U.S. Department
of Transportation

**Maritime
Administration**

Report on Survey of U.S. Shipbuilding and Repair Facilities

1993

REPORT ON SURVEY OF U.S.

SHIPBUILDING AND REPAIR FACILITIES

1993

Prepared By:

Office of Ship Construction

Division of Production

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Introduction

In compliance with the Merchant Marine Act of 1936, as amended [1/], the Maritime Administration (MARAD) conducts an annual survey to obtain information from the shipbuilding and ship repair industry to be used primarily to determine if an adequate mobilization base exists for national defense and for use in a national emergency. This report on the 1993 survey of U.S. shipyard facilities was prepared by the Division of Production, Office of Ship Construction, and is for general use within the Maritime Administration and other Government agencies.

[1/] Section 210

"It shall be the duty of the Secretary of Transportation to make a survey of the American merchant marine, as it now exists, to determine what additions and replacements are required to carry forward the national policy declared in Section 101 of the Act, and the Secretary of Transportation is directed to study, perfect, and adopt a long-range program for replacements and additions to the American merchant marine so that as soon as practicable the following objectives may be accomplished: ...Fourth, the creation and maintenance of efficient shipyards and repair capacity in the United States with adequate numbers of skilled personnel to provide an adequate mobilization base."

Section 211

"The Secretary of Transportation is authorized and directed to investigate, determine, and keep current records of ... (g) The number, location, and efficiency of the shipyards existing on the date of enactment of this Act or thereafter built in the United States."

Section 502(f)

"The Secretary of Transportation with the advice of and in coordination with the Secretary of the Navy, shall, at least once a year, as required for purposes of the Act, survey the existing privately-owned shipyards capable of merchant ship construction, or review available data on such shipyards if deemed adequate, to determine whether their capabilities for merchant ship construction, including facilities and skilled personnel, provide an adequate mobilization base at strategic points for purposes of national defense and national emergency."

The statistical data accumulated by the survey are a major input into the Shipyard Evaluation Analysis System Model (SEAS), a quantitative assessment of the Nation's ship construction and ship repair capability. This capability is periodically compared with Department of Defense scenarios involving various contingency attrition rates and emergency civilian shipping requirements to assess the adequacy of the shipbuilding mobilization base, including ship repair and reactivation of the Maritime Administration reserve fleet and the U.S. Navy reserve fleet.

The survey also provides a database that is used to evaluate the feasibility of proposed shipbuilding programs. Determinations are made as to which existing shipyards might construct proposed ships consistent with ship size and delivery date requirements. The need for construction of new facilities to meet the demands of proposed shipbuilding programs can be also identified. The data gathered by the annual survey also are used extensively in MARAD responses to queries received from a variety of interests, including members of Congress, the Secretary of Transportation, the Department of Defense, the Office of Management and Budget, and other Government agencies.

Each year in late spring, Standard Form 17, "Facilities Available for the Construction or Repair of Ships," is mailed to some 325 U.S. shipbuilding and ship repair facilities. The survey form was developed jointly by MARAD and the Navy. A completed Form 17 represents a detailed description of a shipbuilding or ship repair facility, which is not available from any other source on a continuing and structured basis. The information requested, and available for official use, can be reviewed on a blank Form 17 shown herein as Appendix A. A graving dock characteristics summary and floating drydock characteristics summary are appended to Standard Form 17 to better identify the characteristics of the facilities.

Upon receipt of a completed Form 17 from a shipyard, MARAD forwards a copy to the Naval Sea Systems Command, Industrial Planning Division, which maintains records of available facilities and capacities of various shipyards and repair plants. This would enable the Department of Transportation and the Department of Defense to use such facilities to the best advantage in the event of national emergency.

The annual shipyard survey of 1993 has been completed. The information collected has been organized and condensed in the following narratives, exhibits, and tabulations to focus attention on those elements that are most often requested from this office.

GENERAL

A major shipbuilding and repair facility is defined in this report as one that is open and has the capability to construct, drydock, and/or topside repair vessels with a minimum length overall of 122 meters, provided that water depth in the channel to the facility is at least 3.7 meters. Appendix B is a statistical abstract of data gathered from 102 companies responding to MARAD's annual survey which meet these criteria. It lists the facilities sorted on a coastal basis and displays information with respect to the size and type of each building position, drydock, berth space, employment, and remarks regarding principal shipyard activities.

Table 1 (page 61) has been prepared to answer the frequent question as to the number of shipbuilding positions available to build a complete specified ship. With the exception of the mobilization ship, the ship types listed in Table 1 are those historically delivered to commercial service. Length overall and beam are given for all ships and, in addition, deadweight tonnage is indicated for the bulk carriers. A single shipway or basin may have several building positions depending on the size of the ships being constructed. For example, the 365 meter by 59 meter basin at BethShip's Sparrows Point Yard can accommodate one 265,000-dwt tanker or four of the smaller general cargo ships. The total number of building positions varies from 79 for the small cargo ship to three for a huge 265,000-dwt tanker. An important consideration that is not addressed in Table 1 is the common shipbuilding practice of laying a keel on a building position already occupied by another ship. For example, in a 213-meter basin, a complete 186-meter containership and the stern section of a second ship could be constructed simultaneously. This production procedure maximizes the use of shipbuilding facilities, minimizes the construction period, and increases the number of ships that can be produced in a given period of time. Table 1 addresses only the number of complete ships that can be constructed simultaneously in each building position(s).

Table 2 (page 83) is a somewhat different presentation of shipyard capability. In lieu of actual ships, maximum ship length is used to determine the number of shipways or basins available. In this tabulation, the emphasis is on the number of individual facilities available and not on the number of ships that can be constructed. Again, using the BethShip Sparrows Point Yard as an example, Table 2 lists the 365 meter by 59 meter basin as one facility regardless of what type of ship is constructed in it. Table 1 indicates that there are six building positions for a ship 145 meter LOA at the Sparrows Point Yard, whereas Table 2 indicates that the yard has three individual building positions capable of constructing a ship about that length. Exhibit 20 is a histogram displaying the reduction in the number of available building positions as the maximum ship length increases.

MAJOR SHIPBUILDING FACILITIES

The following is a brief description of 18 of the major U.S. privately-owned shipbuilding facilities. Exhibits 1 through 18 are general arrangement drawings of each yard's facilities. Exhibit 19 illustrates the geographical location of these shipyards in addition to the General Dynamics Corp.'s Electric Boat Division which, although a major privately-owned shipyard, is engaged exclusively in construction of submarines for the U.S. Navy.

DESCRIPTIONS

AND

GENERAL ARRANGEMENT DRAWINGS

FOR

18 MAJOR U.S. SHIPBUILDING FACILITIES

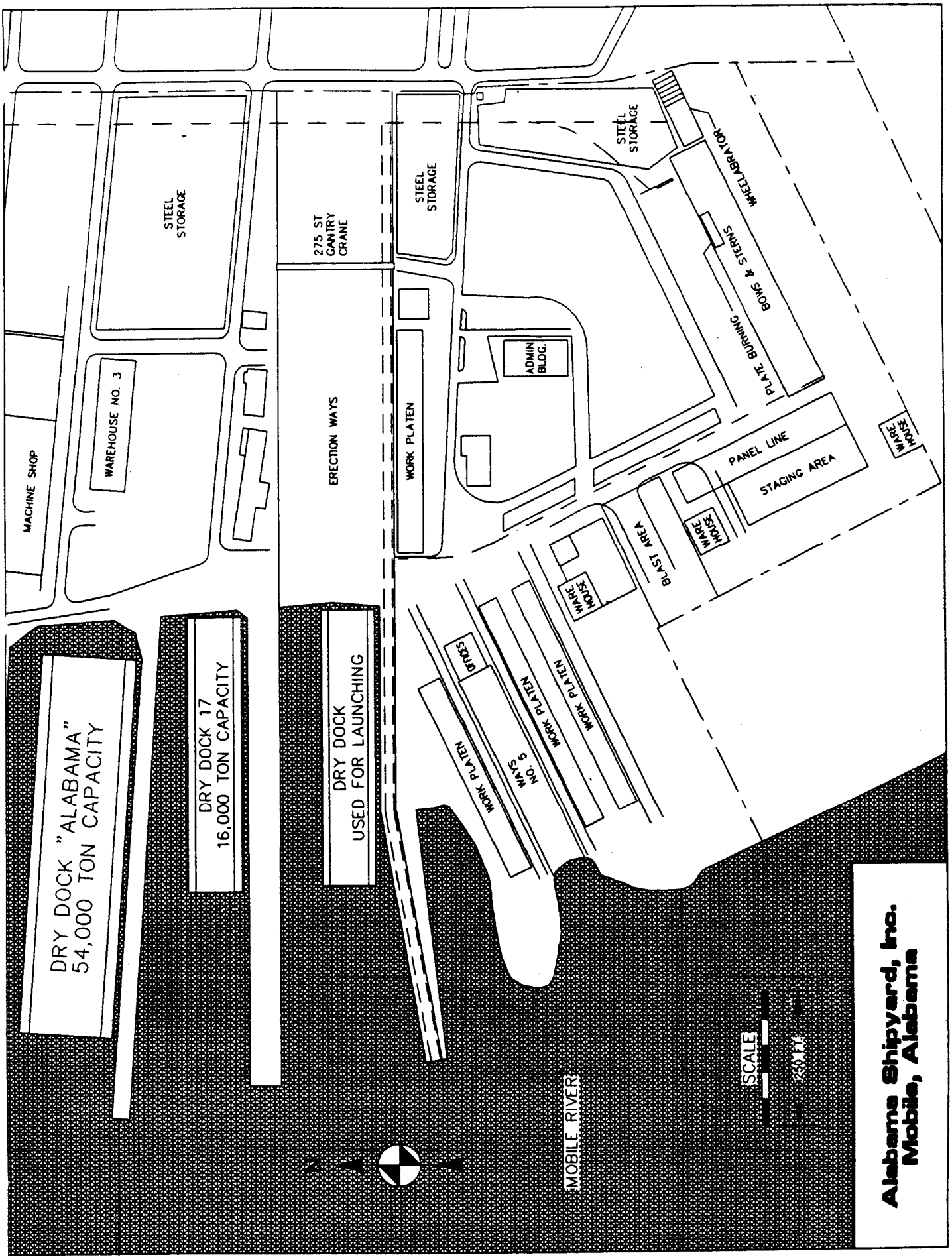
1. Alabama Shipyard, Inc.

Alabama Shipyard, Inc., is a wholly owned subsidiary of Atlantic Marine Holding Co. of Jacksonville, FL. Alabama Shipyard, Inc., (formerly ADDSCO's Alabama Maritime Corp.), is a new construction facility specializing in both marine and industrial fabrication. The shipyard is located on the Mobile River, across the river from Mobile, Alabama, about 48 kilometers from the Gulf of Mexico. Acquired by Atlantic Marine in 1989, the yard has been in existence since 1916 and has constructed a variety of ships (both commercial and naval), barges and drill ships.

As of October 1, 1993, work underway at Alabama Shipyard included construction of eight crane barges for the U.S. Navy, one 1,100 ton specialty barge for Lockheed's ASRM program and 4,500 metric tons of duct work for American Electric Power.

Alabama Shipyard, Inc., is capable of constructing ships up to a maximum size of 290 meters by 50 meters. The shipyard has 12,076 square meters of manufacturing space, 7,432 square meters of covered warehouse space, two finger piers with total usable pier space of 1,219 meters, and a 250-metric ton bridge crane. Various other gantry cranes, as well as a plate shop and a carpenter shop, are available for construction. The yard has a 4 meter by 0.5 meter high fully automatic (enclosed) blast and prime facility.

As of mid-1993, Alabama Shipyard's employment totaled 264, unchanged from a year earlier.


DRY DOCK "ALABAMA"
54,000 TON CAPACITY
DRY DOCK 17
16,000 TON CAPACITY
DRY DOCK
USED FOR LAUNCHING
MACHINE SHOP
WAREHOUSE NO. 3
STEEL STORAGE
ERECTION WAYS
275 ST GANTRY CRANE
STEEL STORAGE
WORK PLATEN
ADMIN BLDG.
STEEL STORAGE
WHEELABRATOR
PLATE BURNING
BOWS & STERNS
PANEL LINE
STAGING AREA
WARE HOUSE
BLAST AREA
WARE HOUSE
WARE HOUSE
CROSS
WORK PLATEN
WAYS NO. 5
WORK PLATEN
WORK PLATEN
MOBILE RIVER
SCALE
250 FT.
Alabama Shipyard, Inc.
Mobile, Alabama

2. Avondale Industries, Inc. - Shipyards Division

Avondale's Shipyards Division is located on the west bank of the Mississippi River approximately 22 kilometers upriver from New Orleans, LA. Avondale, previously a wholly owned subsidiary of Ogden Corp., was sold in 1985 to its employees in an Employee Stock Ownership Plan (ESOP). Since 1938, Avondale has constructed a full range of Navy and commercial ships, as well as Coast Guard cutters and offshore drilling rigs, platforms, jackets, and production modules. It has the distinction of being the only American shipyard to have constructed LASH vessels.

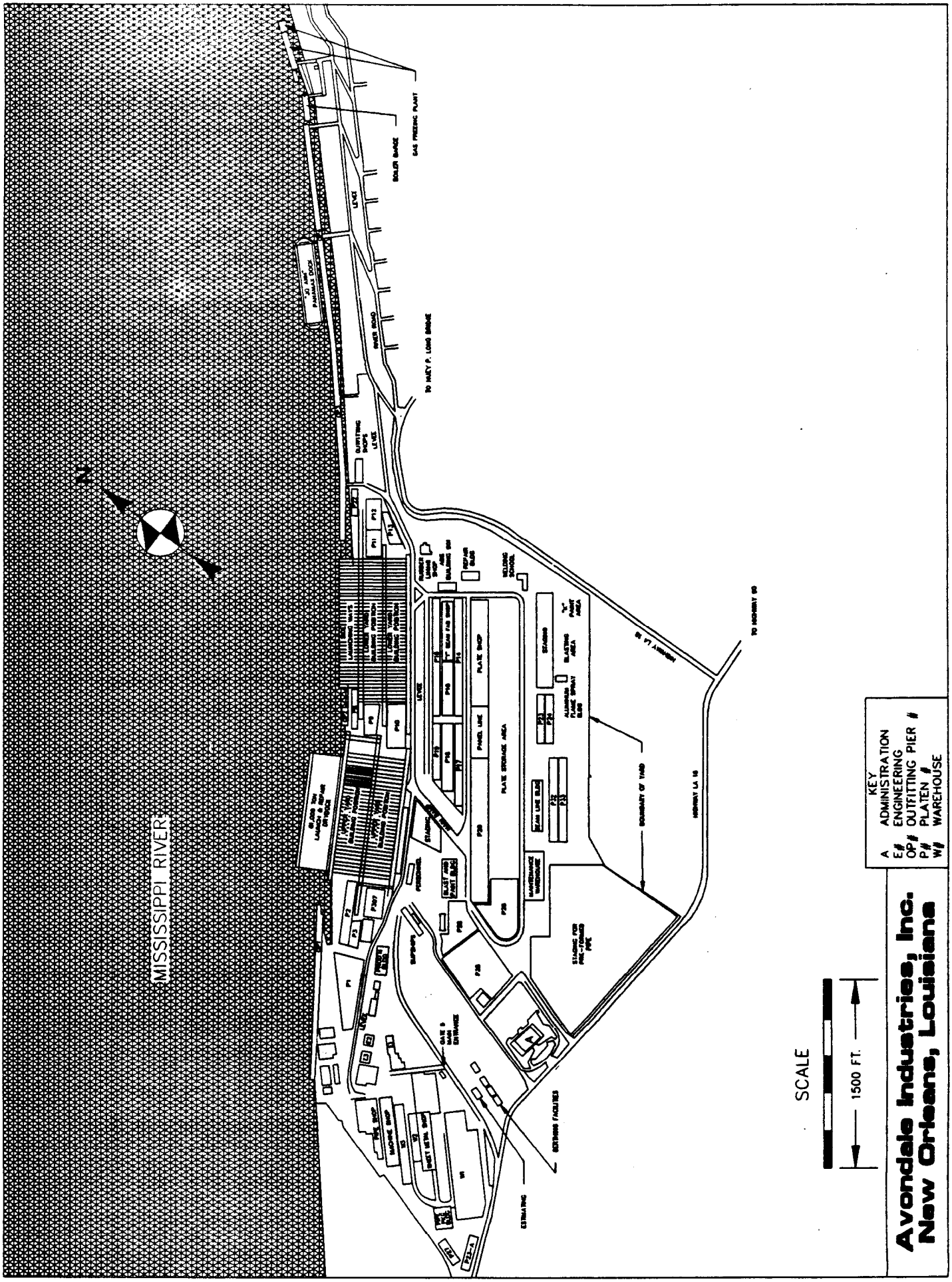
Avondale also maintains an active repair operation for commercial and naval vessels. Ships and offshore drilling rigs are repaired by Avondale's Shipyards Division. Inland waterway and offshore oil vessels are repaired by Avondale's Algiers Yard.

Avondale's new construction orderbook as of October 1, 1993, consisted of one fleet oiler (T-AO), three double-hull fleet oilers (T-AO's), three dock landing ships (LSD's), one WAGB Polar icebreaker, and one Roll-On/Roll-Off Sealift Ship with an option for five additional Sealift Ships. The Boat Division has an orderbook consisting of two 19th century-style paddlewheel gaming vessels.

Avondale's Shipyards Division totals 108 hectares and contains three outfitting docks equipped with supporting shops and over 1,431 meters of pier space. The upper yard shipbuilding area has two large positions to accommodate vessels of up to 311 meters in length by 53 meters beam. The major part of one ship can be erected along with the stern section of a second ship on position No. 1, while a third hull is being completed on position No. 2. Ships constructed in the upper yard move laterally in three positions for launching by Avondale's 81,000-ton floating drydock, which can accommodate ships as large as 305 meters by 66 meters, with a lifting capacity of 82,296 metric tons. Avondale's lower yard has a side-launching construction area that has three large positions to accommodate ships as large as 366 meters by 38 meters. Ships built in the lower yard move laterally toward the river and parallel to the river in five positions. Up to five large vessels, greater than 213 meters LOA, can be constructed simultaneously in the lower yard. A 20,000-ton Panamax floating drydock, which can accommodate ships up to 229 meters by 35 meters and has a lifting capacity of 20,320 metric tons, is moored in this area.

Avondale's Boat Division, located at nearby Westwego, LA, facility is capable of building vessels 137 meters long by 27 meters beam. In 1988, Avondale long-term leased the ex-Todd Shipbuilding Corp.'s New Orleans yard which is now called the Avondale Algiers Repair and Overhaul Facility and is used for ship repair, conversion, and overhaul.

In mid-1993, the total employment was about 5,000, down from 6,500 a year earlier.


MISSISSIPPI RIVER
N
SCALE
1500 FT.
KEY
A ADMINISTRATION
E/ ENGINEERING
OP/ OUTFITTING PIER #
P/ PLATEN #
W/ WAREHOUSE
Avondale Industries, Inc.
New Orleans, Louisiana

3. Bath Iron Works Corporation

Bath Iron Works Corp. (BIW), a wholly owned subsidiary of Bath Holding Corp., is located on the Kennebec River in Bath, ME. The small iron foundry which was established on this site in 1826 became Bath Iron Works, Ltd., in 1884, and the first shipbuilding began in 1889. This yard has constructed various type of ships including roll-on/roll-off cargo vessels, containerships, tankers, dredges, barges, and fishing vessels. Bath also has built 225 surface Navy combatants.

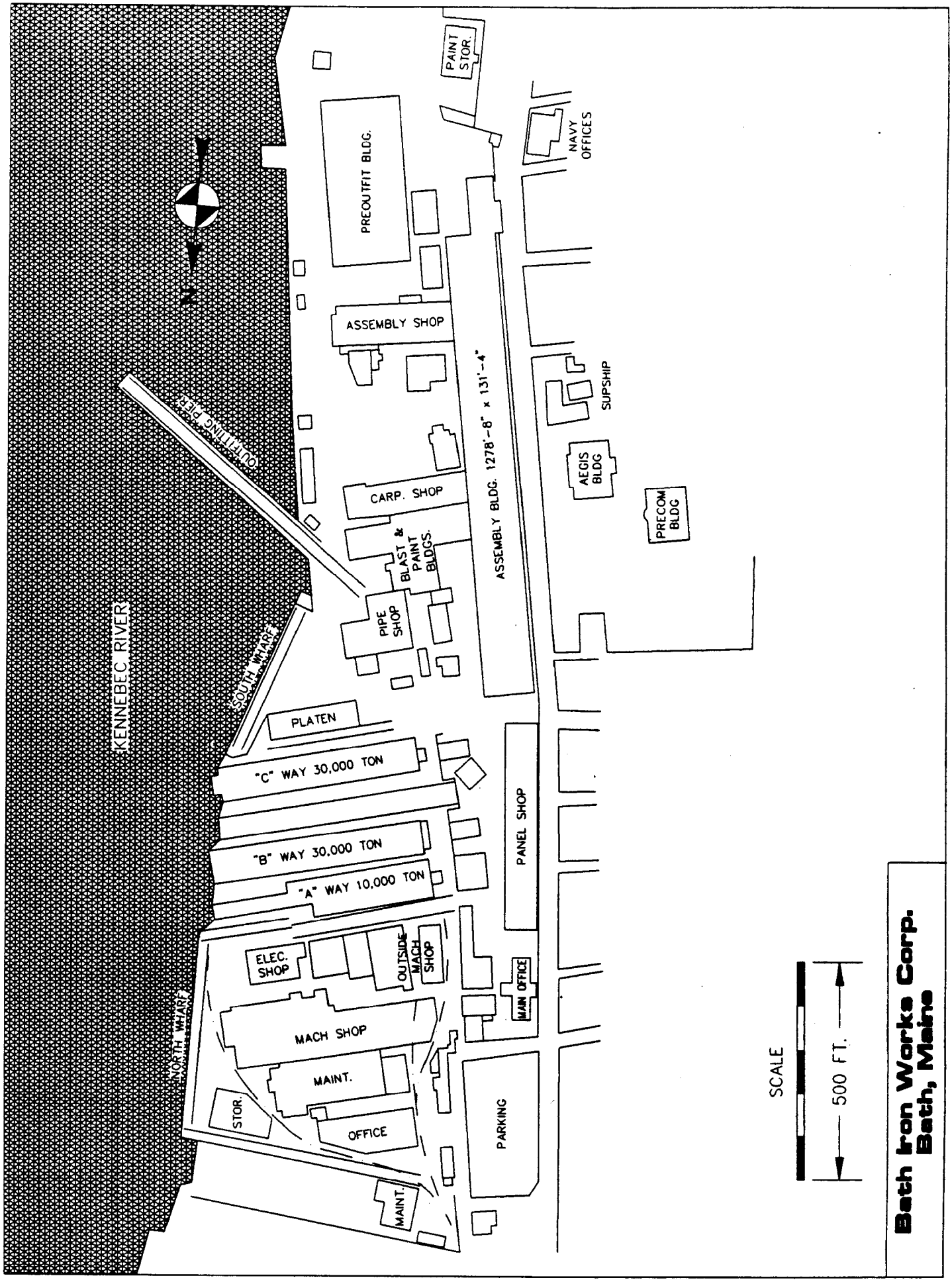
BIW was the lead shipbuilder for the Navy's guided missile frigate (FFG 7 Class) program and was awarded contracts for the construction of the 24 FFG 7 Class frigates. In 1982, the Navy selected BIW as its second source for the high-technology CG 47 Class AEGIS cruiser program, awarding the company contracts to build eight of these TICONDEROGA Class cruisers - the last of which is scheduled for delivery in 1993. In 1985, BIW was selected as the lead shipbuilder for the design and construction of the Navy's DDG 51 Class guided missile destroyer program. The lead ship, USS ARLEIGH BURKE was delivered in 1991. Fourteen more DDG's have been ordered from BIW - the last is scheduled for delivery in 1998.

