). Contractor must notify City of the occurrence of such a lower price or greater discount as described in this Section within thirty (30) days after Contractor's offering or providing such lower price or greater discount to another such customer.

(b) **Similar Services.** The circumstances to be considered in determining what constitutes "similar services" for purposes of the immediately preceding sentence are the specific combination of services required by the customer, the time period during which services are provided, and the overall revenue stream generated by the customer, taking into account the term of the underlying agreement.

**9.10 Funding.** Funding for this Agreement is from Fund Number 003-0764-0581010-0140-220140-03B126 and is subject to availability of funds therein. Payments under this Agreement must not exceed \$289,223.73 without a written amendment in accordance with Section 17.1.

The City, at its option depending upon funding availability, reserves the right to purchase 1 additional Boat within 1 year after the date of contract award all in accordance with the terms and conditions of this Agreement and for the same pricing in Exhibit 2. This additional purchase option is subject to approval of the Chief Procurement Officer and execution of a written amendment to this Agreement.

**9.11 Non-Appropriation.** If no funds or insufficient funds are appropriated and budgeted in any fiscal period of the City for payments to be made under this Agreement, then the City will notify Contractor in writing of that occurrence, and this Agreement will terminate on the earlier of the last day of the fiscal period for which sufficient appropriation was made or whenever the funds appropriated for payment under this Agreement are exhausted. Payments for Services completed to the date of notification will be made to Contractor except that no payments will be made or due to Contractor under this Agreement beyond those amounts appropriated and budgeted to fund payments under this Agreement.

## **X. DISPUTES**

**10.1 Dispute Resolution.** Contractor must and the City may bring any dispute arising under this Agreement that is not resolved by the parties to the Chief Procurement Officer for decision based upon the written submissions of the parties. The parties agree that any such dispute resolution shall be conducted in accordance with the "Regulations of the Department of Procurement Services for Resolution of Disputes between Contractors and the City of Chicago." (A copy of the "Regulations of the Department of Procurement Services for Resolution of Disputes between Contractors and the City of Chicago" is available in City Hall, 121 N. LaSalle Street, Room 301, Bid and Bond Room, Chicago, Illinois 60602.) The Chief Procurement Officer will issue a written decision and send it to the Contractor by mail. The decision of the Chief Procurement Officer is final and binding. The sole and exclusive remedy to challenge the

SAFE Boats International  
 8800 Barney White Road  
 Port Orchard, WA 98367  
 (360) 674-7161  
 (360) 674-7149 (fax)



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Agency/Party : Chicago Police Department		
Point of Contact : Lieutenant Chris Kennedy		
Address : 3510 South Michigan Avenue		
City, ST Zip : Chicago, Illinois 60653		
Phone : 312.742.3205 / 312.742.3207 (fax)		
Email : christopher.kennedy@chicagopolice.org		
Prepared By : Bill Henne - 360 813.0175 - william@safeboats.com		
Quote Date : 3/30/2007		
Quote Length (days) : 90		
Quote Expiration : 6/28/2007		
	<b>Item Description</b>	<b>Unit</b>
	<b>Product improvement changes in items and features may be made from time to time.</b>	
	<b>31' Full Cabin SAFE Boat</b>	ea
	<b>Standard Features</b>	\$164,188.93
	Length: 31' + o/b bracket = 33.6' LOA Inside length: 30' Transom height/Shaft length: 30"	Standard
	Beam: 10 feet - Inside Beam: 84 inches	Standard
	Person capacity: 18	Standard
	Max HP: 600	Standard
	Dry weight: approximately 8,900 lbs. without power.	Standard
	Draft: approximately 30 inches with average load.	Standard
	Max weight capacity: persons, motor, gear: 6,232 lbs	Standard
	<b>Collar System</b>	Standard
	SAFE XDR-1 Extreme Duty Reinforced Collar System. Patented solid polyethylene (closed cell foam) collar encapsulated by a maritized polyurethane membrane with extreme rip-stop reinforcement.	Included
	Standard colors include: Red, White, Blue, Grey, Orange, Purple, Black & Green.	Included
	Anti-fouling paint on side plates behind collars.	Included
	Includes standard identification collar lettering. <b>***CHICAGO POLICE - in white letters***</b>	Included
	<b>Hull &amp; Deck</b>	Included
	5/16" - 5086 bottom plate with SAFE Boats exclusive 5 stringer system with angled transverse framing on 12-inch centers.	Included
	Low profile dimmable LED deck/walkway lights. Inside & outside lights independently operated	Included
	Doubled keel beaching plate.	Included
	Fabricated outboard bracket with removable quick-release T-handle style cast Baywood Hatch and secured retracting dive ladder. (requires 30" motors, adds 31" to LOA)	Included
	Self-bailing decks with twin 4-inch deck scuppers.	Included
	Non-skid decks with 3M Safety Walk. All non skid edges are sealed with 3M Edge Seal.	Included
	Stepped transom with performance shoe in bottom plate. Six full length, fully welded performance strakes.	Included
	Sacrificial zinc anode.	Included
	Performance wings below collars.	Included
	Dual aft lockers with fabricated lids. (vented)	Included
	Port & starboard aft lockers have independent sub-floors for mounting remote engine items.	Included
	Anchor locker with fabricated lid, anchor tie downs and drain.	Included
	All outside lockers have fabricated aluminum access doors.	Included
	All lockers vents are designed to reduce water intrusion.	Included

