HB
691

(9)

COMMITTEE REPORT

HOUSE

2/8/80

FURTHER: FINANCE

Date: _____

Mr. Speaker:

The Committee on RESOURCES has had HB 801

"An Act providing for the issuance of general obligation bonds in the amount of $4,115,200 for the purpose of paying the cost of capital improvements for fisheries resources protection and enhancement facilities; and providing for an effective date."

under consideration and (a majority of the committee) (the committee) reports it back with the following recommendations:

[ ] do pass [ ] do not pass

[ ] do pass with attached amendments(s)

[ ] replace with CS for _____ [ ] same title [ ] new title

and recommends _____

[ ] AND attaches a "Letter of Intent" [ ] New Fiscal Note

[ ] reports it back without recommendation

[ ] referred to the _____ Committee

MEMBERS SIGNING
DO PASS

MEMBERS HAVING
OTHER RECOMMENDATIONS:

_____ CHAIRMAN

H 60 (Rev. 12/78)

Hearing 2/14/80 - Tabled to gather more info on boats available, costs, etc.
Suggested re-wording (by Public Safety) was adopted

2/26/80 - REPORTED OUT AS CS
DO PASS

Alaska State Legislature

House

HOUSE RESOURCES COMMITTEE

FISH & GAME ISSUES
Alvin Osterback, Chairman

Pouch V, State Capitol
Juneau, Alaska 99811
(907) 465-3715

HEARING NOTIFICATIONS

BILL	DATE INFORMED	LETTER/ PHONE	INFORMED	HEARING DATE
HB691	2/13/80	3500	Keith Specking, Governor's office will provide fiscal note Bob Stickles of Public Safety will testify Commissioner Skoog (Fish & Game) will testify	2/19/80
	2/22		Dept. of Public Safety — Bob Lockman to testify	2/26/80

B. F. JENSEN & ASSOCIATES

NAVAL ARCHITECTS · MARINE ENGINEERS

101 SALMON BAY OFFICE BLDG 4215 21st AVENUE WEST

SEATTLE, WASHINGTON 98199

AREA CODE 206 — 284-1274

June 18, 1979
File No. A155

Mr. Peter Van Horsen
P. O. Box 1005
Kodiak, Alaska 99615

Subject: 121 Ft. Patrol Vessel Plans

Enclosures: Two copies of each of the following B. F. Jensen & Associates, Inc., P. S. Plans:

(1)	Dwg. No. 449-1	Outboard Profile
(2)	Dwg. No. 449-2, Sh. 1	General Arrangements, Main Deck & Hold
(3)	Dwg. No. 449-2, Sh. 2	General Arrangements, Focsle, Boat & Bridge Decks
(4)	Dwg. No. 449-3, Sh. 1	Contract Lines
(5)	Dwg. No. 449-6	Structural Inboard Profile
(6)	Dwg. No. 449-7, Sh. 1	Midship and Typical Sections Fwd.
(7)	Dwg. No. 449-7, Sh. 2	Transverse Sections Aft
(8)	Dwg. No. 449-8	Deck and Hold Structural Plans
(9)	Dwg. No. 449-9	Shell Plating and Framing Plan
(10)	Dwg. No. 449-10	Deck House & Pilot House Structural Plans
(11)	Dwg. No. 449-11, Sh. 1	Misc. Structural Details
(12)	Dwg. No. 449-11, Sh. 2	Misc. Structural Details
(13)	Dwg. No. 449-12, Sh. 1	Machinery Arrangement
(14)	Dwg. No. 449-12, Sh. 2	Machinery & Ventilation Arrangement
(15)	Dwg. No. 449-13, Sh. 1	F. O. System, Bilge & Washdown Piping; Fills, Vents & Sounding Tubes
(16)	Dwg. No. 449-13, Sh. 2	Fire System, Drains, Soil Drains & F. W. Service System
(17)	Dwg. No. 449-14	Electrical One Line Diagram

Dear Peter:

Enclosed you will please find two copies of each of the above listed plans per your request of 11 June 1979. Enclosed you will please also find a billing for

reproduction and postage charges.

Based on the 1975 cost of $1,900,000.00 for the 121 Ft. vessel, MARCO estimates that the current price would be $2,900,000.00. Please note that this estimate is current. If the construction was one year from now, the price could increase by approximately fifteen per cent (15%).

If you have any further questions, please do not hesitate to contact our office.

Very truly yours,

B. F. Jensen & Associates, Inc., P. S.

Ben Jensen

BFJ;ljw
Encl.

Harvesting fish and wildlife resources is big business; with an adequate state investment in management and enforcement, these resources will be renewable. Commercial fishermen operating from Kodiak and Dutch Harbor alone have invested about one billion dollars (400 boats x 2.5 million dollars per boat). Significant investments are also made in other statewide fisheries and in the developing bottomfish industry. Commercial fishing statewide produces about 400 to 500 million dollars in annual income. Estimates vary, but about half of that income stays in Alaska. Commercial fishing will produce an estimated $26 million in taxes and license fees for the state in FY-81.

Without calculating the value of sport fish and game harvested, the Alaskan economy significantly benefits from these user groups. Sport fishing contributes about 125 million dollars annually (250 thousand fishermen at 500 dollars average expenditure each); sport hunters contribute about 80 million dollars annually (80 thousand hunters spending an average of one thousand dollars each); the guiding industry contributes about 25 million dollars annually.

Fish and wildlife resources are a multi-billion dollar state asset which is primarily protected by voluntary compliance with management regulations. It is difficult to estimate the percentage of violations deterred by enforcement patrols. Only a small percentage of all potential violations are detected.

To prevent illegal harvesting and detect violations, enforcement officers must patrol where fishing or hunting is allowed or might occur. Without comparable equipment, it can't be done. There are specific evidence requirements for any violations detected so that illegal harvesting might be sucessfully prosecuted. Crabpots must be pulled and examined to see if they are being used illegally, and if so, confiscated for evidence.

Without an adequate state investment for enforcement equipment, officers will be unable to conduct routine patrols efficiently. Enforcement efforts have been hampered by motor breakdowns in the past when the fishery opening was very brief and timely enforcement critical.

It does not seem prudent to depend upon fishermen's short-run compliance with government rules to adequately protect the state's long-term potentially renewable resources. While voluntary compliance from law-abiding citizens has been the backbone of American society, recent economic pressures should cause decision makers to reassess the underlying philosophies about protecting the state's fish and wildlife resources. While the Department of Public Safety, Division of Fish and Wildlife Protection has been given the responsibility for enforcement, no commensurate spending authority has been provided. Without adequate equipment funding, there is a significant chance that enforcement will be both inefficient within available funds, and ineffective in protecting the potentially renewable resource.

CATEGORY NRMEC AGENCY Public Safety PROGRAM Fish & Wildlife Protection

01 1031 (7/79)

31 ANALYTIC STATEMENT (Six-Year Capital Program)

REVISED DATE

000448

120' boat operating costs

Prepared By	Initials	Date
Approved By		

200	-	field/admin moving/meeting training		7.0	
300					
	310	long distance	1.0		
	320	photo processing	.8		
	330	moorage	2.0		
	340	repairs + maintenance	55.0	(yard period each year)	
		radio + electronics	3.0		
	350	shore power	2.0		
	360	rental of misc. [illegible]	.2		
		estimate of tug rental (breakdown-charter)	4.0		
		vehicle mileage	.5		
	390	laundry	.5		
		freight costs (rail supplies)	1.0		
		PSC [illegible] Cleaning-30% (FUP [illegible])	1.8		
		insurance (Vigilant [illegible] 4.2)	52.1		
				123.9	
400					
	420	food	10.0		
		[illegible] cleaning	1.0		
	460	fuel	270.0	50 gal/hr x 12 hr/day x 250 days = 150,000 gal 150,000 gal x 1.88 = $270.0 for FY-83	1.17 ([illegible]) x 24% .4[illegible] 1.80
		oil	3.0		
		parts + supplies	15.0		
	470	professional supplies	.8		
	480	office supplies	.2		
	410	law enforcement sup.	.5		
				300.5	
500		equipment estimate	10.0		
				10.[illegible]	

765.6

120' operating costs

	Prepared By	Approved By
Initials		
Date		

	1st Sgt 20A Kodiak	Corp. 77A Kodiak	Trooper 76A Kodiak	LT 21A(S) Kodiak	Boat Eng. 16A(G) Kodiak		Cook Part Time
Salary/mo				2794	2031		
annual	31176	29460	27372	33528	24372		
OT	9908	10,073	9751	13924	8691	} 59187	
SD/Standby	967	983	900	1100 +	900 + 50 2000 + 58		
Benefits	6934	6681	6270	8006	5729		
FICA	1975	1,975	1975	1975	1975		
Health Ins	1524	1,524	1524	1524	1524		
	52484 +	50696 +	47792(2) +	60,057 +	45381	= 304,202	
	52.5	50.7	47.8	60.0	45.4	+ 20	
						324.2	

16,49

assume
- full salary costs needed for FY-82 even tho boat not available until Sept (10/12 or 83.3% of other costs included except travel + equipment)
- budget salary figures used (without [illegible] or new agreements)
- for LT + Boat Eng, SD + Standby estimated
- part time cook salary estimated

Note
- rotational [illegible] not included
- [illegible] dry cleaning cost included

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
120 Foot Patrol Vessel	Kodiak	Kodiak-Dutch Harbor	15, 16

OBJ. NO(S)	OPERATING BUDGET BRU(S)	NAME(S) BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
1		Marine Enforcement - Vessels 04-47-07	10-80	6-81

PROJECT NARRATIVE

I. Project Need

1. Fisheries Value.

a. Shellfish harvest in the Bering Sea, off Kodiak and the Peninsula or Aleutians during 1978 totaled $172.4 million. Vessels and catch value will continue to increase.

b. The shellfish industry is a multi-billion dollar asset in the short-run (next 5-10 years) not counting direct or indirect taxes and overall economic value to coastal regions. (FY-81 fisheries taxes and license fees will generate a $26 million deposit to the State General Fund.)

2. Jurisdiction

a. The North Pacific Fisheries Management Council proposes management plans for Federal approval. Existing regulations and treaties prevail until pre-empted by Federal management plans implemented under the 200 mile law.

b. The National Marine Fisheries Service (NMFS) and USCG have Federal enforcement responsibility. Their authority has been extended to the State by a Co-operative Enforcement Agreement.

PROJECT TYPE

- ☐ Building Construction (C)
- ☐ Other Improvement (I)
- ☒ Equipment (E)
- ☐ Land (L)
- ☐ Professional Services (P)
- ☐ Other (O)

PROJECT CHARACTERISTICS

- ☐ Totally New Facility
- ☐ Addition to Existing Facility
- ☐ Renovation of Existing Facility
- ☐ Major Maintenance or Repair
- ☐ Supplement Previously Authorized Funds to Enable Completion
- ☐ One of Several Phases
- ☐ Major External Funding Source
- ☒ Other

NO	YES	SITE FEATURES
☐	☐	Site Currently Owned?
☐	☐	All Utilities Available?
☐	☐	Access Already Available?

APPROPRIATION REQUEST

1002	FED. RCPTS	
1003	G/F MATCH	
1004	GEN. FUND	4,060.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	

GOVERNOR'S RECOMMENDATION

APPROVED ☐ DEFERRED ☐ DISAPPROVED ☐

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 82	ULTIMATE ANNUAL YEAR 83
FUNDING SOURCE	FED. RCPTS		
	GEN. FUND	520.0	520.0
TOTAL ANNUAL OPERATIONAL COST		520.0	520.0
POSITION (FTE)		6	6

PREVIOUS YR-PRIORITY: n/a

AGENCY PRIORITY: 81-2

GOVERNOR'S PRIORITY: 81-2

CATEGORY NRMEC AGENCY Public Safety PROGRAM Fish & Wildlife Protection

01 1035a (7/79)

35a PROPOSED CAPITAL PROJECT

REVISED DATE 10/31/79

000459

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL	BUDGET YEAR	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering							
Land							
Construction							
Equipment							
Administration and Other							
Total Annual Expenditure (Capital Cost)							

CONTINUATION OF NARRATIVE

c. Geographic boundaries of jurisdiction for the State are unchanged. The 3 mile limit remains within State boundaries. The 200 mile law (FCMA, PL94-265) Sec. 306 (a) says that it will not interfere with State jurisdiction (See Alaska Supreme Court Opinion # 1232-1-19-79 re: State Bering Sea jurisdiction over State fisherman) except via specified precedures. Foreign fishermen are still prohibited from fishing inside the twelve mile limit and must follow Federal management plan regulations while fishing inside the 200 mile limit.

d. General State management jurisdiction may not be sustained beyond three miles, but specific jurisdiction (over vessels registered in Alaska) will remain. Overlapping jurisdictions will occur, e.g. the Federal approval of hand trolling outside the 3 mile limit when hand trolling inside the 3 mile limit was closed. Though the Federal government would not recognize State jurisdiction, the State could prosecute a vessel registered in Alaska for violating its laws outside the three mile limit.

e. Since present Federal enforcement emphasizes foreign fishermen, domestic fishermen are virtually unregulated. As fuel costs and general inflation continue to impact USCG vessel operating budgets, no enforcement expansion can be expected. Under an existing agreement, the State may enforce Federal regulations on domestic fishermen. If no State enforcement capability exists over domestic (including Alaskan) fishermen, there will be little leverage to gain increased enforecement efforts from the Federal government.

3. Fisheries Management

Historic abundance has not returned, although a decline in key fisheries recently reversed. Several factors determine overall potential for each fishery to remain healthy and capable of optimum sustained yield. An important factor is enforcement. Without sufficient probability of detection, fisheries crimes will not be deterred. It is likely that the average undetected commercial fisheries violation grosses over $10,000 per crewmember.

CATEGORY NRTEC AGENCY Public Safety PROGRAM Fish & Wildlife Protection

PROJECT TITLE 120 Foot Patrol Vessel Kodiak

35b PROPOSED PROJECT ANALYSIS

REVISED DATE

000460

01-1035b (7/79)

4. Enforcement Coverage

a. Ideal coverage would be attained: 1. when 75% of the registered vessels in a fishery could be sighted and a third boarded during routine patrols in an open season, and 2. when combined aircraft/vessel patrols have a 50% probability of detecting any violation in a closed season.

b. While the formula for adequate coverage sounds nice and is patterned after USCG patrol standards designed to detect 50% of all violations and deter 80% of all potential violations, several practical problems are encountered. Efficiency not effectiveness is measured, though a more accurate proxy may not be available. There is no practical way to determine impact of increasing coverage upon violations deterred or detected. Within general plans, the vessel commander must use judgment to best use his patrol time and maximize deterrence.

c. Existing coverage, though not presented via detailed statistical analysis, is not adequate to protect a multi-billion dollar asset.