BIW's facilities include two shipways to accommodate ships of 219 meters in length with a maximum beam of 39 meters, or two ships per way with a beam of 16 meters each; and a 220 metric ton level-luffing crane with sufficient outreach to erect units on both shipways. The pre-outfit building, opened in 1987, is 61 meters by 125 meters and has 18 work stations for 219 metric ton erection units. BIW also added a new 220 metric ton capacity revolver crane to serve the third shipway. The shipway can accommodate a ship 213 meters in length with a beam of 26 meters. Two wharves and a pier provide a total of 655 meters.

BIW operates two support facilities in East Brunswick, located 5 kilometers from the main plant. The 13 hectare Hardings fabrication plant is where the initial steel fabrication takes place. The 24 hectare East Brunswick facility is the location of the 113,000 cubic meter consolidated warehouse which uses state of the art equipment to accomplish the transfer, handling, and storage of shipbuilding inventory. A new 11,148 square meter pipe and sheet metal fabrication facility was added in 1989.

BIW operates the Portland Overhaul and Repair Facility in Portland, ME. This facility has a large floating drydock with a lifting capacity of 65,000 metric tons, which can accommodate a vessel up to 257 meters by 41 meters. This facility also supports new construction programs as the site where sonar dome installations and Post Shakedown Availabilities are performed.

As of mid-1993, the company employed a total of 9,300 compared to 9,960 a year earlier.


KENNEBEC RIVER
NORTH WHARF
SOUTH WHARF
OUTFITTING PIER
PAINT STOR.
PREOUTFIT BLDG.
NAVY OFFICES
ASSEMBLY SHOP
ASSEMBLY BLDG. 1278'-8" x 131'-4"
SUPSHIP
AEGIS BLDG
PRECOM BLDG
CARP. SHOP
BLAST & PAINT BLDGS.
PIPE SHOP
PLATEN
"C" WAY 30,000 TON
"B" WAY 30,000 TON
"A" WAY 10,000 TON
PANEL SHOP
ELEC. SHOP
OUTSIDE MACH SHOP
MAIN OFFICE
MACH SHOP
MAINT.
STOR.
OFFICE
PARKING
MAINT.
SCALE
500 FT.
Bath Iron Works Corp.
Bath, Maine

4. BethShip Sparrows Point Yard

The BethShip Sparrows Point Yard is located on the Patapsco River in the port of Baltimore, MD. Established in 1891, the yard became a part of the Bethlehem organization in 1916 and served as a major shipbuilder during two world wars. During World War II, Sparrows Point constructed 101 vessels of 16 different classes. During the 1950's, 1960's and 1970's, the yard was among the most active in the nation, specializing in series construction of standard size tankers up to VLCCs, freighters, and containerships.

Since the beginning of 1981, the yard has constructed six Integrated Tug Barge (ITB) tankers, six offshore drilling rigs, two container feeder barges, and two oceanographic survey ships for the U.S. Navy. During this same period the yard has adapted to changing markets by increased efforts in ship conversion, repair and industrial fabrication. In addition to numerous drydockings and repairs on commercial and Naval ships, three RO/ROs have been converted to Maritime Prepositioning Ships, five RO/ROs have been reflagged, and tunnel sections for a new Interstate 664 Hampton Roads Tunnel Complex and tunnel sections for the new Interstate 90 project in Boston have been completed.

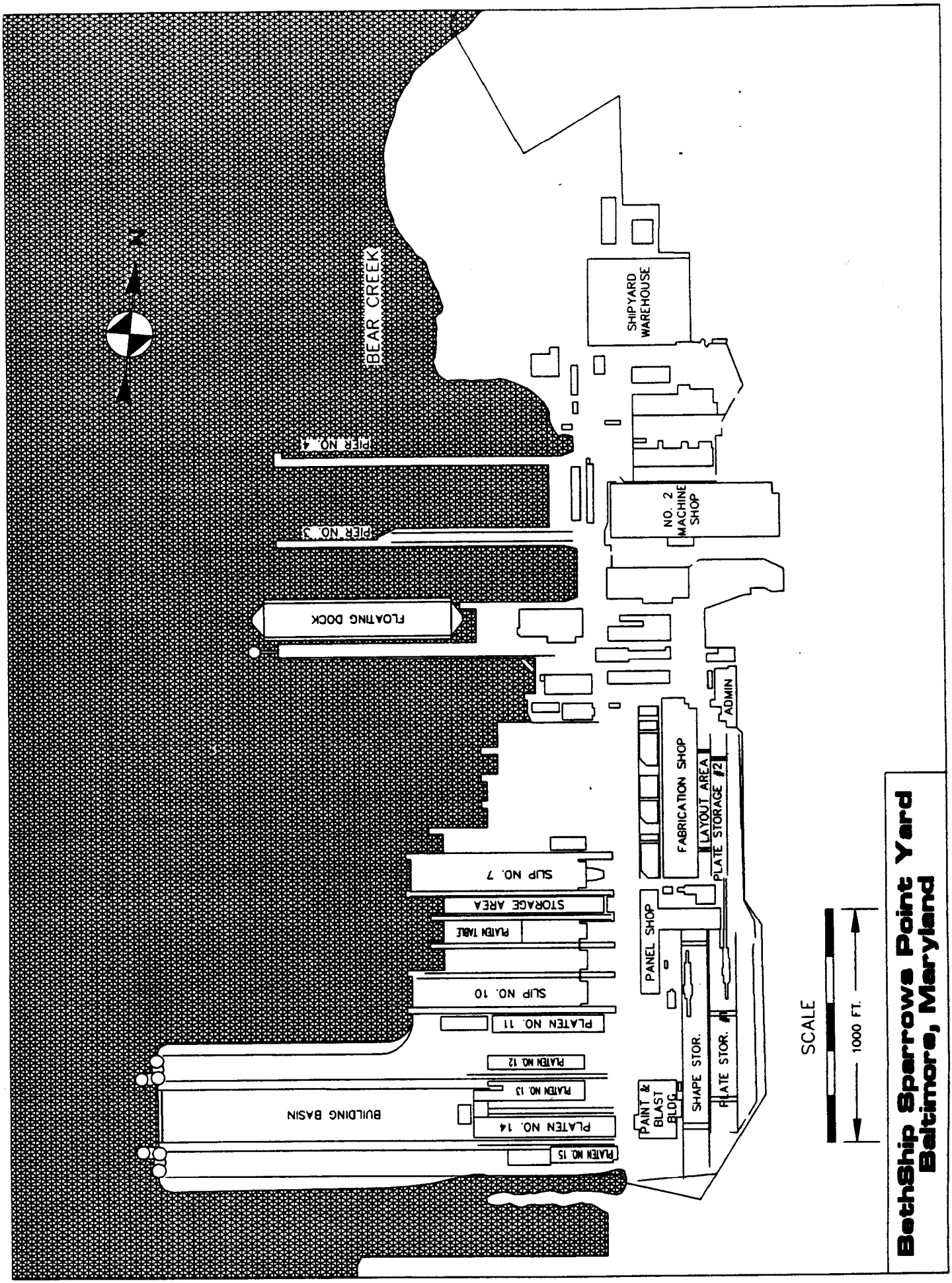
Contracts at the yard as of the fourth quarter of 1993 included drydocking and repair of four cruise ships and two tankers. BethShip was also awarded a contract for topside repairs to one RRF vessel and two contracts to reflag and refurbish five recently purchased RO/RO vessels for prepositioning and RRF fleets.

The major component of this shipyard is the graving dock (the second largest in the U.S.) for construction or repair of ships as large as 365 meters by 59 meters up to about 300,000 dwt. A two-position intermediate gate has been installed to increase the flexibility of the graving dock by dividing it into two sections. In one position the graving dock sections are 274 meters and 91 meters in length. In the second position, the sections are 209 meters and 157 meters in length.

Complementing the large graving dock, which is served by four 181-metric ton revolving cranes, the shipyard maintains two building ways. Each way can accommodate a maximum ship size of 244 meters by 32 meters. Four outfitting berths are available with a combined length of 1,210 meters. The berths are served by five cranes with lifting capacities up to 45 metric tons. Several mobile cranes of various capacities are also available.

BethShip Sparrows Point Yard also has a floating drydock capable of lifting 44,735 metric tons. The drydock can accommodate vessels up to 274 meters in length with a beam of up to 40 meters and a draft up to 9 meters. The entry channel to the yard has a depth of 9 meters.

As of mid-1993, the total labor force at the BethShip Sparrows Point Yard was 617, down from 1,368 a year earlier.


BEAR CREEK
SHIPYARD WAREHOUSE
NO. 2 MACHINE SHOP
PIER NO. 4
PIER NO. 3
FLOATING DOCK
ADMIN
FABRICATION SHOP
LAYOUT AREA
PLATE STORAGE #2
PANEL SHOP
SHAPE STOR.
PLATE STOR. #1
PAINT & BLAST BLDG
SLIP NO. 7
STORAGE AREA
PLATEN TABLE
SLIP NO. 10
PLATEN NO. 11
PLATEN NO. 12
PLATEN NO. 13
PLATEN NO. 14
PLATEN NO. 15
BUILDING BASIN
SCALE
1000 FT.
BethShip Sparrows Point Yard
Baltimore, Maryland

5. Erie Marine Enterprises, Inc.

The Erie Marine Enterprises yard is located on Presque Isle Bay in Erie, PA. The yard is leased from the Erie-Western Pennsylvania Port Authority, which acquired it in 1990 from Litton Industries, the original builder and operator. Litton built two thousand-foot class Great Lakes carriers at the yard, the M.V. STEWART J. CORT in 1972 and the BARGE PRESQUE ISLE in 1973.

Since it reopened in 1991 as Erie Marine Enterprises, the yard has engaged primarily in repair of Great Lakes cargo vessels. It also performs large-scale metal fabrication and assembly. The yard is a subsidiary of The Jonathan Corporation of Norfolk, VA, which has 20 years experience in ship repair and overhaul, and shares resources with the parent.

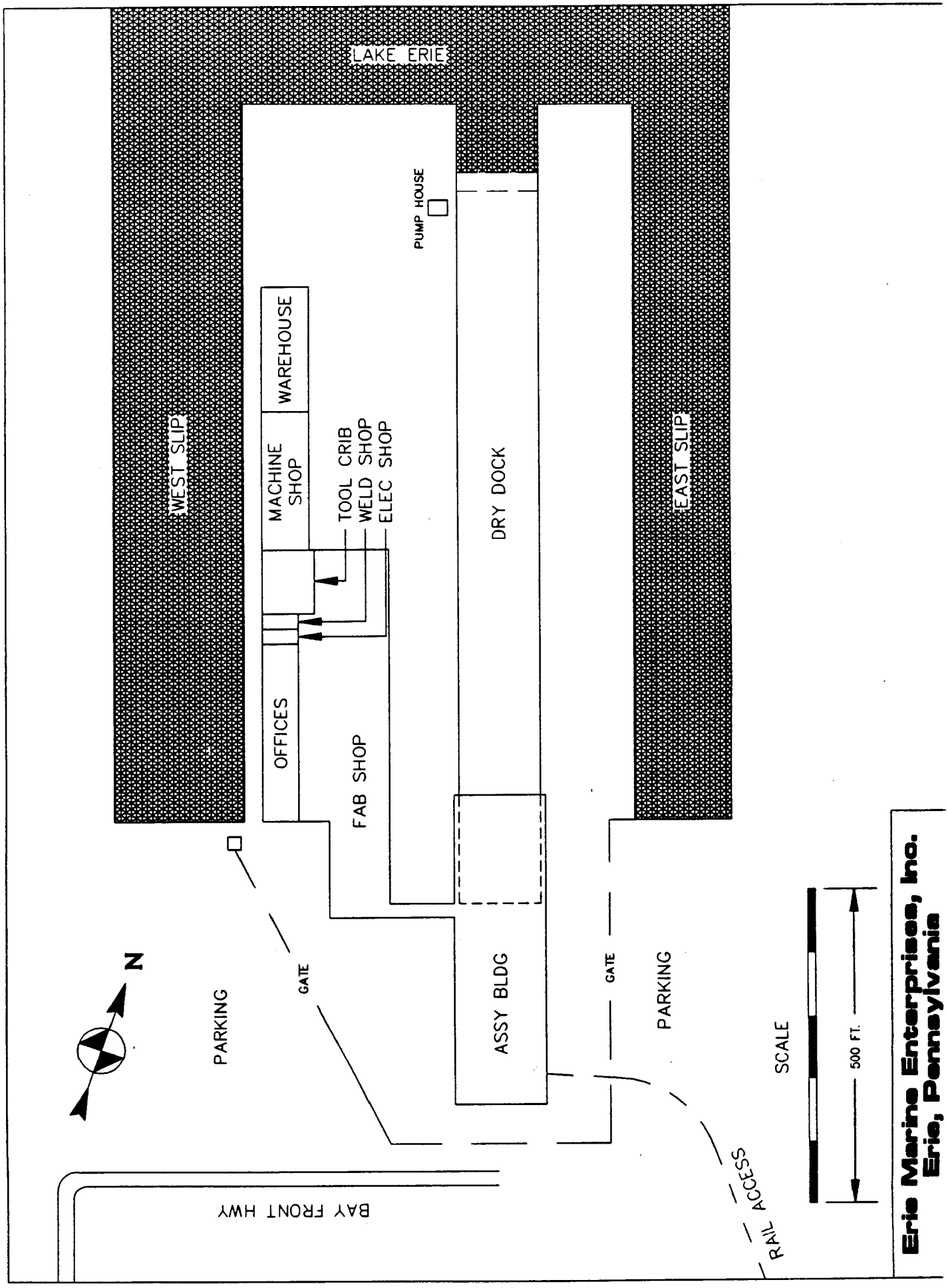
The facility contains over 18,581 square meters in three industrial buildings on an 18 hectare site. The graving dock is one of two on the Great Lakes which can accommodate the construction and drydocking of thousand-foot class vessels. The dock can accommodate ships up to 375 meters in length with a maximum beam of 35 meters. The dock is adjacent to the 6,600 square meter assembly building. The area is served by 90,720 metric ton and 18,140 metric ton overhead cranes.

The facility also contains a 5,760 square meter assembly building with three overhead cranes. There are 1,219 meters of pier space available for winter lay-ups with full dockside services. Two mobile cranes, 113,400 metric ton and 81,650 metric ton, are also available.

The third building contains the machine shop, warehouse and office space.

The company has invested heavily in rehabilitating and upgrading the graving dock, buildings and equipment. Equipment includes a 10 meter Baldwin Roll and a full range of metal fabrication machinery.

As of mid-1993, the company employed a total of 27 compared to 90 a year earlier.


LAKE ERIE
WEST SLIP
EAST SLIP
PUMP HOUSE
WAREHOUSE
MACHINE SHOP
TOOL CRIB
WELD SHOP
ELEC SHOP
DRY DOCK
OFFICES
FAB SHOP
ASSY BLDG
GATE
GATE
PARKING
PARKING
N
SCALE
500 FT.
RAIL ACCESS
BAY FRONT HWY
Erie Marine Enterprises, Inc.
Erie, Pennsylvania

6. Fraser Shipyards, Inc.

The Fraser Yard, the only major American shipyard and drydock operation on the western end of the Great Lakes, is located on Howards Bay in Superior, WI. Since it was founded in the 1890's by Capt. Alexander McDougall, who built 42 of his famous "whaleback" steamers and barges there, this plant has had a succession of owners. From 1900 to 1926, Superior Shipbuilding Co. operated the yard and built more than 50 large Great Lakes ore carriers. The yard became a repair facility of the American Ship Building Co. from 1926 to 1945 and then became known as Knudsen Brothers Shipbuilding and Dry Dock Co. Fraser-Nelson Shipbuilding and Dry Dock Co. took over the plant in 1955, and the present name was adopted in 1964. In August 1977, the yard was sold to Reuben Johnson & Son, Inc., a Superior, WI, contracting and construction firm, but business continues under the Fraser name.

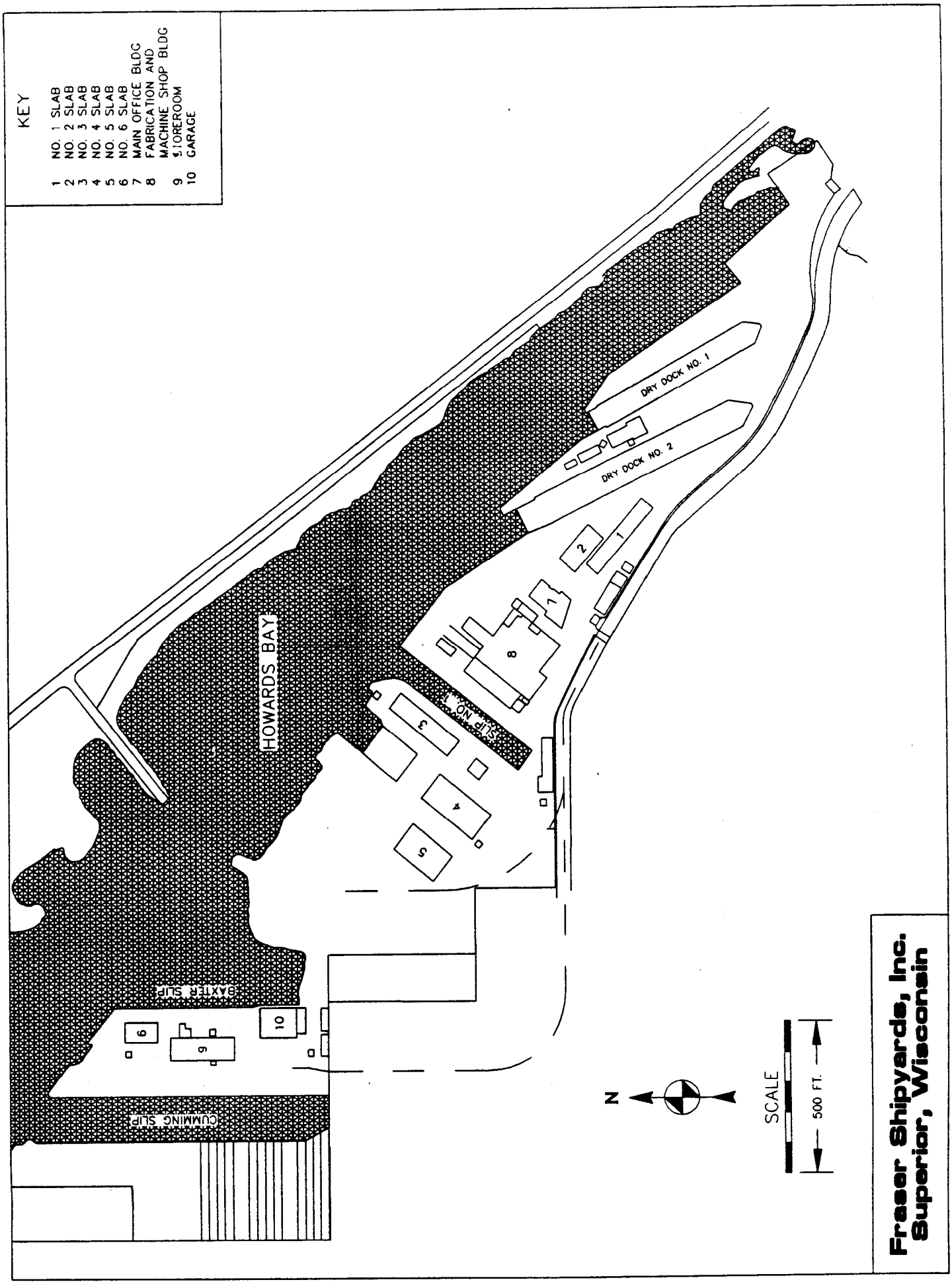
Since World War II, Fraser Shipyards, a complete shipbuilding and ship repair facility, has specialized in vessel repair and ship modernization. In the past 20 years, Fraser has performed most of the major ship lengthening work on the Great Lakes. At this shipyard, general ship repair also has been an important source of revenue.

In the early 1980's, the Fraser yard instituted a major renovation of its fabrication capabilities, including a 40 percent increase in its platen table capacity and extension of its railroad trackage to increase steel unloading capabilities by 300 percent. An all-new steel cutting process with hydraulic loading and unloading tables was installed, as well as major repowering of the shipyard to support the expanding facilities and to improve existing capacity. New automated welding equipment and related modern techniques also were introduced to increase productivity. In 1990 Fraser installed a new metal-forming brake as well as a new shear.

Fraser maintains two graving docks suitable for ship construction, repair, and conversion work. One basin can accommodate a vessel 252 meters by 23 meters, and the other a vessel 189 meters by 17 meters. A small graving-type dock was added in 1973 to build new midbody sections for the lengthening of bulk-ore freighters under contract at that time.

Fraser's 10 mobile cranes, ranging from 14 to 136 metric tons can service all building docks, as well as outfitting and repair berths, and also can be floated on a crane lighter for work afloat. The company also operates an "outside" repair fleet totaling 12 units -- tugs, work launches, and barges -- capable of performing repairs on vessels while they are loading or unloading cargoes in Duluth-Superior harbor and adjacent ports.

