



## COMMERCIAL MARINE SERVICE, INC.

Marine Appraisers, Consultants & Surveyors

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*Since 1983*

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# MARINE SURVEY

## REPORT No. CMS-17-4185

### M/V "GUEMES"

Official Number: 601686

## Condition & Valuation Report



**Requested By: Captain Rachel Rowe**

Skagit County Public Works

1800 Continental Place

Mt. Vernon, WA 98273

**Issued at Seattle, WA May 10, 2017**



**This Is To Certify** that the undersigned marine surveyor did on March 29,2017 and April 3,2017, at the request Captain Rachel Rowe and for the account of Skagit County Public Works, attend survey of the car/passenger ferry boat M/V "GUEMES" as it lay at Foss Shipyard as it lay on Dry Dock and Pier side in Seattle, WA, in order to ascertain its general condition and valuation for insurance purposes and report thereon.

**ATTENDING**

Mr. Jeff M. Kutz----- Marine surveyor  
Captain Rachel Rowe-----Vessel Captain  
Mr. Robert Martin -----Owner's Representative

**LIMITING CONDITIONS**

- A. This is a summary report produced for purposes as defined in contract.
- B. This vessel was surveyed with the consideration that it had responsible ownership and management, a competent crew, and reasonable ongoing maintenance.
- C. The vessel was appraised upon the premise that it was free and clear of all debt, encumbrances, mortgages or special liens.
- D. This survey inspection was done without regard to any possible problems that may arise from the "American Disabilities Act" (ADA) or any violations of the (ADA).
- E. We are unaware of any significant potential environmental hazards associated with this vessel, save those normally associated with vessels of this type.
- F. The values noted herein are based upon vessel's present condition at its present location.
- G. No responsibility is assumed for any latent defects which may affect vessel's value.
- H. No opinion of vessel's stability characteristics has been made and no opinion is expressed hereto.
- I. The vessel equipment identification and classification descriptions included herein are for purposes of identification only, and are not intended to detail all conditions or list all features associated with each item described.
- J. This report was prepared for the client of record, as noted herein, in order to provide an opinion of value and answer specific questions mutually agreed upon by surveyor and that client.
- K. The information supplied by others that was considered and utilized in constructing this report is believed to be reliable, and no further responsibility is assumed for its accuracy.
- L. This report was produced by Commercial Marine Service, Inc. and will be considered confidential. Copies of this report will only be made available to other parties with prior written consent from the client/owner of this report.
- M. This report information considered to be correct as of the date of issue of this report.



## **PROCEDURE AND ANALYSIS**

Marine equipment in general is built to be mobile and can be utilized anywhere in the world, subject to the physical and economical mobility of the particular piece of equipment, its age and general condition. In estimating the value of a particular piece of marine equipment, age, condition and outfitting can be more important than current usage or local market conditions.

To determine the value of a piece of marine equipment, an attempt is made to utilize all three of the following methods:

- **Cost Approach:** To measure value by determining the current cost of producing a new piece of equipment that will have equal utility and then deducting appropriate amounts for the various elements of depreciation, generally referred to as physical deterioration, functional obsolescence, and economic obsolescence.
- **Market Approach:** To measure value by analyzing the results of recent sales of like or similar equipment to arrive at the most likely selling price of the equipment being appraised.
- **Income Approach:** To measure value by determining the current worth of the future benefits of ownership. This is usually done through the capitalization of a specific income.

When utilizing the cost approach we determine the equipment's current replacement cost. This is considered to be the construction of a piece of equipment of like design, capacity and capability at current market rates. This value is then depreciated over the expected useful life of a similar piece of equipment and adjusted up or down for actual condition of the equipment as noted by the appraiser at the time of the appraisal to reflect the actual remaining life. These conditions may include, but are not limited to, recent rebuilding, refurbishment, re-powering or lack of maintenance and repair.

When utilizing the market approach we analyze the available information related to current sales and offerings. The results are adjusted to reflect our opinion of the current market for the particular type of equipment. This adjustment considers functional obsolescence and economic obsolescence and is based upon constant contact with owners, operators, brokers, buyers and sellers of marine equipment since our founding in 1983.

When utilizing value by income approach, complete historical data related to income flow and all related expenses must be provided to appraiser in addition to capitalization rate criteria required by the client.

## **III - RESOURCES**

In order to maintain continuous knowledge marine market place we regularly utilize our numerous industry wide contacts and continually review the following trade publications and Internet sites regarding marine equipment sales and construction.

### **General Reference Sources**

**Brokerage Listings**  
Boats & Harbors

**Frequency**  
Biweekly

**Origin**  
Crossville, TN

### **Industry Periodicals**



Workboat	Monthly	Rockland, ME
Marine Reporter	Monthly	New York, NY
Marine Log	Monthly	New York, NY
Marine News	Tri-weekly	New York, NY

**Internet**

Marcon International	Coupsville, WA
Ship Ads	Singapore
East Coast marine	Cape Canaveral, FL
Apollo Duck	Santa Monica, CA
Ships For Sale	Larnace, Cyprus
Ocean Marine	Morgan City, LA
Dock Street Brokers	Seattle, WA
GSI Boat Brokers	Seattle, WA
Tassin Marine	New Orleans, LA

**DEFINITIONS**

**Terms:** The terms listed here may or may not be used within this report depending upon the requirements of the present assignment.

The definitions are very similar to those provided by the American Society of Appraisers (ASA) through their various appraisal training courses including the Uniform Standards of Appraisal Practice (USPAP).

**Replacement Cost:** The estimated amount of consideration expressed in terms of money that would be required for construction of a new vessel of similar size and capability in today's market.

**Fair Market Value:** The estimated amount of consideration expressed in terms of money that may be expected from a property exchange between a willing buyer and seller with equity to both, neither being under any compulsion to buy or sell, both aware of all relevant facts as of a specific date with no time constraint.

**Orderly Liquidation Value:** The estimated amount of consideration expressed in terms of money that may be expected from a property exchange based upon the assumption that the owner is compelled to sell a certain piece of equipment within a reasonable, but limited, period of time and that a knowledgeable owner would be able to properly advertise subject equipment in order to stimulate reasonable interest that ultimately leads to a sale. This is a gross amount, an "As is where is", and takes into consideration physical location, marketability, physical condition and overall appearance.

**Forced Liquidation Value:** The estimated amount of consideration expressed in terms of money that may be expected from a property exchange where a certain piece of equipment is advertised and required to be sold at public auction in an "As is where is" condition, as of a specific date.