5. Assumptions

a. Laws (regulations) will continue as a basic tool of fisheries management. Economic incentives for fisheries violations will remain high or increase (relative inelasticity of demand for food).

b. User group pressures for optimum management (includes enforcement) will increase.

c. Enforcement capabilities must match those of the resource-user in order to patrol while vessels are fishing

- staff: training, experience
- equipment: seaworthiness, comms., range, speed, berthing, electronics, etc.

d. Cross deputization will not shift any substantial domestic enforcement burden to NMFS

- burden will remain with State for domestic fishermen
- the USCG will not contract with the State for enforcement of Akaskan fisheries

CONTINUATION FORM

CATEGORY NRMFC AGENCY Public Safety PROGRAM Fish & Wildlife Protection

PROJECT TITLE 120 Foot Patrol Vessel Kodiak

REVISED DATE

000461

DI 1033 (7/79)

e. Housing at Dutch Harbor will not be available for crewmember families thereby requiring that any major enforcement vessel use Kodiak as homeport.

f. Aircraft enforcement patrols encourage compliance, but cannot identify people involved in detected violations; vessels are needed to pull pots and verify shellfish violations.

g. There are normally no "crime scenes" to investigate after the violation has occurred; physical evidence of fisheries violations is not usually available for follow-up investigations.

h. Rarely can cases be successfully prosecuted with only circumstantial evidence, e.g. an early fishing citation based upon minimum time required for transit between strings of pots, pot pulling time, transit to processor under existing weather conditions in the specific vessel.

i. Inability to follow-up anonmyous tips about fisheries violations by actual investigation will tend to discourage violations being reported by uninvolved observers concerned about resource crimes.

6. Significant Background Relationships

a. Fish & Game Management biologists are consulted in local and regional enforcement planning, but research needs preempt enforcement concerns. Biologists aboard fishing vessels, by permission, would likely eliminate future research opportunities if violations were reported or enforcement emphasized. Fish ticket information about catch location is important for research or management needs even when catches are reported from closed areas, or are otherwise illegal.

Without voluntary catch location supplied by fisherman, statistical validity of research would suffer. Conflicts emerge because fish tickets are presently not available to enforcement staff unless obtained by warrant.

Even though ADF&G biologists are being trained in enforcement techniques, ADF&G staff cannot be programmed as a significant enforcement tool, which is not necessarily inappropriate given conflicting operational objectives.

CONTINUATION FORM

CATEGORY NRMEC AGENCY Public Safety PROGRAM Fish & Wildlife Protection

PROJECT TITLE 120 Foot Patrol Vessel Kodiak

01-1033 (7/79)

REVISED DATE

000462

b. The Board of Fisheries has significnat impact on enforcement. It would be difficult to overemphasize their impact on the practical aspects of regulation enforceability.

c. The Commercial Fisheries Entry Commission has significant impact on the practical aspects of enforcement which would be aided by: Limited entry cards with photos; elimination of pre-stamped fish tickets; elimination of duplicate cards at canneries; and similar enforcement-oriented approaches.

7. References discussing various aspects of commercial fishing, the 200 mile limit, Federal enforcement plans, and the State's economic interests can be provided upon request. The ADF & G Commercial Fisheries FY-81 policy budget submission contains much background information and statistics. Further research is being done and may be available to decision makers before FCC deliberations in the next session.

II. Project Description

1. The 120 foot twin screw steel hulled fisheries enforcement vessel will be basically built from specifications put out for bid in 1975 when the lowest bid exceeded available funds and the 100 foot "Vigilant" was purchased instead. Some modifications in design may be made based upon experience with the "Vigilant" and with other major enforcement vessels.

2. General requirements will include:

a. Seaworthiness, boarding capability, and small boat operations;

b. On deck pot storage capability (about 175 pots);

c. Fuel economy, endurance, adequate berthing;

d. Electronic gear (Loran, radar, aircraft radios, ship radios, etc.) with back-up capability;

e. Crab pot pulling gear.

III. Capital Cost

1. B.F. Jensen & Associates (Naval Architects - Marine Engineers) of Seattle made a June 18, 1979 cost extimate of $2,900,000 based upon Marine Construction and Design calculations. That firm was low bidder on the first steel hulled

CONTINUATION FORM

CATEGORY NRMEC AGENCY Public Safety PROGRAM Fish & Wildlife Protection

PROJECT TITLE 120 Foot Patrol Vessel Kodiak

REVISED DATE

000463

OI 1033 (7/79)

enforcement vessel. Inflation is estimated at 15% per year, and a factor of 10% is added to help insure that another cost-compromise does not result in a less-than-optimum enforcement vessel.

2. Detailed calculations:

$2,900,000	
x 1.15%	inflation 6-79 to 6-80
3,335,000	
x 1.05	inflation 6-80 to 10-80 (bid award)
3,501,750	
x 1.15	for cost overrun protection (5%); in-state vender preference (5%)
$4,027,000	and equipment outfitting (5%)
33,000	for Marine Architect assistance
$4,060,000	

IV. Estimated Operating Cost

1. FY-79 "Vigilant" operating costs are used to project operating costs for the new vessel:

Personal Services	$ 266,000	(6 positions)
Travel	7,000	
Contractual Services	46,000	
Commodities	66,000	($33,000 fuel)
Equipment	10,000	
	$ 395,000	
	100,000	(fuel use and cost difference)
	$ 495,000	

2. Shipyard overhaul/maintenance periods would be needed at least every 2 years at a minimum cost of $50,000.

3. Bering Sea patrols will likely produce seizure of 175 pots. (@ $500/pot = $87,500 deposited to the State General Fund if maximum number seized and transported). (Not included as off-setting revenue).

CONTINUATION FORM

CATEGORY NR&EC AGENCY Public Safety PROGRAM Fish and Wildlife Protection

PROJECT TITLE 120 Foot Patrol Vessel Kodiak

REVISED DATE 10/31/79

000464

V. Alternatives

1. More efficient use of existing vessels: Assuming that inflationary fuel costs are funded, no significant increase in efficiencies can be obtained from the present vessel. (Internal Audit agrees.)

2. Use of other vessels as enforcement platforms:

   a. USCG: Emphasizes foreign enforcement, virtually no domestic enforcement - although policy will theortically balance later. NMFS relies 100% on USCC for patrols.

   b. ADF&G: Research and enforcement needs are incompatible except on rare occasions.

   c. Charter: Peak season prices are prohibitive especially in view of recent budget cuts, serious intangible factors also contribute to owner reluctance to charter.

   d. Seizure: The '75 American Eagle violation is being pursued in the courts with no successful forfeiture to date. Courts may be unlikely to award vessels in view of recent cases where fines have been slight compared to cash value of the stolen fish. It would take a flagrant, major violation to evoke forfeiture of a major vessel.

   e. Aircraft: Without vessels, aircraft are useful for only certain types of enforcement, e.g. finfish area closures.

3. Crab pots fishing illegally total at least 8,000 and could be as high as 20,000. Unmarked pots fish year round (dead crab act as bait) and can be pulled virtually undetected by any boat able to sell crab thus harvested.

   There appears to be no short-run alternative except to pull unmarked pots, seize them, and transport them back to port for future sale. In the long run, the ability of the State enforcement vessel to selectively seize pots will likely encourage vessels to recover and mark pots left by vessels now sunk or for illegal fishing.

CONTINUATION FORM

CATEGORY NIMEC AGENCY Public Safety PROGRAM Fish & Wildlife Protection

PROJECT TITLE 120 Foot Patrol Vessel Kodiak

DI 1033 (7/78)

REVISED DATE

000465

4. This request would fund another vessel for the high-value shellfishery based from Kodiak and Dutch Harbor. The alternative of doing nothing cannot be recommended under any foreseeable circumstance. The "Vigilant" alone is providing some enforcement, but was a cost-compromise enforcement vessel. With 35,000 miles of coastline (twice that of the lower 48) and a multi-billion dollar fisheries asset, a second major enforcement vessel is a conservative estimate of need and was included in long range plans back in 1974.

5. If a suitable vessel were located, an existing 145-165 remodeling/outfitting contract may prove cost-effective without sacrificing enforcement mission or significantly increasing operating cost. This is not likely for several reasons, but the possibility will be explored.

6. Several sophisticated enforcement technologies are theoretically feasible and have been investigated by the Federal government (NMFS, USCG, Congress-Office of Technology Assessment), but no innovations will be implemented in the near future. Aircraft-vessel combined operations will continue to be standard for some time. The only known imminent change to USCG enforcement equipment is crab pot pulling gear for the 230' USCG Storis which patrols in the Bering Sea, although the USCG reserves the right to reprogram funds for other uses. Enforcement or equipment priorities are not dictated by the co-operative enforcement agreement.

CONTINUATION FORM

CATEGORY NRMEC AGENCY Public Safety PROGRAM Fish & Wildlife Protection

PROJECT TITLE 120 Foot Patrol Vessel Kodiakc

REVISED DATE

000466

01 1033 (7/79)

Department of Administration
[illegible] sion of General Services & Sup

BID ABSTRACT

[X] Formal [ ] Informal Subject PATROL VESSEL

Agency DEPARTMENT OF PUBLIC SAFETY Opening OCT. 10, 1975 Invitation to Bid 7271

ITEM	CAMPBELL INDUSTRIES	TACOMA BT BUILDG	HAROLD HANSEN BOAT	MARCO	MARTINAC SHPBUILDG			
1.	3,103,923.00	2,085,000.00	1,945,459.00	1,897,150.00	2,429,805.00			

NO AWARD WILL BE MADE DUE TO INSUFFICIENT FUNDS. THIS PATROL VESSEL.

[signature]
12/1/75

G. L. White S.P.A.

approval date/[illegible] date

B.F. JENSEN & ASSOCIATES

BID #7271 LETTERS SENT

Sent fed express 12/1/77 BFJ

OFFSHORE INDUSTRIES, INC.
4315 11th AVE. N.W.
✓ SEATTLE, WASHINGTON 98107

MARINE CONSTRUCTION & DESIGN CO. (MARCO)
2300 WEST COMMODORE WAY
✓ SEATTLE, WASHINGTON 98199

MARINE POWER & EQUIPMENT CO.
1441 N. NORTHLAKE WAY
SEATTLE, WASHINGTON 98103

J.M. MARTINAC SHIPBUILDING CORP.
401 EAST 15th STREET
TACOMA, WASHINGTON 98421

TACOMA BOATBUILDING CO., INC.
✓ 1840 MARINE VIEW DRIVE
TACOMA, WASHINGTON 98422

NICHOLS BROS. BOATBUILDERS, INC.
1396 EAST BAYVIEW AVENUE
FREELAND, WASHINGTON 98249

BAYSIDE MACHINE WORKS, INC.
✓ ROUTE EAST BOX 101A
NEWPORT, OREGON 97365

SAN DIEGO MARINE CONSTRUCTION CORP.
✓ P.O. BOX 2803
SAN DIEGO, CALIFORNIA 92112

MARINE IRON WORKS
✓ SHIPBUILDING DIVISION
1720 MARINE VIEW DRIVE
TACOMA, WASHINGTON 98422

DAKOTA CREEK SHIPYARD
P.O. BOX 1646
BLAINE, WASHINGTON 98230

CAMPBELL INDUSTRIES
FOOT OF EIGHTH AVENUE
P.O. BOX 1870
SAN DIEGO, CA 92112

FULTON SHIPYARD
✓ FULTON SHIPYARD ROAD
P.O. BOX 400
ANTIOCH, CA 94509

BETHLEHEM STEEL CORP.
✓ BOX 7963
SAN FRANCISCO, CA. 94120

MARCO
2300 WEST COMMODORE WAY
SEATTLE, WASHINGTON 98199

TODD SHIPYARD CORP.
✓ 1801 16th AVENUE S.W.
SEATTLE, WA 98124

HAROLD HANSEN BOAT COMPANY
1124 OLD HIGHWAY 99
MARYSVILLE, WASHINGTON 98270

Gulf Coast

Levingston Shipbuilding
POB 968
Orange, Texas 77630

Colberg Shipyard
POB 1298
Stockton CA 95201

TO BIDDERS
THIS IS NOT AN ORDER

STATE OF ALASKA
DIVISION OF SUPPLY
POUCH C
JUNEAU ALASKA

THIS FORM REFERS TO IS NUMBER 7271

RETURN BID IN THE ENCLOSED ENVELOPE OR IN AN ENVELOPE ON WHICH THE ABOVE NUMBER APPEARS

☐ QUOTATIONS
☒ SEALED COMPETITIVE BIDS WILL BE RECEIVED IN SINGLE COPY BY THE STATE UNTIL 3:00P M ON October 10, 1975 AT WHICH TIME THEY WILL BE OPENED AT 10th Floor, State Office Builing Juneau, ALASKA

IN COMPLIANCE WITH THIS INVITATION AND SUBJECT TO ALL CONDITIONS SPECIFIED THE UNDERSIGNED OFFERS AND AGREES TO FURNISH ANY OR ALL OF THE ITEMS UPON WHICH PRICES ARE QUOTED AT THE PRICE SET OPPOSITE EACH ITEM BY THE TIME SPECIFIED HEREON

BID ENTERED

AT (IN INVITATION)	DATE DELIVERY REQUIRED	TO BE DELIVERED TO
September 9, 1975	August 15, 1976	SEE BELOW

F.O.B. POINT(S) AND ROUTE F.O.B. Afloat in the Shipbuilder's Yard, U.S. West Coast Port

PATROL VESSEL

The State of Alaska is soliciting bids for the construction of one (1) 121 foot Twin Screw Steel hulled Fisheries Patrol Vessel in accordance with the specifications entitled "Specifications for Construction of a 121 foot Patrol Vessel for State of Alaska, Department of Public Safety", B.F. Jensen & Associates, File No. 449 Dated August 1975.

Sealed bids shall be mailed or delivered to: Department of Administration, Division of General Services & Supply, 10th Floor, State Office Building, Pouch C, Juneau, Alaska 99811. Bids shall be received on or before 3:00 P.M. of the opening date in accordance with the instructions and conditions listed on Page Two (2) of this bid, at which time they will be opened publicly.

PLANS AND SPECIFICATIONS:

A set of plans and specifications may be obtained from the Office of B.F. Jensen & Associates, 101 Salmon Bay Office Building, 4215 21st Ave. West, Seattle, Washington 98199, upon receipt of $100.00 deposit per set. A refund of $65.00 ($35.00 non-refundable) will be paid for each set of plans and specifications returned to B.F. Jensen within 30 days after the bid opening date.

DELIVERY: The successful bidder will be required to deliver the vessel afloat at the Builder's Yard, United States West Coast Port. Delivery shall be made on or before August 15, 1976.

LIQUIDATED DAMAGES: It will be agreed between the successful bidder and the State of Alaska that actual damages will be assessed for the late delivery in the amount of one hundred ($100.00) dollars per day for each calendar day beyond August 15, 1976 to September 14, 1976 and three hundred ($300.00) dollars per day after September 14, 1976 until date of delivery.

BID GUARANTEE: The Bidder shall submit a bid bond, surety deposit, special notice account or certificate of deposit assigned to the State of Alaska in the amount of 5% of the bid. This guarantee must accompany the bid and those that fail to do so will be considered non-responsive. This shall be held as a guarantee that the bidders shall not withdraw said bid within sixty (60) days after said opening, and shall execute such further contractual documents, if any, as may be requested by the terms of the bid, as accepted, and give bonds with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of the resulting contract. Deposits or checks will be returned to the bidder upon completion of the sixty (60) day period.

THIS BID CONSISTS OF THREE (3) PAGES.

IMPORTANT: Bid must be complete. See reverse side for instructions, conditions, and requirements pertaining to Alaska Bidder preference and the Civil Rights Act. Any offer and acceptance resulting from this invitation to bid shall be expressly limited to the terms and conditions as shown on this form and its attachments.

SIDNEY J. LaMONICA PURCH. AGT.
(907) 465-2255

PURCHASING AUTHORITY

mes

DATE OF BID

INDICATE IF YOU QUALIFY FOR 5% ALASKA BIDDER PREFERENCE
YES ☐ NO ☐

BIDDER

BY AND FOR THE BIDDER

INSTRUCTIONS TO BIDDER:

1. All equipment offered must be new and of the latest model currently advertised to the general market, unless otherwise specified by this bid invitation.