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Six (6) 10-inch cast aluminum weld on cleats.	Included
Non-skid gunwale flanges.	Included
Wrap around aft rails.	Included
Bow rails.	Included
Fore & aft tow posts with SS cross pins.	Included
Heavy duty motor cage/tow line guide.	Included
Tow line spool mounted on aft face of radar mast.	Included
Fabricated aluminum life ring mount.	Included
Weld on bow eye with SS insert.	Included
Custom fabricated weld on pick eyes with SS inserts.	Included
Oversized rig tubes below deck to accommodate electrical and mechanical rigging.	Included
Flared high volume scupper valves keep aft deck dry while backing down.	Included
Personnel recovery side plate and collar cutouts. Facilitates PIW recovery.	Included
<b>Fuel System</b>	
Fuel fill pod with SS fill and vent.	Included
300-gallon fuel tank with a formed bottom (1/4" - 5096) No bottom seams. Longitudinal and transverse baffles.	Included
Fuel tank has full size Doubler plates on tank ends to isolate tank from mounting brackets.	Included
Fuel tank mounting brackets are isolated on rubber mounts from hull structure.	Included
Dual fuel tank pickups.	Included
Racor water separator with see-thru bowl, priming system & self venting drain. (one per motor); SS swaged fittings, WEMA sender removable for tank cleaning, inspection.	Included
<b>Cabin, Dash and V-berth</b>	
Full width cabin with forward V-berth. (insulated & carpeted)	Included
Forward cockpit with cuddy access door, bow storage locker, and self bailing deck.	Included
Bow cabin hatch.	Included
Aluminum weather tight full access cabin side slider doors. (Port & Starboard)	Included
Sliding side aft windows (Port & Stbd.) for aft passengers air circulation.	Included
Weather tight hinged aluminum aft door.	Included
Overhead spotter windows. (tinted)	Included
All windows are bolt in safety glass.	Included
OHP - Overhead fold-down electronics bar.	Included
Three red/white dome lights (two in cabin, one in V-berth).	Included
Portable 12-volt chart light mounted inside starboard helm.	Included
Two shock mitigating seats mounted on storage boxes with foot rests. (see options if more are needed)	Included
Port & starboard aft jump seat/storage boxes.	Included
Aft cabin storage lockers, port and starboard, with gasketed exterior access door. See below for optional slide-out service tray for use with installed auxiliary equipment. ***ONLY STARBOARD***	Included
Full aluminum handrail system inside and out.	Included
Swing down radar pod/antenna/spot light mount.	Included
Exterior storage locker suitable for pump can or genset.	Included
<b>Rigging and Electrical</b>	
Accessory 12-volt power receptacles.	Included
Fabricated tie bars to secure all wiring.	Included
Single marine grade Optima blue top battery with switches and battery box. Battery tie-downs fabricated to the deck.	Included
All electrical connections are sealed in marine grade shrink tube.	Included
Recessed toggle style marine grade breaker system with fold-out panels for breakers, battery switches, switch covers, back lighting, and custom labels.	Included