**Salvage Value:** The estimated amount of consideration expressed in terms of money that may be expected for the whole property or a component of the whole property that is retired from service for use elsewhere, as of a specific date.

**Scrap Value:** The estimated amount of consideration expressed in terms of money that may be expected for the whole property if it were sold for its material content, not for a productive use.

**Conditions**

**New:** Unused; No loss in value due to physical deterioration.

**Excellent:** Nearly new; Very little use; Recently purchased.

**Very Good:** Exceptionally good mechanical condition; May have been overhauled or not used enough to require overhaul.

**Good:** In good operating condition; May require replacement or repair of working parts; No known mechanical defects.

**Fair:** May require overhaul; Exhibits evidence of extensive or highly utilized service life.

**Poor:** Is worn and requires major repairs or overhaul.

**PARTICULARS**

**Registered Owner:** Skagit County A Municipal Group

**Managing Owners:** Skagit County Public Works, 1800 Continental Place, Mt. Vernon WA

**Flag:** USA

**Home Port:** Falling Waters, WV

**Official No.:** 601686

**Call Sign:** WDE7121

**Length:** LBP-100-ft / LOA-124.0-ft

**Breadth:** 33.5-ft

**Depth:** 6.9-ft

**Design Draft:** 6.5-ft

**Gross Tonnage:** 91-GRT

**Net Tonnage:** 91-NRT

**Place Built:** Somerset, MA

**Year Built:** 1979

**Engine Horsepower:** 1200 HP @ 1,800-RPM **Type of Fuel:** No. 2 Diesel Oil

**No. of Engines:** Two

**Estimated Speed:** Approx. 7-knots full

**Construction:** All Welded Steel

**Passengers:** 100

**Crew:** Three

**Intended Service:** Inshore Passenger Ferry

**CAPACITIES**

**Fuel Oil:** 6,352 -US gal.

**Lube Oil:** Pail Storage

**Hydraulic Oil:** Pail Storage.

**Waste Oil:** Pail Storage



**Potable Water:** 275-US Gal

**Ballast Capacity:** 23,747-US gal.

## NAVIGATION LIMITS

### **Route**

Car and passenger ferry between Anacortes and Guemes Island, WA a distance of 0.7-miles in each direction. Not to exceed 1.0-mile from shore when carrying passengers.

## DESCRIPTION OF VESSEL

### **Type**

**Vessel:** A typical, steel hull, open car deck ferry boat with passenger cabin, crew day room and raised pilothouse to Starboard of No. 1 end. Subject vessel is diesel powered with dual azimuthing outdrive propellers diagonally mounted through deck apron, fore and aft on opposite sides of vessel.

### **Operational Criteria**

**Endurance:** Vessel's fuel capacity of 6,352-US Gal will allow vessel to operate for approximately 110-hours at full throttle; however the short route between landings do not allow for full speed cruising with both engines ahead.

**Distance:** Under ideal conditions, subject vessel could complete approximately 150-round trips with full fuel tanks.

### **Manning**

**USCG Licensed Master:** One

**USCG Licensed Mates:** None

**Deckhands:** Two required when carrying passengers.

### **Classification**

**Country:** None

### **Load Line**

**Country:** None

### **Certification**

**Country:** USA

**Agency:** US Coast Guard

**Service:** Passenger

**Route Restrictions:** < 1-Mile from land

**No. Persons:** Total 103

**Expiration Date:** 10 Nov 2020

**Last Drydock Examination:** 26 Oct 2015

**Next Drydock Examination:** Oct 26, 2017



**Last Internal Examination:** Jan 2017

**Next Internal Examination:** Jan 2019

### ***Regulation***

**Country/Agency:** United States of America, US Coast Guard.

**Criteria:** 33 CFR 26, 81, 130, 155, 156 & 173; 46 CFR 25, 26, 28 & 105; 47 CFR 80; 46 USC 4505, 8103, 11101, 10601 & 10602.

### ***Stability Criteria***

**Authority:** US Coast Guard

**Criteria:** Subchapter "T – L"

**Location:** Seattle, WA

**Date Of Issue:** 1-05-2007

### ***Design Characteristics***

**Watertight Hull Compartmentation:** Subject vessel is bisected by seven transverse bulkheads located at frames "0" amidships as well as forward frames and aft No's 7, 14 and 20 with other longitudinal part length bulkheads forming ten major watertight compartments and/or integral tanks consisting of: Two Forepeaks, Two Pump Tank compartments; Two voids; Two ballast tank voids; Two Ballast Tank compartments.

**Hull Form:** Hull is a typical double ended displacement ferry type with deck apron extensions along sides, thrusters located diagonally from each other on each end with skegs at each end.

**Superstructure Form:** When looking toward No, 1 end the two level deck house with all around vision pilothouse having counter inclined windows and machinery enclosures is to starboard side at amidships ranging forward to aft.

**Hull Protection:** Formed steel hull guard on sides of vessel.

### ***Layout, Top to Bottom, Forward to Aft:***

**Cabin Top:** Generally contains communication and navigation antennae, light mast and running lights.

**Upper Deck:** Generally contains: Raised pilothouse with state-of-the-art communications and navigation equipment, along with engines and steering controls, monitoring gauges and alarms, counter tilt windows with sun shades four of which are sliding types; One 18-in hatch to cabin top; Stairwell to main deck;

**01 Deck:** Generally contains: Crawl space below pilothouse with emergency batteries, battery charger and potable water tank; Light masts fore and aft; Forward life preserver storage; Access to battery room, forward; Aft life preserver storage .



**Last Internal Examination:** 26 Oct 2015

**Next Internal Examination:** Oct 26, 2017

Main Deck, Generally contains: Open deck on both ends with auto drive on and passenger walk on embarkation gates forward and aft; Parking for 20 standard sized vehicles; Inside area seating area for approximate 28 walk on passengers; Passenger cabin has doors on deck side and No. 1 end

**Accommodations:** Electric heated passenger cabin, office and pilothouse.

**Mooring Fittings:** Eight, 29-in cast steel cleats, ranging four on each side.

**Watertight Integrity:** Hatches, doors, scuttles and windows opening to all weather decks and/or weather deck bulkheads are metal weather tight or screw down watertight types.

**Minimum Freeboard to Weather Deck:** Estimated 2 ft. 6 in. amidships.

**Construction**

**Designer:** Nickum & Spaulding Marine Architects of Seattle, WA.

**Builder:** Gladding Hearn Shipyard at Somerset, MA in 1979.

**Method/Material:** All welded steel hull; All welded steel deck house; Sheet metal, wood, plywood and pressed wood ceiling in deckhouse with painted decks and steel cabinetry.