2. Samples of items, when required, must be furnished at no cost to the State. On request, samples will be returned at the bidder's expense provided they were not consumed in testing.

3. Prices should be stated in units of quantity specified, with packing included.

4. Time of proposed delivery must be stated in definite terms if different from that stated by the State. If time varies for different items, the bidder shall so state. Delivery date is defined as the date upon which delivery is required at the ultimate destination.

5. If the item bid upon has a trade name or brand, such trade name or brand must be stated in the bid

6. All bids shall be submitted exclusive of Federal, State, and local taxes. However, if the bidder believes that certain taxes are properly payable by the State, he may list such taxes separately, in each case directly below the prospective item bid price.

7. Assignment of contract or subcontracts shall not be permitted, and claims of subcontractor due to cancellation of contract will not be recognized.

8. AWARDS Tentative award(s) will first be made on all formal competitive bids and will become final award(s) after five days therefrom, providing no protest has been received by the Department of Administration. This five-day period permits an aggrieved bidder to appeal, in writing, to the Department of Administration for hearing and redetermination of final award. Notice of appeal must be furnished (by the aggrieved bidder) to all interested parties. (Note: Formal competitive bids are defined as those issued for purchases of all materials, supplies, or services estimated to cost in excess of $1,000.)

9. Bidders are instructed to use this and attached for in submitting bids.

CONDITIONS

1. Formal bids will be rejected if not received at the issuing office prior to the time set for bid openings. If there is doubt that your bid will be received timely, telegraphic notices that the bid is in the mail will reserve the right to have your bid read when it is received. Such notices must be received at the office of the Division of General Services/Supply handling the bid prior to the scheduled bid opening hour, and the written bid must be post-marked no later than "AM" of the day of opening.

2. Where the description of an item includes both specifications and a brand name and number, the specification shall govern in case of conflict. Brand name and number are for reference as to the type and quality required and do not preclude offers of a comparable or better product, provided full specifications and descriptive brochures accompany the offer. Failure to include fully descriptive literature may be cause to reject the offer.

3. The State reserves the right to reject any and all bids, to waive minor deviations from the specifications, and to waive any informalities in bids received, whenever such rejection or waiver is in the best interest of the State, and unless otherwise specified by the bidder, to accept any items in the bid. It also reserves the right to reject the bid of a bidder who has previously failed to perform properly or complete on time contracts of a similar nature, or a bid of a bidder who is not in a position to perform to contract.

4. In case of error in the extention of prices in the bid, the unit prices will govern.

5. In case of default of the contractor, the State of Alaska may procure the articles or services from other sources and hold the contractor responsible for any excess cost occasioned thereby.

6. In case of damage to State property in fulfilling this contract, the contractor shall reimburse the State to the extent of such damage.

7. The contractor shall hold and save the State, its officers, agents and employees, harmless from liability of any nature or kind, including costs and expenses, for or on account of any or all suits or damages of any character whatsoever resulting from injuries or damages sustained by any person or persons or property by virtue of performance of this contract, unless such suits or damages arise from carelessness or negligence on the part of the State or its employees in the performance of their assigned duties. The State shall not be liable for any costs incurred by the bidder in bid preparation.

8. Time, in connection with discount offered, shall be computed from date of the delivery of the material at destination when final inspection and acceptance are at this point, or from date correct bill or invoice is received, whichever is later.

9. No officer or employee of the State of Alaska shall be admitted to any share or part of this contract or of any benefit that may arise therefrom unless it may be made with a corporation for its general benefit.

BIDDERS MUST COMPLY WITH CIVIL RIGHTS ACT

By signature on this form, the vendor indicates that he is complying with the applicable portion of the federal Civil Rights Act of 1964 and the Equal Opportunity Employment Act and the regulations issued thereunder by the State and federal Government. If any bidder fails to comply with the Act or the Regulations issued thereunder, the State reserves the right to terminate the contract.

5% ALASKA BIDDER PREFERENCE - (Alaska Statutes 37.05.730)

A bid shall be awarded to an Alaska bidder if his bid is not more than five percent higher than the lowest nonresident's bid. An Alaska bidder is defined as one who

(a) holds a current Alaska business license,

(b) submits a bid for goods or services under the name as appearing on his current Alaska business license,

(c) has maintained a place of business in the State of a period of six months immediately preceding the date of his bid.

Check the box on the front a indicates your eligibility.

PERFORMANCE BOND: The successful bidder will be required to furnish to the State of Alaska a performance bond equal to one hundred percent (100%) of the contract.

BIDDER'S PROTECTIVE CLAUSE: There shall be no obligation to deliver any or all of the products or services included in this invitation in the customary manner when such deliveries are prevented or hindered by acts of God, strike, or partial or total interruption or loss or shortage of transportation facilities, fire or lockout, commandering of raw materials, products, plants or facilities or by other similar or different acts of Civil or Military authorities or by other like causes beyond the control of the bidder.

AWARD: Award will be made to the low bidder meeting the specifications available from B.F. Jensen and providing suitable delivery time. The State of Alaska reserves the right to reject any or all portions of this Invitation to Bid in order to stay within appropriated funding.

PAYMENT SCHEDULE: Payments to the builder will be made in accordance with the following schedule:

a. Fifteen Percent (15%) upon execution of this agreement and contract.
b. Twenty-five Percent (25%) when the keel of the vessel is laid.
c. Twenty-five (25%) when the main and auxiliary engines are installed.
d. Twenty-five Percent (25%) when the vessel is completely ready for launching, including the completion of the Deck House.
e. Balance of the ten percent (10%) on delivery of vessel to State or the State's representative, upon acceptance in accordance with the specifications and drawings.

GENERAL CHARACTERISTICS OF VESSEL:

Length Overall, Molded		121'-6"
Length on Design Waterline		110'-0"
Breadth, Molded		28'-0"
Depth, Molded		12'-6"
Draft, Amidship to Design Waterline		10'-0"
Power - Twin Screw Diesel		
Total Maximum SHP		2050
Compliments, Officers and Crew		~~12~~ 6
Weights and Capacities		
Diesel Fuel	Approx.	42,000 gal.
Potable Water	Approx.	5,000 gal.
Lubricating Oil	Approx.	330 gal.
Gasoline (small boat fuel)	Approx.	850 gal.
Helicopter Fuel	Approx.	350 gal.

CHANGE ORDERS: Any work in the nature of change in the original plans and specifications which may result in additions or reductions in the basic contract price may be submitted in writing to the State along with the basic price adjustment accruing from such change. Such changes in the contract price can be authorized only by the Division of General Services & Supply in writing. Work accomplished without such authorized change in the contract price shall be at the contractor's expense.

BID PRICE: Bid price on the vessel is to be shown in the space below. Price quoted shall be firm and is not subject to escalation unless authorized in writing by the State of Alaska, Division of General Services & Supply, Juneau, Alaska

PRICE FOR VESSEL: $ _____

ALTERNATE DELIVERY TIME: _____ DAYS A.R.O.

FOR STATE USE ONLY: THIS INVITATION TO BID COVERS PR-12-00035

STATE OF ALASKA
DEPARTMENT OF ADMINISTRATION
DIVISION OF GENERAL SERVICES & SUPPLY
POUCH C
JUNEAU, ALASKA 99811

PATROL VESSEL
AMENDMENT #1

INVITATION TO BID # 7271
TO BE OPENED: OCTOBER 10, 1975
3:00 P.M.

This amendment required to delete the 100% performance bond requirement on Page 3 of this invitation. However, the State of Alaska reserves the right to reject any bid if a subsequent background search reveals that the apparent low bidder is financially unsound or incompetent.

NOTE: The attached Equal Opportunity Clause shall be considered a part of this Invitation to Bid.

BIDDER _____

DATE _____

SIGNATURE _____

Sidney J. LaMonica

SIDNEY J. LaMONICA, PURCHASING AGENT

NOTE: A SIGNED COPY OF THIS AMENDMENT MUST ACCOMPANY BID.

STATE OF ALASKA
DEPARTMENT OF ADMINISTRATION
DIVISION OF GENERAL SERVICES & SUPPLY
POUCH C
JUNEAU, ALASKA 99811

PATROL VESSEL

AMENDMENT #2

October 2, 1975

INVITATION TO BID #7271
To Be Opened October 16, 1975
3:00 P.M.
CHANGE OPENING DATE FROM October 10, 1975 to October 16, 1975.

This amendment required to modify the plans and specifications entitled "Specifications for construction of a 121 foot patrol vessel for State of Alaska, Department of Public Safety", B.F. Jensen & Associates, file No. 449 dated August 1975.

These plans and specifications are hereby modified in accordance with the following attachment:

"Modification No. 1 to the Plans and Specifications dated September 25, 1975".

NOTE: Modification No. 1 has previously been forwarded to prospective bidders by the office of B.F. Jensen and Associates.

BIDDER _____

DATE _____

SIGNATURE _____

Sidney J. Lamonica,
Purchasing Agent

NOTE: A SIGNED COPY OF THIS AMENDMENT MUST ACCOMPANY BID.

MODIFICATION NO. 1

TO THE PLANS AND SPECIFICATIONS

for

121-FOOT PATROL VESSEL

for

STATE OF ALASKA

DEPARTMENT OF PUBLIC SAFETY

DATED: September 25, 1975 - File No. 449

The following modifications apply to the Specifications:

SECTION 7 INSULATION AND LININGS

Art. 1, (page 7-1) part b. Engine Room Bulkheads Fr. 16 & Fr. 23; 2nd line -

After: - - - 2-inch thick SONOLEAD,

Add: "Supreme",

Art. 1, (page 7-1) part c. Below Deck Quarters, Main Deckhouse, Pilot House and Upper Deckhouse Overhead Insulation, 2nd and 3rd lines

Delete: - 3-inches thick Johns-Manville BX-Spintex, or equal, minimum density 3.25 pounds per cubic foot.

Substitute: - 3-inches, total thickness, Owen-Corning, 703 board, or equal, made up from a layer of 1-inch board and a layer of 2-inch board.

Art. 1, (page 7-2) part g. Miscellaneous Insulation, 2nd line

After: - - - 2-inch thick SONOLEAD,

Add: "Supreme"

SECTION 19 FURNITURE AND FURNISHINGS

Art. 3, (page 19-3) part e. Chart Table, last par., 3rd, 4th, and 5th lines

Delete: Small drawers and lockers shall be provided under to stow navigating equipment and a shelf for electronic equipment shall be provided over.

Substitute: Small drawers and lockers shall be provided under the chart table. A shelf for electronic equipment shall be provided on the bulkhead over the chart table.

Art. 3, (page 19-3)

Add: part j. Furniture in the Lounge

The lounge on the main deck, Fr. 19 to 23, shall be provided with furniture generally as shown on the Main Deck Arrangements, Dwg. No. 449-2 Sht.-1. The Contractor shall submit details of the design and construction of all furniture to the Owner for approval before purchasing items or proceeding with the construction and installation.

The conference table and table in front of the settee shall be 29½-inches high. Tops shall be constructed of plywood overlaid with teak "desk top type" Formica, or equal. Low teak sea rails shall be fitted around the edges of each table. The tables shall be fixed to steel pipe pedestals attached to the deck. Chairs at the conference table shall be swiveling, pedestal type attached to the deck. Backs, arms and seats shall be upholstered. Settee shall be built-in, with upholstered back and seats. Two upholstered arm chairs shall be provided. Provision shall be made for lashing the arm chairs under the settee table in heavy weather.

SECTION 51 MAIN PROPULSION MACHINERY

Art. 3, (page 51-2) Front Power Take-off and Fire Pump Drive, 2nd par.

Delete: Entire paragraph.

Substitute: Power take-off shall be a Marine Construction and Design Co., or equal, unit consisting of a Marco, Model E1460 FPTO Drive Adaptor; Koppers, Size 90 coupling; Twin Disk, Model SP114P stub shaft clutch, brackets, etc. Unit shall be modified as required to adapt to the G.M., 16 V-149, marine engine.

Art. 4, 4th par.

Add: An approved stainless steel, bellows type, flexible connection shall be installed in each branch exhaust line from each engine (two per engine).

SECTION 56 DIESEL OIL SYSTEM

Page 56-2 After last paragraph.

Add: A register type fuel oil meter, calibrated to read in gallons, shall be provided in the discharge of the fuel oil transfer pump. Meter shall be a Tokheim, 2-inch, Series 1400, line type, or equal, rotary fuel oil meter.

SECTION 73 PUMPS

Art. PUMP SCHEDULE, part E, Diesel Oil Transfer Pump (page 73-2)

Change: 1 hp to 5 hp.

The following modifications apply to the Plans:

Dwg. No. 449-2 Sht 1 General Arrangements Main Deck and Hold

Main Deck Arrangements

Frame 18 port - window over galley sink - Add following note:

"Vertical Drop window"

Dwg. No. 449-2 Sht 2 General Arrangements Foc'sle, Boat & Bridge Decks

Captain's Day Room and Captain's State Room

Drop window P&S noted to port in Captain's Day Room - Add "sloping".

Note to read: "Sloping Drop Window P&S.

(Note: The vessel to be provided with a total of three drop windows; one vertical sliding drop window in the galley, a sloping, sliding drop window in the Captain's Day Room and a sloping, sliding drop window in the Captain's State Room.)

INVITATION TO BID

ON

CONSTRUCTION

OF

121 FOOT PATROL VESSEL

FOR

STATE OF ALASKA

DEPARTMENT OF PUBLIC SAFETY

August 20, 1975
File No. 449

The following is an outline of information to include on the "Invitation to Bid".

1. General

The State of Alaska invites sealed bids with the intent of establishing a contract for the construction of one 121 foot, twin screw steel patrol vessel in accordance with the Specifications entitled: "Specifications for Construction of 121 foot Patrol Vessel for State of Alaska, Department of Public Safety," B.F. Jensen & Associates, File No. 449 dated August 1975.

2. General Characteristics of Vessel

Length Overall, Molded		121'-6"
Length on Design Waterline		110'-0"
Breadth, Molded		28'-0"
Depth, Molded		12'-6"
Draft, Amidship to Design Waterline		10'-0"
Power - Twin Screw Diesel		
Total Maximum SHP		2050
Compliments, Officers and Crew		~~12~~ 6
Weights and Capacities		
Diesel Fuel	Approx.	42,000 gal.
Potable Water	Approx.	5,000 gal
Lubricating Oil	Approx.	330 gal.
Gasoline (small boat fuel)	Approx.	850 gal.
Helicopter Fuel	Approx.	350 gal.

3. Plans and Specifications

A set of Plans and Specifications may be obtained from the office of B.F. Jensen & Associates, 101 Salmon Bay Office Building, 4213 21st Ave. West, Seattle, Washington 98199, upon receipt of a deposit of $100.00 per set, of which $65.00 will be refunded upon return of each set of Plans and Specifications ($35.00 non-refundable) within 30 days after the date of the opening of bids. Plans and Specifications are for use in preparing a bid in response to this invitation and are not to be used for any other purpose.

4. Bidding Time and Delivery of Bids.

Plans and Specifications available from the office of B.F. Jensen & Associates on or after September 2nd, 1975. Sealed Bids shall be mailed or delivered to Department of Administration, Division of General Services/Supply, 10th Floor, State Office Building, Pouch C, Juneau, Alaska 99811. Bids shall be received on or before 3:00 P.M. Pacific Daylight Savings Time, Friday, October 10th, 1975.