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Running lights.	Included	
Port, starboard and aft flood/deck lights.	Included	
Upgraded self-parking intermittent windshield wiper with washer system.	Included	
Hydraulic steering (tilt helm)	Included	
Transom rig tubes.	Included	
Twin overhead air circulation fans.	Included	
Two (2) fire extinguishers and mounts.	Included	
Compass with backlighting.	Included	
Twin blue LE strobe lights.	Included	
Installation only of standard, customer provided, electronics package. Standard package includes One (1) Radar w/ dome or array, One (1) GPS receiver and display, One (1) Chartplotter display, One (1) VHF radio system w/ antenna and external speaker, and One (1) Depth sounder with thru-hull (flush) or transom mount transducer and display. Additional charges may apply for other customer provided equipment.	Included	
<b>Miscellaneous</b>		
Perform sea trial and document mechanical and performance data. (fuel, labor, oil included)	Included	
<b>Options</b>		
Glyde Ride shock mitigating seating.	ea	\$967.00
Glyde Ride shock mitigating seating.	ea	\$967.00
Forced air diesel heater and defroster with 5 gallon diesel tank.	ea	\$4,627.00
Add four (4) roll control dive tank holders.	ea	\$231.00
Single RCL-1000D Remote Control Searchlight with control panel mounted at helm.	ea	\$1,494.00
Shore power with galvanic isolator, 110 v. panel, built-in battery charger and 25' cord.	ea	\$1,961.00
Trailer, 15000 - 29 - 33' Hulls, bunk trailer with drum brakes, bow ladder, v-stop, and LED lighting.	ea	\$11,876.00
<b>Motor Options. SBI Rigging Kits include: Stainless Steel props, dedicated engine batteries, wiring harnesses, gauge package, shifter and control cables, steering, key switches and installation/labor.</b>		
Mercury Verado - Two (2) (1-R, 1-L) 250XXL & 250CXXL Verado 4-Stroke, (30" transom)	pair	\$29,405.00
Verado Twin Engine Rigging. Rigging includes: hydraulic steering, tie bar, SS prop, dual binnacle, steering wheel, safety lanyard, SC5000 digital gauge and installation/labor.	kit	\$8,612.00
<b>Electronic Options</b>		
Furuno 1834CNT Radar/Chart Plotter w/ 10.4" color display & 24" - 4KW Radome (36 nm range)	ea	\$5,349.75
Furuno 008-523-070 Video Interface Kit (**Parts Note** Specify at order-Furuno will install and test for waterproof)	ea	\$300.00
Furuno Chart Card Great Lakes (Lake Michigan) USA-H1E-T5M	ea	\$225.00
Furuno GP37 DGPS/WAAS Display w/ antenna	ea	\$729.75
Furuno ARP11PG AutoPiloter for NAVNET w/ Furuno Heading Sensor	ea	\$1,254.75
Furuno BBFE1 Network Sounder	ea	\$735.00
Furuno 555-SLD low profile through hull transducer.	ea	\$315.00
Furuno 000-117-603 6 Pin Cable (NMEA input/output) need 2	pair	\$73.50
Furuno BBWGPS WAAS/GPS Receiver Antenna	ea	\$367.50
Furuno Remote Second Station Microphone for VHF FM3010	ea	\$150.00
Furuno LH 3000 30 watt loud hailer w/ two (2) external speakers (fore and aft) M95435, flush mount kit LH3020 and siren switch.	package	\$1,332.27
Furuno FM3000 25W VHF Radio w/ DSC and Flush Mount Kit FM3040	ea	\$477.75
VHF antenna 156HD Morad w/ Stainless steel ratchet style antenna mount 1986068	ea	\$184.00
KVH Brand Azimuth 1000 Fluxgate compass	ea	\$457.60
FLIR Voyager thermal imager w/ continuous digital zoom and pan-tilt	ea	\$75,799.00
Customer to supply 3 Astro Spectra radios w/ antennas for install (price is for installation and SS ratchet mounts only)	three	\$1,200.00
<b>Miscellaneous Options</b>		



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Boat Outfit Kit: includes: 30' mooring lines (4), black fenders ANDK0022 w/ 10' x 3/8" whip (4), telescoping boat hook w/ mounts, bucket w/ lanyard, 300' tow line, 10-person first aid kit, Fortress FX11 anchor kit ((2) 3/8" shackles, 3/8" eye-eye swivel, 150' anchor line, 1/4" x 4" PVC coated chain & SS chain deck pipe), 24" life ring buoy with distress marker light, portable bilge pump, spare parts/tool bag including 3/16" T-handle, 5/16" T-handle and offset screwdriver, offshore marine flare signal kit and hand held compressed air horn.	Kit	\$1,821.73
Gun Locks for Remington Shotgun (1 ea) and AR Rifle (1 ea) SC-1/AR-H (Total - 1 w/ shotgun inserts)	pair	\$575.00
Line Drawing Package including electrical	ea	\$775.00
Install customer provided strobe light system around cabin with dedicated fore and aft switches. (make sure when ordering and supplying that it has the ability to differentiate between fore and aft)	ea	\$879.00
Tow Line for tow spool - 3/4 x 300'	ea	\$324.40
Enlarge starboard seat box and pump can locker to accommodate CFE equipment. Chicago to supply dimensions.	ea	\$150.00
SEADOG 28858 bow roller	ea	\$175.00
Panasonic MM-46943 Deluxe laptop kit for engine diagnostics.	ea	\$8,219.97
Hand Gun Storage Locker (Custom, aluminum by SBI) with key lock door and padding on inside, mounted under seat box. Dimensions to be approximately: 6"H x 8"W x 10"D	ea	\$667.00
Seat Belts (4 ea)-Installed	ea	\$190.72
Install luminescent stickers for egress out of cabin and cuddy.	ea	\$147.00
<b>Total Package FOB Port Orchard, Washington. ***NOT INCLUDING SHIPPING***</b>		<b>\$327,204.62</b>
Shipping - NOT TO EXCEED		
***Vessel Offloading Will be Customer Responsibility***		<b>\$9,819.98</b>
<b>Total Package Including Shipping</b>		<b>\$337,024.60</b>
Acceptance at Port Orchard, Washington		
FOB Port Orchard, Washington		
***Delivery XXX days after the receipt of contract or purchase order.***		
SAFE Boats International		
8800 Barney White Rd.		
Port Orchard, WA 98367		
(360) 674-7161		
(360) 674-7149 fax		
www.safeboats.com		
DUNS# 01-991-5511		
Federal Tax ID # 91-1737896		
Resale tax# 601-758-087		
Discount available for multiple boat order of three (3) or more identical items on same order.		
<b>** Please Sign Below &amp; Attach this quote to your Purchase Order when submitting**</b>		
Customer Sign: _____		
Print Name: _____		