**Major Scantlings:** Vessel framed on 4-ft centers with truss frames of 35-in X 4-in X 3/8-in flanged plate bottom and side chords, 6-in X 3-1/2-in X 3/8 deck beams; Longitudinal deck stiffeners, 14-in X 4-in X 3/8-in flanged plate at 6-ft centers; Longitudinal bottom stiffeners are 20-in X 4-in X 3/8-in flanged plates on 6-ft centers; Bulkhead stiffeners are 3-in X 2.5-in X 3/8-in angle bar; Hull plate is 3/8-in mild steel save one plate that was inadvertently installed at time of construction that was 5/16-in. That plate has been changed and hull is now a uniform 3/8-in.

Hull scantlings are considered normal for vessel's intended service.

**DOCUMENTS AND PUBLICATIONS ON BOARD**

Vessel's Registration	7 Feb	FCC License	Jan 15 2019	Yes
Radiotelephony Cert.	15 Jan	Bridge To Bridge Cert	15 Jan 2019	Yes
2019	Yes			
Stability Book/Letter	5 Jan	FCC Regulations		Yes
2007	Yes			
C O I 10	Nov 2015	Yes	ITC Tonnage Certificate	Yes
Current Notice to Mariners	Yes		Charts For Area Of Operation	Yes
Coast Pilot	Yes		USCG Light List	Yes





Tide Tables Yes Current Tables Yes

USCG Rules Of Navigation Yes  
Compass Deviation Card 24 Oct 2014  
New Deviation Card to be issued April 2017 at completion  
of compass repair and adjustment.

## NAVIGATION EQUIPMENT

### ***Required Lights***

**Running Lights:** Two sets of red and green 112.5° side lights; two white 225° masthead lights; to white 135° stern light; two all round white 360° lights displayed depending upon direction of travel.

### ***Day Shapes***

**Vessel Status Shapes:** Three black balls, any number of which can be suspended from rigging.

### ***Signaling Equipment***

**Horn:** Two single trumpet pneumatic horn and Loud Hailer function.

**Bell:** Two 8-in-dia chrome fog signal bells.

**Flares:** Properly dated, USCG approved, distress flares conforming to 46 CFR 28.145 dated to next expire as follows: Six (6) Orange smoke, Oct 2016; Four (4) Handheld Red, Apr 2016; Four (4) Red Rocket Parachute, Dec 2016.

### ***Navigation Aids***

**Global Positioning System:** Integral to AIS and Nav Net.

**Radar:** Two Furuno, model FR8062 with RDP-150 display units.

**Radar Auto Target Plotter:** One Furuno, model ARP Nav-Net 10.

**Heading Sensor:** Two Furuno, model PG500R. Integral with Satellite compass Furuno model SC-502.

**Depth Indicator:** One Furuno, model FCV-620.

**Latitude & Longitude Repeater:** Integral to AIS.

**Magnetic Compass:** One Dirigo 5-1/2-in-dia off vessel for servicing. \*

**Satellite Compass:** One Furuno, model SC-502.

**Automatic Identification System:** One Furuno, model FA-150.

**Searchlight:** Two Carlisle Finch, 12-in diameter incandescent bulb type.



**Binoculars:** Two pair in pilothouse No. 1, End chart table.

**Illumination:** Red and white dual illumination for bridge and stairwell; Three high pressure sodium floodlights from mast one each facing ends and car deck; Three Quartz floodlights directed at either end and car deck from mounts under pilothouse awning; Five vapor proof globe covered lights strategically spaced on deckhouse at car deck level.

**Rudder Angle Indicators:** Integral to Thruster Controls.

**Trim Gauges:** Two Lev-o-gauge, one Fore to aft 0° to 10°; One side to side 0° to 5.

**Side to side Windshield Wipers:** Two adjustable speed, electric palindrome type, one on each fore and aft end windows.

**Ships Clock:** Two Tempo Atomic clocks, located in pilothouse and crew office.

**Bridge Computer:** One laptop.

**Chart Plotting Equipment:** Sufficient.

### ***Communication Equipment***

**VHF Radiotelephone:** Two SEA, model 157; One Standard Horizon, model Matrix AIS GX, 2100.

**VHF Handheld Radiotelephone:** One Motorola, model XPR-6380.

**Private Channel UHF Radiotelephone:** One Kenwood, model TK-8180.

**Loud Hailer / Intercom :** One Sea model 857.

**Squawk Box:** One Eletro Voice, model PA-60 with speakers below forward of passenger cabin on No. 1 end and under pilot house awning on No. 2 end.

### ***Weather Monitoring Equipment***

**Barometer:** One Swift, 5 in. diameter, brass cased.

**Thermometer/Hygrometer:** One Radio Shack

**Anemometer:** One Sou'wester 0-100-mph.

## **PROPULSION MACHINERY AND AUXILIARY SYSTEMS**

### ***Propulsion Machinery***

**Machinery:** Two Cummins, model KTA19-M2, six cylinder, turbocharged and aftercooled, electric starting, fresh water cooled by channel cooler, 600 horsepower @ 1,800-rpm each, diesel engines, driving one ZF, model 550, 0.936:1 ratio hydraulic marine reverse/reduction gear, with drive shaft to Ulstein model DF-370 azimuthing thruster with a reduction ratio of 4.2:1 and a Kruger, bronze four blade 52-in-dia X 36-in pitch propeller mounted thereon.

End #1 Propulsion Engine serial # 37217217.

End #2 Propulsion Engine serial # 37217616.



End #1 Marine reverse/reduction gear serial # 20065972.

End #2 Marine reverse/reduction gear serial # 20070386.

### ***Engine Exhaust System***

**Piping:** Dry type steel and flexible steel piping lagged in engine room, muffler located in unit stack.

### ***Fuel System***

**Tanks:** Four freestanding steel cylindrical tanks with vents and remote shut-off valves.

**Plumbing:** Steel supply and return lines through strainer, water trap, and filters to engine with flex lines, and shut off valves at engines.

### ***Lube Oil System***

**Tanks:** None pail storage only.

### ***Operational Controls***

**Steering:** Ulstein electronic/hydraulic system steering azimuthing thrusters.

**Engine:** Integral to Ulstein thruster controls.

### ***Electrical System***

**Power Supply:** 110/220/480 3Ø VAC from service generators with 24-volt DC from storage batteries; shore power by means of heavy duty electric extension cord to permanently-mounted receptacle on vessel's exterior.