In mid-1993, employment was about 70 people, up from 60 a year earlier.


KEY
1 NO. 1 SLAB
2 NO. 2 SLAB
3 NO. 3 SLAB
4 NO. 4 SLAB
5 NO. 5 SLAB
6 NO. 6 SLAB
7 MAIN OFFICE BLDG
8 FABRICATION AND MACHINE SHOP BLDG
9 STOREROOM
10 GARAGE
DRY DOCK NO. 1
DRY DOCK NO. 2
HOWARDS BAY
BAXTER SLIP
CUMMING SLIP
SCALE
500 FT.
N
Fraser Shipyards, Inc.
Superior, Wisconsin

7. Halter Marine, Inc., Moss Point Division.

The Halter Moss Point (HMP) facility is located on the Escatawpa River in Moss Point, MS, a short distance from the Gulf of Mexico and Interstate 10. Significant features of the HMP yard include: a protected, deep-waterway location; large module fabrication and assembly platens; two launchways; lift capacity of up to 272 metric tons; full range of outfitting services; and full-service warehousing facilities.

HMP recently delivered a 73 meter tow boat/inspection vessel and a 91 meter dustpan dredge, both for the Army Corps of Engineers, and is currently constructing three T-AGS 60 class Oceanographic Survey Ships, and one AGOR 23 class Oceanographic Research ship.

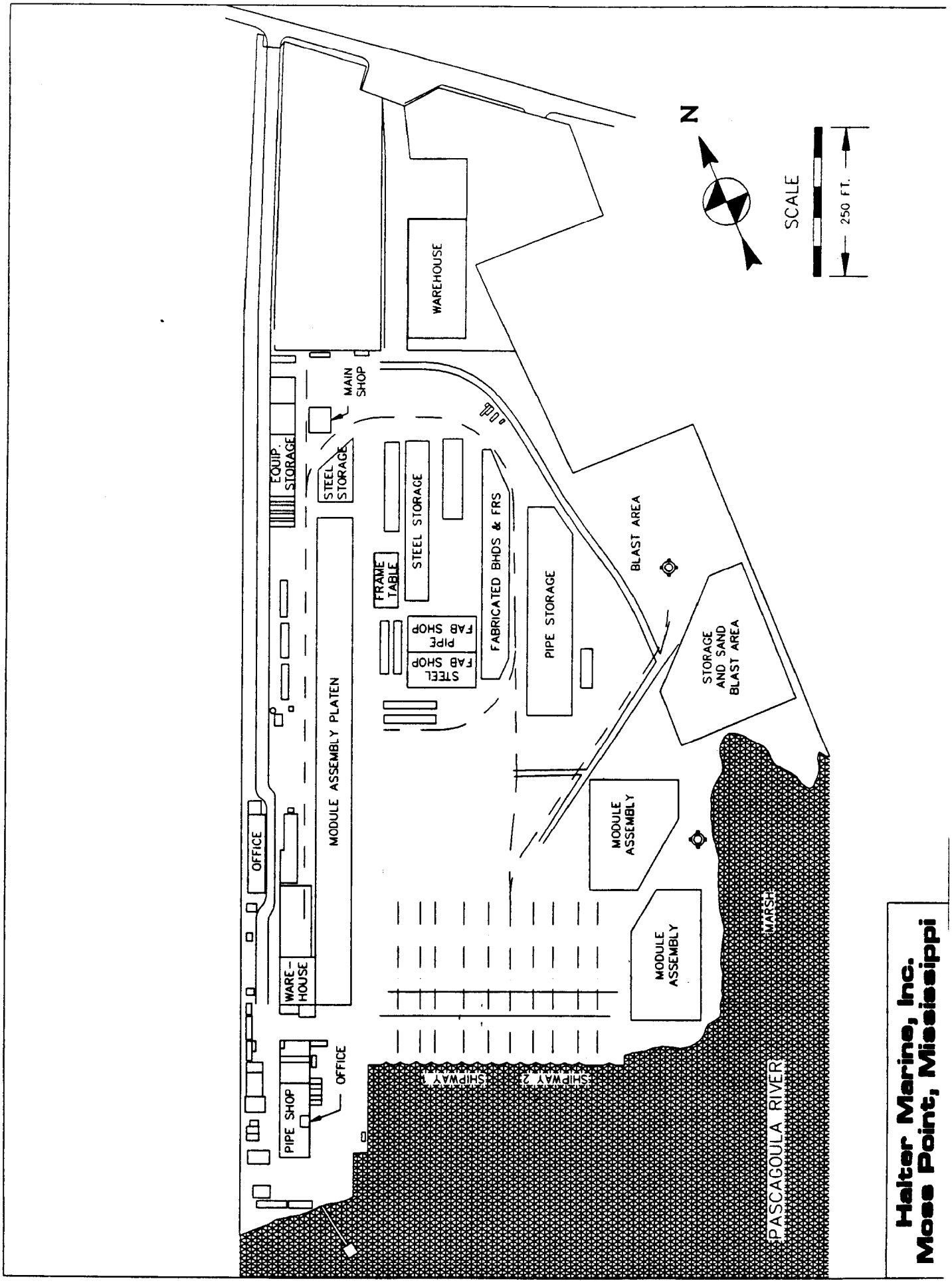
The Halter Moss Point facility is equipped and staffed to handle fabrication, assembly and delivery of high complexity ships up to 146 meter in length by 20 meter beam. The shipyard maintains moveable heavy-lift crane capacity of up to 272 metric tons.

The 4-story main fabrication shop contains 929 square meters and is fitted with a 5 metric ton overhead crane serving its entire length plus an extension at each end, and a 9 metric ton Gantry crane. The pipe shop covers 855 square meters. The building is serviced by four 1-ton jibs and a 5 metric ton overhead crane and contains standard outfit of pipe fabrication tools and equipment, including six pipefitter work stations. The combined carpenter shop and electric shop contains 465 square meters. The carpenter shop contains a joiner, band saw, radial arm saw and complete outfit of portable tools and equipment. The electric shop contains portable test equipment, meters and instruments for continuity and polarity checks, insulation resistance testing, cable installation tools and equipment and battery service facilities.

The main warehouse contains 1,858 square meters of modern receiving and weatherproof storage space. Environmentally controlled warehouse space for the stowage and test of sensitive equipment is available on site.

The HMP yard has a steel fabrication throughput capacity of 400 tons per month. The pipe shop has the capacity to provide up to 22,859 meters of pipe per year. The paint shop has the capacity to blast and paint over 363 metric tons of steel per month.

As of mid-1993, employment at Halter Moss Point was 407, up from 351 a year earlier.


N
SCALE
250 FT.
WAREHOUSE
MAIN SHOP
EQUIP. STORAGE
STEEL STORAGE
STEEL STORAGE
FRAME TABLE
FAB SHOP STEEL
FAB SHOP PIPE
FABRICATED BHDS & FRS
PIPE STORAGE
BLAST AREA
STORAGE AND SAND BLAST AREA
MODULE ASSEMBLY PLATEN
OFFICE
WARE-HOUSE
MODULE ASSEMBLY
MODULE ASSEMBLY
PIPE SHOP
OFFICE
SHIPWAY 1
SHIPWAY 2
PASCAGOULA RIVER
MARSH
Halter Marine, Inc.
Moss Point, Mississippi

8. Ingalls Shipbuilding, Inc.

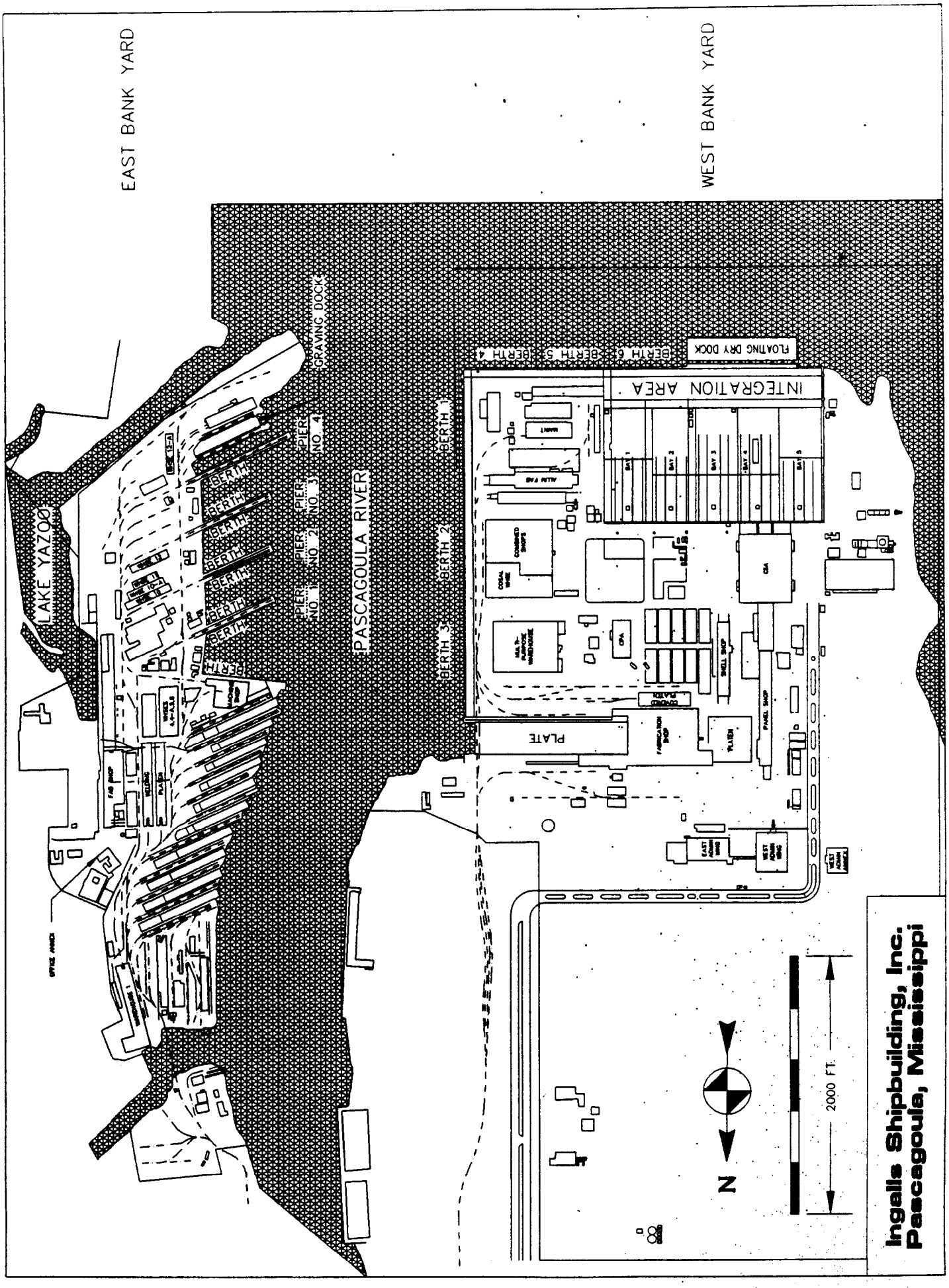
Ingalls Shipbuilding, Inc., a division of Litton Industries, Inc., is located on the Gulf of Mexico in Pascagoula, MS. Ingalls is a diversified shipbuilding facility experienced in the design, engineering, construction, modernization, conversion, overhaul and fleet support of Navy warships and auxiliaries. Since 1975, Ingalls has designed, built and delivered to the Navy 62 major surface combatant ships.

As of October 1, 1993, the company held orders for one Aegis cruiser -- which is scheduled for delivery in 1994. Other ships under contract were three Ingalls-designed multi-purpose amphibious assault ships (LHDs) for the Navy, as well as ten new DDG-51 class guided missile destroyers. The Ingalls backlog also includes three SA'AR 5 corvettes for the Government of Israel.

Ingalls' 243 hectare West Bank facility, completed in 1970, does not have conventional inclined shipbuilding ways but is geared to assembly-line construction. Fabricated steel and subassemblies are brought from the various shops to the subassembly area where they are erected and pre-outfitted, then moved to the module assembly area. These areas are divided into five bays, each of which can produce 5,447 metric ton modules. After assembly and outfitting, the modules are moved to the integration area where they are erected into a complete ship. The ship is then moved to a floating drydock (resting on a submerged grid) which is subsequently floated and moved to a deep-water area where it is ballasted and the ship launched. The drydock can launch or recover a maximum ship size of 259 meters by 53 meters. Approximately 1,432 meters of berthing space, serviced by cranes up to 272 metric tons, are available for outfitting. In August 1988, about 16,721 square meters of the shipyard's slab area were brought under roof to increase the amount of early outfitting performed. Improved pipe production facilities, a machinery packaging facility, and a new blast and paint station in the steel fabrication complex have been added.

Ingalls' older East Bank facility has been in operation since 1938, engaged primarily in the construction of commercial cargo ships and tankers. Although there are six inclined shipways and a graving dock at East Bank, they were all taken out of service in 1989. Refurbishment of these facilities is anticipated to take at least two years. However, a wharf and four piers provide a total of 914 meters of berthing space serviced by cranes with up to 54 metric tons of capacity for outfitting and topside repair.

As of mid-1993, Ingalls employed a total labor force of 15,289, down slightly from 16,072 a year earlier.


EAST BANK YARD
WEST BANK YARD
LAKE YAZOO
PASCAGOULA RIVER
BERTH 6
BERTH 5
BERTH 4
FLOATING DRY DOCK
INTEGRATION AREA
PLATE
N
2000 FT.
Ingalls Shipbuilding, Inc.
Pascagoula, Mississippi

9. Intermarine USA

Intermarine SpA of Sarzana, Italy, was invited by the United States Navy to transfer their composite material design and production technology to the USA in support of a new Coastal Minehunter program. In response, Intermarine USA was established in 1987 following a U.S. Navy contract, awarded on a sole source basis, to build large minehunters using composite materials. Intermarine completely renovated a shipyard in Savannah, Georgia, and converted it into a modern composite manufacturing facility.

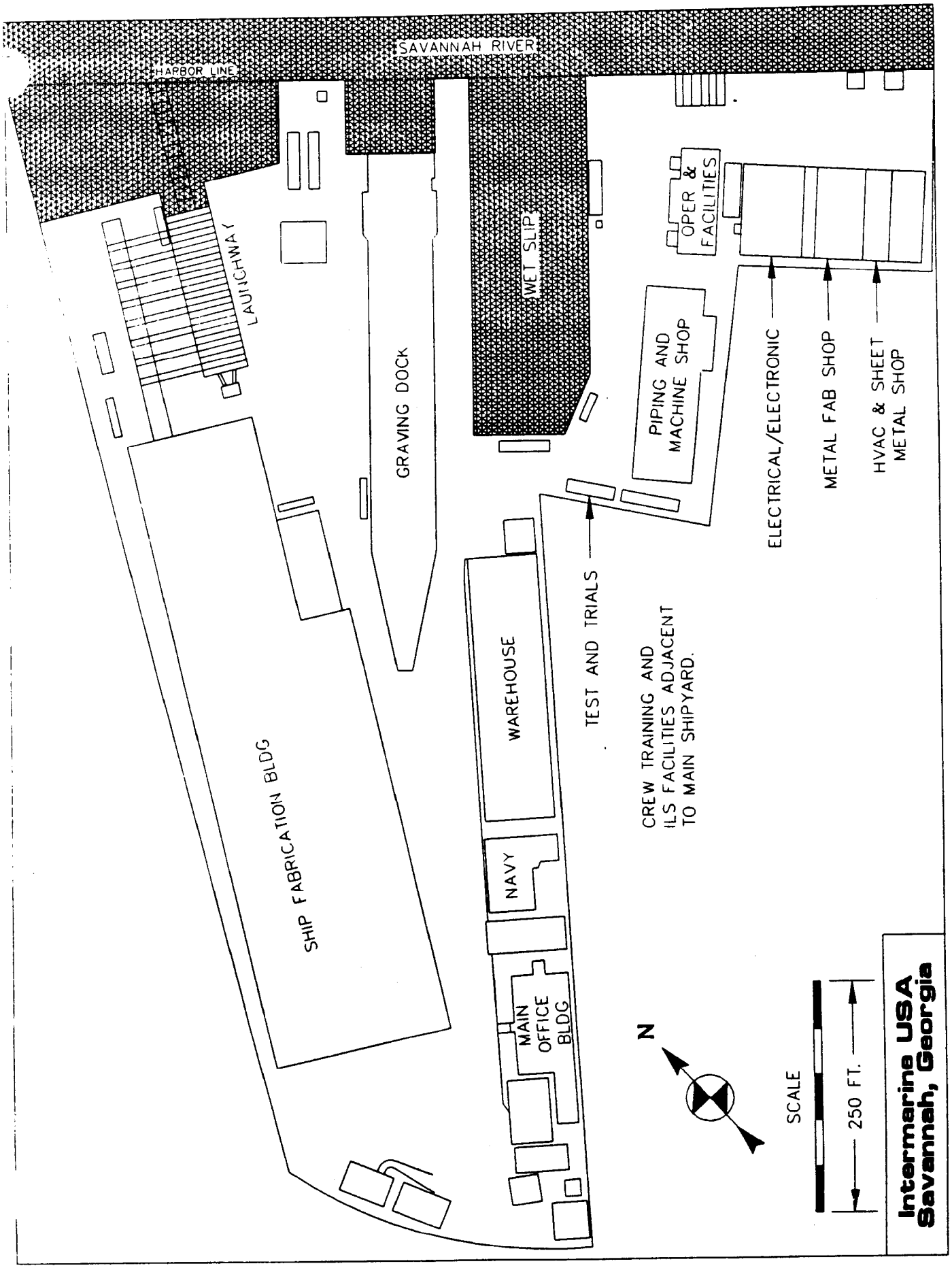
Intermarine USA started construction of OSPREY, lead ship of the MHC-51 Coastal Minehunter class, in May 1988, only one year after the original contract award. The class is 57 meters in length and a full load displacement of 900 metric tons. OSPREY was launched in March 1991. Intermarine USA's second MHC-51 class minehunter, HERON, was launched in March 1992 and is now in the final stages of outfitting. Construction of the third ship, ORIOLE, started in August 1991, with launching on May 22, 1993. In April 1992, the U.S. Navy awarded a contract to Intermarine USA for the construction of MHC-58, 59 and 60. This was followed by awards for the MHC-61 and 62 in March 1993. These awards ensure continuous ship production through mid 1997. Delivery of the first ship, OSPREY, occurred on August 23, 1993.

The company has contributed to U.S. Navy advanced composite materials studies in support of marine structural designs up to 73 meters in length. Intermarine USA also constructed a 20 meter catamaran yacht tender for service in the America's Cup competition. The vessel was constructed in fiberglass, with a balsa core deck. Fiberglass is also the primary material for a series of air deflectors that were built for Sea-Land ships. In addition, Intermarine USA has continuous ongoing naval and commercial ship repair work.

Intermarine USA has all the facilities necessary for military and commercial ship construction, including a certified 162 meter long graving dock and a 1,016 metric ton marine railway. The composite materials fabrication building has an area of over 14,860 square meters and is equipped with six semi-automatic resin/glass impregnators on fully-articulated bridge cranes. Materials storage areas and environmental controls have been specifically designed to meet all composite materials storage and manufacturing requirements. The facility is large enough to house six minehunter vessels or molds, all under cover, simultaneously. There are 4,180 square meters of shop space, in addition to the composite materials fabrication areas and ample warehouse space on-site.

In support of the ongoing construction programs, Intermarine has established Technical and Integrated Logistics Support departments staffed with experienced engineers, designers and logisticians.

As of mid-1993, Intermarine USA employment totalled 583, unchanged from a year earlier.


SAVANNAH RIVER
HARBOR LINE
LAUNCHWAY
GRAVING DOCK
WET SLIP
OPER & FACILITIES
PIPING AND MACHINE SHOP
ELECTRICAL/ELECTRONIC
METAL FAB SHOP
HVAC & SHEET METAL SHOP
SHIP FABRICATION BLDG
WAREHOUSE
TEST AND TRIALS
CREW TRAINING AND ILS FACILITIES ADJACENT TO MAIN SHIPYARD.
NAVY
MAIN OFFICE BLDG
N
SCALE
250 FT.
Intermarine USA
Savannah, Georgia

10. Marinette Marine Corporation

Marinette Marine Corporation (MMC) is a privately-owned shipbuilding company founded in 1942. Since inception, the yard has built nearly 1,300 vessels, including tugs, research vessels, torpedo weapon retrievers, mine counter-measure ships and yard patrol craft and a variety of landing craft.