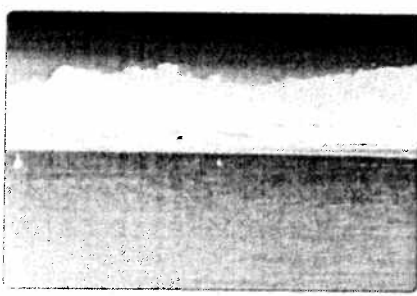
# Voyager

The ThermoVision Voyager is a powerful multi-sensor thermal imaging system for maritime navigation and security.

The system uses two thermal imagers; one with a wide field of view for navigating and situational awareness, and another longer range imager for hazard detection. Both cameras provide clear imagery regardless of lighting conditions. A long range daylight/lowlight camera can be used for identification of approaching vessels or onshore activity when lighting conditions permit. All three cameras are enclosed in a sealed pan and tilt enclosure that can provide 360 degree visibility. The system uses active stabilization to provide steady imagery even in rough seas.



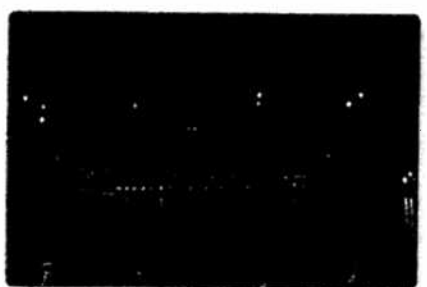
Unlike radar systems that require adjustments and training to use, the Voyager is simple to operate. If you can watch TV, you can use the Voyager. The system provides crisp imagery that appears as black and white video. With FLIR thermal imagers, you can usually see more scene detail than you can with your eyes during daylight. Thermal imagers sense small differences in temperature, so warmer objects appear white, and cooler objects appear dark. You can clearly see outcroppings of land, buoys, markers, and other boats at range. Simply put, you can navigate with confidence in total darkness. Voyager will support up to 4 control stations onboard and the video can be displayed on virtually any multi function display or video monitor.



Voyager provides continuous zooming between the wide and narrow field of view thermal imagers



With Voyager thermal imager



Without Voyager thermal imager





# Voyager

## THERMAL IMAGING PERFORMANCE

Detector type	Focal Plane Array (FPA), Uncooled microbolometer 320 x 240 pixels
Spectral range	7.5 to 13µm
Field of view camera 1	20° (H) x 15° (V) with 35 mm lens
Field of view camera 2	5° (H) x 3.75° (V) with 150 mm lens
Thermal sensitivity	65mK max
Image frequency	30 Hz (RS170A), 25 Hz (CCIR) or 7.5Hz (RS170A)
Focus	Automatic or Manual
Electronic zoom	20° to 2° HFOV (Foveal presentation)
Image processing	Digital Detail Enhancement (DDE)

## VISUAL

Built-in digital video	FCBEX980S 26x High Telephoto Zoom Color Block Camera (NTSC)
Lines of resolution	Approx. 680,000 pixels (NTSC)
Standard lens performance	26x Zoom, f=3.5mm (wide) to 91.0 mm (tele), F1.6 to F3.8 (NTSC)
Zoom	Tied to thermal camera

## PAN/TILT

Az Range	Continuous panning, speed tied to zoom
EI Range, EI velocity	+/-60°
Slew Rate	20°/sec at 20° HFOV. Speed tied to zoom.

## STABILIZATION

Type	Gyro stabilized and electronic stabilization
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## IMAGE PRESENTATION

Video output	RS170A thermal and NTSC visible
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## POWER

Requirements	24 VDC or 24V AC (+/-10%)
Consumption	<50 W nominal; 130W max; 270W max w/ heaters

## ENVIRONMENTAL SPECIFICATION

Operating temperature range	-32°C to +55°C
Storage temperature range	-40°C to 70°C
Automatic Window defrost	When window temperature is below 5°C
Humidity	100% relative humidity salt spray
Sand/dust, vibration, icing	Mil-Std 810
Encapsulation	IP X6

## PHYSICAL CHARACTERISTICS

Camera Weight	45 lb (20.4 kg)
Camera Size	15" diameter by 23" height swept volume

## INT. BRACKET

RS-422	Voyager Joystick Control Unit (JCU) via RS422
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## STANDARD PACKAGE

Stabilized pan/tilt head with integrated thermal imagers and DLTV camera  
 150 feet with breakout box and mating connectors  
 Operator manual  
 Voyager Joystick Control Unit

## WARRANTY

2 years

FLIR Santa Barbara, CA  
 2500 North Hollister Ave.