**Batteries:** Two banks of two each, 12-volt marine type 8-D storage batteries in 24-VDC configuration and one each, 12 volt marine Group 27 storage battery in 12-VDC bank connected to plastic covered, multi-strand, copper cables, all located in corrosion proof, covered, well-ventilated boxes in engine compartments with master switches at batteries; One banks of one 12 volt marine type DC220-12 storage battery and one bank of two Lifetime volt marine type Deep Cycle batteries located in boxes in locker under pilothouse.

**Battery Maintenance:** 24- VDC from Delco Remy 100-ampere engine mounted alternators; One LaMarche, model E12, 24-VDC at 30-amperes permanently mounted battery charger with charge divider; One LaMarche Constivolt, model A12B, 12 VDC at 20 amperes;

**DC to DC Power Converter:** One Astron, model N2412-12, 24-VDC @ 10 amperes to 12VDC @ 12-amperes.

**Wiring:** Plastic and basket weave armor covered, multi-strand, copper marine type wiring, well secured throughout vessel's interior.

**Fixtures:** Marine type exterior and interior lighting fixtures, with marine type switches, light sockets and receptacles throughout vessel.



**Circuit Protection:** Dead front main panels with circuit breakers and/or fuses in all circuits with master switches located in engine compartments and battery room.

### ***Ship Auxiliary Power***

**AC Service Generator:** One FPT Model # FGE9455A , four cylinder, turbocharged and aftercooled, electric start diesel engine. This engine produces 65.5 HP @ 2800 RPM. The generator in keel cooled via a Fernsturm grid cooler and dry lagged exhaust. This engine drives a Stamford 60 KW generator producing 110/208/440 3Ø VAC.

Engine Serial # J600-00881229 .

Generator Serial # X16D163416.

### ***Ventilation System***

**Accommodations:** Natural and mechanical type through door and window openings, equipped with heat pump system with necessary air handlers and ducting throughout.

**Machinery Spaces:** Natural type through vent openings.

### ***Alarm System***

**Propulsion Engines:** Audible and visual for abnormal oil pressure or temperature.

**Bilge:** Audible and visual with eight reporting stations.

**Fire/Smoke Alarm:** Detect-A-Fire sensors in engine compartments.

**General Alarm:** Not required on this class of vessel.

### ***Potable Water System***

**Tanks:** One galvanized steel tank with vent and shut-off valve at tank.

**Plumbing:** Galvanized steel piping with in line strainer and/or filter.

**Water Pressure System:** One Jabsco ITT, PAR model 36900-1000, 4.2-gpm diaphragm pump in demand system.

**Water Heater:** None.

### ***Anchoring Gear***

**Winch:** One single gypsy drum hydraulic winch located forward of passenger cabin on No. 1 End foredeck. This winch is equipped with a single direction valve and friction brake and clutch for engagement.

**Anchor:** One Danforth, type 400-lb. anchor with 5/8" stud link chain leader; balance of ground tackle consisting of 5/8-in-dia X 300-ft IPS wire rope. This anchor additionally fitted with a pelican release for storage.

### ***Bilge/Wash-down System***

**Sea Chests:** Two, located fore and aft at centerline.



**Service Pumps:** Two Barnes 2-in-dia hydraulic motor and electric driven rotary pumps;  
 Manifold on either end of vessel near engine enclosures.

**Sewage System**

**Heads:** Vessel has no toilet facilities.

**SAFETY EQUIPMENT**

**Emergency Lighting**

**System:** Battery powered wall mounted lanterns.

**Life Saving Gear**

**Personal Floatation Devices:** One hundred three (103) adult and eleven (11) child US Coast Guard approved Type I, PFD's each equipped with retro-reflective strip and float light.

**Visual Distress Signals:**

- 7) Hand Held Red Flares, expiration Dec 2019.
- 3) Hand Held Orange Smoke, expiration July 2019.
- 4) Pistol Fired Cartridges, expiration Jan 2020.

**Life Raft:** None required on this route.

**Life Ring Buoys:** Three USCG approved ring buoys all with retro-reflective tape, One with float light, one with 90 ft. by 3/8 in. retrieving line and one other; Vessel's name lettered on all.

**Man Overboard Retrieval:** Two rescue lines; One swimmer's suit with harness and tether; One marker buoy located in crew's room.

**First Aid Equipment:** One reasonably well maintained, industrial first aid kit with first aid book located in crew's room below pilothouse; Eye wash station, two fire blankets in same location.

**First Aid – CPR Certification:** One crew member holds valid certificate as a function of USCG licensing.

**Hand Rails**

**Weather Decks:** All welded steel 40-in height bulwark around deck area with safety chains across care gates; Two course 40-in height welded steel pipe handrails on other decks.

**Portable Fire Fighting Apparatus**

**Portable fire Extinguishers USGC Approved, Hand Held:**

Type	Size	Weight	Location	Last Inspection
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Halon	2A-40:BC	13-lb	Pilothouse	Dec 2016
Halon	2A-40:BC	13-lb	Space under Pilothouse	Dec 2016
Halon	2A-40:BC	13-lb	Crew's Room	Dec 2016
Dry Chem	60:BC	10-lb	Crew's Room	Dec 2016
Dry Chem	60:BC	10-lb	Crew's Room	Dec 2016
Halon	3A-80:BC	17-lb	Crew's Room	Dec 2016
Dry Chem	60:BC	10-lb	Passenger Cabin	Dec 2016
Dry Chem	60:BC	10-lb	Passenger Cabin	Dec 2016
Dry Chem	60:BC	10-lb	Passenger Cabin	Dec 2016

**Fire Axe:** One standard fire axe bulkhead mounted in pilothouse.

***Fixed Fire Fighting System***

**Fire Pump:** One Barnes 3-in-dia hydraulic motor powered and one Barnes 3-in-dia electric motor powered centrifugal pumps piped via 2-in-dia steel pipe to two fire stations, located forward and aft each equipped with 50-ft section of 1-1/2-dia. Fire hose, nozzle and spanner.

**SPECIFIC CONDITIONS**

***Circumstances of Survey***

**Vessel:** On dry-dock; All compartments entered; Machinery inspected while not operating.

**Housekeeping:** Good

**Protective Coatings:** Good

**Structural:** Good

**Machinery:** Good

**Cordage:** Good

**Safety Equipment:** Good

***Vessel Security***

**Mooring:** Vessel normal mooring is at Guemes Island ferry terminal on Guemes Channel in Anacortes, WA; Mooring is in semi protected waters.