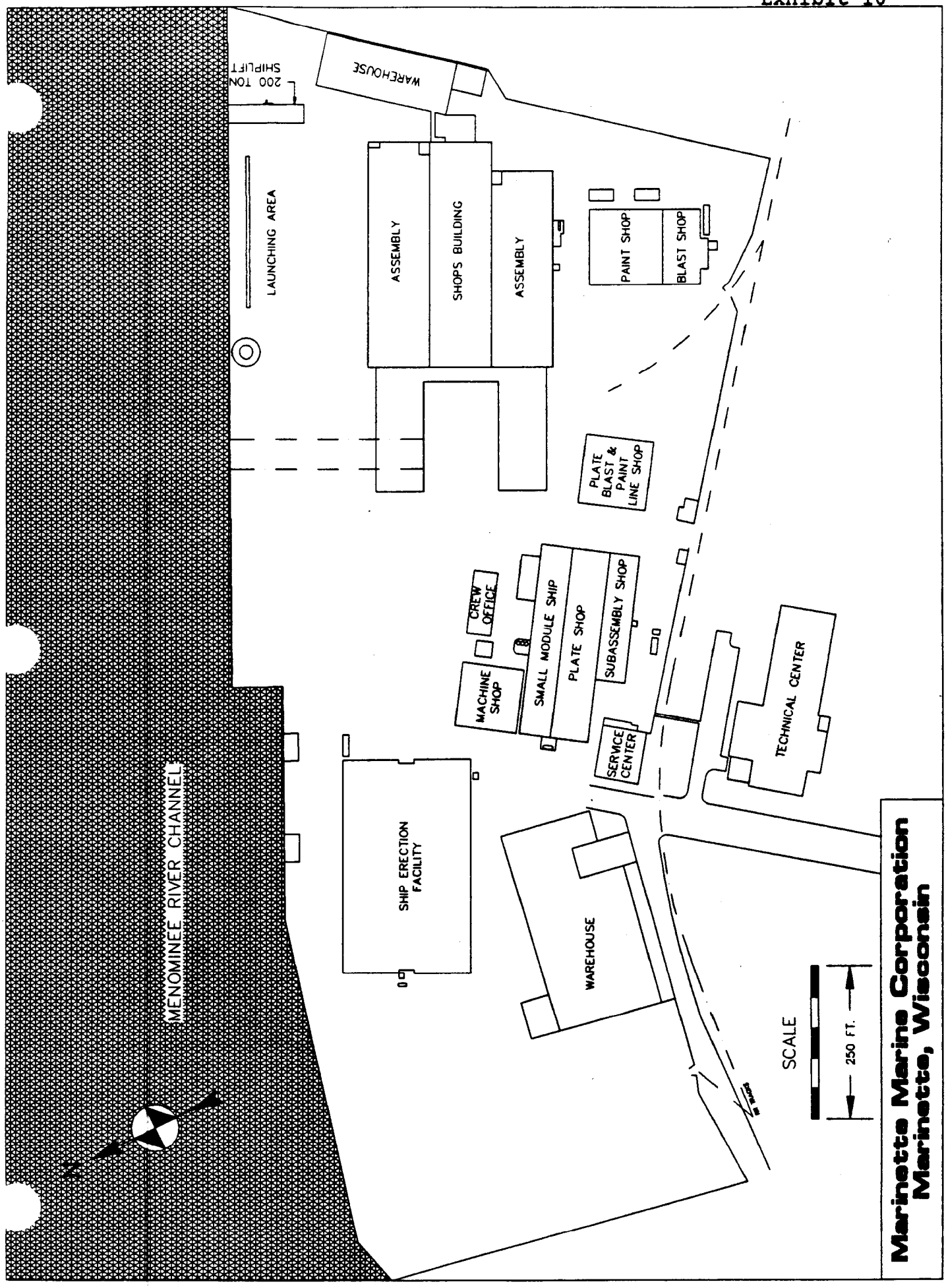
As of October 1, 1993, MMC was engaged in the detail design phase of two contracts with the U.S. Coast Guard. One contract is to design and construct Oceangoing Buoy Tenders, the other to design and construct Coastal Buoy Tenders.

The shipyard covers 23 hectares and has approximately 150,000 square meters of enclosed workspace permitting year-round, uninterrupted construction of vessels. A modern design and administrative building, large fabrication shops and erection areas, a 200 metric ton ship lift, three launchways, and numerous berthing spaces along the 651 meter dockwall have been acquired or constructed to provide what is needed to satisfy multiple ship construction projects in assembly line fashion.

Strategically positioned fabricating, assembly and trade shops allow smooth and efficient movement of material, prefabricated components, and small modules through the ship construction process. Most shops are equipped with overhead bridge cranes. Crawler cranes service the outdoor erection areas. Large modules and completed vessels are transferred to erection and launching sites using a Dual Walking Beam ship transfer system that is capable of carrying up to 1600 long tons.

Construction of the Oceangoing Buoy Tender is expected to start in late 1993. Construction of the Coastal Buoy Tender will commence in mid 1994. The two programs will accommodate a total of approximately 300 people when production is at full strength.

Total employment at the yard in mid-1993 was 104, compared to 130 a year earlier.


MENOMINEE RIVER CHANNEL
N
SHIP ERECTION FACILITY
WAREHOUSE
MACHINE SHOP
CREW OFFICE
SMALL MODULE SHIP
PLATE SHOP
SUBASSEMBLY SHOP
SERVICE CENTER
TECHNICAL CENTER
PLATE BLAST & PAINT LINE SHOP
ASSEMBLY
SHOPS BUILDING
ASSEMBLY
PAINT SHOP
BLAST SHOP
LAUNCHING AREA
200 TON SHIPLIFT
WAREHOUSE
SCALE
250 FT.
Marinette Marine Corporation
Marinette, Wisconsin

11. National Steel and Shipbuilding Company

National Steel and Shipbuilding Co. (NASSCO), the largest shipbuilder on the West Coast, participates in both the commercial and the U.S. Navy shipbuilding, conversion, and repair markets. In the marine business since 1945, the company now occupies 59 hectares on the harbor in San Diego, CA. In 1989, NASSCO became an employee-owned company.

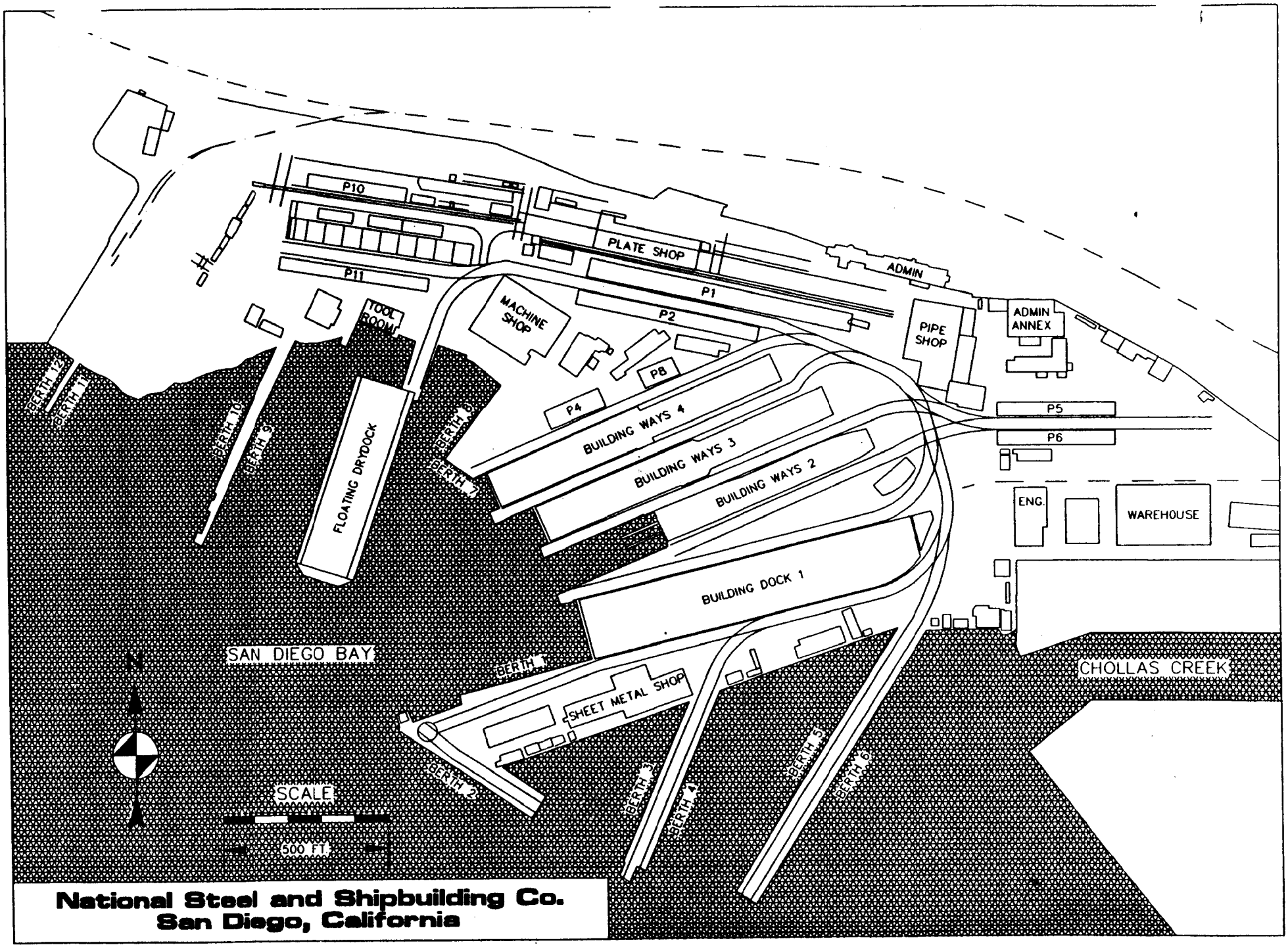
In the past, NASSCO has constructed ore-bulk-oil (OBO) carriers, very large crude carriers (VLCC) up to 209,000 dwt, product carriers, destroyer tenders, a large cable repair ship, special purpose ships and a variety of Navy vessels. NASSCO conversion projects have included the conversion of two 90,000 dwt tankers to 1,000-bed hospital ships (T-AH), three containerships to Maritime Prepositioning Ships (T-AKX), and the reconstruction of three former Sea-Land SL-7 containerships to Fast Sealift Ships (T-AKR) for the Navy. Repair and overhaul work during the past few years consisted principally of Navy contracts.

NASSCO has contracts to design and construct four AOE class Fast Combat Support Ships for the Navy. NASSCO has a contract to convert three containerships to Fast Sealift RO/RO's for the Navy. NASSCO also has a contract to design and construct six (one firm and five options) Fast Sealift RO/RO's for the Navy. In August 1992, NASSCO delivered a commercial containership to Matson Navigation Company. As of October 1, 1993, NASSCO was performing overhaul and repair work on a variety of Navy and commercial ships.

NASSCO's facilities include a building dock in which ships up to 303 meters by 52 meters can be constructed. In addition, the company operates three inclined building ways. Two of these can accommodate a maximum size ship of 274 meters by 34 meters and one a ship size of 210 meters by 27 meters. Cranes are available that can provide lifts up to 159 metric tons. Berthing is available at 10 full-service berths that can accommodate ships with drafts up to 11 meters and lengths up to 305 meters. NASSCO also operates a 25,400 metric ton floating drydock.

NASSCO has a full-service machine shop, carpenter shop, sheet metal shop and pipe shop with an automated pipe silo. The company's steel fabrication and assembly facilities, with a capacity of 1,816 metric tons per week, includes seven burning machines: one has a plasma arc and two have computer numerical control. Steel assembly facilities include a modern 16 meters panel line, eight assembly tables with a combined area of 11,472 square meters, a turning jig for curved steel blocks, and an enhanced pin jig area with two bridge cranes. There is also an automated line for blasting and priming steel plates and shapes. NASSCO offers full-service marine engineering and naval architecture, utilizing the latest technology such as Computer-Graphics Augmented Drafting and Manufacturing System (CADAM).

As of mid-1993 the total labor force was 4,085 unchanged from a year earlier.



National Steel and Shipbuilding Co.
San Diego, California

EXHIBIT 11

12. Newport News Shipbuilding

Newport News Shipbuilding, located at the Port of Hampton Roads in Newport News, VA, is the largest shipbuilding complex in the United States. The company, founded in 1886, is a subsidiary of Tenneco, Inc. Newport News has delivered 26 aircraft carriers, 47 nuclear-powered submarines, and over 120 other surface ships for the U.S. Navy. Commercial vessels delivered by the yard include 71 cargo ships, 85 tankers, 61 passenger ships (most notably the famed superliner UNITED STATES), and more than 50 other self-propelled vessels. Newport News was a pioneer in the field of jumboizing ships, and since 1957 has completed 34 such operations.

Newport News is the Nation's foremost builder of Navy nuclear warships. As of October 1, 1993, the yard was at work on two Nimitz class aircraft carriers and 6 attack submarines. Overhaul and repair of nuclear-powered submarines and surface ships for the Navy and commercial repair work are also a principal activity at Newport News.

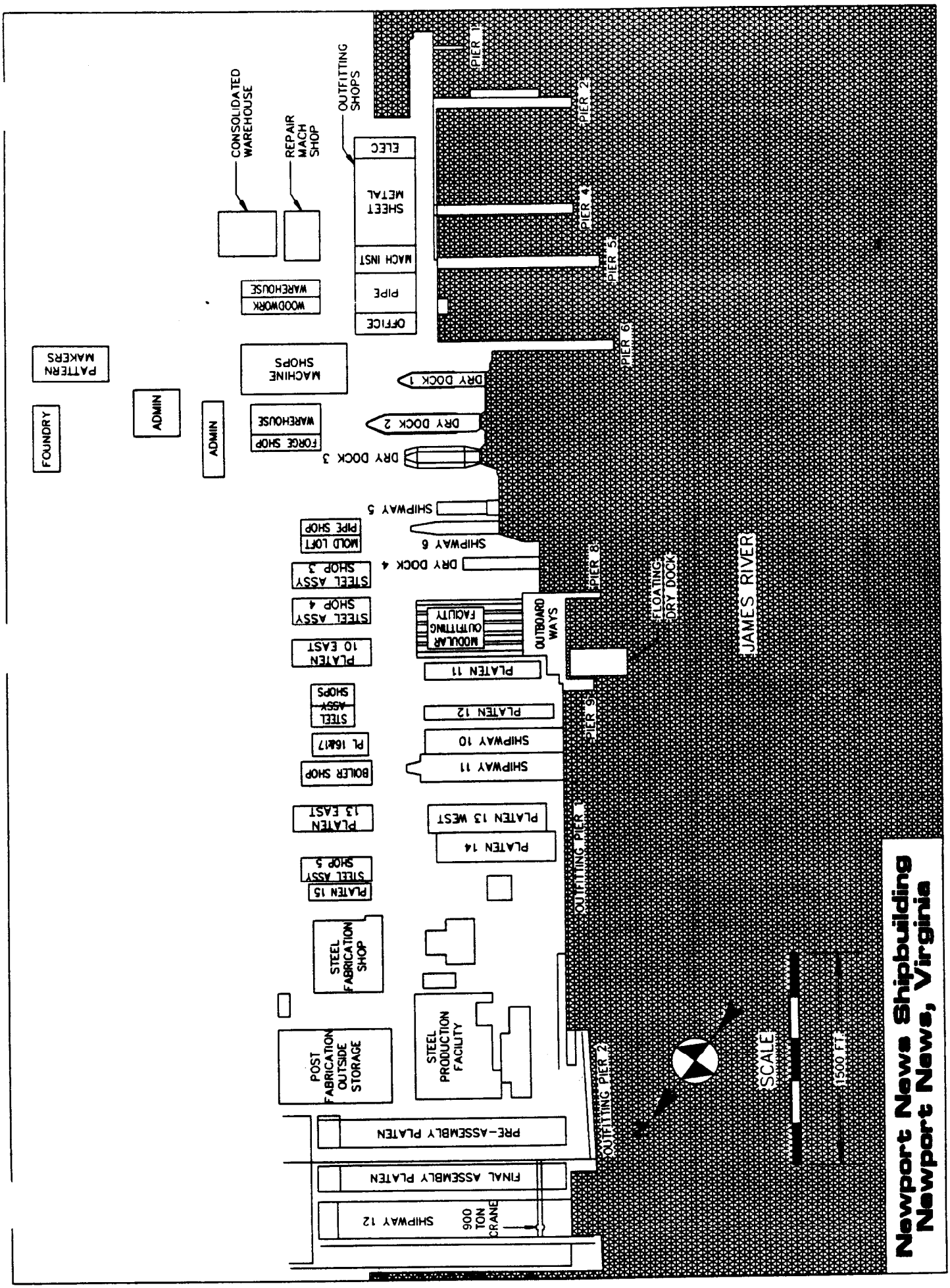
Included in Newport News major facilities are:

Docks and Shipways - There are eight separate docking facilities. Drydock 12, the largest building basin in the nation, can accommodate vessels up to 490 meters in length by 75 meters beam. Three positions for the intermediate gate expand the multi-ship construction capability of this dock, permitting simultaneous ship construction and repair. A 900 metric ton gantry crane, one of the largest in the world, can handle completely outfitted assemblies. This crane has a height of 71 meters overall, a girder clearance of 61 meters and a span between rail centers of 165 meters. Shipways 10 and 11 are used for construction work, as well as overhaul and repair, and are serviced by a 315 metric ton gantry crane. The other four graving docks (Dry Docks 1-4) are used mainly for ship repair and overhaul work. The floating drydock, which is 195 meters by 41 meters, is primarily used as a part of the submarine land level facility.

Vessel Berthing - Newport News has two outfitting berths totaling 799 meters each serviced by 30 metric ton cranes. There are four piers totaling 2,577 meters serviced by cranes with capacities of up to 45 metric tons in addition to the two small piers included with the submarine land level facility. A fourth pier has been taken out of service.

Submarine Construction and Repair Complex - This land level facility is currently being used for construction of nuclear attack submarines. It includes a Modular Outfitting Facility (MOF), outboard ways, two small piers, a transporter and transfer system, and a floating drydock.

The labor force at Newport News in mid-1993 was about 22,500, compared to 24,500 a year earlier.


Newport News Shipbuilding
Newport News, Virginia
SCALE
1500 FT
JAMES RIVER
FLOATING DRY DOCK
OUTFITTING PIER 1
OUTFITTING PIER 2
PIER 1
PIER 2
PIER 4
PIER 5
PIER 6
PIER 8
PIER 9
CONSOLIDATED WAREHOUSE
REPAIR MACH SHOP
OUTFITTING SHOPS
ELEC
SHEET METAL
MACH INST
PIPE
OFFICE
WOODWORK
WAREHOUSE
MACHINE SHOPS
PATTERN MAKERS
ADMIN
ADMIN
FOUNDRY
WAREHOUSE
FORGE SHOP
DRY DOCK 1
DRY DOCK 2
DRY DOCK 3
SHIPWAY 5
SHIPWAY 6
DRY DOCK 4
MOLD LOFT
PIPE SHOP
STEEL ASSY SHOP 3
STEEL ASSY SHOP 4
10 EAST PLATEN
MODULAR OUTFITTING FACILITY
OUTBOARD WAYS
PLATEN 11
PLATEN 12
SHIPWAY 10
SHIPWAY 11
STEEL ASSY SHOPS
PL 16&17
BOILER SHOP
PLATEN 13 EAST
PLATEN 13 WEST
PLATEN 14
STEEL ASSY SHOP 5
PLATEN 15
STEEL FABRICATION SHOP
POST FABRICATION OUTSIDE STORAGE
STEEL PRODUCTION FACILITY
PRE-ASSEMBLY PLATEN
FINAL ASSEMBLY PLATEN
SHIPWAY 12
900 TON CRANE

13. Peterson Builders Inc.

Peterson Builders, Inc. (PBI), of Sturgeon Bay, WI, established in 1933, is a privately owned, full service, construction and repair shipyard, which serves the government, commercial and service industries with its construction capabilities in wood, steel, fiberglass and aluminum, as well as design and production expertise. Their continuing backlog of ship construction, complemented by conversion, repair, and special projects of unique assembly fabrications, enables PBI to maintain a skilled labor force and to keep pace with the latest technologies and developments in the industry.

The main yard, with about 3 hectares of buildings, provides inside construction and production facilities; total area is about 5 hectares. Extensive waterfront facilities provide berthing for vessels up to 152 meters in length. PBI operates two side launching shipways; one can accommodate a maximum ship length of 125 meters and the other 69 meters. Also, inside ship construction capabilities for vessels up to 70 meters by 18 meters are available. PBI's floating drydock has the capacity to accommodate a vessel up to 110 meters by 12 meters and is Navy-certified for 1,118 metric tons.

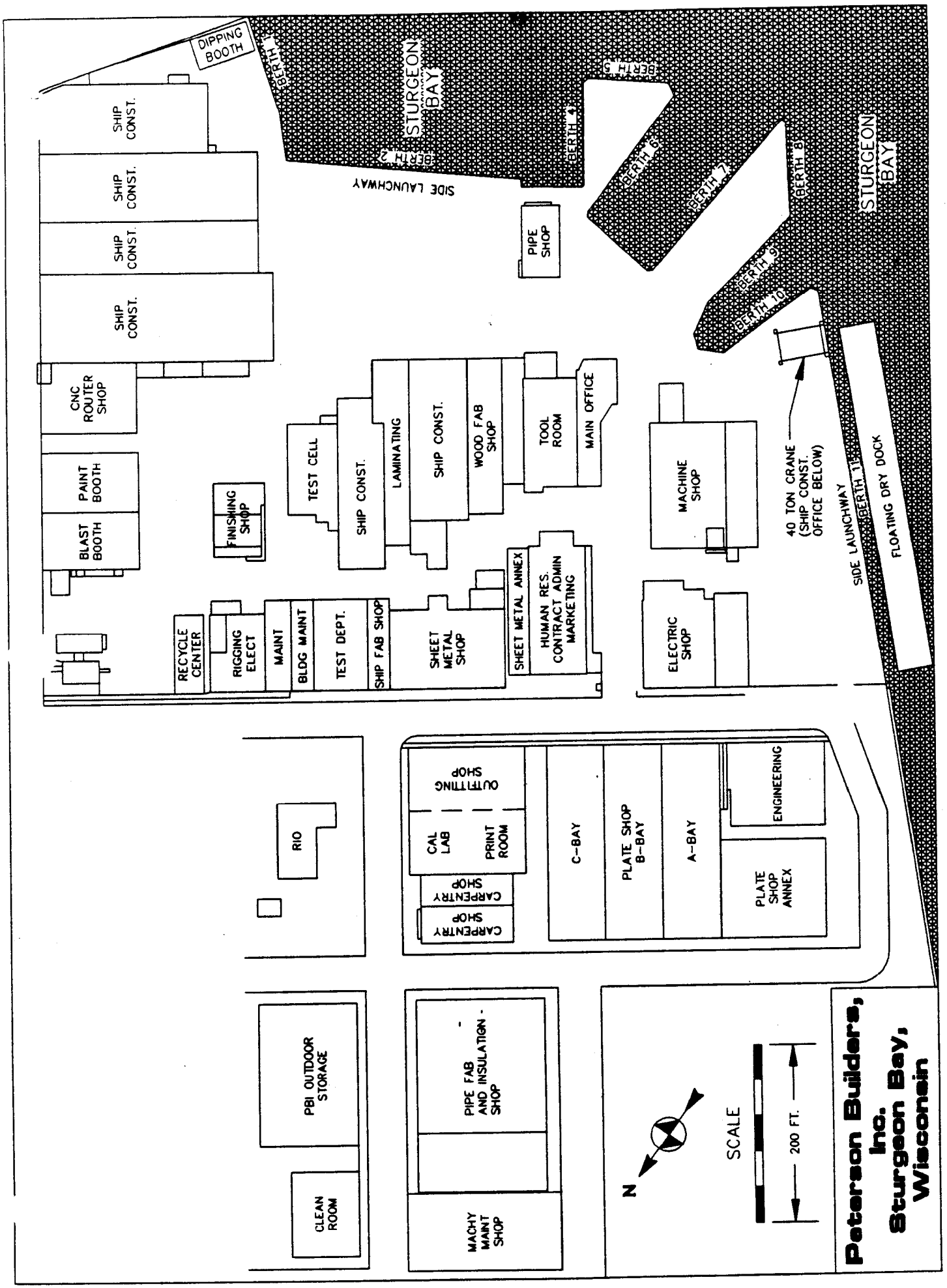
The Ingleside Division of Peterson Builders, Inc. is a 2 hectare shipyard on the Jewell-Fulton Canal in Ingleside, TX. This yard supports warranty and repair services for the mine countermeasure ships homeported at the Ingleside Naval Base, as well as offering commercial marine repair services.