5. Building Time

Ten months from date of award.
Tentative award October 16, 1975 - Delivery August 15, 1976.

6. Performance Bond

Performance bond equal to one hundred per cent (100%) of the Contract.

7. Delivery of Vessel

Vessel shall be delivered afloat at Building Yard at United States West Coast Port.

8. Liquidated Damages

Liquidated damages in the amount of one hundred ($100.00) dollars per day for each calendar day beyond August 15, 1976 to September 14th, 1976 and three hundred ($300.00) dollars per day after September 14, 1976 until date of delivery.

PLEASE NOTE

THE ORGINAL FILE CONTAINS AN OVERSIZED DOCUMENT THAT IS UNSUITABLE FOR FILMING. PLEASE REFER TO THE ALASKA STATE ARCHIVES TO VIEW THE ORIGINAL.

DESCRIPTION: BLUEPRINTS

IDENTIFICATION XEROXED BELOW

SYM	REVISIONS	BY	DATE

B. F. JENSEN & ASSOCIATES

NAVAL ARCHITECTS MARINE ENGINEERS

101 SALMON BAY OFFICE BLDG.
4715 21ST AVE WEST
SEATTLE, WASHINGTON 98199

121 FT PATROL VESSEL

DECK HOUSE & PILOT HOUSE STRUCTURAL PLANS

CHKD NILSON		DATE AUGUST 1979	
SCALE 1/4"=1'-0"		DWG NO 449-10	REV
DRAWN J.R. C.E.			

PLEASE NOTE

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DESCRIPTION: BLUEPRINTS

IDENTIFICATION XEROXED BELOW

SYM	REVISIONS	BY	DATE

B. F. JENSEN & ASSOCIATES

NAVAL ARCHITECTS MARINE ENGINEERS

101 SALMON BAY OFFICE BLDG
4215 21st AVE WEST
SEATTLE, WASHINGTON 98199

121 FT PATROL VESSEL

OUTBOARD PROFILE

CHKD NILSON	DATE AUGUST [illegible]
SCALE 1/2" = 1'-0"	DWG NO 449-1
DRAWN O.K. LE	

PLEASE NOTE

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DESCRIPTION: BLUEPRINTS

IDENTIFICATION XEROXED BELOW

SYM.	REVISIONS	BY	DATE

B. F. JENSEN & ASSOCIATES

NAVAL ARCHITECTS — MARINE ENGINEERS

101 SALMON BAY OFFICE BLDG

4215 21st AVE. WEST

SEATTLE, WASHINGTON [illegible]

121 FT. PATROL VESSEL

STRUCTURAL INBOARD PROFILE

CHKD. [illegible]	DATE [illegible]		
SCALE [illegible]	DWG. NO.		REV.
DRAWN [illegible]	449 - 6		

PLEASE NOTE

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DESCRIPTION: BLUEPRINTS

IDENTIFICATION XEROXED BELOW

BY	REVISIONS	BY	DATE

B F. JENSEN & ASSOCIATES
NAVAL ARCHITECTS MARINE ENGINEERS
101 SALMON BAY OFFICE BLDG
4215 21st AVE WEST
SEATTLE WASHINGTON 98199

121' PATROL VESSEL
GENERAL ARRANGEMENTS
MAIN DECK & HOLD

CHKD: NILSON DATE AUGUST 1975
SCALE: 1/4" = 1' 0" DWG NO. REV
DRAWN D.K. IK, CE 449-2 SHT 1

PLEASE NOTE

THE ORGINAL FILE CONTAINS AN OVERSIZED DOCUMENT THAT IS UNSUITABLE FOR FILMING. PLEASE REFER TO THE ALASKA STATE ARCHIVES TO VIEW THE ORIGINAL.

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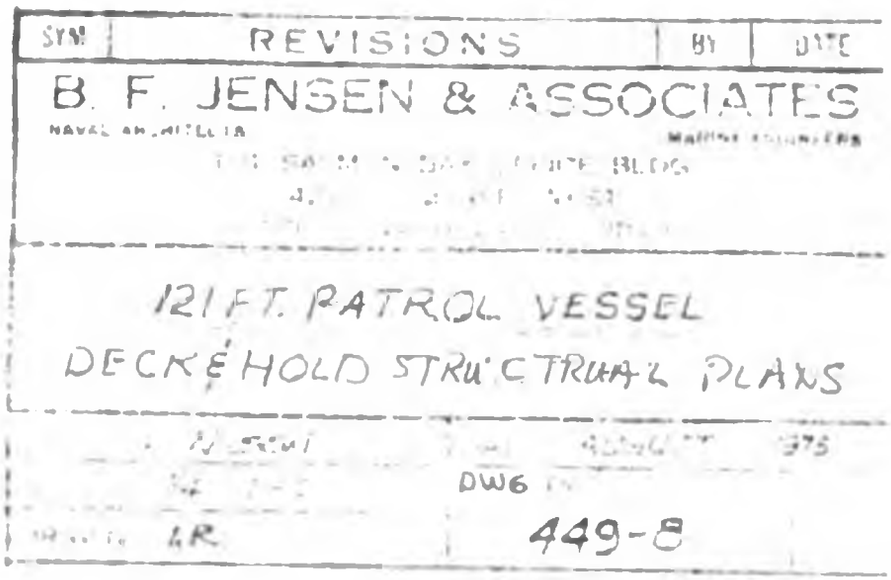

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DESCRIPTION: BLUEPRINTS

IDENTIFICATION XEROXED BELOW

SYM	REVISIONS	BY	DATE

B. F. JENSEN & ASSOCIATES
MARINE ENGINEERS
101 SALMON [illegible] OFFICE BLDG
4715 [illegible] AVENUE
SEATTLE, WASHINGTON [illegible]

121' PATROL VESSEL
GENERAL ARRANGEMENTS
FOCSLE, BOAT & BRIDGE DECKS

NUMERAL	[illegible] AUGUST [illegible]
[illegible]	1/4" = 1'-0"
[illegible] SCALE	MAP - SHT 2

Resources/ Senate hearing this Wed. 1:30

Introduced: 2/8/80
Referred: Resources and Finance

Ours:

Tues. Feb. 19 3p.m.

IN THE HOUSE (also SB 344) BY THE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

HOUSE BILL NO. 691

IN THE LEGISLATURE OF THE STATE OF ALASKA

ELEVENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act providing for the issuance of general obligation bonds in the amount of $4,218,800 for the purpose of paying the cost of capital improvements for fisheries resources protection and enhancement facilities; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. For the purpose of paying the cost of capital improvements for fisheries resources protection and enhancement facilities, general obligation bonds of the state in the principal amount of not more than $4,218,800 shall be issued and sold. The full faith, credit, and resources of the state are pledged to the payment of the principal of and interest and redemption premium, if any, on these bonds. These bonds shall be issued under the provision of AS 37.15 as those provisions read at the time of issuance.

* Sec. 2. (a) If the issuance of these bonds is authorized by the qualified voters of the state, a special fund of the state to be known as the "1980 Fisheries Resources Facilities Construction Fund" shall be established, to which shall be credited the proceeds of the sale of bonds described in sec. 1 of this Act except for accrued interest and premiums.

(b) There is appropriated from the "1980 Fisheries Resources Facilities Construction Fund" to the Department of Public Safety the amount of $4,218,800, for the purchase of one 120-foot patrol vessel to be based at Kodiak.

Bob Stitzel Public Safety

* Sec. 3. If the issuance of these bonds is authorized by the qualified

voters of the state, the amount of $14,800 or as much of that amount as is found necessary is appropriated from the general fund of the state to the state bond committee to carry out the provisions of this Act and to pay expenses incident to the sale and issuance of the bonds authorized in this Act. The amounts expended from the appropriation authorized by this section shall be reimbursed to the general fund from the proceeds of the sale of the bonds authorized by this Act.

* Sec. 4. The amount withdrawn from the public facility planning fund for the purpose of advance planning for the improvements financed under this Act shall be reimbursed from the proceeds of the sale of bonds authorized by this Act.

* Sec. 5. The question whether the bonds authorized in this Act are to be issued shall be submitted to the qualified voters of the state at the next general election and shall read substantially as follows:

Proposition

State General Obligation Fisheries Resources Facilities Construction Bonds $4,218,800

Shall the State of Alaska issue its general obligation bonds in the principal amount of not more than $4,218,800 for the purpose of paying the cost of capital improvements for fisheries resources protection and enhancement facilities?

Bonds Yes [ ]

Bonds No [ ]

* Sec. 6. This Act takes effect immediately in accordance with AS 01.-10.070(c).

12-1.6LH

STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

DEPARTMENT OF PUBLIC SAFETY

DIVISION OF ADMINISTRATIVE SERVICES / POUCH N - JUNEAU 99811

February 4, 1980

The Honorable Bill Sumner
Senator, Alaska State Senate
Pouch V
Juneau, Alaska 99811

HB691

Subject: Senate Bill 344

Dear Senator Sumner:

The 120 foot patrol vessel referenced in Senate Bill 344 will be stationed in Kodiak to serve the Kodiak/Dutch Harbor areas. If the bond package is approved by the Legislature and the voters, we anticipate receipt of the vessel some time in September, 1981.

The priority enforcement project for this vessel will be in the crab fishery in the Kodiak/Dutch Harbor areas. The Alaska Department of Fish and Game and our Division of Fish and Wildlife Protection conservatively estimate that between 8,000 and 20,000 unmarked and unclaimed illegal pots fish the gulf and Bering Sea year-round. The toll these pots have on the resource is really unknown, and until now we have not had the ability to calculate, with any reasonable degree of success, what that toll is. We feel we will be able to do this with the new boat because it will be capable of carrying approximately 175 crab pots. This will give us two enforcement vessels operating in the Kodiak area, and coverage of the fisheries should increase substantially.

We feel that the primary purpose of the Division of Fish and Wildlife Protection is to provide the enforcement necessary to ensure the successful completion of Fish and Game's management plans. In the Kodiak area, as an example, we have been unable to provide the necessary level of enforcement due to a lack of adequate vessels to patrol the waters in and around Kodiak and Dutch Harbor. Upon receipt of this boat there is still no guarantee that all fishing violations or crabbing violations will be detected. However, the degree at which violations occur should be reduced substantially due to the fact that there are now more vessels operating in the area. As indicated above, the primary objective of this new vessel will be in the crab fishery but it will also be doing work in the salmon, shrimp and bottomfish fisheries as well. In addition, the vessel will play a large role in search and rescue missions that we conduct along the Chain.

The Department of Public Safety considered this 120 foot vessel its top capital budget priority, as evidenced by the Commissioner's list of priorities submitted to the Governor. I would like the opportunity, at your convenience, to meet and further discuss the potential uses and benefits of this vessel.

Sincerely,

Robert J. Stickles

Robert J. Stickles
Director

RJS/bh

THE LEGISLATURE OF THE STATE OF ALASKA
ELEVENTH LEGISLATURE

FISCAL NOTE

HB691

I. REQUEST

Bill/Resolution No. SB 344 - "An Act providing for $4,218,800 in GO bonds for
Title fisheries resource protection facilities" (120 foot patrol vessel).
Requested by Sen. Sumner Date 1/29/80

II. FISCAL DETAIL

Agency Affected Public Safety
Program Category Affected NRMEC
BRU, Program, or Subprogram(s) Affected Vessel Section (Marine Enforcement)
(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
100 PERSONAL SERVICES			324.2	324.2	324.2	
200 TRAVEL			7.0	7.0	7.0	
300 CONTRACTUAL			103.2	123.9	123.9	
400 COMMODITIES			250.3	300.5	300.5	
500 EQUIPMENT			0	10.0	10.0	
600 LAND & STRUCTURES				-	-	
700 GRANTS, CLAIMS, ETC.				-	-	
TOTAL	0	0	684.7	765.6	765.6	

FUNDING (Thousands of Dollars)

GENERAL FUND	0	0	684.7	765.6	765.6	
FEDERAL FUNDS						
OTHER (Specify Fund Source)						

POSITIONS

FULL TIME	0	0	6	6	6	
PART TIME			1	1	1	
TEMPORARY						

III ANALYSIS (See Fiscal Note Preparation Instructions, Section III)

Crewmember salary and benefit costs are: Lt. $60.0; 1st Sgt. $52.5; Cpl. $50.7; 2 troopers $47.8 each; Boat Engineer II $45.4; and a part-time cook $20.0. These costs include sea pay, similar to overtime and shift differential, to compensate crewmembers for shipboard duty. Both salary and other costs are comparable to the Vigilant's operating needs.

In contractual services, major items are: $55.0 for repairs & maintenance and $55.1 for insurance. In commodities, fuel use is estimated at 50 gallons/hour for 12 hours/day during 250 days at sea. The 150,000 gallons needed would cost $270.0 using $1.80/gallon as the price for diesel fuel.

Estimating vessel delivery on 9-1-81, major FY82 operating costs have been adjusted except for salary. Crew training is needed on other vessels until acceptance of the new vessel. Present costs are used for all expenses except fuel estimated at FY83 cost.

IV. DATE 1/29/80 PREPARED BY Mike Clements
AGENCY Public Safety
PHONE 465-4336

Original: Legislative Finance
cc: Budget and Management
Prime Sponsor (First Legislator Named)

33-001 (Rev. 12/79)

12-L6LH

SB 344
HB 691

STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

DEPARTMENT OF PUBLIC SAFETY

DIVISION OF ADMINISTRATIVE SERVICES / POUCH N – JUNEAU 99811

February 1, 1980

The Honorable Bob Mulcahy
Senator, Alaska State Senate
Pouch V
Juneau, Alaska 99811

HB691
Subject: Senate Bill 344

Dear Senator Mulcahy:

HB691
The 120 foot patrol vessel referenced in Senate Bill 344 will be stationed in Kodiak to serve the Kodiak/Dutch Harbor areas. If the bond package is approved by the Legislature and the voters, we anticipate receipt of the vessel some time in September, 1981.

The priority enforcement project for this vessel will be in the crab fishery in the Kodiak/Dutch Harbor areas. The Alaska Department of Fish and Game and our Division of Fish and Wildlife Protection conservatively estimate that between 8,000 and 20,000 unmarked and unclaimed illegal pots fish the gulf and Bering Sea year-round. The toll these pots have on the resource is really unknown, and until now we have not had the ability to calculate, with any reasonable degree of success, what that toll is. We feel we will be able to do this with the new boat because it will be capable of carrying approximately 175 crab pots. This will give us two enforcement vessels operating in the Kodiak area, and coverage of the fisheries should increase substantially.

We feel that the primary purpose of the Division of Fish and Wildlife Protection is to provide the enforcement necessary to ensure the successful completion of Fish and Game's management plans. In the Kodiak area, as an example, we have been unable to provide the necessary level of enforcement due to a lack of adequate vessels to patrol the waters in and around Kodiak and Dutch Harbor. Upon receipt of this boat there is still no guarantee that all fishing violations or crabbing violations will be detected. However, the degree at which violations occur should be reduced substantially due to the fact that there are now more vessels operating in the area. As indicated above, the primary objective of this new vessel will be in the crab fishery but it will also be doing work in the salmon, shrimp and bottomfish fisheries as well. In addition, the vessel will play a large role in search and rescue missions that we conduct along the Chain.