**Police/Night Watchman:** Mooring area patrolled by local police department.

**Fire Protection:** Local Fire Department located approximately 1-mile from vessel; reported response time is 5 minutes.

***Remarks***

**Bow, Port Side, Starboard Side, Stern, Bulwarks, Superstructure and Deck:** found free of waste areas chafing or rot and contained no noticeable indents or insets.

**Bilges and Internal Framing:** Visible areas found to be well coated and free of waste, rot and/or oil accumulation.

**Propulsion Machinery:** Found to be clean and appeared to be subject of an adequate maintenance program. Sufficient oil supply and extra oil and fuel filters on board for expected usage; engines reportedly operate without excessive exhaust smoke or crank case back pressure;



exposed moving machinery parts are equipped with safety guards; No. 2 End thruster foundation stress fracture repaired Oct 2015.

**Superstructure:** All areas well coated.

**Interior:** Found to be clean and in a state of good repair; Housekeeping disheveled due to shipyard disruption and necessary storage of maintenance and repair items. \*

**Decks:** Guard rails and bulwark are up to industry standard and in satisfactory condition; weather deck, engine room and other ladders and/or stair treads are covered with a high traction coating; Deck anti skid surface renewed in Oct 2014; Deck insert 1-ft X 2.5-ft X 1/2-in Corten steel in No. 2 end engine compartment Oct 2014; All coatings are newly applied 2017.

**Bottom:** Bottom found to generally be without indents and/or set-ins or repairs worthy of notation except for port side chine plate renewal 4-ft X 32-ft X 3/8-in; Bottom is protected by 16-zinc anodes on each side of bottom and 8-smaller zinc anodes on each azimuthing drive collar; Bottom is coated to 6-ft 6-in draft with antifouling coating.

## OPERATIONAL ADVICE

1. All personnel should be made aware of location of fire extinguishers and life saving equipment and its proper usage.
2. All doors and hatches not in use should be kept secured while at sea.
3. All fire extinguishers should be periodically checked by a qualified service person, serviced and tagged as necessary.
4. All bilges to be kept as near dry as possible, clean and free of oil.
5. Engine room should be checked by competent crewmember every hour while operating.
6. Disconnect master switch on electric circuitry excluding properly fused bilge pump while vessel is unattended.

## RECOMMENDATIONS

1. Ensure continued compliance with the USCG "Top 10 Deficiencies" list:
  - a. All cables or wires must serve a piece of equipment or system. Remove wires from any equipment or system removed from the vessel.
  - b. Perform routine examinations of the hull. Inspect welds for cracks and all coatings.
  - c. Test visual and audible bilge high level alarms.
  - d. Maintain a portable hand bilge pump, capable of reaching all spaces of the vessel.
  - e. Maintain FCC license registration.
  - f. Perform routine examinations of Stern, Mast, and Side navigation lights.
  - g. Maintain light guards on weather deck, engine space, and generator space fixtures.
  - h. Perform routine examinations of First Aid Kit medication for proper expiry date.



- i. Maintain current navigation charts, Coast Pilot, Light List, Tide and Current Tables.
  - j. Maintain EPIRB and hydrostatic release (NOT APPLICABLE).
2. Maintain a close watch on thruster foundations for stress fractures in area of outdrive pin locations and hull attachment area.
3. Return repaired magnetic compass to vessel.
4. Swing repaired compass and provide compass deviation card.
5. Clean and re-stow vessel prior to return to service.

### NOTES

1. Last Dry-docking for bottom maintenance: March 2017.
  - a. Bottom coated with PPG Americoat ABC3 Series Antifouling Compound;
  - b. Anti-Corrosion coating 240 Americoat Epoxy;
  - c. All zinc anodes renewed;
  - d. Install new ships service generator #2 end, including all necessary systems for this installation;
  - e. Remove End #1 Main engine for foundation bed work and replace with County supplied spare engine;
  - f. Remove End #2 Main engine for foundation bed work and reinstall;
  - g. Installed SKF Vibracon adjustable chocks on both main engine foundations;
  - h. Install new drive lines and align;
  - i. Remove and reseal main deck windows;

#### Notes Cont.

- j. Install Fernstrum Gridcooler for new ships service generator;
  - k. Remove, inspect and reinstall all sea valves;
  - l. Remove and replace both reduction gears, replace End #1 with County owned rebuilt spare, service both gears that are removed;
  - m. Install new critical grade mufflers on both main engines;
  - n. Install machinery space enclosures and reinstall utilizing new soundproofing insulation;
  - o. Crop and Replace bilge piping in voids #6 and #7;
  - p. Repair as necessary, support brackets for Ulstein outdrive legs. (see photo).  
Surveyor Note: This repair is under review and is to be visually inspected by ship's crew every thirty (30) days and USCG inspected at each COI inspection.

2. Engine service hours Port Forward Main: 1300-hrs, reported after in frame rebuild.

Starboard Aft Main: 6-hrs, reported after in frame rebuild.  
Auxiliary engine hours: 0-hrs by meter, new install 2017.

3. Major hull repairs: None reported since new.





4. Owners have one spare engine and one spare azimuthing outdrive that is regularly exchanged so that maintenance on all units can be performed. Units can be changed without dry-docking.

## **HIGHEST AND BEST USE**

The highest and best use of subject vessel is as car and foot passenger ferry.

## **VALUE METHODOLOGY**

**Methods Considered:** We considered the cost, income and market methods. As subject vessel is a public owned vessel and not a for profit operation the income method was excluded. Subject vessel of a class that is rarely traded the market revealed no useful information. All of the ferries that we located were much larger foreign flag or fast passenger only ferries. Therefore we used the cost method of determining value.

**Cost:** In September 2012, Foss Shipyard at Rainer, Oregon, reported built a 20-car 99-passenger ferry for the amount of \$10-million dollars. The Producer Price Index for shipbuilding reports a 5% rise in vessel building costs since that time. Trending forward the cost would now be approximately \$10.5-million. Public vessels are generally built to last 40 to 50-years. They are generally disposed of before the reach the end of their lives.

All vessels are subject to economic, functional and physical depreciation. These types of depreciation are largely curable with proper maintenance and upgrading, although as a vessel ages the maintenance cost increases to a point where it becomes cost prohibitive and new equipment is considered. When we depreciate the new replacement cost of subject vessel over a 40-year period we come up with a 11% remaining life or \$525,000. However, after inspection of subject vessel, we are of the opinion that it has had continued superior maintenance and upgrading and has resulted in a 13-years or 32.5% Remaining Useful Life estimate resulting in a present value in the amount of \$3,412,500.00.