Three MCMs (68 meter Mine Countermeasure Ships) were delivered to the U.S. Navy in 1993. MCM-14, the 11th and last MCM under contract, will be delivered in 1994. As part of the Navy's mine warfare renewal program, these MCMs replace ships in service since the early 1950's. PBI has been a leader in minecraft construction since that time; longer than any other shipyard in the world. This new generation of wooden ships being built at PBI are by far not only "first of a kind" contracts awarded to the yard. Other completed "new class of ship" contracts were four steel 69 meter ARS Auxiliary Rescue/Salvage ships and seven wooden 33 meter YP Yard Patrol craft; both contracts for the U.S. Navy. PBI also maintains a long standing history for excellent commercial vessels ranging from super tuna seiners, research ships, large passenger/car ferries, and a range of sizes of tugs.

Under construction at the yard in 1993 were aluminum 6 meter Patrol Craft Fast (PCFs), fiberglass 11 meter Landing Craft Personnel Large (LCPLs), in addition to the delivery of a 29 meter ferry to Miller Boat Line, Inc., and the mid-life conversion and refit of the research vessel ENDEAVOR, for the State of Rhode Island. Other drydock/repair work included the U.S. Coast Guard Buoy Tender, SUNDEW, and barge/tug repairs.

In 1993 a contract was received from the United States Special Operations Command to construct the Mark V Special Operations Craft (MV V SOC) System, a craft/transporter package for test and evaluation. PBI was selected as one of two companies to provide these test craft. A contract was also received for ten 12.8 meter Patrol Craft Coastal (PCC) from the Department of the Navy.

Mid-1993 the company's average total employment was about 652 compared to 910 in mid-1992.


DIPPING BOOTH
BERTH 1
BERTH 2
BERTH 3
BERTH 4
BERTH 5
BERTH 6
BERTH 7
BERTH 8
BERTH 9
BERTH 10
BERTH 11
STURGEON BAY
STURGEON BAY
SIDE LAUNCHWAY
SHIP CONST.
SHIP CONST.
SHIP CONST.
SHIP CONST.
PIPE SHOP
CNC ROUTER SHOP
PAINT BOOTH
BLAST BOOTH
FINISHING SHOP
TEST CELL
SHIP CONST.
LAMINATING
SHIP CONST.
WOOD FAB SHOP
TOOL ROOM
MAIN OFFICE
MACHINE SHOP
40 TON CRANE (SHIP CONST. OFFICE BELOW)
SIDE LAUNCHWAY
FLOATING DRY DOCK
RECYCLE CENTER
RIGGING ELECT
MAINT
BLDG MAINT
TEST DEPT.
SHIP FAB SHOP
SHEET METAL SHOP
SHEET METAL ANNEX
HUMAN RES. CONTRACT ADMIN MARKETING
ELECTRIC SHOP
RIO
OUTFITTING SHOP
CAL LAB
PRINT ROOM
CARPENTRY SHOP
CARPENTRY SHOP
C-BAY
PLATE SHOP B-BAY
A-BAY
ENGINEERING
PLATE SHOP ANNEX
PBI OUTDOOR STORAGE
CLEAN ROOM
PIPE FAB AND INSULATION SHOP
MACHY MAINT SHOP
N
SCALE
200 FT.
Peterson Builders, Inc. Sturgeon Bay, Wisconsin

14. Portland Ship Repair Yard

The Portland Ship Repair Yard is part of the Municipal Corp. of the Port of Portland. The 57-hectare shipbuilding and ship repair facility is located in Portland, OR, on the Willamette River. The yard was developed from the World War II Swan Island Shipbuilding facilities which delivered 1,076 oceangoing ships. Today's facility includes Dry Dock 4, the largest floating drydock in the Americas.

Projects in 1993 include structural enhancements and tank coating of four very large crude carriers; tandem drydocking of two large fish processors; major upgrade and overhaul of a worldwide cruise ship; and development of an on-site training facility and program for welding, steel forming, sheet metal, laborers, machinists, and painters.

The shipbuilding assets are augmented by the individual facility users' assets. Cascade General, Inc., and West State, Inc., are contracted users of the facility.

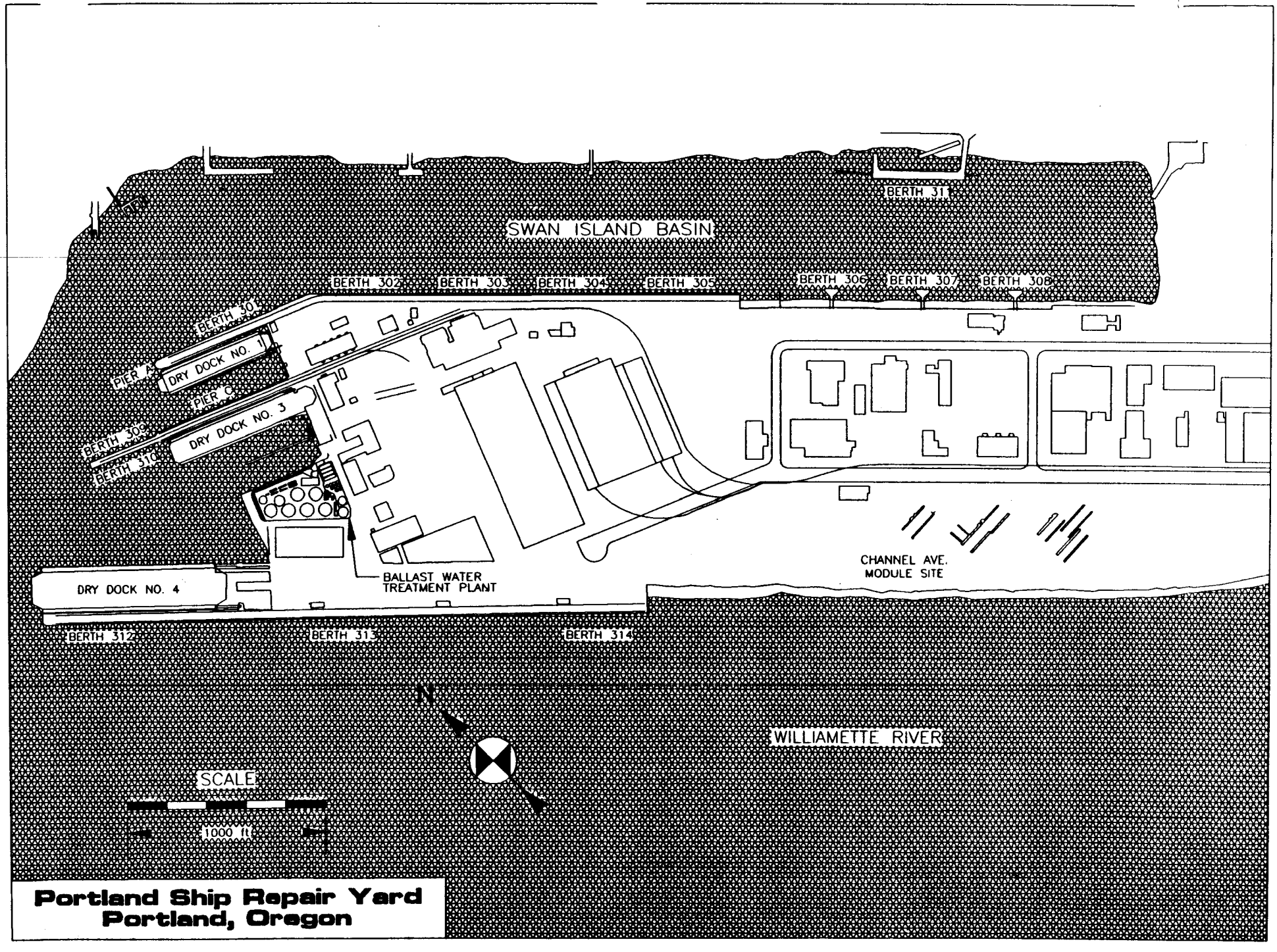
The shipbuilding facilities at the Portland Ship Repair Yard are capable of producing modular-type units from 1,525 to 5,084 metric tons. Units are transported by rubber-tired vehicles, crawler or walker, via a launching bridge to two locations. At one ship construction location, a vessel 183 meters by 30 meters can be constructed using Dry Dock 1 for launching. At the other location, a vessel up to 305 meters by 55 meters can be constructed using Dry Dock 3 and Dry Dock 4 for launching.

Portland Ship Repair Yard operates three drydocks. The largest two (No. 3 and No. 4) can accommodate vessels up to 247 meters by 33 meters, and 351 meters by 55 meters, respectively. A total of 3,078 meters of fully serviced pier space with 16 whirley type cranes are employed for outfitting. In 1986, a layberth facility (Berth 315) was added which can accommodate two 335-meter VLCCs in lay-up status.

The yard has 46,500 square meters of fully enclosed service shops and warehouse space. The 11 module assembly bays are 98 meters long, 21 meters clear width, and 18 meters clear height.

The Portland Ship Repair Yard is preparing to expand its modular construction capability by an additional 38,000 square meters, located in the Swan Island Lagoon. This facility will be suitable for constructing ship modules.

As of mid-1993 the shipyard employed about 1,560 people, down from 2,157 a year earlier.


SWAN ISLAND BASIN
BERTH 311
BERTH 302
BERTH 303
BERTH 304
BERTH 305
BERTH 306
BERTH 307
BERTH 308
BERTH 309
BERTH 310
PIER A
PIER C
DRY DOCK NO. 1
DRY DOCK NO. 3
DRY DOCK NO. 4
BALLAST WATER TREATMENT PLANT
CHANNEL AVE. MODULE SITE
BERTH 312
BERTH 313
BERTH 314
N
WILLIAMETTE RIVER
SCALE
1000 ft
Portland Ship Repair Yard
Portland, Oregon

15. Tacoma Boatbuilding Company

In operation since 1926 in Tacoma, WA, this shipyard has designed, constructed, and repaired vessels for commercial customers, the Navy and Coast Guard, and foreign governments. Tacoma Boat's overall facilities consist of 8 Hectares located on the Hylebos Waterway adjacent to Commencement Bay.

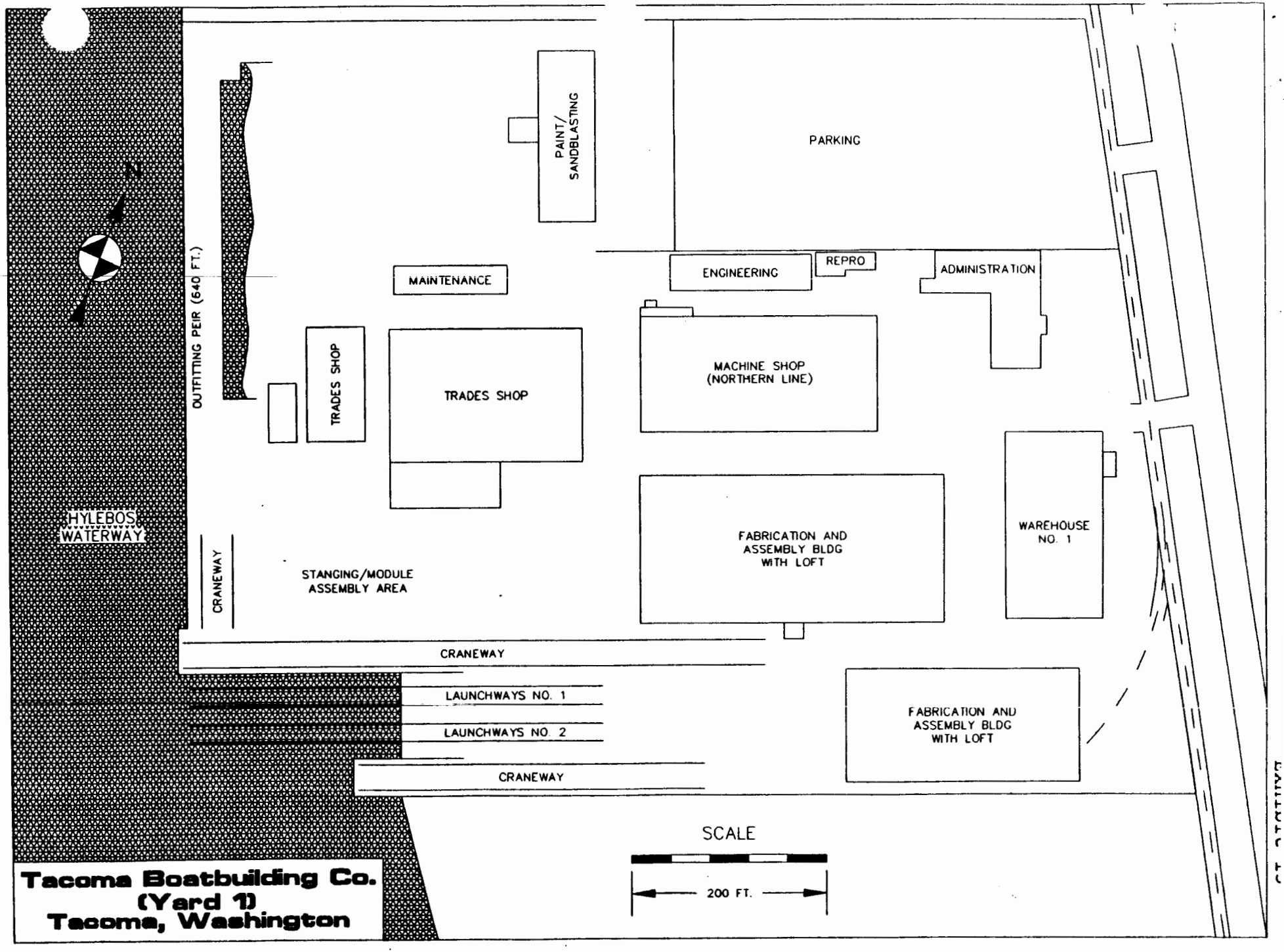
Tacoma Boat has constructed a variety of standard-class tuna purseiners, a semi-submersible offshore oil-drilling rig, barges and tug/supply vessels for the offshore oil industry, WYTM icebreaking tugs and WMEC cutters 82 meter long for the Coast Guard, revolutionary-design tractor tugs, and high-speed patrol ships, gunboats, and minesweepers for the Navy and/or foreign governments. The company also helped design and build an 80 knot surface effect ship (SES).

During the 1984 to mid-1991 period, Tacoma delivered 12 ocean surveillance ships (T-AGOS) to the U.S. Navy. This T-AGOS contract was a focal point for zone outfitting in which various portions or "zones" of a ship were built separately as virtually complete units and then assembled at the launchway.

The company's activity under present market conditions is primarily in the area of ship repair on both commercial and Government contracts and in its Northern Line Machine & Propeller Division for deck equipment construction and repair and propulsion system fabrication and repair.

Tacoma Boat's facilities include two end-launch ways which can accommodate new construction vessels up to 130 meters by 30 meters and the haulout of barges up to 28 meters and 4,000 tons. Available for outfitting and repair work are 212 meters of berthing space.

The total work force at Tacoma Boat at mid-1993 was 40, compared to 60 a year earlier.


N
OUTFITTING PEIR (640 FT.)
PAINT/ SANDBLASTING
PARKING
MAINTENANCE
ENGINEERING
REPRO
ADMINISTRATION
TRADES SHOP
TRADES SHOP
MACHINE SHOP (NORTHERN LINE)
HYLEBOS WATERWAY
CRANEWAY
STANGING/MODULE ASSEMBLY AREA
FABRICATION AND ASSEMBLY BLDG WITH LOFT
WAREHOUSE NO. 1
CRANEWAY
LAUNCHWAYS NO. 1
LAUNCHWAYS NO. 2
FABRICATION AND ASSEMBLY BLDG WITH LOFT
CRANEWAY
SCALE
200 FT.
Tacoma Boatbuilding Co.
(Yard 1)
Tacoma, Washington

16. Tampa Shipyards, Inc.

Founded in 1948, Tampa Shipyards, Inc., (formerly Tampa Ship Repair and Drydock Co.) is a full service yard which was purchased by The American Ship Building Co. in 1972 and is located on the recently deepened 13 meter Sparkman Channel in Tampa, FL. This channel depth reduces to 10 meters approximately 457 meters from the shipyard.

During World War II, the company built Navy auxiliary vessels and C2 cargo ships for the Maritime Commission. Since World War II, Tampa Ship has been a major Gulf Coast repair yard. During the 1980's significant projects completed by Tampa Ship included the conversion of four Moore-McCormack C4 cargo ships to larger self-sustaining breakbulk/container vessels and the construction of five 30,000 dwt clean-product, ice-strengthened tankers for charter to the Military Sealift Command.

During 1989, Tampa Shipyards completed the conversion of two freighters to auxiliary crane ships, T-ACS 7 and 8, for the Maritime Administration. The keel of the T-AGOS ocean surveillance ship, IMPECCABLE, was laid in March 1992 and construction began in July 1993 on the first of six 41-meter, 6,700 hp tractor tugs for Bay Transportation.

Major facility installations were integrated into Tampa's ship construction program in 1984. The additions include: a concrete pier, two graving docks, two wet berths, additional shops, and an erection/assembly building. The erection/assembly building is 183 meters by 44 meters by 35 meters, and is serviced by three overhead bridge cranes with a combined lifting capacity of 908 metric tons. About 107 meters of this building straddles one of the graving docks, allowing pre-assembled units weighing in excess of 908 metric tons to be erected in a covered environment. The company currently has four graving docks operational. The largest can handle ships up to 273 meters by 44 meters. Two of the drydocks can accommodate a vessel as large as 226 meters by 32 meters.

To provide additional fabricating capability, Tampa Ship currently operates the Westinghouse heavy steel fabricating facility on Tampa's Westshore Blvd. This facility provides over 4 hectares of covered fabrication floor, bridge cranes up to 817 metric ton capacity, and barge loading facilities. The building is two hours by tow from Tampa Ship. This heavy steel fabricating facility is now referred to as the Westshore Facility. In addition, Tampa Ship currently leases two wet berths north of the main yard at South Slip. These wet berths are 256 meters and 213 meters long.

As of mid-1993, 1,410 people were on Tampa's payroll unchanged from the previous year.

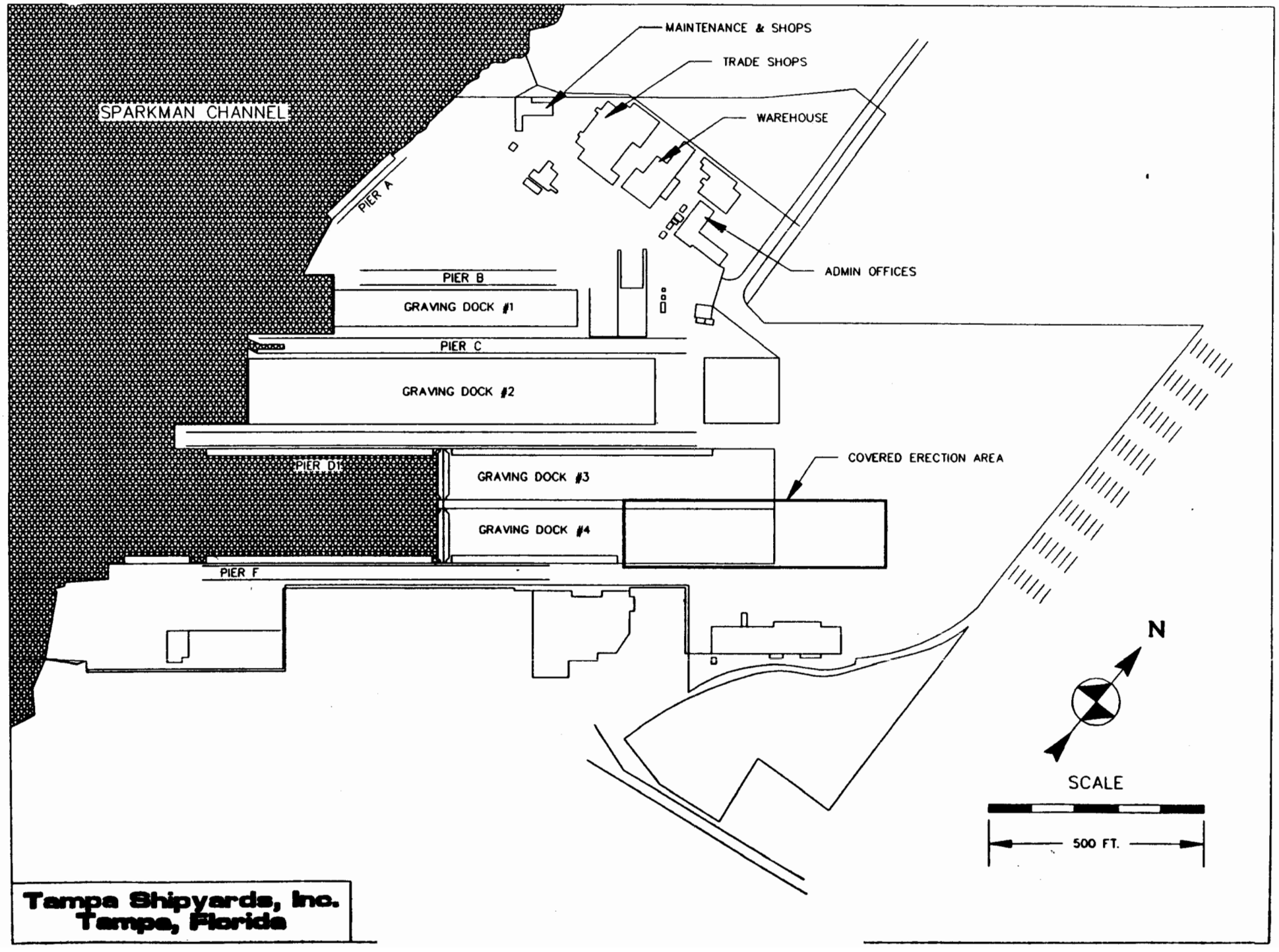

MAINTENANCE & SHOPS
TRADE SHOPS
WAREHOUSE
SPARKMAN CHANNEL
PIER A
ADMIN OFFICES
PIER B
GRAVING DOCK #1
PIER C
GRAVING DOCK #2
PIER D
GRAVING DOCK #3
COVERED ERECTION AREA
GRAVING DOCK #4
PIER F
N
SCALE
500 FT.
Tampa Shipyards, Inc.
Tampa, Florida

EXHIBIT 16

17. Todd Pacific Shipyards Corporation - Seattle Division

Todd's Seattle Division is located at the northwest corner of Harbor Island in Elliot Bay, less than 10 minutes from downtown Seattle, WA. From 1898 until 1916, when the William H. Todd Co. of New York bought the shipyard from the Seattle Construction and Drydock Co., a variety of vessels were produced, including the world's finest six-masted barkentine and (at that time) the world's fastest single-screw steamer. This 21 hectares yard has been a prime supplier of fighting ships for the Navy. During World War II, Todd-Seattle constructed over 125 ships and repaired and serviced some 2,700 deep draft vessels of all sizes, types, and flags. Since 1952, the yard has built 80 vessels of 20 different types.