Attached is a fiscal note for operating the vessel, beginning in FY82.

The Department of Public Safety considered this 120 foot vessel its top capital budget priority, as evidenced by the Commissioner's list of priorities submitted to the Governor. I would like the opportunity, at your convenience, to meet and further discuss the potential uses and benefits of this vessel.

Sincerely,

Robert J. Stickles

Robert J. Stickles
Director

RJS/bh

Attachment

JAY S. HAMMOND
GOVERNOR

STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

February 13, 1980

The Honorable Alvin Osterback
Co-Chairman
House Resources Committee
and
The Honorable Bill Miles
Co-Chairman
House Resources Committee
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Representatives Osterback and Miles:

HB 691 contains several typographical errors that need to be corrected. They are as follows:

Title, delete words "and enhancement" immediately following word "protection"

Sec. 1, page 1 line 13, delete words "and enhancement"

Sec. 2, page 1 line 22, after word "Resources" add word "Protection"

Sec. 2, page 1 line 25, after word "Resources" add word "Protection"

Sec. 5, page 2 line 16, after word "Resources" add word "Protection"

Sec. 5, page 2 line 21, delete words "and enhancement" immediately following word "protection".

Sincerely,

Keith W. Specking
Legislative Assistant
to the Governor

Possible alternative
style boat
for vessels
in HB 591

SPECIFICATION

FOR

MARCO 122' CRAB VESSEL

MARCO
SEATTLE

7300 WEST COMMODORE WAY ■ SEATTLE WASHINGTON 98199 USA

TELEPHONE (206) 285-3200 CABLE MARCO TELEX 32-0098

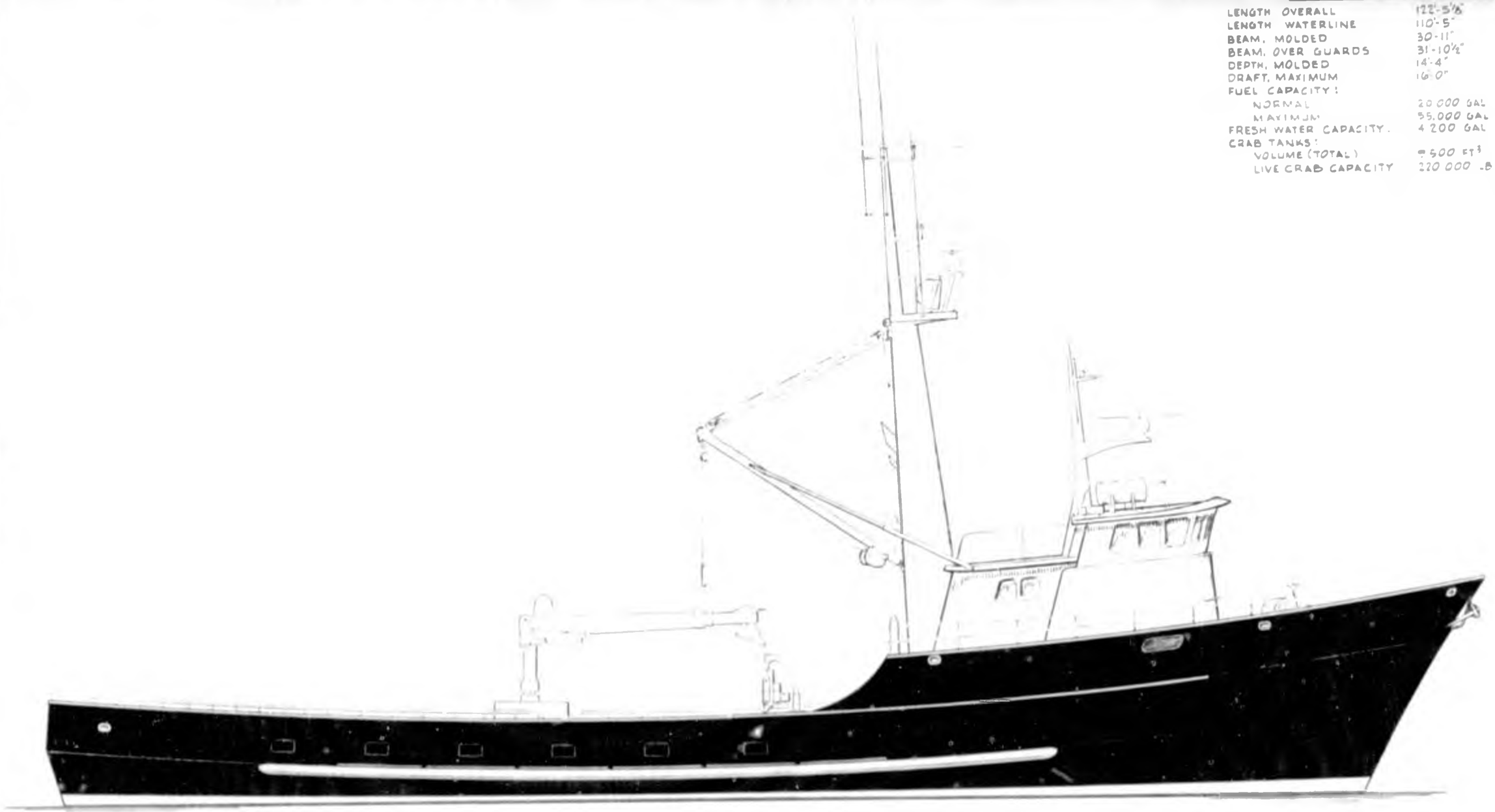
SPECIFICATION

FOR

MARCO 122' CRAB VESSEL

CHARACTERISTICS

LENGTH OVERALL	122'-5⅞"	37.32 m
LENGTH WATERLINE	110'-5"	33.66 m
BEAM, MOLDED	30-11"	9.42 m
BEAM, OVER GUARDS	31'-10½"	9.72 m
DEPTH, MOLDED	14'-4"	4.37 m
DRAFT, MAXIMUM	16'-0"	4.88 m
FUEL CAPACITY:		
NORMAL	20,000 GAL	75,700 L
MAXIMUM	55,000 GAL	208,200 L
FRESH WATER CAPACITY:	4,200 GAL	15,900 L
CRAB TANKS:		
VOLUME (TOTAL)	9,500 FT³	269 m³
LIVE CRAB CAPACITY	220,000 LB	100,000 kg



MARINE CONSTRUCTION & DESIGN CO.

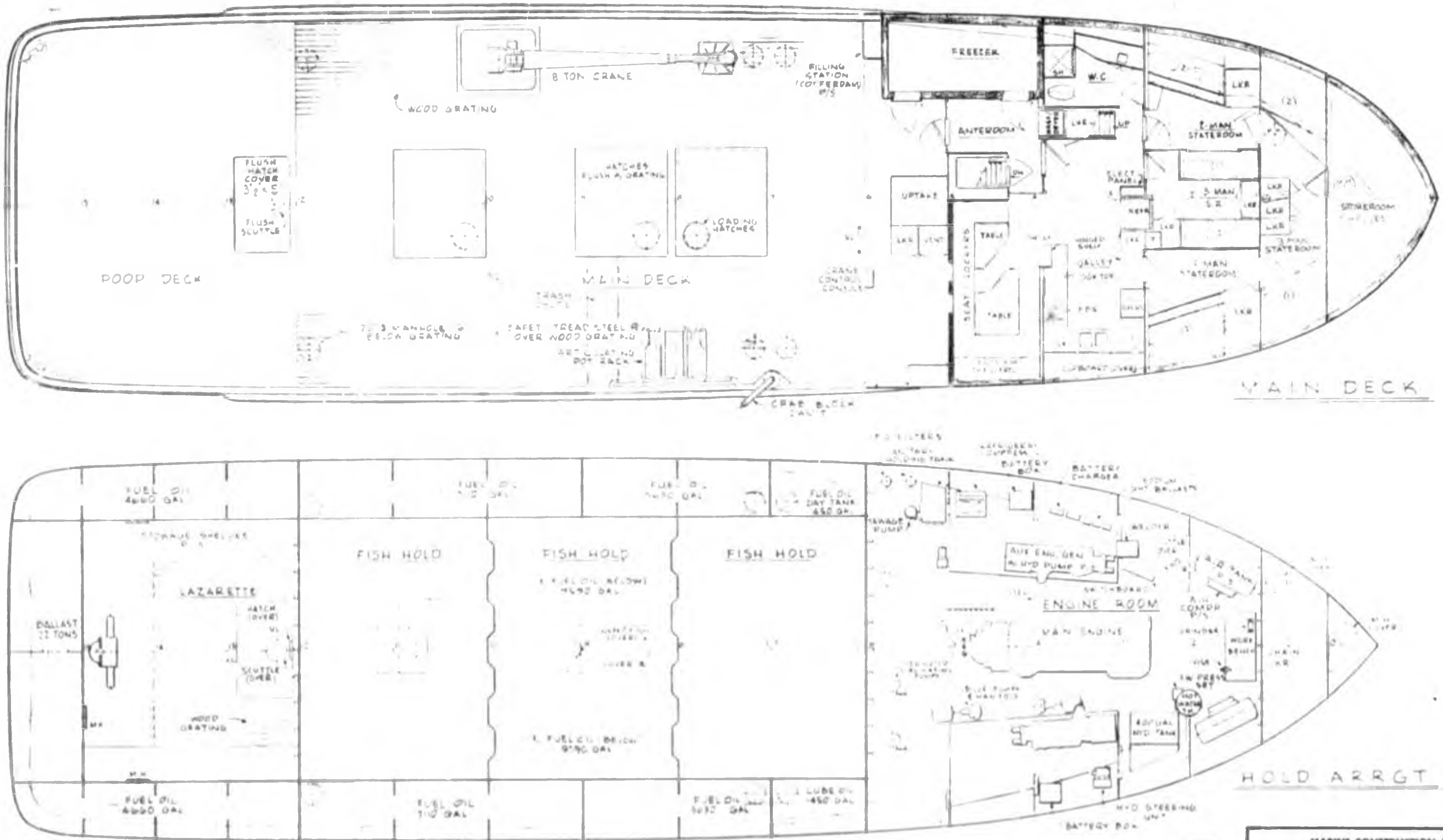
122' x 31' CRAB VESSEL

OUTBOARD PROFILE

NOTE: [illegible]

E-225-1-1100-1

MARCO SEATTLE



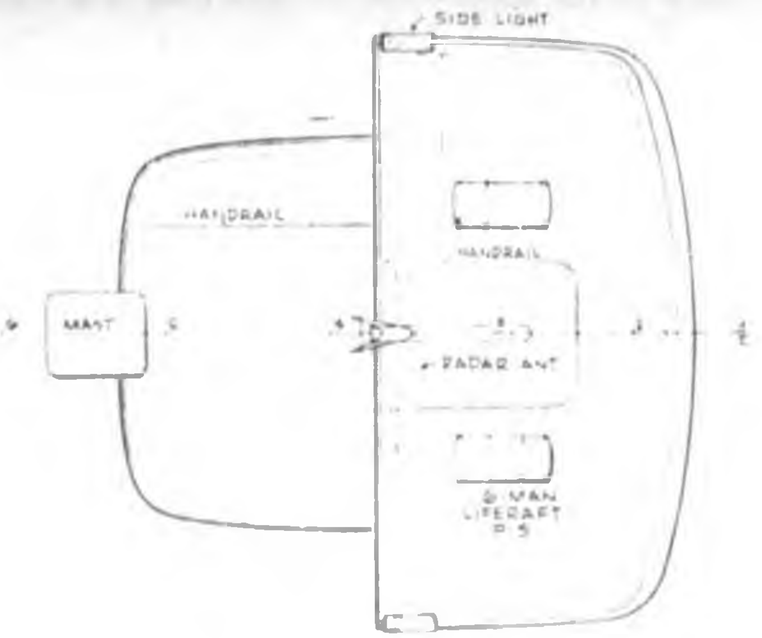
MARINE CONSTRUCTION & DESIGN CO.