## **APPRAISAL**

### **General Condition**

Subject vessel is 38-years old; It shows evidence of ongoing good maintenance and is considered to be in good condition.

### **Valuations**

Estimated New Replacement Cost	----- \$10,500,000.00
Estimated Current Fair Market Value	----- \$ 3,412,000.00

## **CONCLUSION**

It is the opinion of the undersigned, as far as could be determined by the foregoing general inspection, without making removals to expose parts normally concealed, or making borings or



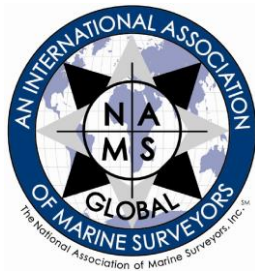
**Commercial Marine Service, Inc.**  
**Report No. CMS-17-4185**  
**Issued At Seattle, WA**

**M/V "GUUEMES"**  
**Condition & Valuation**  
**March 1, 2018**

ultrasonic measurements to ascertain thickness, or opening up machinery to ascertain exact condition, that the vessel described herein, subject to compliance with the foregoing recommendations and limitations, was found to be in satisfactory condition to continue in its intended service.

**THIS SURVEY REPORT MADE WITHOUT PREJUDICE TO THE RIGHTS AND/OR INTERESTS OF WHOM IT MAY CONCERN**

**COMMERCIAL MARINE SERVICE**

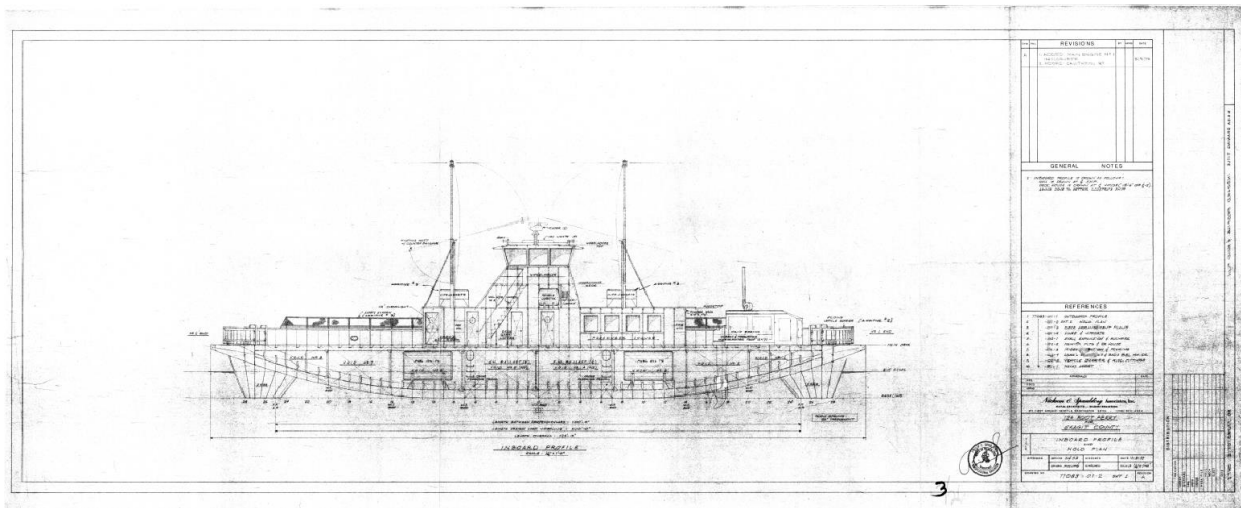


**Thomas D. Laing, Jr. NAMS-CMS, ASA**  
 Principal Marine Surveyor



**Attachments:**

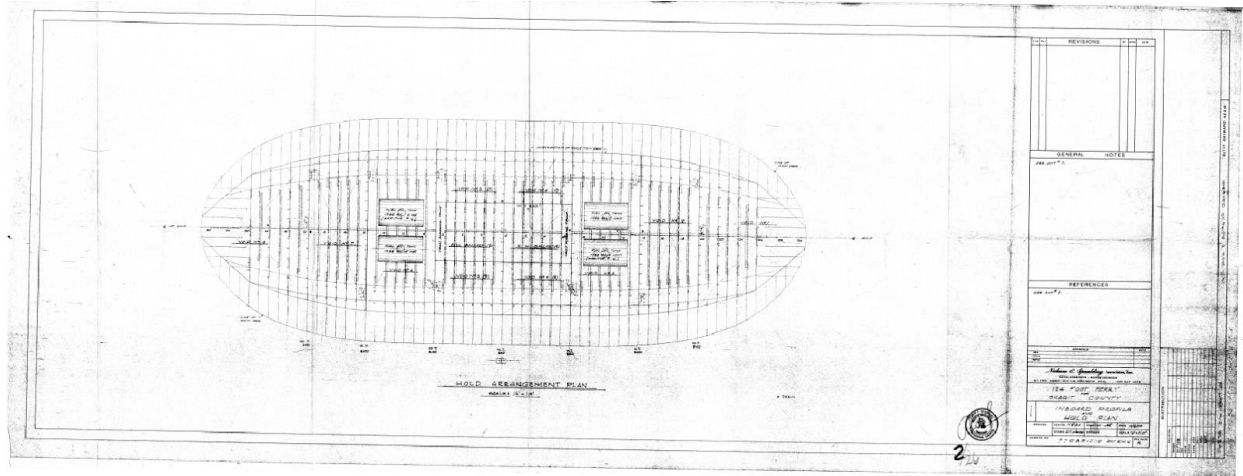
- Inboard Profile Side View
- Inboard Plan Hold View
- Certificate of Inspection
- Color Photographs of Vessel