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 Santa Barbara, CA 93108  
 805-964-4600  
 www.flir.com

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FLIR Boston, MA

FLIR Boston, MA  
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Equipment described herein may require US Government authorization for export purposes. Diversion contrary to US law is prohibited.  
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## EXHIBIT 1

### SCOPE OF SERVICES, BOAT TECHNICAL/FUNCTIONAL SPECIFICATIONS AND DRAWING

The Contractor shall build, test and deliver FOB, City of Chicago, one 31 foot patrol Boat ("Boat"), complete and ready to use, with all required Equipment installed as listed in Exhibit 2 that meets the technical and functional specifications described herein all in accordance with the terms and conditions of this Agreement. The Services include certification training of City personnel in the operation and maintenance of the Boat in addition to maintenance and technical support for the Warranty Period. The Boat must be delivered to the Chicago Police Department's ("CPD") Marine Unit, at a pre-determined location subsequent to sea trial and approval. Final inspection, testing and Acceptance will be done by the City at City of Chicago facility.

To ensure that the CPD receives a Boat design that has been proven in service, durability and construction, the Contractor must not only meet the following specifications, but must demonstrate a Boat that has identical specifications as contained herein.

The Boat will be in operation year round and therefore must be designed and constructed to withstand conditions associated with a Sea State Five status (winds up to 25 knots and waves up to 8 feet), withstand the rigors of extreme weather and water conditions of the Great Lakes, operate in limited icing conditions, operate within areas of oil and chemical spills and operate in shallow waters where similar size Boats might ground.

The Boat will conduct numerous underway boardings, therefore, the Boat must incorporate a full length fendering system described herein. The Boat must comply with the following specifications:

The Boat must conform to standards that are established by the International Organization of Standards (ISO) and ASTM International.

Length:	31 Feet; O/B Bracket 33.4' LOA- Inside length 30' – Transom height/Shaft length 30"
Beam:	10 Feet – Inside beam 84 Inches
Person Capacity:	18
Maximum Horsepower:	600
Dry Weight:	8,900 lbs. (approximately without power)
Maximum Weight:	Capacity weight (engines, persons, gear) should be at least 6,230lbs.
Draft:	30 inches (approximately with an average load)

#### Hull and Deck Design

The hull of the requested Boat must meet the specifications listed below and established by the International Organization of Standardization (ISO).

- The bottom plate must be made of 5/16" 5086 marine aluminum and be constructed of a five (5) stringer system with angled transverse framing on 12 inch centers.

- Low profile dimmable LED deck/walkway lights. The inside and outside lights must be on separate controls.
- Equipped with an overhead fold down electronics bar, doubled keel beaching plate and a fabricated outboard bracket with 20"x10" cast Baywood hatch.
- The deck should be self bailing with a minimum of two (2) four (4) inch deck scuppers and have 3M non skid Safety Walk. All non skid edges must be sealed with 3M edge seal.
- There should be a stepped transom with performance shoe in the bottom plate and six (6) full length, fully welded performance strakes.
- There should be sacrificial zinc anode.
- There should be a minimum of two (2) aft lockers (vented) with fabricated lids. There should be sub-floors for mounting remote engine items.
- All outside locker doors must have fabricated aluminum access doors and must be designed to reduce water intrusion.
- The deck hatches and inspection ports will be bolted or welded in and sealed.
- The entire hull volume below decks and fuel tank will be pressure tested to 33CFR 183.510, in excess of those required by the enhanced pressure test, Table F.2 of ISO 12217-1.
- Cabin and console openings will be of weather tight construction.
- All hatches and lockers will be designed to minimize water intrusion.
- The exterior of the Boat must have six (6) 10-inch cast aluminum weld on cleats.
- The gunwale flanges should be non-skid.
- There should be bow rails, fore and aft tow posts with SS cross pins and a heavy-duty motor cage with a towline guide.
- There should be a tow line spool, with 300 feet of ¾ inch tow line, mounted on the aft face of the radar pod, a fabricated aluminum life ring mount, SS bow and transom lifting eyes and flared high volume scupper valves to keep the aft deck dry whole backing down.
- The Boats noise levels will not exceed 84 decibels when the engines are at full throttle. ~
- All installed components and stores will not rattle. At the request of the CPD Representative the Contractor will install support bracing at designated locations. Support bracing will be installed before the final trim pieces are put into place. The support bracing will not be visible to the eye and will be able to hold a weight of five (5) pounds.
- The airtight hull will be required to stay a float without the collar system (fendering system) in place.
- The Boat shall have four (4) roll control dive tanks that will be mounted at a location determined by the Chicago Police Department representative.
- The Boat shall have personnel recovery side plate and collar cutouts on both the port and starboard sides.
- The Boat shall have a pump can storage locker with access.
- The forward cockpit with cuddy door will include: bulhead, a minimum of two (2) scupper drains (port and starboard), anchor locker with fabricated door and ammunition storage.