122' x 31' CRAB VESSEL

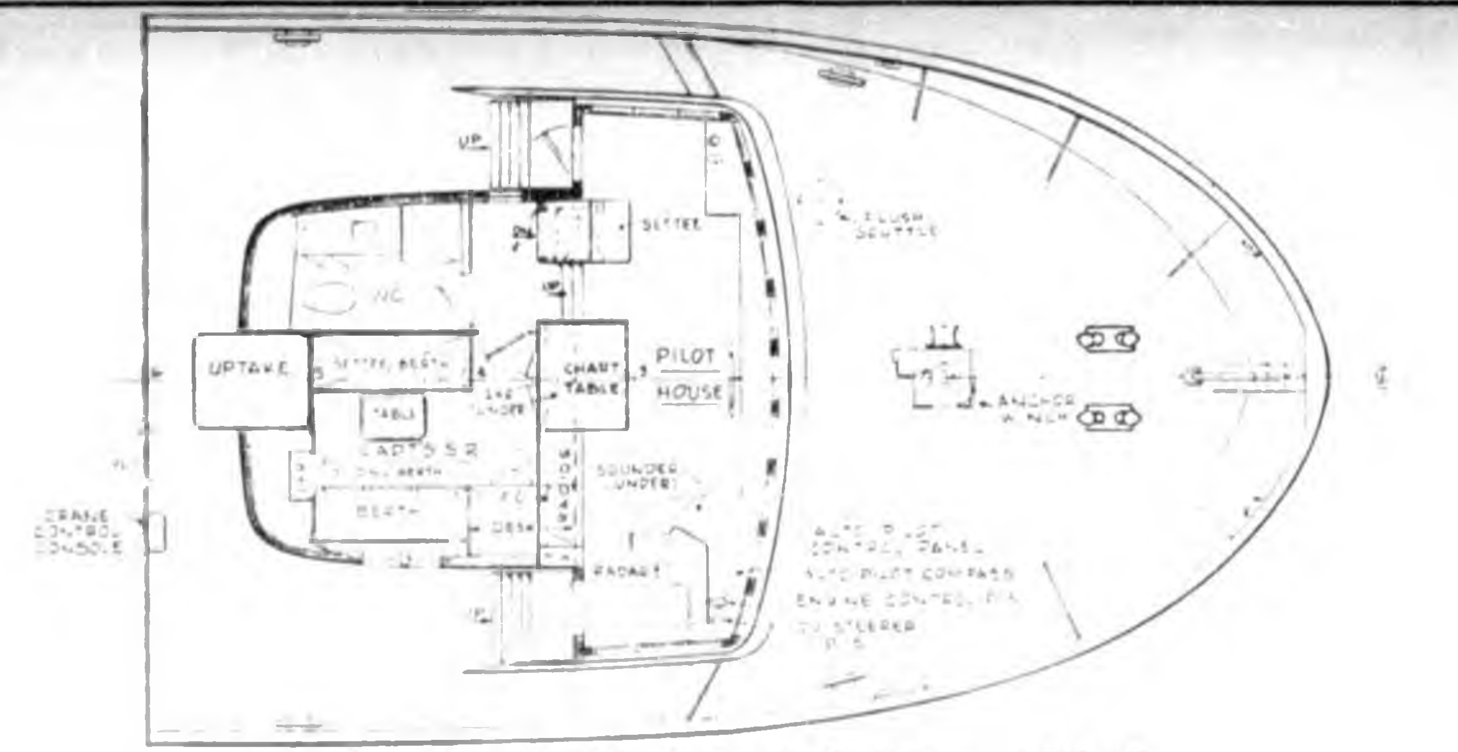
GENERAL ARRANGEMENT
MAIN DECK & HOLD

E-225-3-1100-27 A

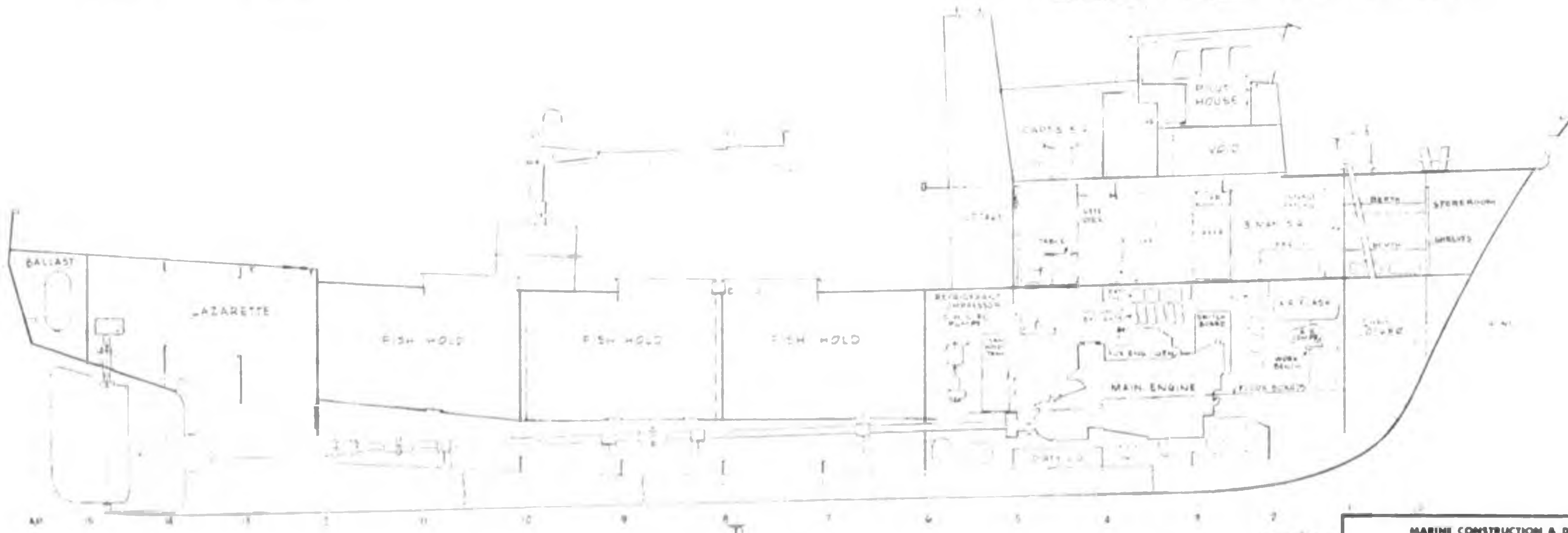
MARCO SEATTLE



HOUSE TOP ARRGT



PILOT HOUSE & FOC'SLE DECK ARRGT



INBOARD PROFILE

MARINE CONSTRUCTION & DESIGN CO.

122' • 31' CRAB VESSEL

GENERAL ARRANGEMENT
INBOARD PROFILE & PILOT HOUSE

LASALLE	BSW	100
OK	5-1-78	
E-225-3 1100-3-7	A	

NOTE: This drawing is the property of Marine Construction and Design Co. Seattle, Wash. U.S.A. and must be returned. It shall not be used for construction or manufacture or duplicated or copied or submitted to outside parties without our written consent.

MARCO
SEATTLE

MARCO "STARLITE" - 122' Combination Crab Boat - August 26, 1978


MARCO "ARCTIC SEA" - 122' Combination Crab Boat - July 15, 1978

SPECIFICATIONS

for the

122' MARCO CRAB VESSEL

Designed and Built by

MARCO SEATTLE
2300 West Commodore Way
Seattle, Washington 98199

Specification E-225-1

Revised 22 February 1980

1100 INTRODUCTION

It is the intent of these specifications to describe the construction, equipment and outfit of the MARCO 122' Basic Crab Vessel.

The vessel will be arranged especially for the North Pacific King crab fishery but is easily adapted to trawling, scalloping, and other fisheries. Particular attention has been given to the general safety and economy of the vessel's operation by providing adequate stability, freeboard and ease of maintenance.

1200 PRINCIPAL CHARACTERISTICS

Length, overall	122'-5"
Length, design water line	111' 4"
Beam, maximum	31' 10 1/2"
Beam, molded	30' 11"
Depth, molded amidships	14' 4"
Draft, aft, crabbing (approx.)	16' 0"
Hold Capacities:	
Crab tank volume, (uninsulated)	9,500 ft^3
Crab capacity (approx.)	220,000 lb
Tank Capacities:	
Fuel oil - normal	20,000 gal
- maximum	55,000 gal
- day tank	1,400 gal
Fresh water	4,000 gal
Lube oil	1,400 gal
Dirty oil	400 gal

1300 GENERAL ARRANGEMENT

General

The vessel will have the general arrangements and appearance as indicated on Drawings E225-1-1100-1E,-2E and -3C. The foc's'le and house have been kept well forward, thus reserving the maximum clear space aft for crab pot stowage.

Deck House

The foc's'le deck forward provides area for anchoring a ' mooring equipment and is protected by a flared bulwark of 4' 6" maximum height at stem. The captains quarters and toilet are in the house on this level with interior ladder access from foc's'le and up to pilot house. The pilot house, with bridge deck raised 4', is arranged with enclosed wings each side and with windows all around for good visibility of fishing operations. Two doors open aft from wings.

Fo'c'sle Area

The fo'c'sle contains three staterooms and crew's toilet, large stowage area forward, galley and mess areas. An anteroom is provided to separate the living areas from the main deck. Walk-in freezer is outboard to port. Access to the engine room is to port.

Main Deck

The main deck aft provides clear area for crab pot hauling and storage. Three hatches with bolted covers give access to fish holds.

The large deck area provides adequate space for future installation of trawling gear. The poop deck aft is 12" above main deck level.

Below the Main Deck

The hull is divided into five main areas by four watertight bulkheads, as follows:

Fore Peak: Chain locker

Engine Room: Contains the main engine, two auxiliary diesel generators sets, salt water circulating pumps, bilge pumps, hydraulic power systems, piping, air compressors, fresh and sanitary water pumps, freezer compressor, welding machine, etc..

Fish Holds: The three fish holds are formed by the engine room bulkhead, outboard longitudinal bulkheads, and three transverse bulkheads aft. The hold bottoms are steel plate, providing a clean and easily maintained surface. The double bottom tanks below the fish holds, and the wing tanks outboard of the holds are fitted for fuel oil.

Lazarette: The lazarette contains fuel tanks, steering gear, and stowage space for ship's gear.

Aft Peak: The aft peak tank is piped for ballast.

2100 HULL STRUCTURE

The entire hull is of welded steel construction, with longitudinal hull and deck framing supported by transverse watertight bulkheads and transverse web frames. Steel will be ASTM A-36 or equal.

All steel plating, framing and bulkheads are wheelabraded and coated with zinc weld-through primer before construction.

Hull and Fo'c'sle Scantlings

Stem	10" x 1 1/4" plate
Keel, center vertical - forward	3/4" plate
Keel, center vertical - aft	3/8" plate
Box keel side plates - aft	3/8" plate
Keel shoe - forward	10" x 1" plate
Keel shoe - aft	12" x 1" plate
Rudder shoe	12" x 2" flat bar
Horn bar	1 1/4" x 12" flat bar
Stern tube	12" Sch. 80 pipe
Stern frame	1 1/2" plate
Web frames	14" x 4" x 5/16" flg. plate
Floors	3/8" plate with 3" flg.
Longitudinal framing:	
Bottom	3 1/2" x 3 x 5/16" angle
Sides	3 1/2" x 3 x 5/16: angle
Main deck, aft	4" x 1/2" flat bar
Main deck, forward	3 1/2" x 3/8" flat bar
fo'c'sle deck	3 1/2" x 3/8" flat bar
Plating:	
Sides	3/8" plate
Bottom	3/8" plate
Transom	3/8" plate
Main deck	5/16" plate
Poop deck	5/16" safety tread plate
Fo'c'sle deck & aft bulkhead	1/4" plate
Bulwark & fo'c'sle side	5/16" plate
Bulwark cap main deck	3" x 6" x 5/16" rect. tubing
Bulwark cap forward	3" x 6" x 1/4" rect. tubing
Main deck guard	10" Sch. 80 pike (split in 1/2 sec.)
Tie rails	2 1/2" Sch. 80 pipe
Bulkheads:	
Upper plate	1/4" plate
Lower plate	5/16" plate
Fairing plate under davit	20" x 5/16" plate - 20' long - stb.
Bilge keel	/2" x 12" plate & 2" round bar
Bilge keel doubler	/2" x 12" plate
Tank drains	1" stainless steel pipe plugs in each built-in tank

2200 DECK/PILOT HOUSE

The entire deck house is of welded steel construction.

Deck House Scantlings

House front	1/4" plate
Bridge Deck	3/16" plate
Sides and aft bulkhead	3/16" plate
House top	3/16" plate
Interior bulkheads	3/16" plate
House front stiffeners	4 x 3 x 5/16" Angles
House side stiffeners	4 x 3 x 5/16" Angles
House after bulkhead stiffeners	3 x 2 x 1/4" Angles
House top stiffeners	3 1/2" x 5/16" flat bar

3100 MAIN PROPULSION MACHINERY

3110 Main Engine and Gear

Caterpillar D399 4-cycle diesel engine, turbo-charged and aftercooled, rated 1125 continuous BHP at 1225 rpm with 4.22 to 1 hydraulic reverse/reduction gear, Model 7261.

Engine is equipped with the following:

Engine mounted instruments
Oil and fuel filters (full flow and by-pass type)
Fresh water cooling with separate heat exchangers for jacket water and aftercooler water
Alarm sensors for low cooling water, low oil pressure, high water temperature and high gear oil temperature
Air starting
Main engine mounted on "Fabreeka" mountings and chocks

3120 Propeller Shaft, Bearings and Propeller

Shafting is hot rolled steel, AISI C1018, turned and polished intermediate shafts are approximately 6-7/16" diameter tail shaft is 7-1/2" diameter with stainless liners, protected with three layers of fiberglass tape and four coats of polyester resin between liners.

Intermediate shaft bearings are babbitted cast iron. Stuffing box is cast bronze.

Stern bearing is flanged type rubber.

Four blade stainless steel propeller is 86" diameter, with conical tail nut balanced, ground and polished. Propeller is installed with Neoprene O-ring, stainless gland ring and welded rope guard.

3130 Main Engine Controls and Instruments

Two-station single-lever Mathers Model AD-12, or equal, mechanical/pneumatic engine controls for throttle and clutch, with fully automatic proportional delay type shaft brake. Controls are located in pilot house, with one fast idle lever starboard side. Air starting and stopping is controlled in engine room.

Engine Room Instruments

Tachometer, engine oil temperature, engine oil pressure, jacket water temperature, fuel pressure, gear oil temperature, gear oil pressure, left and right manifold air temperature, left and right exhaust temperature, start air pressure.

3130 Controls and Instruments (Continued)

Wheel House Instruments

Tachometer, engine oil pressure, gear oil pressure, jacket water temperature, fuel pressure, starting air pressure.

3200 AUXILIARY MACHINERY

Two Caterpillar 3306 turbo-charged aftercooled diesel engines, driving 240-volt, 155 KW prime rated, 3-phase, 4-wire, 60-cycle generators.

Engine will be equipped with the following:

Engine-mounted instruments and automatic shut-down.
Lube and fuel oil filters
24-volt electric starters
PTO adapters for hydraulic pump drives

3300 NON-STRUCTURAL TANKS

400-gallon hydraulic oil tank with sight gage.
5-gal. main engine cooling expansion tank

200-gallon sewage holding tank
3-gallon oil storage tank, sight gage and valves for intermediate shaft bearing lubrication.

3400 PIPING SYSTEMS

3405 Main Engine Cooling

Fresh water cooling with heat exchanger and salt water pump. After cooler fresh water cooled with separate heat exchanger.

Auxiliary Engine Cooling

Fresh water cooling with heat exchanger and salt water circulating pumps.

3415 Sea Chests

Three sea chests fabricated of 16" diameter x 1/2" wall pipe are located in the engine room to serve to crab circulating system. A sea chest with separate suctions P/S of the keel provides water for engine cooling, salt water flushing, and wash down.

3420 Engine Exhaust Piping

Independent exhaust systems will be provided with silencers and stainless steel flexible connections, suitable for main and auxiliary engines. Exhausts discharge out after side of box mast.

3400 PIPING SYSTEMS (continued)

3425 Fuel piping

2" extra heavy black suction piping from after fuel tanks to engine room day tank.

Fuel strainer
Electric power transfer pump, 50 gpm, 5 hp Worthington 6 GAUM or equal, with automatic transfer to day tank on demand
Westphalia OTA-2-00-066 fuel oil centrifuge with independent transfer
Rotary hand transfer pump, 10 gpm, Blackmer or equal.
Standard black piping or Gates hose from day tank to engines with bronze gate valves for fuel filter.

Fuel transfer meter - 50 gpm 1 1/2" Gas Boy #4060
A fuel transfer manifold permits transfer of fuel from any tank except day tank, to any other tank.

Double primary filter for main engine.
Single primary filter for each auxiliary engine.

3430 Bilge Pump and Piping

Pumping will be done with two electric motor driven bilge pumps.

Pumps: Two 3" x 3" Flomax #15, self-priming, 270 gpm centrifugal pumps each direct connected to a 10 hp, 3600 rpm electric motor.

Piping: Bilge suctions with intake screens are provided in the following compartments and are connected to the bilge manifold in the engine room:

Aft Peak	2" pipe
Lazarette	3" pipe
Engine room	2 1/2" pipe
Shaft alley	2" pipe

A 1" discharge valve is provided on the main deck, with 1" by 100' wash-down and fire hose and flange adaptor for shore connection.

3435 Salt Water Flushing System

A 1/2 hp electric motor driven pressure set, Jacuzzi 5RM2AP/S with hydrocell, provides salt water for toilet flushing. Piping is galvanized.

3440 Fresh Water System

Pressure system: 1/2 hp electric motor driven fresh water pressure set, Jacuzzi 5RM2A/S with Aqua Genie located in the engine room.

3400 PIPING SYSTEMS (Continued)

3400 Fresh Water System (continued)

Piping: 1/2 " hot and cold fresh water galvanized piping and copper tubing to galley, toilets and washer. Hot and cold outlets are mounted at bulkhead #5 on Main deck.

Hot water heater: A 52 gallon, 4000 watt electric Sears or equal domestic type water heater is provided and piped to the galley sink, lavatories, showers and washer.

3445 Crab Tank Sea Water Circulating System

Pumps: Three Deming 6" x 6" #4021-6M A1, vertical centrifugal circulating pumps. Each pump rated 1600 gpm at 38' TDH with 25 hp electric motor.

Piping: Each crab tank is supplied through 6" galvanized pipe header and six 3" perforated plastic pipes each hold. All joints will be easily accessible for inspection. Check valves are installed in each circulating header to prevent loss of water from crab tank due to pump stoppage. The system is designed so that any tank can be circulated while one is pumping down. 6 " galvanized suction runs thru shaft alley. An emergency bilge suction in the engine room will be connected to one of the circulating pumps.