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		United States of America Department of Homeland Security United States Coast Guard				Certification Date: 10 Nov 2015	
						Expiration Date: 10 Nov 2020	
<h2 style="margin: 0;">Certificate of Inspection</h2> <p style="font-size: small; margin: 0;">For ships on international voyages this certificate fulfills the requirements of SOLAS 74 as amended, regulation V/14, for a SAFE MANNING DOCUMENT.</p>							
Vessel Name	Official Number	IMO Number	Call Sign	Service			
GUEMES	601686		WDE7121	Passenger (Inspected)			
Hailing Port	Hull Material	Horsepower	Propulsion				
ANACORTES, WA	Steel	1050	Diesel Outdrive				
UNITED STATES							
Place Built	Delivery Date	Keel Laid Date	Gross Tons	Net Tons	DWT	Length	
SOMERSET, Massachusetts	01Dec1979	08Sep1978	R-91	R-91		R-0	
UNITED STATES							
Owner				Operator			
SKAGIT COUNTY PUBLIC WORKS 1800 CONTINENTAL PLACE MOUNT VERNON, WA 98273 UNITED STATES				SKAGIT COUNTY PUBLIC WORKS 1800 CONTINENTAL PLACE MOUNT VERNON, WA 98273 UNITED STATES			
This vessel must be manned with the following licensed and unlicensed Personnel. Included in which there must be 0 Certified Lifeboatmen, 0 Certified Tankermen, 0 HSC Type Rating, and 0 GMDSS Operators.							
1 Masters	0 Licensed Mates	0 Chief Engineers		0 Qualified Member Engineer Depts			
0 Chief Mates	0 First Class Pilots	0 First Assistant Engineers		0 Oilers			
0 Second Mates	0 Radio Officers	0 Second Assistant Engineers		0 Crew Members			
0 Third Mates	0 Able Seamen	0 Third Assistant Engineers					
0 Master First Class Pilots	0 Ordinary Seamen	0 Licensed Engineers					
0 Mate First Class Pilots	2 Deckhands	0 Non Licensed Engineer Depts					
In addition, this vessel may carry 100 Passengers, 0 Other Persons in crew, 0 Persons in addition to crew, and no Others. Total Persons allowed: 103							
Route Permitted And Conditions Of Operation: <b>---Lakes, Bays, and Sounds---</b> GUEMES CHANNEL, ON AN ESTABLISHED FERRY ROUTE BETWEEN ANACORTES, WASHINGTON AND GUEMES ISLAND, WASHINGTON, NOT MORE THAN 1 MILE FROM LAND.							
***SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION***							
With this Inspection for Certification having been completed at Anacortes Washington UNITED STATES, the Officer in Charge, Marine Inspection, SECTOR PUGET SOUND certified the vessel, in all respects, is in conformity with the applicable vessel inspection laws and the rules and regulations prescribed thereunder.							
Annual/Periodic/Re-Inspection				This certificate issued by:			
Date	Zone	A/P/R	Signature	 J. D. Dwyer Officer in Charge, Marine Inspection SECTOR PUGET SOUND			
13 JAN 2017	SPS	A					
				Inspection Zone			



United States of America  
 Department of Homeland Security  
 United States Coast Guard

Certification Date: 10 Nov 2015  
 Expiration Date: 10 Nov 2020

## Certificate of Inspection

Vessel Name: GUEMES

THE MASTER AND CREW MEMBERS MAY ONLY WORK 12 HOURS IN ANY 24 HOUR PERIOD; WORK IS DEFINED AS: ANY ACTIVITY THAT IS PERFORMED ON BEHALF OF A VESSEL, ITS CREW, ITS CARGO OR THE VESSEL'S OWNER OR OPERATOR. THIS INCLUDES STANDING WATCHES, PERFORMING MAINTENANCE ON THE VESSEL OR ITS APPLIANCES, UNLOADING CARGO, OR PERFORMING ADMINISTRATIVE TASKS, WHETHER UNDERWAY OR AT THE DOCK, INCLUSIVE OF LUNCH AND ALL BREAKS; IF WORK EXCEEDS 12 HOURS IN ANY 24 HOUR PERIOD, AN ALTERNATE MASTER AND CREW SHALL BE PROVIDED.

THE VESSEL MAY NOT BE OPERATED UNLESS IT HAS IN SERVICE AND ONBOARD THE CREW COMPLEMENT REQUIRED BY THIS CERTIFICATE WITH THE FOLLOWING EXCEPTION. WHILE THE VESSEL IS SECURED AT THE DOCK AND CONDUCTING NORMAL LOADING AND UNLOADING OPERATIONS, AT A MINIMUM, ONE CAPTAIN AND ONE DECKHAND MUST BE ONBOARD. ANOTHER DECKHAND MAY CONDUCT PURSER OPERATIONS AND CONTROL VEHICLES AND PASSENGERS FROM SHORE SIDE. THIS DECKHAND MUST BE IN THE IMMEDIATE VICINITY AND IN COMMUNICATION WITH THE CAPTAIN OF THE VESSEL AT ALL TIMES.

EMPTY LIQUEFIED PETROLEUM GAS OF FLAMMABLE LIQUID TANK TRUCKS OR TRAILERS ARE ALLOWED IF THE TANKS ARE CLEANED AND PURGED SUCH THAT THERE IS NO RESIDUAL PRODUCT AND THE REMAINING VAPORS ARE LESS THAN 10% OF THE LOWER EXPLOSIVE LIMIT (LEL).

THE VESSEL MAY OPERATE AS A FREIGHT VESSEL TO PERMIT THE CARRIAGE OF LIQUEFIED PETROLEUM GAS, OR FLAMMABLE LIQUIDS OF GRADE B OR C IN TRAILERS OR TANK TRUCKS SUBJECT TO THE CONDITIONS PRESCRIBED IN 49 CFR PART 176. NO PASSENGERS OR OTHER CARGO OR VEHICLES MAY BE CARRIED WHILE OPERATING UNDER THE PROVISIONS OF THIS PARAGRAPH, BUT THE VESSEL MAY CARRY, IN ADDITION TO THE CREW, 2 PERSONS PER VEHICLE.

THE VESSEL IS PERMITTED TO CARRY COMBUSTIBLE LIQUIDS OF GRADE D OR E IN TRAILERS OR TANK TRUCKS WHILE OPERATING AS A FERRY VESSEL SUBJECT TO THE CONDITIONS PRESCRIBED IN 49 CFR PART 176.