#### Engines and Fuel System

- The Boat shall have two (2) 2006 (1-R, 1-L) 250 XXL and 250CXXL Verado 4-stroke engines with a 30" shaft. The starboard engine will rotate clockwise and the port engine will rotate counter-clockwise. The motor options will include a SBI motor package which includes the motors, rigging kits, stainless steel props.

- The Boat will be equipped with a fuel fill pod with SS fill and vent.
- The Boat will have a 300-gallon fuel tank with a formed bottom, constructed of ¼" 5086 marine grade aluminum. The tank will have no bottom seams and both longitudinal and transverse baffles.
- The tank will be installed with full size Doubler plates on both tank ends so that the tank is isolated from the mounting brackets.
- The fuel tank mounting brackets must be isolated on rubber mounts from the hull structure.
- The Boat will have dual fuel tank pick-ups.
- Each motor will have a Racor water separator with see-thru bowl, priming system & self-venting drain.
- The fuel system will have SS swaged fittings and a WEMA sender that is removable for tank cleaning and inspection.

#### Collar System (Fendering System)

- The collar system will use a 1.3-pound per cubic foot polypropylene.
- The collar system will be required to provide redundant buoyancy above and beyond the airtight hull of the Boat.
- The collar (fender) will be manufactured from 100 percent foam. There will be no air used in the system.
- The closed cell polypropylene foam will be shaped to the required geometry for the Boat.
- The foam will be placed within a polyurethane membrane collar, blue in color that is reinforced with a woven polyester base cloth. The collar will have white lettering that says CHICAGO POLICE in capital letters, on both the port and starboard sides of the collar. The collar will also have the following capabilities:
  - Base Fabric Type: Woven Polyester
  - Base Fabric Weight: 15 oz. per square yard
  - Finish Coated Weight: 50 oz. per square yard
  - Tongue Tear: 448/495 pounds per foot (ASTM D751)
  - Grab Tensile: 1618/1683 pounds per foot (ASTM D751)
  - Strip Tensile: 1333/990 pounds per square inch (ASTM 571 Procedure B)
  - Adhesion: 43 pounds per inch Dielectric Weld
  - Hydrostatic Resistance: 1000 pounds per inch
  - Low Temperature: Pass at -30 degrees Fahrenheit
  - Abrasion Resistance: 10,000 cycles (ASTM 3389)

#### Cabin, Dash and V-Berth

- The Boat will be equipped with a full width cabin with a forward V-berth. The cabin and V-berth will be insulated and carpeted and there will be a bow cabin hatch.
- The Boat will have aluminum weather tight full access cabin side slider doors on both the Port and Starboard sides and sliding side aft windows on both the Port and Starboard sides.
- There will be a weather tight hinged aluminum aft door.
- The Boat will have overhead spotter windows with tinted glass. All windows on the Boat will have bolt in safety glass.
- The Boat will have three (3) red/white dome lights. Two (2) lights will be installed in the cabin and one (1) in the V-berth.

- The Boat will have a total of four (4) pneumatic suspension seats, mounted on storage boxes with foot rests. The rear two (2) pneumatic suspension seats will be Glyde ride.
- The Boat will have a full aluminum handrail system inside and out.
- The Boat shall have a forced air diesel heater and defroster with five (5) gallon diesel tank.
- The Boat shall have a forward V-berth locker/bulkhead.
- The Boat shall have two (2) gun locks for a Remington Model 810 shotgun and one (1) gun lock for a Ruger Mini-14 rifle system and one (1) gun lock for an M-14 rifle system. Each lock will be controlled by both an individual key lock and an individual button release system that is hidden at the location designated by the Chicago Police Department representative.

### Rigging and Electrical

All wiring shall be of marine grade quality-tinned copper strand type 3. All electrical connections shall be sealed in marine grade shrink tube. Fabricated tie bars will be used to secure all wiring. Additional requirements are listed below:

- The Boat shall have three (3) marine grade dry cell battery system (Optima Blue Tops) with battery switches, jumper switch, battery boxes, one port starting battery, one starboard battery, one house electronics battery. The house battery shall be able to charge from either bank.
- The Boat shall have an accessory 12 volt power receptacle.
- The Boat shall have recessed toggle style marine grade breaker system with fold-out panels for breakers and battery switches. The panel will include twenty (20) percent spare breakers and the switch covers will have back lighting and custom labels.
- The Boat shall have the appropriate running lights, aft flood and deck lights on both the port and starboard sides.
- The Boat shall have upgraded self-parking intermittent windshield wipers, with washer system on both the port and starboard windows.
- The Boat shall have hydraulic steering with a tilt helm and transom rig tubes.
- The Boat shall have twin overhead air circulation fans and a fire extinguisher with mount.
- The Boat shall have twin blue LE strobe lights. The lights will be controlled by the siren/light control box that will be provided by the City of Chicago.
- The Contractor will provide one (1), twelve gauge power wire (red) and one (1) twelve gauge ground wire (yellow) to the location designated by the City of Chicago representative for the siren/light control box. The opposite ends of the wire will be terminated at the designated power source that will provide all emergency lights on their own dedicated circuit. These wires will not be exposed except for the connection end at the designated location, for the siren/light control box. The Contractor will ensure that there is a minimum of twelve inches of both power and ground wire at the designated location.
- The Contractor will run both power (red) and ground (yellow) wires from the designated location of the siren/light control box to the locations designated by the City of Chicago representative for installation of the LED warning lights that will be provided by the City of Chicago. Each run will consist of one 14 gauge power wire (red) and one 14 gauge ground wire (yellow.) The Contractor will leave a minimum



of twelve inches of both power and ground wire at each end of the designated locations.

- The Contractor will run four (4) blue 14 gauge wires from the siren/light control box to the exterior roof of the cabin. The Contractor will leave a total of twenty-four (24) inches of each wire exposed at each end of the locations for installation.
- The Boat shall come with shore power which will consist of a galvanic isolator, 110 panel, 110 outlet, built in battery charger and twenty-five (25) feet of cord.

### Electronics Equipment

The Contractor will furnish and install the following electronics equipment for the Boat. Included with the Boat will be all operating equipment that is required including but not limited to the manuals, appropriate antenna, mounting brackets, cables, weather covers and any other operational components. All equipment will be installed at a location determined by the designated City of Chicago representative.

- One (1) Furuno 1934 C/NT Navnet Radar/Plotter with a 10.4 inch LCD display. The unit will have a 48 nautical mile range and a 4 KW Open Array antenna and a video input package.
- One (1) Furuno Chart Card for the Great Lakes region (Lake Michigan)
- One (1) Furuno ARP 11 Autoplotter for Navnet with a Furuno PG1000 Heading Sensor. The unit must be compatible with the Furuno 1933 C/NT system.
- One (1) Furuno BBFF1 Network Sounder.
- One (1) Furuno GP37 DGPS/WAAS Display with antenna. The unit must be compatible with the Furuno 1933 C/NT system.
- One Furuno 520PLD Low Profile through hull transducer.
- Two (2) Furuno 000-117-603 6 Pin Cable (NMEA input/output.) One (1) Furuno BBWGPS WAAS/GPS Receiver Antenna.
- One (1) Furuno FM3000 25W VHF Radio with DSC and Flush Mount Kit FM 3040. The unit will also include a remote second station microphone that will be installed at the location designated by the City of Chicago representative.
- One (1) Furuno LH3000 30 watt loud hailer with external speaker M95435, flush mounts kit LH3020 and siren switch.
- One (1) KVH Brand Azimuth 1000 fluxgate compass.
- One (1) NVTi Day/Night Vision Thermal Imager 3200-C camera System with Display, controller, custom mount all installation material and installation.

### Trailer

The Contractor will provide a custom 15,000 pound galvanized bunk trailer, twin axle, suitable to carry the total weight load of the provided Boat specified herein. The trailer will have:

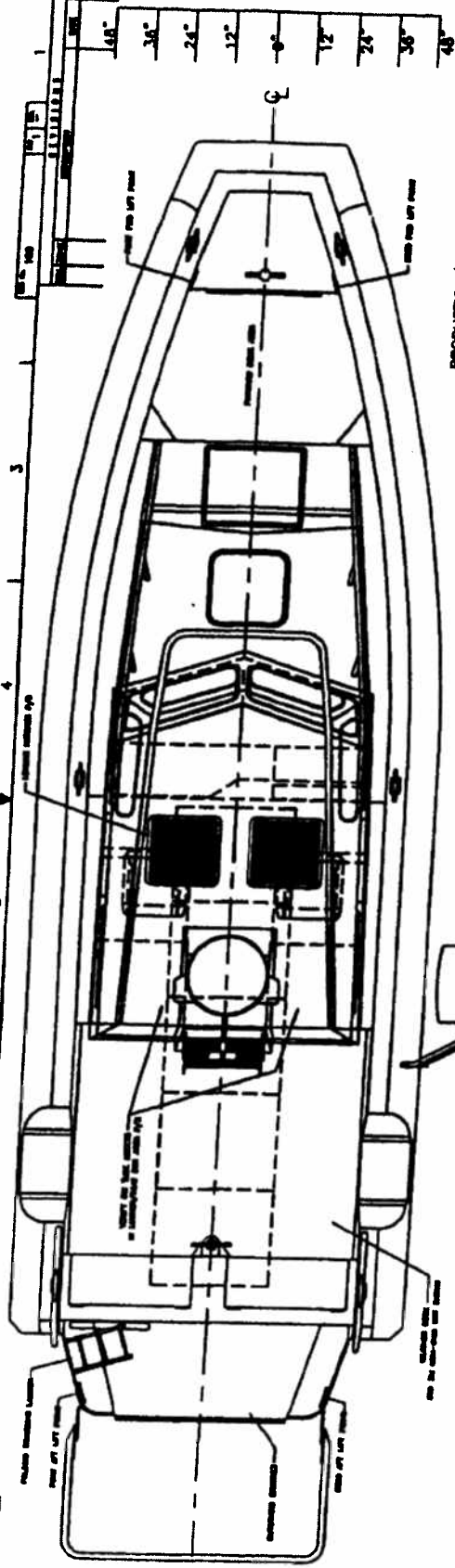
- Hydraulic surge brakes, one axle.
- Galvanized spare tire assembly.
- Appropriate trailer/brake light system.
- Trailer jack.
- Loading guide posts