3450 Hydraulic System

The basic hydraulic system takes suction from the 400 gallon tank in the engine room. Oil for each pump passes through a 140 Micron suction strainer. The port and starboard auxiliary engines each drive two Vickers 3525 double pumps through Marco DP 26 HPD's. High pressure lines supply oil to anchor winch, crane, pot boom winch, pot rack, Kinghauler and line coiler, with a 3-position selector valve provided to recirculate oil to tank if no equipment is being operated. Another selector valve diverts oil to either the anchor winch or the boom winch - pot/rack - Kinghauler circuit.

Control valves for crane and pot/boom winch are located in engine room and operated remotely by hydraulic pilot-pressure valves at main deck and foc's'le deck consoles. Pilot control oil is provided by two electric motordriven 5 gpm Vickers pumps, one of which is for stand-by. The anchor winch control valve is mounted on the winch. Kinghauler/coiler valve and pot rack valves are located at starboard bulwark.

All return oil passes through two Gresen 10-Micron filters. Piping throughout will be pickled black pipe with suitable hose connections to pumps and driven equipment.

3400 PIPING SYSTEMS (Continued)

3455 Fills, Vents and Sounding

One 3" fuel fill pipe is located at frame 6 main deck, to starboard. 2" vents run into bulwark cap, with 3" screened outlet protected by foc's'le. Oil spill cofferdam is fitted around each fill and vent station.

Fuel oil day tank vents back to main fuel tanks.

Fresh water fill and vent are located port and starboard at foc's'le bulkhead. Fill is 2"; vent 1 1/2".

Three 2" vents lead from crab holds to weather deck at crane and at foc's'le bulkead.

3460 Drains

Galvanized pipe drains are connected to each sink and plumbing fixture. Trapped deck drains are provided in each interior wet space. Waterclosets drain to sewage tank. A 3" x 3" Cornell pump Model 3NLT-3-4 discharges sewage to deck flange or to lockable through-hull valve with automatic transrer system.

3465 Compressed Air System

Two electric driven air compressors, rated at 5 CFM free air to 180 psi with 1.5 hp motors are located in engine room with two 11 cu. ft. air receivers for 200 p i working pressure. An air outlet is provided in the engine room and on deck. Air is piped to wipers in pilot house and to horn on mast.

3470 Lubrication Systems

1/2" copper tube carries oil from 3-gallon tank in engine room fiddley to the four line shaft bearings.

Dirty oil system utilizes Worthington 3 GAM reversible rotary pump 15 GPM at 50 PSI with 2 HP electric motor. Oil may be pumped from main and auxiliary engines into dirty oil tank. The same pump discharges to shore connection flange on main deck.

3475 Crank Case Vents

Pipe vents shall run from engine crank cases to goosenecks along side mast.

3500 STEERING ARRANGEMENT

Rudder will be welded single plate type with 5 1/2" diameter steel rudder stock with continuous stainless steel liner (6" O.D.). Pintle is 4" diameter stainless steel turning in 4" I.D. 'Cutless' gudgeon bearing. Stuffing box is nylon bushed.

A Wagner Model T-19 manual hydraulic steering system with 7-1/2 HP electro-hydraulic power unit shall be installed. Electric stations are located at the starboard and port bridge wings and actuate solenoid valves at power unit. Solenoid valves may also be actuated by auto pilot.

Wagner D-16 helm pump with 36" mahogany wheel is mounted on centerline.

Emergency tiller is provided in Lazarette, with padeyes for owner furnished tackle.

Hydraulic lines shall be pickled black pipe with flexible hose at power unit and T-head unit.

3600 REFRIGERATION

A walk-in freezer of about 390 cu. ft. capacity shall be installed in the port aft corner of the foc's'le. There is an interior door in the anteroom for galley frozen stores and exterior door on deck for the bait section of the freezer. A 2 HP Lehigh compressor is located in the engine room and cools the space with cold plates.

3700 HEATING AND VENTILATION

Heating

Electric heaters shall be 2000 watt, flush mounted and located as follows:

Pilot house - two
Captain's Quarters - two
Crew's quarters - one each stateroom
Galley and Mess - three
Water closets - one each
Forward storeroom - one

Ventilation

Engine room air supply: Forced air supply through one 7000 CFM 2 hp axial fan 'Acrovent' or equal with intake located in after foc's'le overhead.

Engine room exhaust: Exhaust to be through uptake in mast.

3700 HEATING AND VENTILATION (Continued)

Pilot house: Natural ventilation through windows and interior doors.

Foc'sle air supply: Forced air supply through one 1280 CFM blower, Barry or equal, with intake in after foc'sle bulkhead and discharges in the crew's staterooms and Captain's stateroom. Mess and galley exhaust through 400 CFM Nutone fan in range hood. Each toilet has a 120 CFM Vent-Axia exhaust fan.

Lazarette air supply: Two ducts run between engine room and lazarette 750 CFM blower, Barry or equal, will be mounted in the engine room.

4100 ELECTRICAL LIGHT AND POWER

General

The vessel shall be equipped with a 125/216 volt 3 phase, 4 wire, 60 hertz electrical system. Motors over 1 hp shall be rated at 230 volts, but powered by 216 volt, 3 phase system. Normal lighting shall be 125 volt, single phase except fixtures greater than 1000 watts shall be 216 volt, single phase. Emergency engine room lighting shall be 24 volt DC.

Power Generating system

AC System: Two 155 kw prime rated 125/216 volt, 3 phase auxiliary diesel generators shall be provided, each capable of carrying the entire electrical load of the vessel (see section 3200).

DC Systems: Two 24 volt battery banks, each consisting of two 140 ampere hour 4-D (12-19) batteries with a 10 amp Ratelco charger # VM 24102, shall be supplied for the starting circuit of the auxiliary engines. Either battery bank may be selected to supply the alarm panel and engine room emergency lights. A 12 volt battery, charger and 12 volt power supplies for electronics are described in section 4200.

Power Distribution Equipment

Main Switchboard: A compact, marine type, drip proof, dead front split bus switchboard shall be provided in the engine room. Equipment provided in the board shall be as follows:

1. Main circuit breaker for each generator and for shore power.

2. All bus to be copper

3. Control section including panel style ammeter and voltmeter and reed type frequency meter for each generator.

4. Panelboard section including circuit breakers for pumps, blowers, 24 VDC battery chargers, welder, sodium vapor lights, engine room lights, and feeders to two branch circuit panelboards.

4100 ELECTRICAL (Continued)

5. Mechanical interlock preventing parallel operation of generators or feeding back into shore power electrical system.

6. Bus tie circuit breaker.

Shore Power: A 120/208 3 phase 4 wire shore power receptacle, Crouse Hinds # AREA 10476-S22, shall be mounted on the vessel. A 100 ' length of # 6/4 SO cord terminating in a Crouse Hinds # ACP 10477-S22 plug shall be furnished for connection to a shore power source.

Panelboards: Two branch circuit panelboards shall be provided for power distribution to the wheelhouse and the main deck. Panels shall be 225 AMP 42 circuit load centers, Square D # Q042W suitable for flush mounting. Two 40 AMP 2 Circuit panels, Square D # Z02S, shall be provided for the DC circuits supplying the main alarm panel.

Battery Switch: A 200 AMP knife switch shall be provided to disconnect each auxiliary engine circuit from its battery.

Conductors: Cables for feeders and branch circuits shall primarily consist of shipboard cable types SGA, SJ, BSP, or HOF. In dry interior locations multiconductor PVC of brake cable shall be acceptable. Welding cable or SO cord may be used for connection to equipment when flexibility is required.

Welding Cable: Two 75' lengths of # 1/0 welding cable shall be provided for welding leads.

Enclosures: All enclosures shall be suitable for the environment in which they are located. No hubs, holes, or knockouts shall be left open. Suction boxes and splice boxes located in wet locations shall be of weatherproof construction cast brass, aluminum, or glass polyester. Boxes in damp locations may be sheet steel Nema 12 phosphatized and painted. Junction boxes and outlet boxes in dry locations may be sheet steel with a close fitting cover.

Panelboards and motor starters situated in dry locations have Nema 1 enclosures.

Raceways: Electrical conduit, when use, shall be rigid.

Control Devices:

1. Across the line magnetic motor starters shall be provided for all three phase motors. Non-reversing starters shall be 600 volt 3 pole with 3 thermal overloads, Allen Bradley type # 709. Reversing starters shall be type # 705.

4100 ELECTRICAL (Continued)

2. Forward-off reverse selector switch for the dirty oil pump shall be Allen-Bradley # 800S-3SA.

3. Pushbuttons for the whistle solenoid shall be Cole-Hersee # M 608.

4. CO_2 switch is furnished as a part of the CO_2 fire extinquishing system.

5. Pressure switches for use with the salt water and fresh water pumps are furnished with the units. Pressure switches for the fuel oil transfer pump shall be Barksdale # DITA3SS.

6. Toggle switches shall be Bryant # 4801.

7. Relays for switching of the sodium lights shall be Allen-Bradley type # 702L.

8. Whistle solenoid shall be ASCO # 8211D2.

Wiring Devices:

1. Non-watertight toggle switches shall be heavy duty Bryant # 4801, 4802, or 4803 located as shown on the plans. A Bryant #4801-PLR shall be located in the anteroom by the freezer door. A Bryant # 4822 shall be used as a selector switch for the engine room emergency light.

2. Non-water tight duplex receptacles shall be Hubbell # 5252. Receptacles shall be located as follows:

1 - In anteroom
2 - In engine room
4 - In galley
1 - In mess area
8 - In pilot house
2 - In captain's Quarters
1 - In crew's toilet room
1 - In captain's toilet room
2 - In crew's stateroom
1 - In storeroom
1 - for refrigerator
1 - for washer
1 - In void under pilot house

3. Watertight toggle switches shall be cast brass manufactured by Pauluhn. A combination switch/receptacle located in the lazarette shall be Cat. # 2532. A combination switch/pilot light # 889 shall be located on the main deck next to the freezer door.

4. Watertight receptacle on the main deck shall be a Pauluhn # 2524.

5. Welding receptacle in the main deck locker shall be a Bryant # 9306.

POWER UTILIZATION EQUIPMENT

Navigation lights: shall be # 9S4461 located as follows:

Running lights - one port, one starboard.
Range light - one on mast
Stern light - one on aft side of mast
Anchor light - one on mast

Fishing Lights: Shall be Pauluhn # 767B one each red over white on mast.

Floodlights: High pressure sodium floodlights, shall be Widelight # TLS1000. Quartz floodlights shall be Widelight # L-1500, Floodlights shall be located as follows:
2 - 1500 w. Quartz - on mast for starboard working area and aft deck.
2 - 1500 w. Quartz - on mast facing outboard.
4 - 1000w. sodium - on mast platform facing forward.
Ballasts shall be located in engine room.

Watertight Deck Lights: Shall be cast brass with globe and guard. Location and type to be as follows:

2 - in freezer	- Pauluhn # 717B
2 - port and starboard deck	- Pauluhn # 776B
1 - forward deck light	- Pauluhn # 776D
4 - deck lights on house aft	- Pauluhn # 717B
2 - Lazarette(crab tank)	- Pauluhn # 717B

Interior Lights: Non-watertight lights shall be incandescent or fluorescent located as follows:

1 - in lazarette	- #77.4	- 2' fluor
13 - in engine room	- Metalux # VT240A	- 4' fluor
2 - in galley	- #77.5	-2' fluor
1 - in engine room stair well	- #77.4	-2' fluor
1 - in anteroom	- #77.5	-2' fluor
3 - in mess	- #77.5	-2' fluor
1 - in crew's head	- #77.5	- 2'fluor
1 - in crew's head	-#153.2	-mirror light
3 - in crew's quarters	-#77.5	-2' fluor
7 - in crew's quarters	-Swivelier # 59X-0188	-bunklight
1 - in storeroom	- #77.4	- 2' fluor
2 - in captain's head	- #77.5	- 2' fluor
1 - in captain's quarters	- #77.5	- 2' fluor
2 - in captain's quarters	- #77.5	- 2' fluor
2 - in wheelhouse	- # 77.5	- 2' fluor
1 - in wheelhouse	- # 141.2 w/red filter	- chart lt.
1 - in wheelhouse	- Guest # 910	- console lt.
1 - in wheelhouse	-# 77.5	- 2' fluor
2 - in wheelhouse stairwell	- Prescolite # WB 24	- incandescent
2 - in engine room	- #9546651	- 24v. emerg. lt.
2 - in wheelhouse void	- Pauluhn #729B	- incandescent
2 - in engine room (crab tank)	- #9546656	- incandescent

4200 ELECTRONIC EQUIPMENT

A. Radars

One Decca Model 916-48 mile mounted on mast platform.
One Decca Model 926-60 mile on lower mast bracket.
One magnifier and VRM on Model 926 (without interswitch).

B. Recording Sounder

Simrad Model EX 380 600 fathom range with 10 x 20 transducer.

C. Depth Indicator

Raytheon DE726B 120-fathom/360-foot with 7041K transducer.

D. Lorans

Two Northstar 6000 Dual Loran C with auto tracking.
8 foot whip antennas.

E. VHF radio-telephone

Raytheon Model 50A or Equal
25 watts output, 55 channel.
Morad VHF-156 antenna and mounts.

F. Main Single Side-band, radio telephone

Northern Model N-550 Single Sideband Radiotelephone, 150 watt P.E.P. output, 12/24 channel, with 10 Simplex A crystals, 9 simplex B Crystals, and 2 Duplex crystals. System to include RF gain and squelch option, Northern Model N-555 antenna coupler, Morad WH-17 antenna with M-6 antenna mounts. System operates on 115 volts A.C..

G. Auto Pilot

Sperry BT Magnetic Auto Pilot System, complete with magnetic compass, amplifier, interconnect cables, junction box, electronic box, steering selector control, two rudder angle indicators, rudder angle transmitter unit, heeling error tube, and two curved quandrantal arms with 3 inch spheres.

H. Gyrocompass

One Sperry Model SR-130 Gyrocompass System, consisting of master compass, static inverter, transmission unit, power adapter, interconnect cables, one standard repeater flush-mounted in console, and one 45° heading selector

I. Intercommunication System

4-station, Raytheon Model 350 master panel in pilot house.
Slave talk-back station in mess room.
Slave talk-back station in starboard stateroom.
Weatherproof talk-back station under fo'c'sle overhead.

4200 ELECTRONIC EQUIPMENT LIST (Continued)

J. Wind-Speed Indicator

Danforth White # M50SC

K. Emergency Radio-Telephone

Northern Model N-571 Single Sideband Radiotelephone. 100 watt P.E.P. output, 11/22 channel, with 6 Simplex A crystals, 4 Simplex B Crystals, and 1 Duplex crystals. System to include Northern Model N-700 Antenna Coupler, Morad WH-17 Antenna, with M-6 Antenna Mounts. System operates on 12 volts D.C. with a separate 10 volt sealed battery, and 6 AMP Ratelco battery charger.

L. C.B. Radio-Telephone

Cobra Model 21XIR or equal citizen band transceiver, 40 channel with M-6 antenna and mounts.

M. 12 Volt Power Supplies

Four Newman Model 115-12-6B or equal power supplies are provided for 12 volt equipment in the pilot house (except the emergency radio telephone).