### ---Hull Exams---

Exam Type	Next Exam	Last Exam	Prior Exam
DryDock	26Oct2017	26Oct2015	29Sep2014
Internal Structure	26Oct2017	26Oct2015	29Sep2014

### ---Stability---

Type	Issued Date	Office
Letter	31Jan1979	MSO PROVIDENCE

### ---Lifesaving Equipment---

Total Equipment for 103 Persons

Primary Lifesaving Equipment	Quantity	Capacity	Required
Lifeboats (Total)	0	0	Life Preservers (Adult) 103
Lifeboats (Port)	0	0	Life Preservers (Child) 11
Lifeboats (Starboard)	0	0	Ring Buoys (Total) 3
Motor Lifeboats	0	0	With Lights 1
Lifeboats W/Radio	0	0	With Line Attached 1
Rescue Boats/Platforms	1	0	Other 1
Inflatable Rafts	0	0	Immersion Suits 0
Life Floats/Buoyant App	0	0	Portable Lifeboat Radios 0
Inflatable Bouyant App (IBA)	0	0	Equipped with EPIRB? NO

### --- Fire Fighting Equipment ---

Number of Fireman Outfits -                      Number of Fire Pumps - 1



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Vessel Name: GUEMES

**\*Hose Information\***

Location	Quantity	Diameter	Length
Machinery	2	1.5	50

**\*Fire Extinguishers - Hand portable and semi-portable\***

Quantity	Class Type
2	A-II
1	B-I
8	B-II

\*\*\*END\*\*\*



Detail of Bottom ,Starboard Side End #2



Subject Vessel on DD # 3 Foss Shipyard, March 2017.



Typical propulsion engine.







Photo showing outboard leg attachment to hull side.



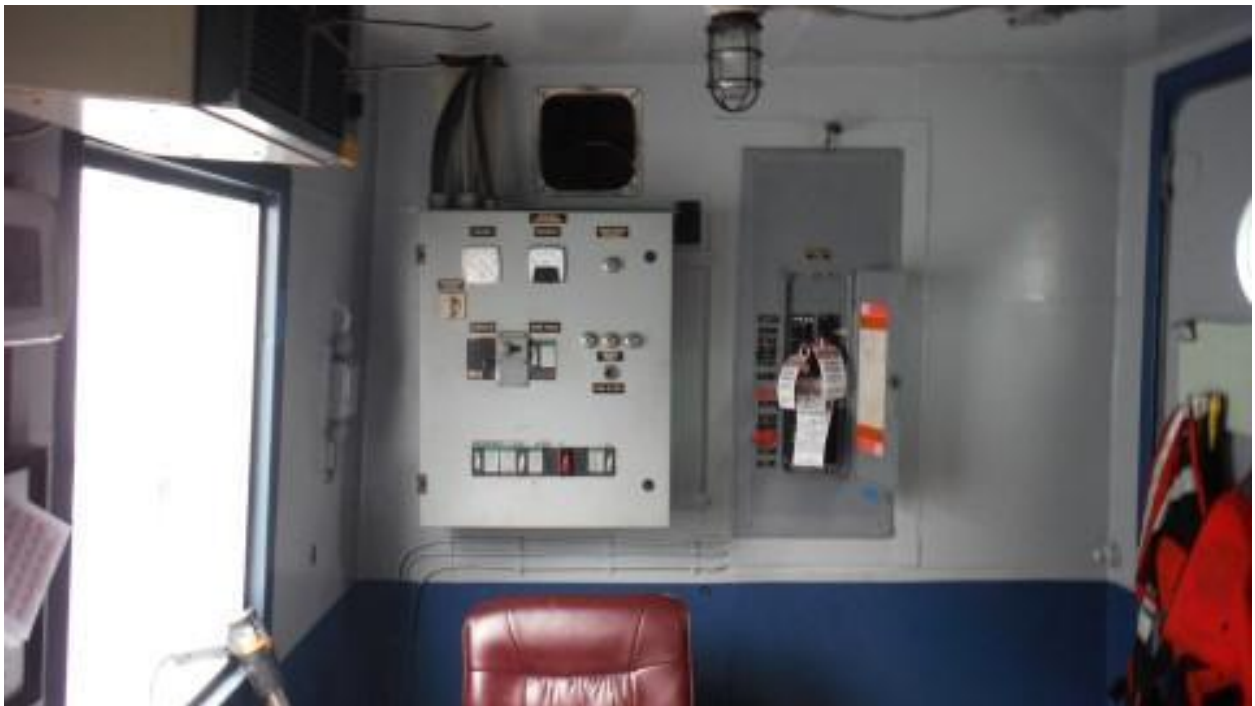
Crews day room



Passenger Waiting Area



Anchor Winch and Rode





### Electrical Main Distribution Panel

Detail of Electrical  
Transit





Hydraulically Driven Fire Pump Void #2





Fuel Oil Tanks Void # 3



Detail of Void # 3 outboard of Fuel Oil tanks



Detail of new Fernstrum® keel cooler frame.





Helm Station

Pilot House looking FWD end  
#2









New Drive Line



Detail of Vibracon propulsion engine mount



Looking FWD End #1





Detail of new ship service generator and sound enclosure.



Front end of new ships service generator



Deck House



Detail of one (1) Life Jacket Locker



03 Pilothouse



04 Typical Propulsion Engine



**05 Typical Rebuilt Transmission**



**06 New Bilge Washdown Manifold**



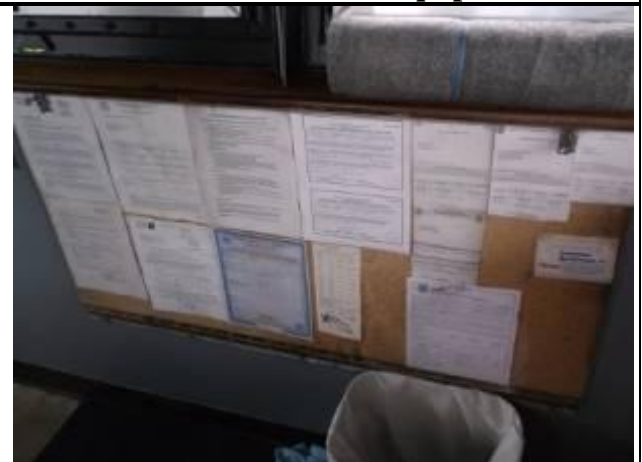
**07 Helm Stations**



**08 Communications Equipment**



**09 Navigation Manuals & Binoculars**



**10 Posted Documents**





11 Eye Cleaning & First Aid Station



12 Crew Hand Wash Sink



13 Main Switch Gear



14 Distribution Panel



15 Potable Water Tank & Battery Charger



16 Spill Kit / Rope Locker



17 Typical Life Preserver Storage



18 Emergency Batteries



19 No. 1 Void



20 No. 2 Void



21 No. 3 Void



22 No. 4 Void



**23 No. 5 Void**



**24 No. 6 Void**



**25 No. 7 Void**



**26 No. 8 Void**



**27 New Starboard Chine Plate**



**28 No. 1 End Bottom**



**29 No. 2 End Bottom**



**30 Reconditioned Propellers**