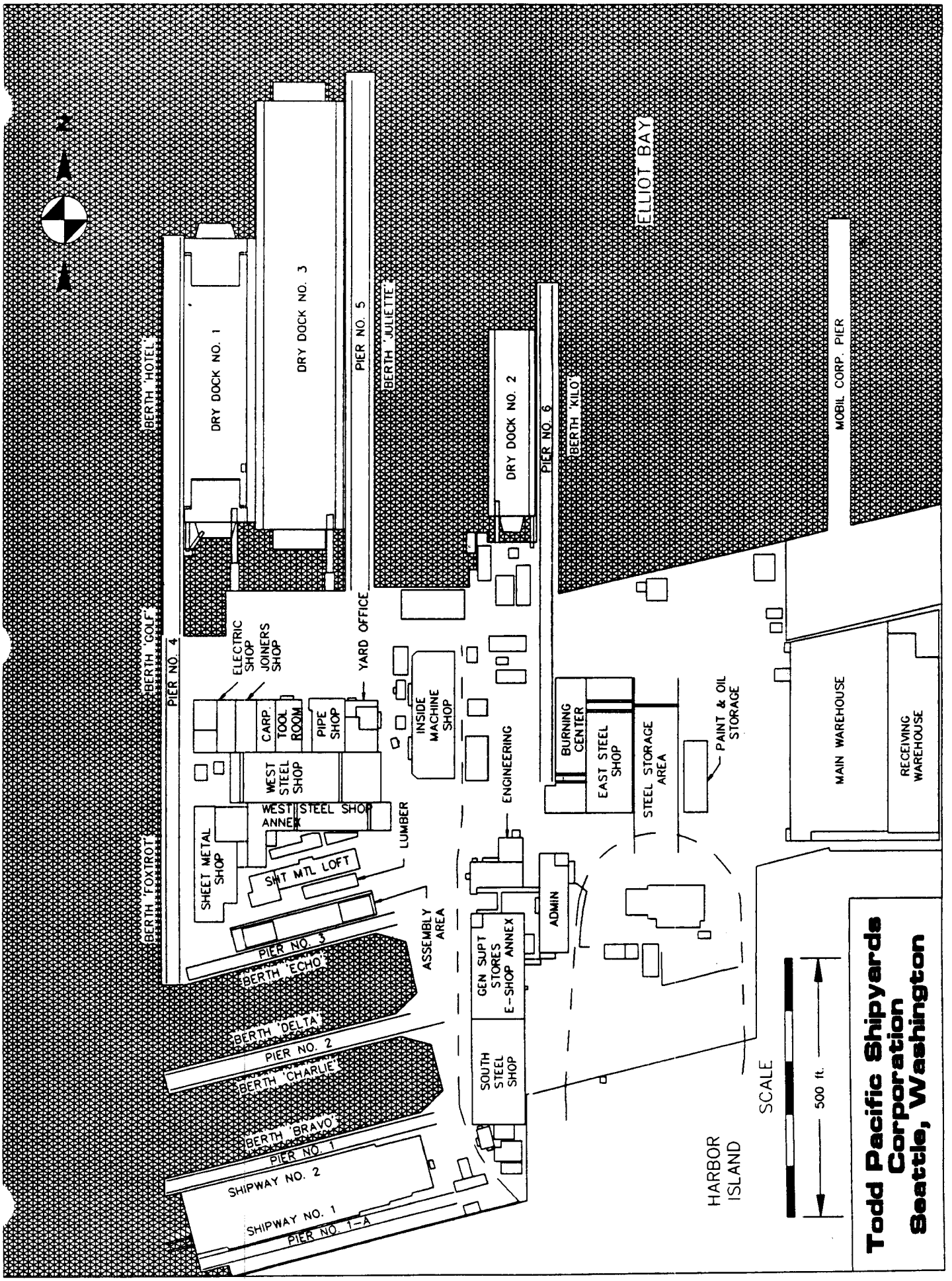
As of October 1, 1993, work in the yard included the repair and overhaul of numerous factory trawlers, containerships, barges and tugs. Todd is performing hatch coverless modifications to the MAUI and KAUI for Matson. Also, ongoing is the phased maintenance work on the USS CAMDEN and SACRAMENTO which provides a solid base for Todd's skilled labor force.

Todd-Seattle has a dual shipway for simultaneous construction of two ships with a maximum length of 168 meters by 18 meter beam. Combining the two shipways, Todd-Seattle can handle a ship up to 168 meters by 29 meters. A small side-launch building way is also available. In addition to the 40,640 metric ton drydock, there are two other floating drydocks, the larger of which can accommodate ships up to 287 meters by 41 meters.

In July 1982, the company transferred a 40,640 metric ton floating drydock from its San Francisco Division to Seattle. A new 137 metric ton traveling whirley crane on the adjacent 305 meter concrete pier serves the floating drydock and the adjacent berths. A second pier was rebuilt in concrete and lengthened to give the yard a 427 meter berth with a 12 meter water depth.

Two wharves and five piers provide a total of 1,834 meters of berthing space for outfitting and repair. The yard is serviced by 15 whirley traveling cranes, with lifting capacities ranging from 23 metric tons to 136 metric tons.

In mid-1993, total employment at the Seattle plant was 900, up from 750 a year earlier.


N
BERTH 'FOXTROT'
BERTH 'GOLF'
BERTH 'HOTEL'
PIER NO. 4
DRY DOCK NO. 1
DRY DOCK NO. 3
PIER NO. 5
BERTH 'JULIETTE'
DRY DOCK NO. 2
PIER NO. 6
BERTH 'KILO'
ELLIOT BAY
MOBIL CORP. PIER
ELECTRIC SHOP
JOINERS SHOP
YARD OFFICE
CARP. TOOL ROOM
PIPE SHOP
INSIDE MACHINE SHOP
WEST STEEL SHOP
WEST STEEL SHOP ANNEX
LUMBER
ENGINEERING
BURNING CENTER
EAST STEEL SHOP
STEEL STORAGE AREA
PAINT & OIL STORAGE
MAIN WAREHOUSE
RECEIVING WAREHOUSE
SHEET METAL SHOP
SHT MTL LOFT
ASSEMBLY AREA
GEN SUPT STORES E-SHOP ANNEX
ADMIN
PIER NO. 3
BERTH 'ECHO'
BERTH 'DELTA'
PIER NO. 2
BERTH 'CHARLIE'
SOUTH STEEL SHOP
BERTH 'BRAVO'
PIER NO. 1
SHIPWAY NO. 2
SHIPWAY NO. 1
PIER NO. 1-A
HARBOR ISLAND
SCALE
500 ft.
Todd Pacific Shipyards Corporation
Seattle, Washington

18. Trinity Marine Group - Beaumont Division

This shipyard, located on the Neches River in Beaumont, TX, was established in 1917 by Beaumont Shipbuilding and Drydock Co., which built C1-A cargo ships and Navy minesweepers during World War II. In 1947, the yard was acquired by Bethlehem Steel Corp., which pioneered the design and production of mobile offshore drilling rigs, drill ships, offshore oil and gas facilities and barges. After closure in mid-1988, the yard was acquired and reopened in mid-1989 by Trinity Industries, Inc., of Dallas, TX.

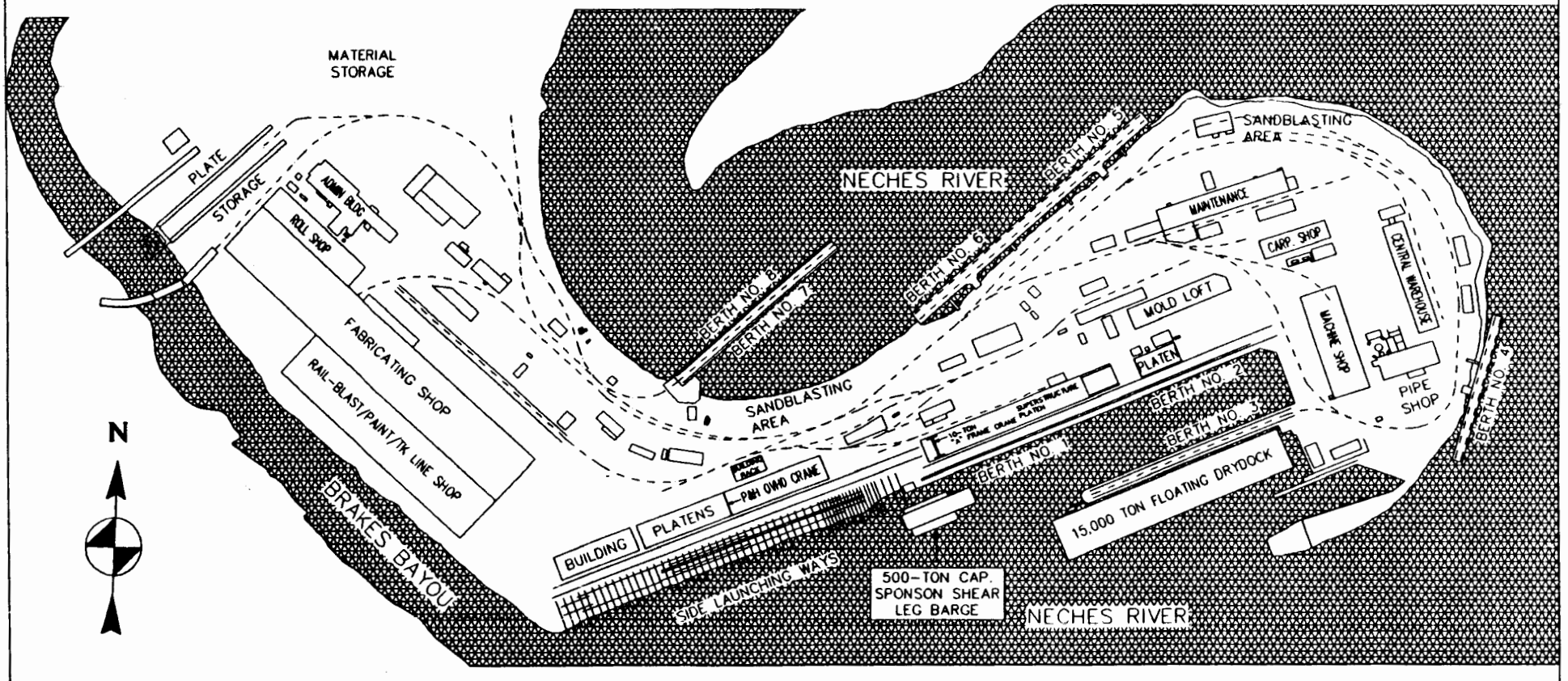
Trinity's Beaumont yard is highly mechanized. In the early 1970s, a multimillion-dollar panel line and material handling facilities were installed. In recent years, capital improvements included installation of a CNC plasma burning machine, larger plate bending rolls, larger overhead bridge cranes, pipe burning and bending equipment, a pipe fabrication shop, improved welding equipment, mobile cranes, and improved building platens.

Trinity-Beaumont has one side-launching way that can accommodate ships up to approximately 259 meters by 32 meters. Also, the yard has recently acquired under lease a floating drydock (AFDM-2) from the Navy. This drydock can accommodate a vessel up to 183 meters in length with a beam of 25 meters. Trinity Beaumont has also recently acquired an additional floating drydock that can accommodate a vessel up to 198 meters in length with a beam of 32 meters.

There are 1,402 meters of fully-serviced piers and wharves and mobile equipment for servicing ships or other vessels at pierside or anchorage. With a 508 metric ton lift capacity, the company's barge-mounted "Big Bessie" is the largest floating derrick between Houston and New Orleans.

While awaiting a major marine construction contract, Trinity is utilizing the yard's flexibility by repairing and servicing railcars, building LPG tank barges, both inland and ocean hopper barges, and recently began construction of one 61 meter casino barge, one 100 meter tank barge, and accomplished miscellaneous docking and repairs to various types of commercial vessels.

Employment at Trinity's Beaumont facility at mid-1993 was 218, up significantly from 83 a year earlier.



Trinity Marine Group, Inc.
Beaumont, Texas

EXHIBIT 18

SHIP REPAIR INDUSTRY

While over 200 privately owned firms of varying capabilities are involved in repairing ships in the United States, only 33 yards are capable of drydocking vessels 122 meters in length and over. For ships this size, the U.S. shipbuilding and repair industry is currently operating a total of 48 floating drydocks, 31 graving docks, and 3 marine railways. However, some of these graving docks are committed to new construction. The large organizations which have drydocks generally have extensive waterfront acreage and are capable of all types of ship repair and maintenance. Major shipyards usually combine repair, overhaul, and conversion with shipbuilding capabilities, and employment usually numbers in the thousands. It is difficult to draw a sharp line between shipbuilding yards and ship repair yards, as many of the two engage in both types of work.

Repair (with Drydocking) Facilities

Major drydocking facilities are defined as those yards having at least one drydocking facility that can accommodate vessels 122 meters in length and over, provided that water depth in the channel to the shipyard itself is at least 3.7 meters. These facilities may also be capable of constructing a vessel less than 122 meters length overall. Exhibit 21 is a histogram displaying the reduction in the number of available floating drydocks as the maximum ship length increases.

Appendix B tabulates information updated through 1993 on 33 of these repair yards by geographical location. Additional information is available in the Office of Ship Construction.

Major Topside Repair Facilities

Major topside repair facilities are those that have sufficient berth/pier space for topside repair of ships 122 meters in length and over, provided that water depth in the channel to the facility itself is at least 3.7 meters. These facilities may also have drydocks and/or construction capability for vessels less than 122 meters in length. Services rendered by these firms vary from a simple repair job to a major topside overhaul, particularly when the work on oceangoing ships can be accomplished without taking the ships out of the water. It is common practice for a shipyard to send its personnel and equipment to provide voyage repairs while the ship is at anchor or working cargo at a commercial marine terminal. There is an increasing trend worldwide to send ship repairers to the ship rather than to bring the ship to the shipyard, thus calling for greater mobility of ship repair personnel.

Appendix B also tabulates information through 1993 on the topside repair yards' facilities (berth/pier space). The yards' building ways, drydocks, marine railways, etc., are not addressed herein as they cannot accommodate vessels 122 meters in length and over. However, detailed data for these facilities were obtained during the MARAD annual shipyard survey and are available in the Office of Ship Construction.

MAJOR SHIPBUILDING AND REPAIR BASE

The major Shipbuilding and Repair Base (MSRB), as identified by the Navy and MARAD, is comprised of 19 privately owned U.S. shipyards that are open, having at least one shipbuilding position capable of accommodating a vessel 122 meters in length or over. In addition, these shipyards must own or have in place a long-term lease (1 year or more) on the facility in which they intend to accomplish the shipbuilding work, there must be no dimensional obstructions in the waterway leading to open water (i.e., locks, bridges), and the water depth in the channel to the facility must be a minimum of 3.7 meters. Exhibit 19 of this report identifies and graphically locates these 19 yards.

As of October 1993, the MSRB shipyards employed roughly 73 percent of the U.S. shipbuilding and repair industry's total workforce, as reported by the Bureau of Labor Statistics under SIC 3731. At the same time 94 percent of the production workers in these 19 shipyards were engaged in Navy or Coast Guard ship construction and repair work.

As of year's end, nine of the 19 shipyards were engaged in construction and/or conversion of major combatant and auxiliary ships for the Navy. Two of the yards were engaged primarily in ship construction work provided by the Navy's T-Ship program. Five of the yards had only repair and overhaul work, smaller Navy vessel orders, and non-ship construction work.

Employment projections for production workers is shown by Exhibit 22 of this report. These data are generated by overlaying Navy projected five-year shipbuilding and conversion programs onto the estimated work force required to complete a current orderbook.

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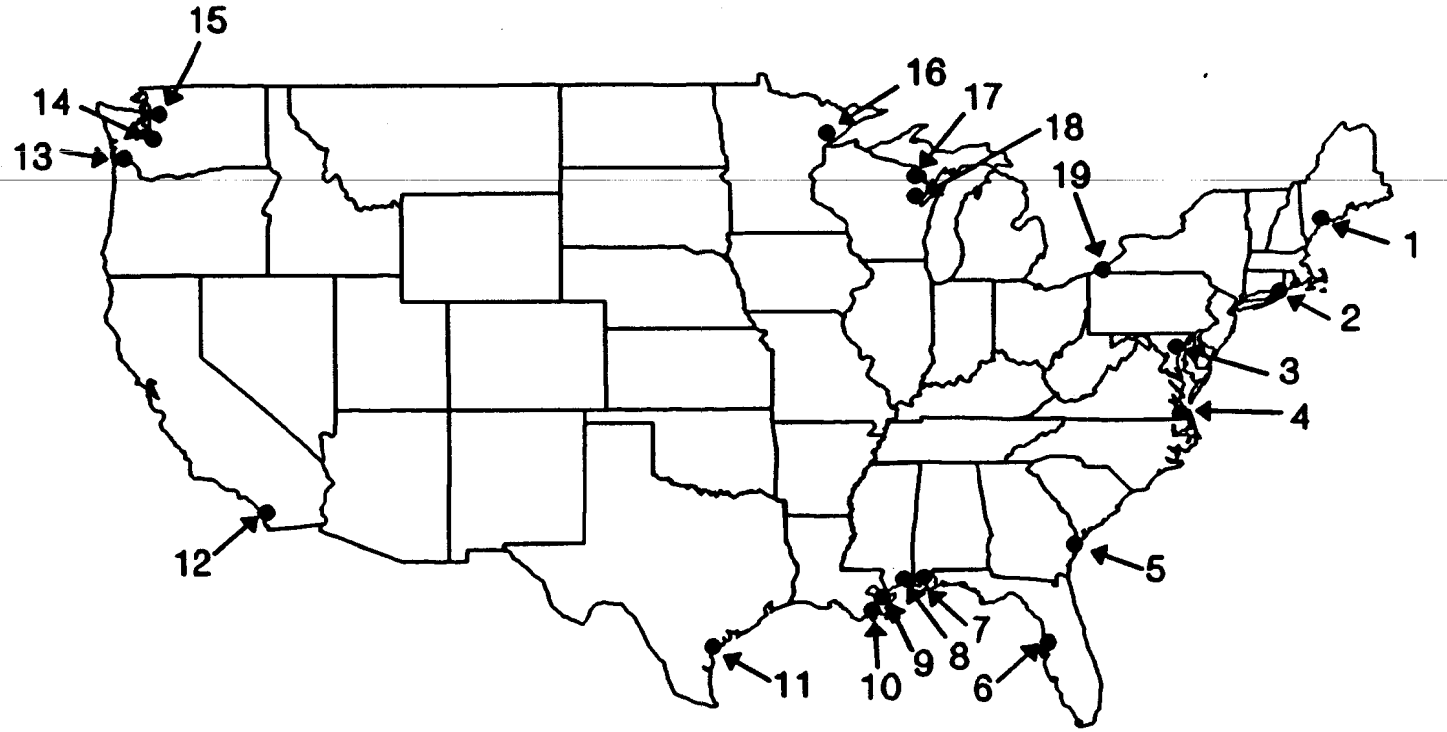
SHIPBUILDING INDUSTRY

AND

ACTIVITIES

1993

MAJOR SHIPBUILDING AND REPAIR FACILITIES IN THE UNITED STATES

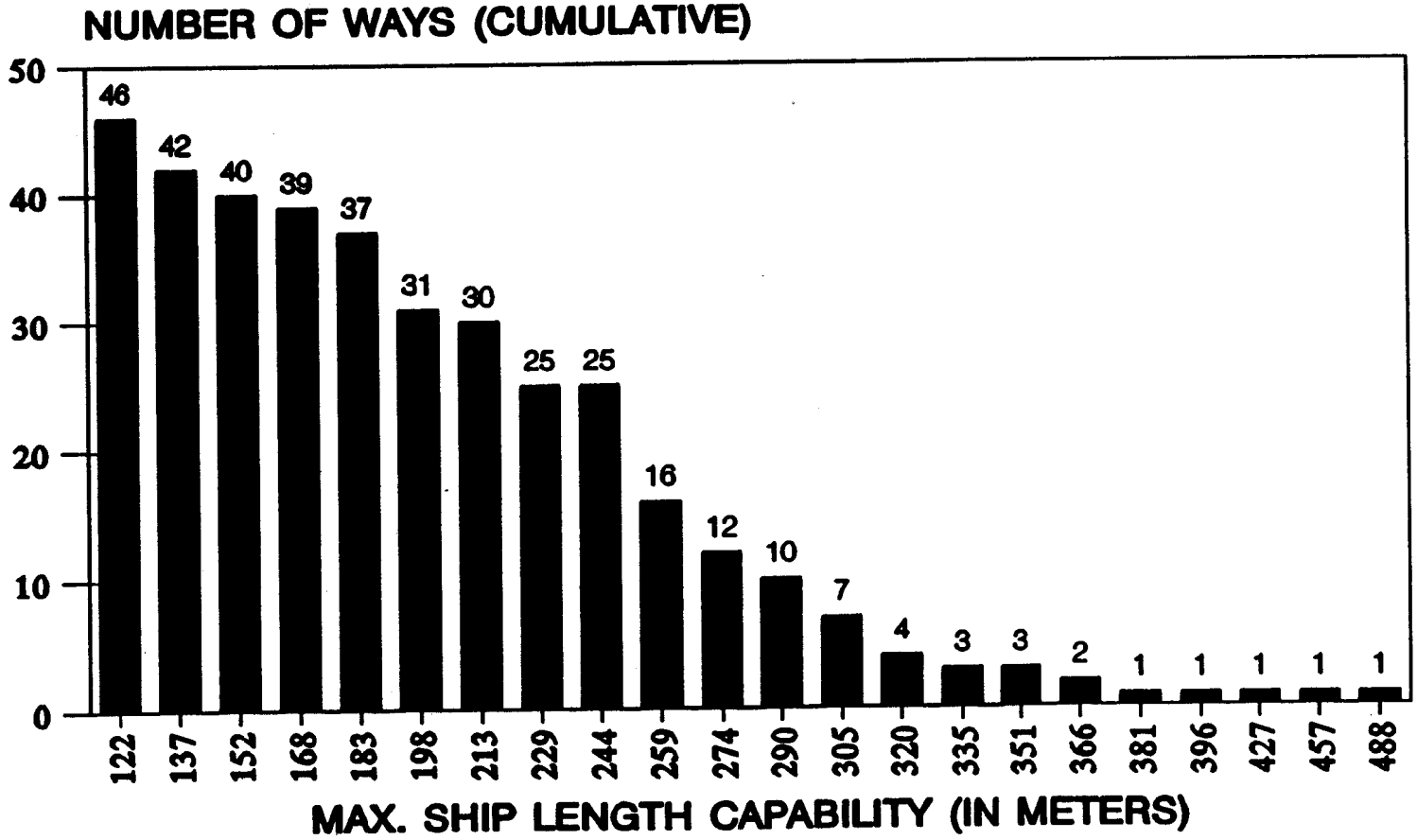


1. Bath Iron Works Corp.
2. General Dynamics - Electric Boat Div.
3. BethShip, Sparrows Point Yard
4. Newport News Shipbuilding
5. Intermarine USA
6. Tampa Shipyards, Inc.
7. Alabama Shipyard, Inc.
8. Halter Marine, Inc., Moss Point Div.
9. Ingalls Shipbuilding Inc.
10. Avondale Industries, Inc.
11. Trinity Marine Group - Beaumont Div.
12. National Steel and Shipbuilding Co.
13. Portland Ship Repair Yard
14. Tacoma Boatbuilding Co.
15. Todd Pacific Shipyard Corp.
16. Fraser Shipyards, Inc.
17. Marinette Marine Corp.
18. Peterson Builders, Inc.
19. Erie Marine Enterprises, Inc.