4300 ALARMS

A master alarm panel will be mounted in the engine room with silencing switches and indicating lights for each of the following systems. A green light indicates normal operation and a red light indicates malfunction or non-operation. The alarm bell will be located in the anteroom. An additional alarm panel with red warning lights, is located in the pilot house, which indicates malfunction only.

Main Engine

High temperature, low oil pressure expansion tank low water level, and gear oil high temperature alarms.

Auxiliary Engine

High temperature and low oil pressure alarm, set to ring before automatic shutdown.

Bilge

High water sensors located in engine room and lazarette bilges.

Hydraulic Oil Tank

Low level alarm set for 200 gallons remaining.

Fuel Oil Day Tank

Low level alarm set below automatic fuel transfer.

Sewage Holding Tank

High level alarm.

4300 Alarms (Continued)

Flow Alarm

Three flow alarm senders for crab sea water system will be provided to work in conjunction with the basic alarm panel in the engine room.

Bearing Temperature

Install four main shaft bearing temperature sensors with readouts in engine room entry. Connect the system to main alarm bell.

4400 ANODIC HULL PROTECTION

Hull anodes will be 24-pound weld type cast with high purity zinc as supplied by Federated Metals Corporation or Bunker Hill Corporation. A total of 24 will be uniformly distributed on rudder, skeg, bottom, and bilge keels. One 12-pound zinc anode will be installed in each sea chest. Four 24-pound zincs will be welded in each crab tank. Three 1" Sentinal or equal pencil anodes are fitted in crab circulating pipes adjacent to pumps.

5000 JOINER, CARPENTER INSULATION

5100 JOINER AND CARPENTER WORK

Interior Bulkheads and Sheathing (General)

Joiner bulkheads will be 3/4" plywood
Sheathing will be 3/8" plywood
Galley, mess, Captain's and crew's staterooms and pilot house will be formica or equal; carpet will be behind crew's berths on bulkheads.
Overheads in quarters will be 24" x 24" Armashield, or equal.
All wood trim will be oiled teak.

5120 Pilot House

Steering console with autopilot, radar and sounder at starboard station.
Chart table with three chart drawers
Overhead will be 3/4" Formica faced plywood.
Captain's chair(starboard)

Captain's Quarters

One double berth starboard with 3 drawers underneath
One hanging locker
One table and settee with Naugahyde covered polyfoam cushions and 2 drawers underneath
One desk with fixed sliding chair
One single berth and hanging locker to port
One file cabinet

5160 Crew's Quarters

Three staterooms provided with the following:

Berths with 2 drawers under lower berths.
Hanging locker and stowage racks.
Bulkhead mirror

5150 Mess Room (Starboard aft)

Pedestal tables with Formica covering and condiment rack.
Dinette seat lockers with Naugahyde covered polyfoam cushions.
Storage shelf above dinette.

Galley (Starboard)

Formica covered counter.
Drawers and lockers with doors above and below counter top.
Locker over refrigerator.
Stainless behind stove units.

5100 JOINER AND CARPENTER WORK (Continued)

Captain's and Crew's Toilets

Built-in counter with stainless wash basin
Built-in medicine locker, mirror, soap dish, etc.
Shower with rod and curtain.
Overheads will be 3/3" formica faced plywood.
Anteroom

Stacked clothes dryer and washer are located at forward bulkhead.
Engine room entry will be lined with 1/4" perforated board.
Overhead will be 3/8" formica faced plywood.

5180 Forward Storeroom

The storeroom will have two storage shelves port, starboard, and forward, set in angle frames.

Lazarette

The lazarette will be fitted with 2 x 4 wood grating from forward bulkhead aft to the second web frame.

Shelving shall be provided port and starboard from forward bulkhead to after bulkhead, and shall be 3 feet deep and two courses high, with suitable sea rails.

5190 Main Deck

2 x 6 flat fir grating on main deck, between fo'c'sle deck and raised poop. Top surface will be flush with the hatches and poop. The grating will be free of surface obstructions which might snag pots.

Crab Holds

Removable fore and aft pen boards are located on the hold bottom below the outboard hatch coamings in each tank These boards are the full length of the holds and are 3" x 12" rough fir, three high.

5200 DOORS, PORTS, WINDOWS AND HATCHES

5210 Doors

Interior doors - 9 required, constructed of mahogany plywood faced with formica.
Two exterior doors in Pilot House - aluminum with two safety glass windows (Dutch door starboard side.).
One weathertight door in after fo'c'sle bulkhead with 6" fixed light
One weathertight aluminum door to engine room.

5200 DOORS, PORTS, WINDOWS AND HATCHES (Continued)

Ports and Windows

Front and side pilot house windows will be 1/2" heat tempered glass in aluminum frames. All others are 3/8" heat tempered glass.

2 - Vent top windows in Captain's quarters: 1-port, 1-starboard
2 - fixed windows located in captain's quarters starboard side.
17 - fixed windows located in pilot house.
2 - drop windows located in pilot house sides.
1 - Vent top and one fixed window located in mess aft.
4 - 8" fixed lights in hold bulkheads.

Hatches

3 - Steel flush, watertight main hatches, each with 20" galvanized Baier
1 - lazarette hatch 3 1'2 x 5' flush, bolted watertight with 20" galvanized Baier
2 - quick acting flush, watertight deck scuttles, 20" Baier or equal, for engine room and fo'c'sle crew escape.

Manholes

Bolted manholes shall be fitted in each built-in oil and fresh water tank, and to the forepeak void.

5300 INSULATION

Living Quarters

Hull and house sides exposed to weather in main deck living quarters, pilot house and captain's stateroom are sprayed with 1" Cafco or equal. Deck heads in main living quarters exposed to weather will be covered with 1" Microlite or equal, with F.S.K. vapor barrier. 1" Cafco will also be applied to outside of uptake in galley and pilot house.

Engine Exhausts

All engine exhaust pipes and silencers will be lagged with 1" Temp-Mat blanket throughout.

Freezer Compartment

Sides and overhead of freezer compartment are lined with 6" Spinglas and sheathed with 3/4" marine grade plywood. The bottom is insulated with 6" Foamglas and covered with 3/4" plywood and fiberglass.

Void under Holds

Polyurethane foam outboard of shaft alley (2 lbs./CF).

Forward Storeroom and Lazarette

The forward storeroom and lazarette above the waterline will be coated with Chemshield 1503R insulating paint, applied to 40 mils. thickness.

6100 PAINTING AND PREPARATION

Sandblasting and Painting Preparation

All steel plating, framing and bulkheads are wheel-abraded and inorganic zinc prime coated before construction. All exterior shell plating, decks, bulwarks, and crab tanks have the welded areas sandblasted to bright steel. All sandblasted surfaces are to be prime coated within two hours.

Painting Schedule

Bottom Paint:

1	Devran	230	Red/Brown	8 MILS
1	Devran	230	Black	8 MILS
1	Devran	216	Anti-Fouling	2 MILS

Hull Exterior:

2	Cathacote	302	Inorganic Zinc	2 1/2 MILS
1	Devran	201	Primer	2 MILS
1	Devran	229	Finish Coat	2 MILS

Deck (Under Grating and Inside of Bulwarks):

2	Catacote	302	Inorganic Zinc	3 MILS
1	Devran	201	Primer	2 MILS
1	Kel-Kote	206	Coal Tar Compound	To Cover

Foc'sle and P.H. Top (Non-Skid Areas):

1	Cathacote	302	Inorganic Zinc	3 MILS
1	Devran	201	Primer	2 MILS
1	Kel-Kote	206	Coal Tar Compound	To Cover

Crab Tanks

2	Devran	244 HS	Tank Coating	4 MILS (Each Coat)

Fresh Water Tanks:

1 Cement Wash

Interior (Exposed Steel):

1	Brolite	P-93	Zinc Chromate	1-2 MILS
1	Brolite		Flat Undercoat	4 MILS
1	Brolite		Gloss Finish	2 MILS

6100 PAINTING AND PREPARATION - Continued

Voids, Chain Locker:

1 Devran	201	Primer	2 MILS
1 Devran	230	Black Anti-corrosive	2 MILS

Spray one coat water base latex paint over Cafco insulation. Paint draft marks with contrasting color, port and starboard, fore and aft.

Paint name both sides of bow and on centerline aft, 3' logo on stem, and provide basic labels. One contrasting stripe will be applied around the pilot house.

6200 CEMENT AND SPECIAL COATINGS

Cement

Cement will be installed in bilge areas to facilitate drainage.

Deck Coverings

Main deck over engine room will be covered with 1" light weight aggregate and epoxy sub-base.

Exposed deck areas within the foc's'le and upper house shall be finished with 3-M 'Colorflake' or Armstrong 'Commendation' carpeting.

6300 GALLEY AND ACCOMMODATION EQUIPMENT

Ranges and Ovens	General Electric deluxe cabinet mount oven Model JKS 06 General Electric push button counter top range Model JP 651 Frigidaire electronic built-in oven, RWM7 Jenn-air counter top barbecue, Model 2360
Double Sink	Stainless steel, with trap and swing spout
Refrigerator	Frigidaire 17 cu. ft. with freezer, Model PCI 170T, 2 door
Waterclosets	Flush type in crew's and captain's toilets
Shower Stall	30" x 30" for each toilet with rod and curtain
Lavatories	Stainless steel in crew's and captain's toilets
Mattresses	polyfoam with cotton ticking
Washer and Dryer	Westinghouse stack type LA 170/DE 170

6400 DECK OUTFIT

6410 Mooring Equipment

Main anchor 2,000 lb. Navy or equal
120 fathoms 1-1/8" stud link chain, galvanized
11" diameter anchor roller
3 - closed chocks in bulwark aft
6 - closed chocks in foc's'le bulwark
4 - double bitts, 2 forward, 2 aft
2 - 100' x 2" polypropylene mooring lines
12 - 12" x 24" hinged aluminum freeing ports
4 - 30" cleats on foc's'le deck

6400 Deck Outfit (continued)

6420 Safety and Navigation Outfit

10 - life jackets
2 - ring buoys
8 - fire extinguishers. (1) 15# CO_2 and (2) 10# Dry chem in engine room; (1) 10# dry chem in ante room; (2) 2 1/2 #Dry chem in fo'c'sle (galley and quarters); (2) 2 1/2 # Dry Chem in pilot house and captains quarters.
2 - inflatable life rafts, Elliott or equal, 6-man capacity
Magnetic compass starboard side - 4" Ritchie DP60

Bronze bell 8"
Air horn, Cunningham Model 3A or equal
Three windshield wipers, air driven Trico or equal
Three defrosters, Arvin # 29H60
Install engine room fixed CO_2 system consisting of six 75 lb. bottles with remote control in anteroom and automatic blower shutdown.

6430 Ladders and Handrails

Inside ladders are provided to engine room, fo'c'sle deck, and pilot house.
Outside inclined ladders lead from main deck to fo'c'sle deck and from fo'c'sle deck to bridge wings port and starboard.
Vertical ladders are provided in lazarette and at engine room and fo'c'sle emergency escapes.
1 1/2" pipe handrails are fitted on fo'c'sle deck sides and aft.
1 1/4" pipe stormrails are fitted on deck house , sides, and front.
3/4" rungs are welded inside and outside mast.

6440 Masts and Booms

Masts

Main mast is tapered rectangular box shape, fabricated of 5/16" and 1/4" plate and built integral with deck house.
Suitable brackets are provided for radar antennas, range light, air horn, crab lights and radio antennae with 5' x 8' mast platform.

Pot Boom

Pot boom to starboard will be 28' x 6" pipe with 3" and 4" pipe adjustable strut.

6450 Running Rigging

Pot boom topping lift: 3/4" polypropylene, 5 parts with 6" wood blocks and 5/8" wire safety pendent.

Pot boom fall: 75' x 1/2" wire rope whip with 10" galvanized oval block, and fabricated 1 1/4" steel pot hook.

6400 DECK OUTFIT (Continued)

6460 Engine Room Outfit

Engine room floor plates will be aluminum diamond plate. A Steel work bench will be located in the forward part of the engine room with a 5" vise and drawers under. A stowage locker for miscellaneous fittings and filters will be provided. A Sears 230 amp welding machine will be wired to a receptacle in the main deck locker.

6500 DECK MACHINERY

Deck Machinery for a basic King Crab vessel will consist of:

Marco Model A5031 hydraulic anchor winch, with wildcat, single gypsy and local controls.

Rowe 8 ton crane to port with base raised 36", complete with Marco W3000 winch, 110' of 1/2" 6 x 37 wire cable and pot basket.

W3000 Marco winch for pot boom with 75' of 1/2" 6 x 37 wire.

6600 FISHING GEAR

The fishing gear for a basic King Crab vessel will be as follows:

Marco KingHauler J0111 with 5" galvanized pipe davit.

Marco J2111 KingCoiler.

Marco double-acting pot rack with 3" Sch. 80 galvanized pipe frame and two T-J 4" x 1 3/4" x 22" hydraulic cylinders. and manual dogs.
8' x 30' x 1/4" steel safety treat plate on deck grating fitted aft of pot rack.

Aluminum crab loading hopper.

MARCO SEATTLE
2300 West Commodore Way
Seattle, Washington 98199

SPECIAL CONDITIONS

In addition to the work described in the attached Specifications, the Builder will accomplish the following:

1) Upon completion of the hull, Builder shall arrange for Customs admeasurement through the U. S. Coast Guard. Builder will supply a Master Carpenter's Certificate and provide other necessary information to Purchaser as required for documentation. Upon assignment of official number, same will be marked into the vessel's structure and the name and hailing port shall be painted in accordance with Maritime Law.

2) Upon completion of the vessel, Builder will conduct dock and sea trials, testing all systems and equipment and demonstrating the vessel's capability to Purchaser's satisfaction. Fuel and lube oil for the trials will be supplied by Builder.

3) Builder will conduct an inclining test and provide a stability report to Purchaser.

4) At the time of acceptance, Builder will provide Purchaser with two sets of Marco standard general information books, which include basic instructions, major equipment lists with model and serial numbers, electrical and piping diagrams, arrangement plans, docking plan, propeller shafting and rudder details, together with manufacturers' instruction manuals where available.

5) Upon completion of trials and correction of any deficiencies, the vessel will be cleaned of all shipyard gear and debris, the painting touched up and the entire vessel left in shipshape condition.

6) The Builder will provide signal flags, bunting, flowers, champagne bottle and public address system for the christening of the vessel. An additional sum of $1,000 will be allowed for Purchaser's reception.

122' BASIC CRABBER

Addendum No. 1
to
Specification E-225-1
dated
22 February 1980

Reference drawings: E-225-3-1100-1-7, -2-7, -3-7, Rev. A

3300 Non-Structural Tanks

Delete the 200-gallon sewage holding tank.

3460 Drains

Delete the 3" x 3" Cornell Model 3NLT-3-4 sewage pump with automatic transfer system and 3" main deck discharge.

Substitute a Red Fox Model RF-05-MP USCG Type II marine sanitation device rated for 8 persons continuous and up to 12 intermittent (4-day duration).

Unit to be equipped with the following:

1) Air regulator and gauge to reduce ship's air supply to 4 SCFM at 2 PSI

2) High-level alarm sensor in the discharge sump

Install a 2"-dia. galvanized steel overboard discharge line with bronze gate and check valves. A 2"-dia. galvanized steel vent will be discharged 19' above the main deck at the after side of the mast.

5180 Forward Stateroom

Convert the forward storeroom into a 3-man stateroom complete with lockers and additional door to port. Relocate the fixed CO_2 bottles to the engine room.