### Sea Trial

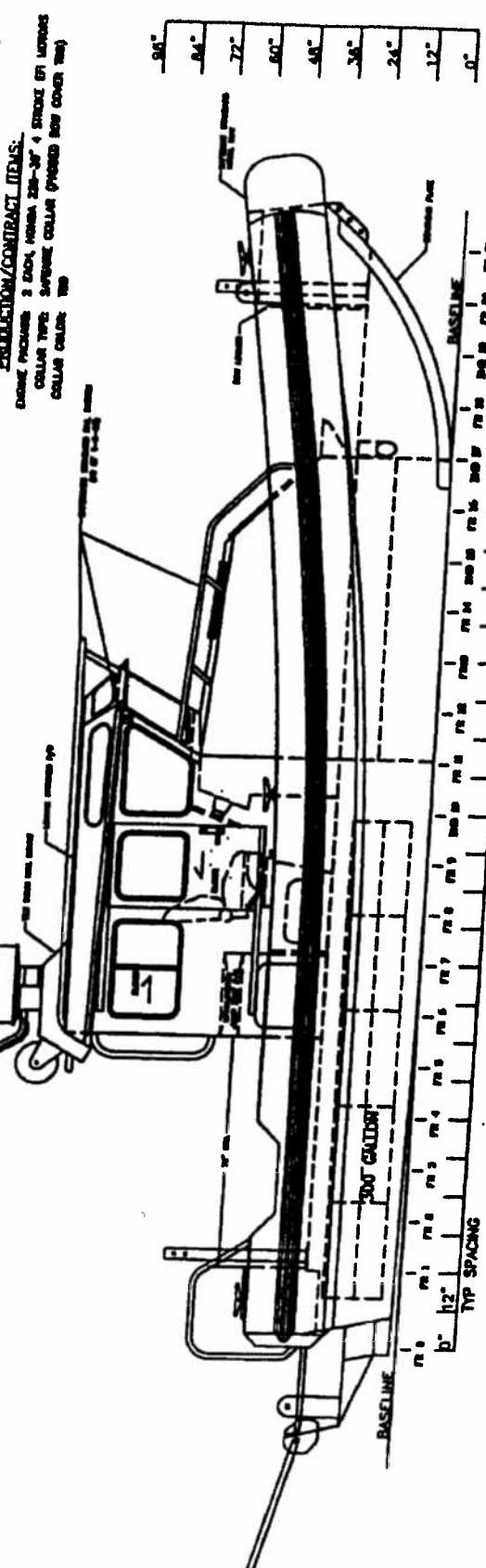
The Boat with all equipment onboard and a full fuel tank must be launched, water tested and the results verified as follows:

- Documented sea trial report providing measured mile speeds, free board dimensions, dry and wet weights and propeller size.
- Photograph and video tape the Boat in the water during the sea trials and include these along with the owners' manual for both the Boat and all accessories and other appropriate documentation, to include construction blueprints.
- The Chicago Police Department is to have a representative at the sea trial and final approval will rest with the Chicago Police Department representative.
- Final acceptance of the Boat will occur once it is received in the City of Chicago. Upon arrival it will be physically inspected for damage and placed into the water to ensure that it operates in the same manner as the sea trial. Final acceptance will rest with the designated representative from the City of Chicago, Chicago Police Department.

FILE NAME  
31754-118.dwg



**PRODUCTION/CONTRACT ITEMS:**  
 DOME PACKAGES 3 EACH, HEIGHT 28"-30" 4 STRIKE OFF LANTERNS  
 COLLAR TYPE: SUPPLEMENT COLLAR (PREFERRED BOW COVER TYPE)  
 COLLAR COLOR: RED



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NO.	DATE	REVISED	BY
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LHM NO. 607  
 HULL NO. 607  
 31' PATROL VESSEL  
 GENERAL ARRANGEMENT

HULL NO. 607