1993

MAJOR U.S. SHIPBUILDING FACILITIES *

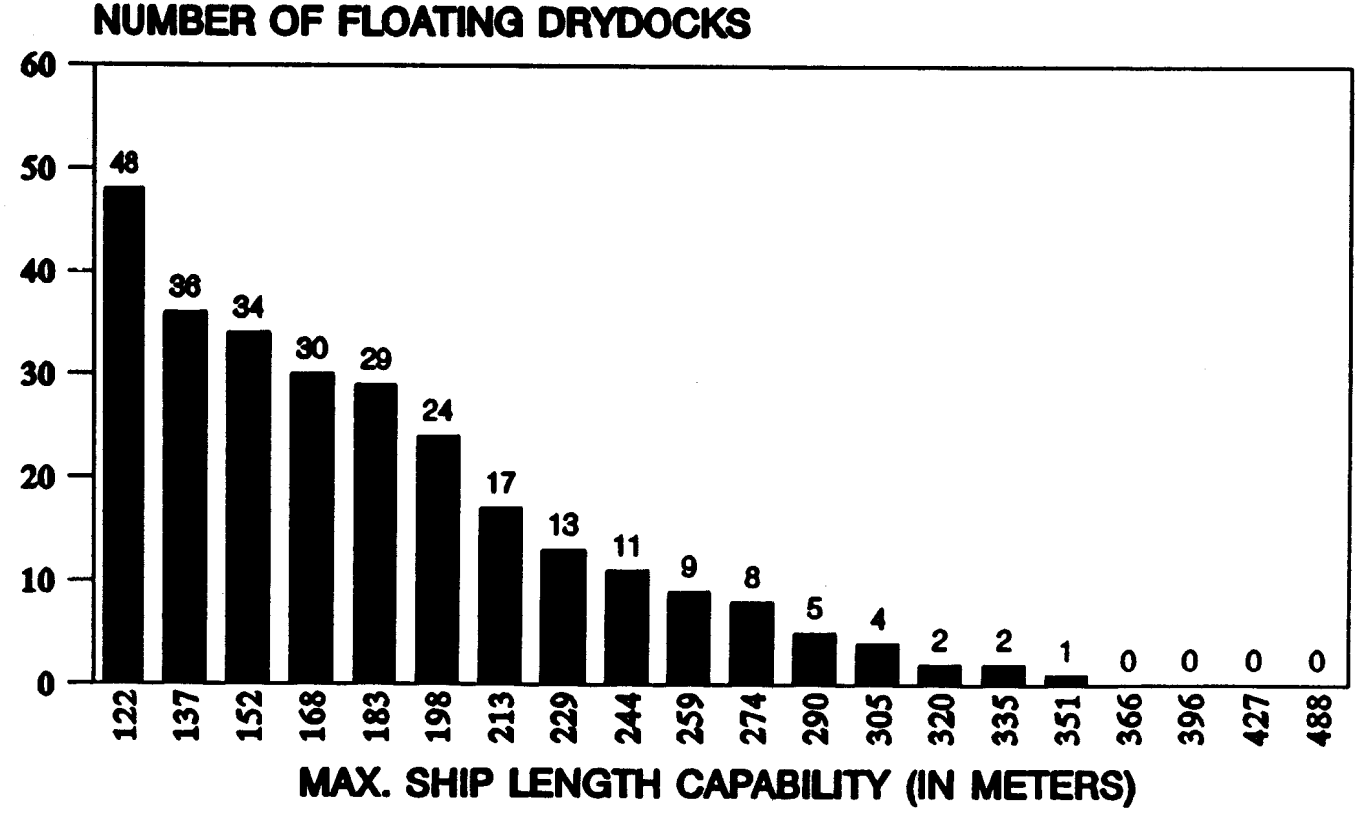
NUMBER OF BUILDING POSITIONS BY MAXIMUM LENGTH CAPABILITY (OCTOBER 1, 1993)



* Shipways, Graving Docks and Land Level Positions

MAJOR U.S. SHIP REPAIR FACILITIES *

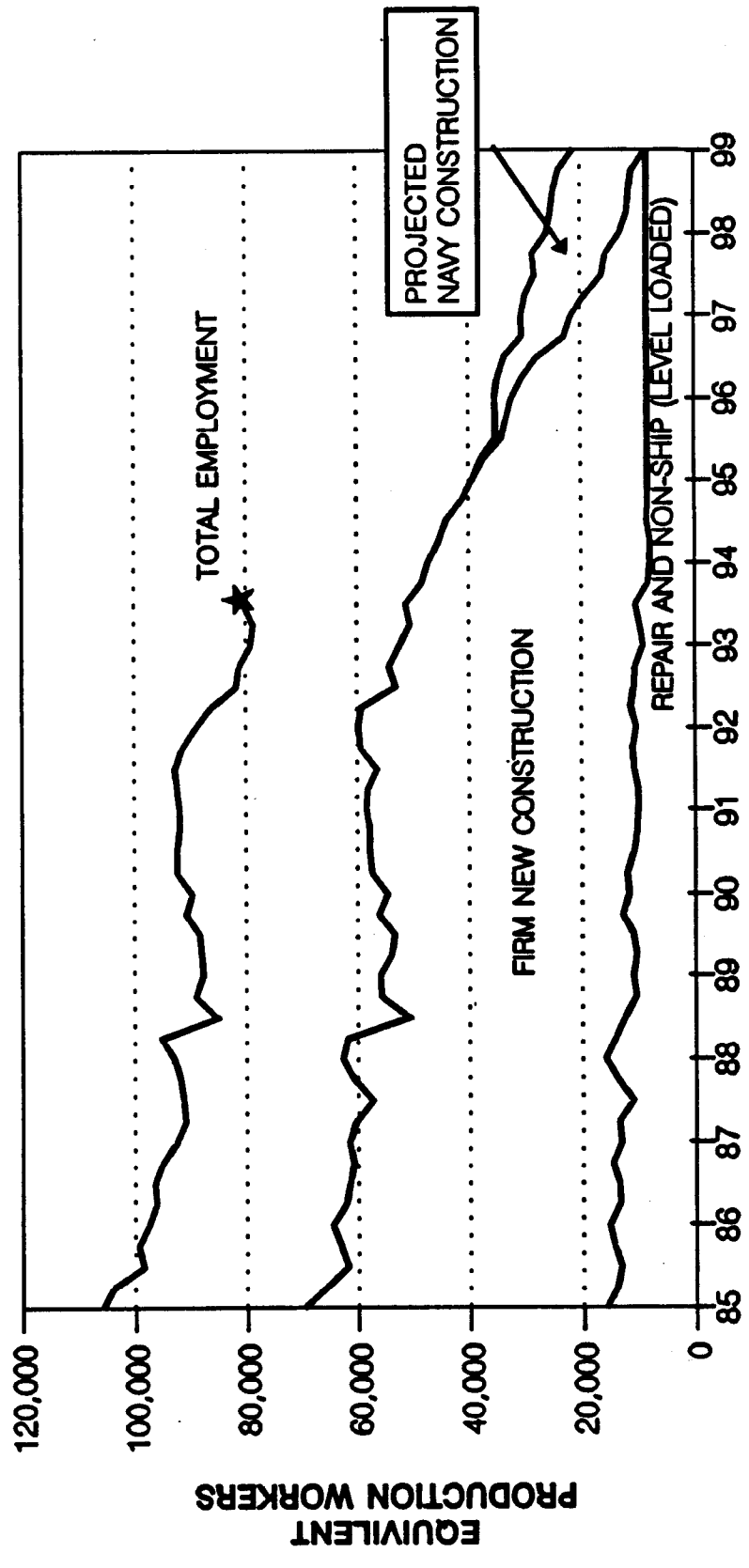
NUMBER OF FLOATING DRYDOCKS BY MAXIMUM LENGTH CAPABILITY (OCTOBER 1, 1993)



* Includes Major Shipbuilding and Repair Yards with Drydock Facilities

Exhibit 21

SHIPBUILDING INDUSTRY WORKLOAD PROJECTION
MAJOR SHIPBUILDING BASE SUMMATION
NUMBER OF YARDS = 19



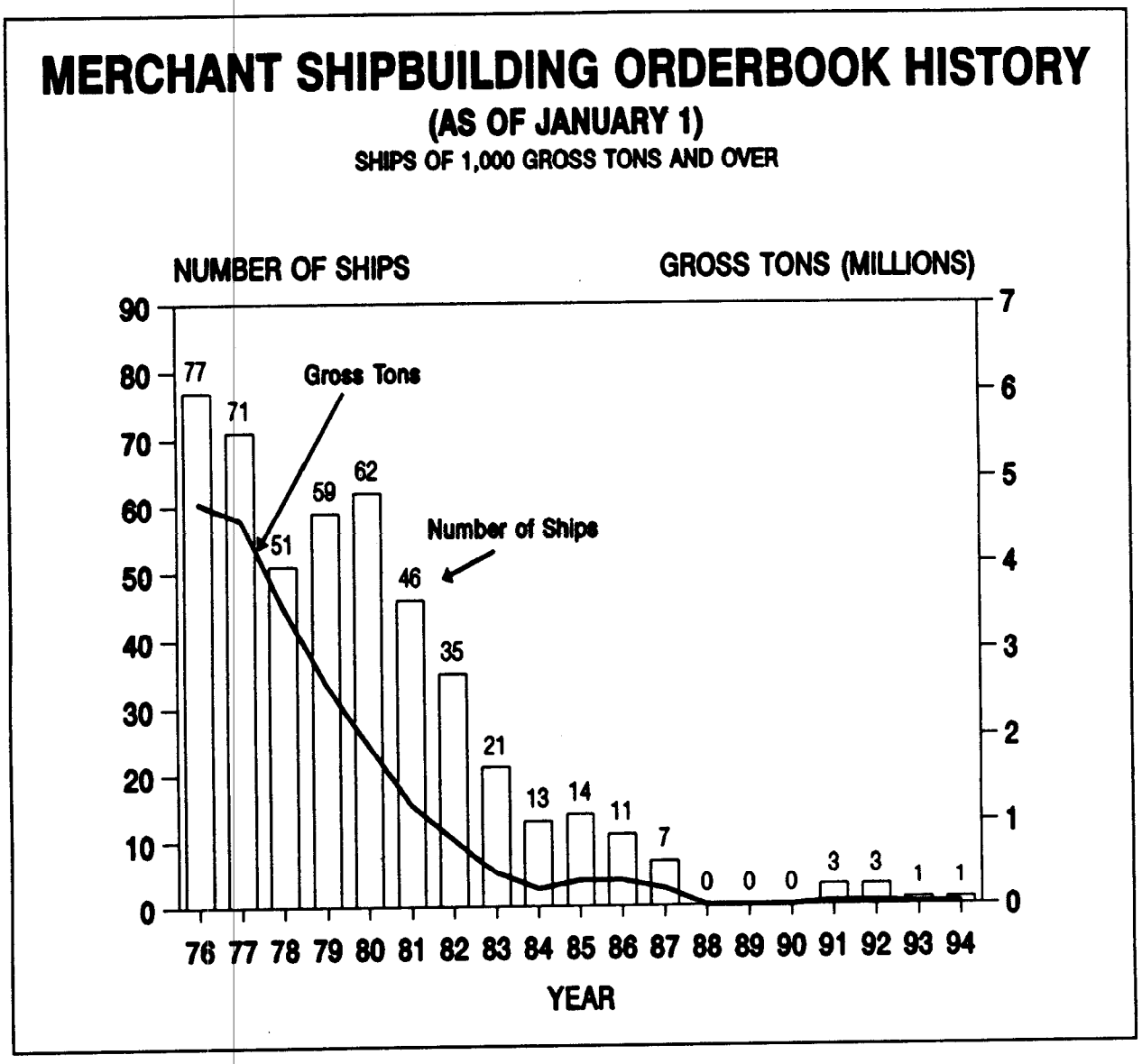
OCTOBER 1993

SOURCE: SHIPYARD DATA FROM FORM MA832 WHEN PROVIDED
OFFICE OF SHIP CONSTRUCTION; MARITIME ADMINISTRATION

COMMERCIAL SHIP CONSTRUCTION

In 1993, no new commercial oceangoing ships 1,000 gross tons or larger were ordered from U.S. shipyards. At the end of 1993 the U.S. orderbook for commercial shipbuilding consisted of one ship, a 24,000 dwt, 160 meter sulphur carrier under construction at McDermott Shipyards scheduled for delivery in July 1994. It should be noted that although another vessel, the AMERICAN QUEEN, a 3,195 gross ton paddlewheel boat, is being built by McDermott it is not oceangoing. The orderbook since 1976 is illustrated in Exhibit 23.

Exhibit 23

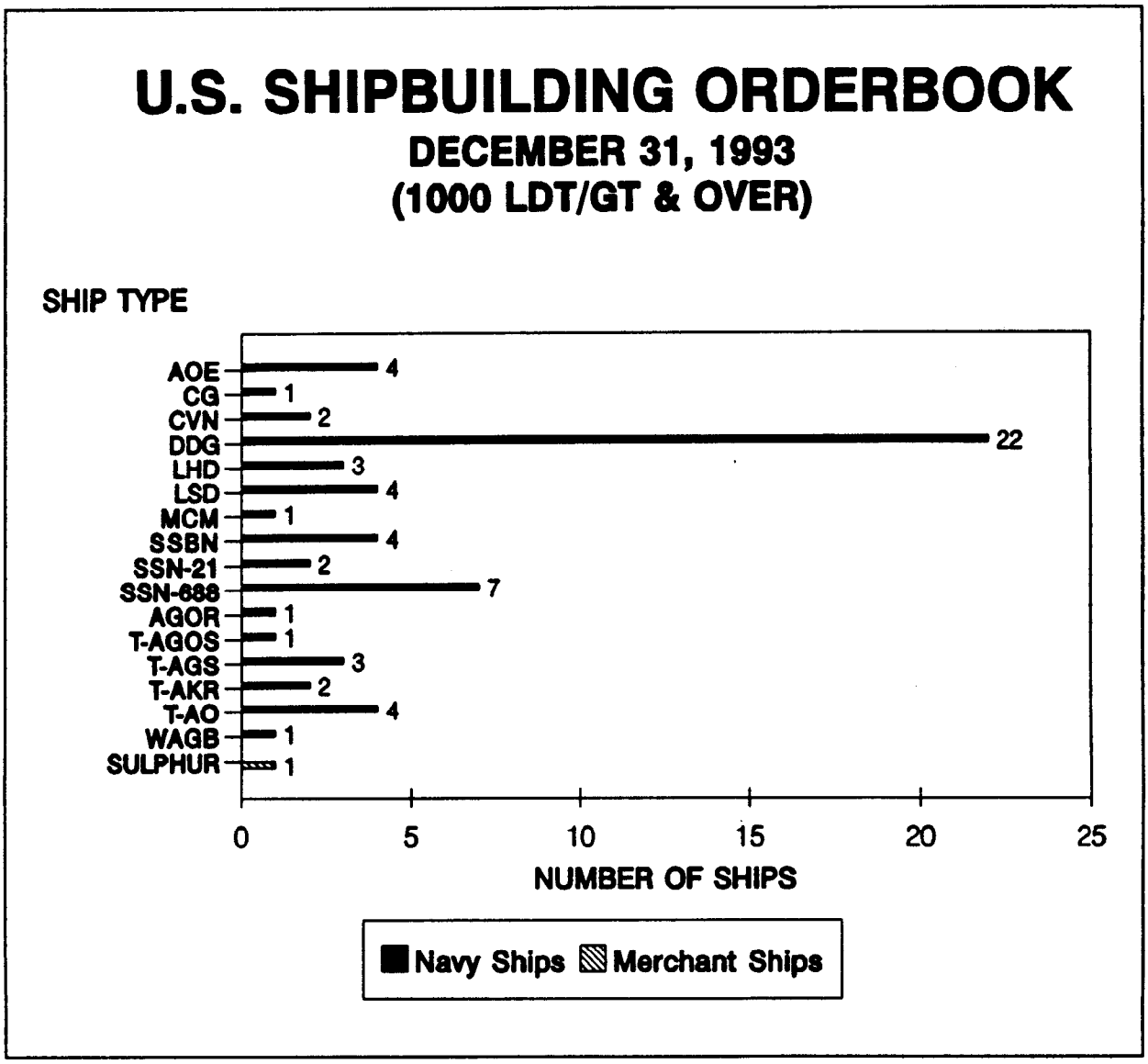


U.S SHIPBUILDING ORDERBOOK

As of December 31, 1993, new ships on order or under construction (naval vessels 1,000 light displacement tons (ldt) and larger and commercial ships 1,000 gross tons (gt) and larger) in U.S. private shipyards totalled 62 naval and 1 commercial vessel (Exhibit 24).

Ten shipyards had contracts for the construction of naval and commercial vessels. The naval shipbuilding orderbook includes 27 ships scheduled for delivery in 1996 and later. One shipyard had an order for one commercial ship which is scheduled to be delivered in 1994. The naval orderbook is comprised of 16 different types of vessels.

Exhibit 24



NEW SHIPBUILDING ORDERS - 1993

In 1993, U.S. shipyards received orders for the construction of ten new construction naval ships (Exhibit 25). There were no new oceangoing commercial vessel ordered. Contracts were placed for the construction of one oceanographic research ship (AGOR 24) at Halter Marine, Inc., Moss Point, MS; one fast combat support ship (AOE 10) and one vehicle cargo ship (T-AKR 301) at National Steel Shipbuilding, San Diego, CA; three guided missile destroyers (DDG 73, DDG 75 and DDG 76) at Bath Iron Works Corporation, Bath, ME; one guided missile destroyer (DDG 74) at Ingalls Shipbuilding, Pascagoula, MS; one icebreaker (WAGB 20), one dock landing ship (LSD 52) and one vehicle cargo ship (T-AKR 300) Avondale Industries, New Orleans, LA. The total contract value for these ships was approximately $2.5 billion.

Exhibit 25

NEW SHIPBUILDING ORDERS - 1993
(1,000 LDT or GT and OVER)

SHIPYARD	SHIP CLASS and HULL NUMBER	CONTRACT PRICE (in Millions)	LDT / GT	CONTRACT AWARD DATE	ESTIMATED DELIVERY DATE
NAVAL SHIPS					
Halter Marine - Moss Point	AGOR 24	$34.6	3,300	01/11/93	05/11/96
National Steel Shipbuilding	AOE 10	$365.8	19,700	01/15/93	10/15/97
Bath Iron Works	DDG 73	$241.3	6,625	01/19/93	12/16/97
Ingalls Shipbuilding	DDG 74	$340.0	6,625	01/21/93	03/06/98
Bath Iron Works	DDG 75	$241.3	6,625	01/19/93	06/16/98
Bath Iron Works	DDG 76	$241.3	6,625	01/19/93	09/15/98
Avondale Shipyards	WAGB 20	$232.5	11,400	07/16/93	09/30/97
Avondale Shipyards	T-AKR 300	$265.2	34,408	09/03/93	06/30/97
National Steel Shipbuilding	T-AKR 301	$269.1	36,114	09/15/93	06/30/97
Avondale Shipyards	LSD 52	$257.5	11,894	10/12/93	01/15/98
	10 Ships	$2,488.6	143,316		
COMMERCIAL SHIPS					
None					

COMMERCIAL SHIP DELIVERIES - 1993

There were no commercial ships delivered by U.S. shipyards during 1993 (Exhibit 26).

During 1992 there were 3 commercial ships delivered. The WK MCWILL JR and the BENNO C. SCHMIDT are 398 foot sulfur carriers ordered by Freeport McMoran. These vessels were delivered in February and September, respectively. The R.J. PFEIFFER a 713 foot container ship was ordered by Matson Navigation Co. and delivered by National Steel Shipbuilding Co. (NASSCO) in August.

Exhibit 26

COMMERCIAL VESSELS DELIVERED - 1993
(1,000 GT and OVER)

SHIPYARD	DESIGN TYPE	VESSEL NAME	GROSS TONS	DELIVERY DATE	CONTRACT PRICE (in Millions)
NONE					

NAVY SHIP DELIVERIES - 1993

During calendar year 1993, U.S. private shipyards delivered 18 new naval vessels, 1,000 light displacement tons (LDT) and larger. The naval vessels delivered totaled 129,350 LDT and had an initial contract value of approximately $3.5 billion (Exhibit 27). By comparison, U.S. shipyards delivered 18 new naval vessels valued at approximately $4.9 billion in 1992.

Nine different types of naval ships were delivered by seven shipyards during 1993: 3 - guided missile cruisers (CG); 2 - guided missile destroyer (DDG); 1 - amphibious assault ship (LHD); 3 - mine countermeasure ships (MCM); 1 - ballistic missile submarine (SSBN); 4 - attack submarines (SSN); 1 - coastal hydrographic survey ship (T-AGS); 2 - ocean surveillance ships (TAGOS); and 1 - fleet oiler (T-AO).

Exhibit 27

NAVY NEW CONSTRUCTION VESSELS DELIVERED - 1993
(1,000 LDT and OVER)

SHIPYARD	SHIP CLASS and HULL NUMBER	VESSEL NAME	LDT	DELIVERY DATE	CONTRACT PRICE (in Millions)
McDermott Shipyards	T-AGOS 21	EFFECTIVE	2,486	01/27/93	$19.8
Newport News Shipbuilding	SSN 765	MONTPELIER	6,000	01/28/93	$257.5
Avondale Shipyards	T-AO 199	TIPPECANOE	15,000	02/08/93	$106.3
Bath Iron Works	CG 70	LAKE ERIE	7,035	03/12/93	$226.1
Ingalls Shipbuilding	CG 71	CAPE ST GEORGE	7,009	04/13/93	$192.3
Avondale Shipyards	T-AGS 45	WATERS	7,312	05/26/93	$104.4
Peterson Builders	MCM 11	GLADIATOR	1,000	06/04/93	$61.7
General Dynamics - EB	SSN 762	COLUMBUS	6,000	06/23/93	$258.1
General Dynamics - EB	SSBN 739	NEBRASKA	12,500	06/30/93	$611.5
McDermott Shipyards	T-AGOS 22	LOYAL	2,486	07/01/93	$19.8
Ingalls Shipbuilding	CG 72	VELLA GULF	7,009	07/12/93	$192.3
Ingalls Shipbuilding	LHD 3	KEARSARGE	28,233	08/16/93	$378.7
Bath Iron Works	DDG 53	JOHN PAUL JONES	6,640	08/20/93	$189.9
Peterson Builders	MCM 12	ARDENT	1,000	08/20/93	$65.9
Newport News	SSN 767	HAMPTON	6,000	10/28/93	$257.5
General Dynamics - EB	SSN 763	SANTA FE	6,000	11/18/93	$258.1
Peterson Builders	MCM 13	DEXTROUS	1,000	12/03/93	$65.9
Bath Iron Works	DDG 54	CURTIS WILBUR	6,640	12/10/93	$203.3
TOTAL	18 Ships		129,350		$3,469.1

NAVY'S T-SHIP PROGRAM

The Navy's T-ship program continued to be an important segment of ship construction and conversion activity for U.S. shipyards. T-ships are auxiliary vessels funded by the Navy budget but designed to be civilian-manned and under the control of the Military Sealift Command. Since mid-1979, 16 U.S. private shipyards have been awarded contracts for the construction of 57 new ships and the conversion of 36 existing vessels. The initial contract value for these vessels totalled almost $7.4 billion.

During 1993, two new T-ship contracts were placed with U.S. shipyards. Avondale Industries, New Orleans, LA, received an order with an initial contract value of $265.2 million to build one vehicle cargo ship (T-AKR 300) and National Steel Shipbuilding Co., San Diego, CA, received an order with an initial contract value of $269.1 million to build a vehicle cargo ship (T-AKR 301). These ships are the first new construction contracts awarded under the Fast Sealift initiative.

During 1993, deliveries included an oceanographic survey ship (T-AGS 45) and one fleet oiler (T-AO 199) by Avondale Industries, New Orleans, LA; two SWATH class ocean surveillance ships (T-AGOS 21 and T-AGOS 22) by McDermott Shipyards, Morgan City, LA. The contracts for the T-AO 191 and 192 at Tampa Shipyards, Tampa, FL, were terminated during August 1993.

As of December 31, 1993, 10 T-ships were under construction or on order at four shipyards (Exhibit 28). The value of this orderbook is approximately $1.1 billion.

Exhibit 28

T-SHIPS ON ORDER OR UNDER CONSTRUCTION
(as of December 31, 1993)

SHIPYARD	SHIP CLASS and HULL NUMBER	VESSEL NAME	ESTIMATED DELIVERY DATE	CONTRACT PRICE (in Millions)
Halter Marine	T-AGS 60	PATHFINDER	10/31/94	$49.9
Halter Marine	T-AGS 61	SUMNER	05/01/95	$42.9
Halter Marine	T-AGS 62	BOWDITCH	11/29/95	$19.8
Tampa	T-AGOS 23	IMPECCABLE	01/31/95	$58.6
Avondale	T-AKR 300	- unnamed -	06/30/97	$265.2
National Steel	T-AKR 301	- unnamed -	06/30/97	$269.1
Avondale	T-AO 201	PATUXENT	06/07/95	$106.3
Avondale	T-AO 202	YUKON	10/15/93	$97.5
Avondale	T-AO 203	LARAMIE	04/05/96	$106.3
Avondale	T-AO 204	RAPPAHANNOCK	11/07/95	$97.5
TOTAL	10 Ships			$1,113.1

PROJECTED NAVY SHIPBUILDING PLAN

The U.S. Navy shipbuilding plan for fiscal years 1995 - 1999 and the appropriation for fiscal year 1994 includes the construction of 44 new ships, as illustrated in Exhibit 29. More than $30 billion is proposed for this plan. Shipyard contract value accounts for about a third of this amount, while the remainder is attributed to Government-furnished equipment placed aboard the vessels and to other Government program costs.

The Navy's proposed FY 1995 - 1999 shipbuilding program represents a continued reduction in the amount of new shipbuilding work available to the nation's industrial base when compared with previous Navy programs. At an average of less than 8 ships per year, this program represents a 58 percent reduction in the quantity of ships to be procured compared with the 19 ships per year average for Navy programs during the 1980s.

The Navy's plan includes the construction of 1 nuclear aircraft carrier (CVN), 21 guided missile destroyers (DDG-51) and 1 attack submarine (SSN-21). These three shipbuilding programs will probably consume approximately 80 percent of the available funding.

Exhibit 29

NAVY SHIPBUILDING PLAN
Fiscal Years 1995 - 1999
Plus Fiscal Year 1994 Appropriation

Ship Class	1994	1995	1996	1997	1998	1999	TOTAL
CVN	-	1	-	-	-	-	1
SSN	-	-	-	-	1	-	1
DDG-51	3	3	4	4	3	4	21
LX	-	-	1	-	2	2	5
T-AGOS	-	-	1	1	-	-	2
T-AGS (OCEAN)	1	-	1	-	-	-	2
T-AKR (FAST SEALIFT)	2	2	2	2	1	-	9
ADC(X)	-	-	-	-	1	-	1
AOE	-	-	-	-	-	1	1
AGOR	1	-	-	-	-	-	1
Total	7	6	9	7	8	7	44

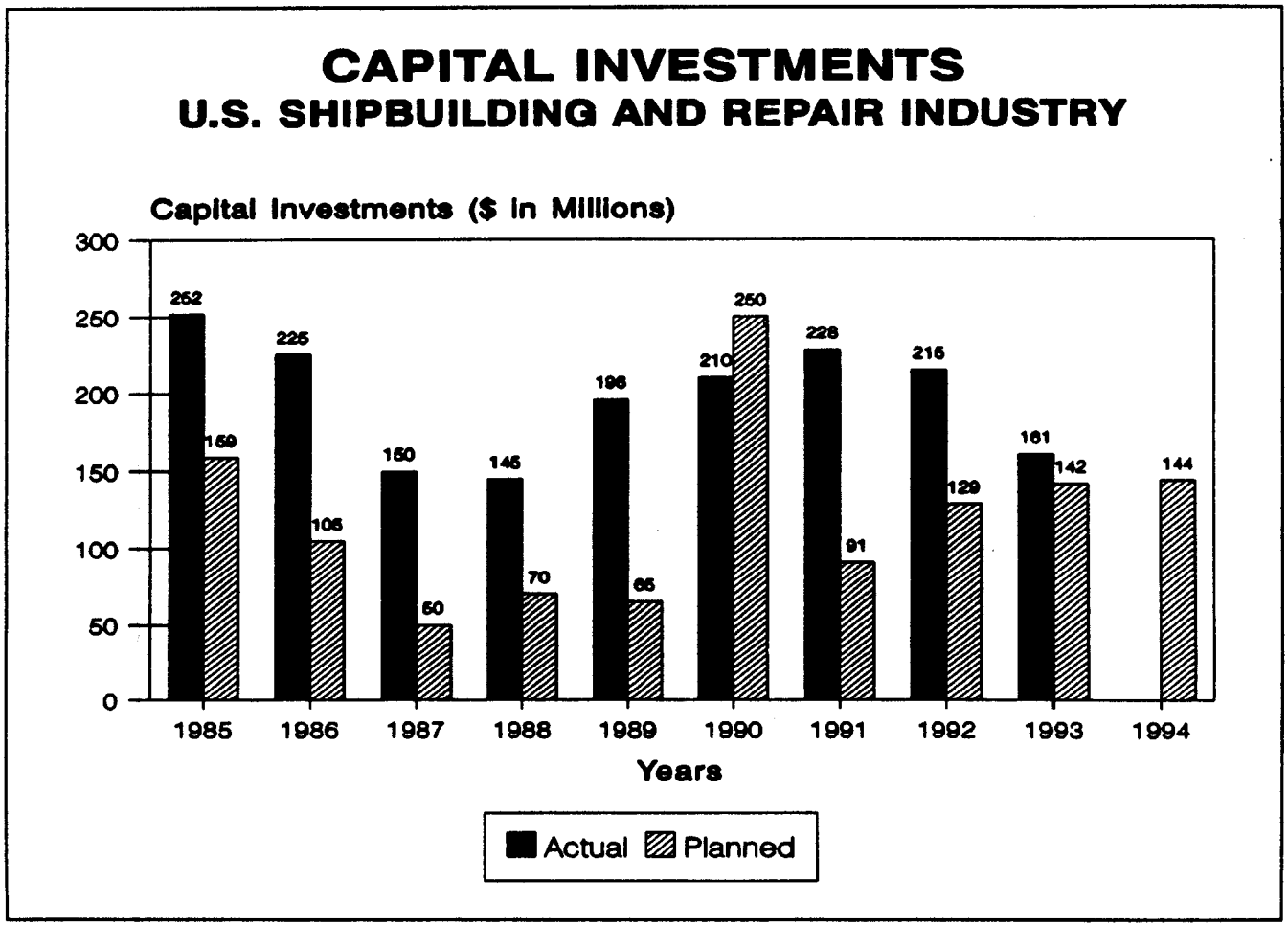
CAPITAL INVESTMENT

During FY 1993, the U.S. ship construction and ship repair industry invested more than $161 million in the upgrade and expansion of facilities (Exhibit 30). Much of this investment was to improve efficiency and competitiveness in the Navy's construction, repair and overhaul projects, which are considered the most consistent and stable element in the industry's projected market.

In 1994, the industry plans to spend about $144 million in the upgrade and expansion of facilities, according to data received by the Maritime Administration. The industry's capital investments since 1970 have totaled more than $5.2 billion, and actual expenditures between 1985 and 1993, with the exception of 1990 have consistently exceeded those planned.

These capital investments have included building basins, floating drydocks, cranes, automated equipment, and highly mechanized modular techniques - fabrication of large subassemblies and pre-outfitting of ship components.

Exhibit 30

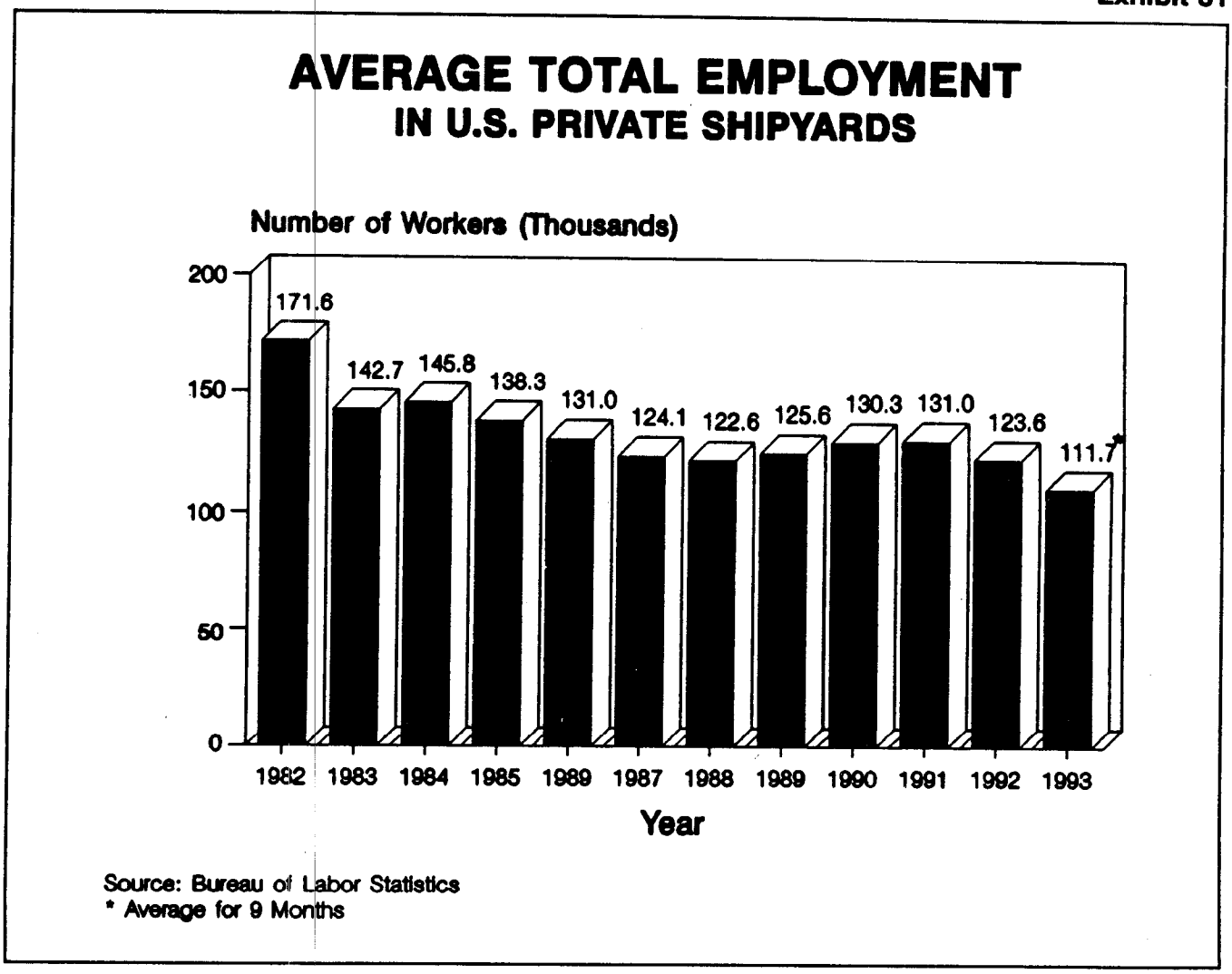


TOTAL EMPLOYMENT IN PRIVATE SHIPYARDS

According to preliminary employment data published by the Bureau of Labor Statistics (BLS), U.S. Department of Labor, under the Standard Industrial Classification (SIC) Code 3731 (Shipbuilding and Repairing), the average total employment in U.S. private shipyards for the first nine months of 1993 was 111,700 (Exhibit 31). This total reflects a decline of 9.7 percent from the reported total average employment for the shipbuilding and repairing industry for 1992.

According to the data published by the BLS, total average employment in the shipbuilding and repairing industry increased slightly between 1989 and 1991, but is currently projected to be lower than any level in the past twenty-three years. Despite the fact that the employment level has increased in the last few years it has remained considerably lower than that reported in 1982 when 171,600 people were employed in the industry.

Exhibit 31

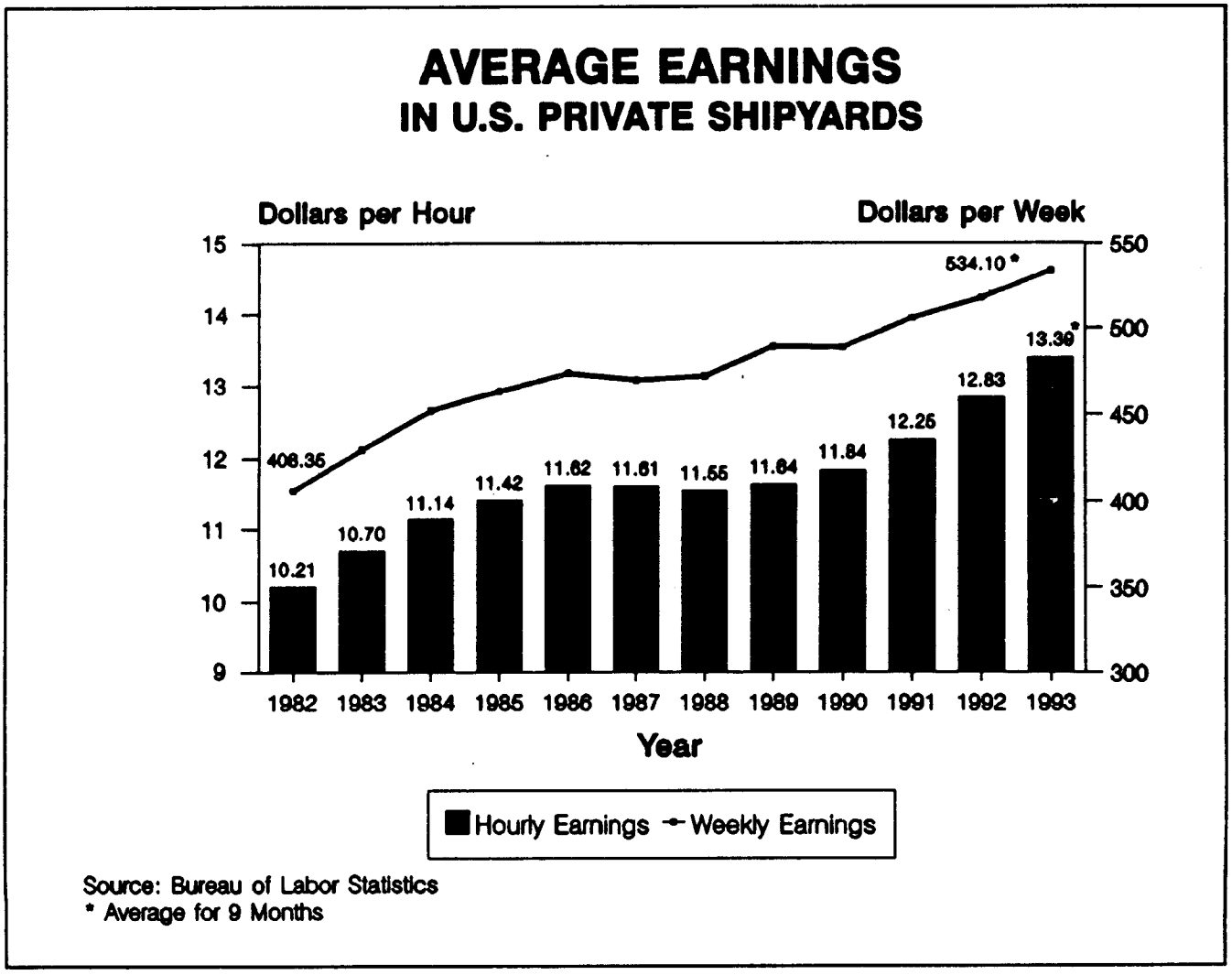


AVERAGE EARNINGS IN U.S. PRIVATE SHIPYARDS

Average hourly earnings in the U.S. private shipyards are presented on a "gross" basis, reflecting not only changes in basic hourly and incentive wage rates, but also such variable factors as premium pay for overtime and late-shift work, as well as changes in output for workers paid on an incentive plan. Averages of hourly earnings differ from wage rates. Earnings are the actual return to the workers for a stated period of time; rates are the amount stipulated for a given unit of work or time. Gross average weekly earnings are derived by multiplying average weekly hours by average hourly earnings. Therefore, weekly earnings are affected not only by changes in gross average hourly earnings, but also by changes in the length of the workweek.

The annual average earnings of the private shipyards in the United States from 1982 through the first nine months of 1993 show an increase from $10.21 to an average of $13.39 (Exhibit 32). During the same period, the average weekly earnings rose from $408.35 to $534.10.

Exhibit 32



Source: Bureau of Labor Statistics
* Average for 9 Months

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TABLE 1

SHIP CONSTRUCTION CAPABILITY

BY

SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

TABLE 1A: GENERAL CARGO AND DRY BULK

TABLE 1B: TANKER AND OBO

1/ LEGEND

Maximum Ship Size
(LOA x Beam)
SW = Shipway
GD = Graving Dock
FD = Floating Drydock
MR = Marine Railway
LL = Land Level Position

TABLE 1A
SHIP CONSTRUCTION CAPABILITY
BY
SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

		General Cargo						Dry Bulk DWT		
BUILDING POSITION 1/ (Number)		Gen. Cargo	Mob. Cargo	Container	RO/RO	LASH	Container	21,300	51,000	100,000
	Length (m)	145	221	186	208	272	289	174	183	274
	Beam (m)	21	32	27	31	30	32	23	32	32
SHIPYARD	Metric Units (m)	Quantity of Ships								
EAST COAST										
Bath Iron Works	219 X 34 SW	1	1	1	1	0	0	1	1	0
	219 X 39 SW	1	0	1	1	0	0	1	1	0
	213 X 26 SW	1	0	1	0	0	0	1	0	0
		3	0	3	2	0	0	3	2	0
BethShip Sparrows Point Yard	(2) 244 X 32 SW	2	2	2	2	0	0	2	2	0
	365 X 59 GD	4	1	3	2	1	1	4	2	1
		6	3	5	4	1	1	6	4	1

1/ LEGEND

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(LOA x Beam)
SW = Shipway
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	Beam (m)	21	32	27	31	30	32	23	32	32
SHIPYARD	Metric Units (m)	Quantity of Ships								
EAST COAST										
Intermarine USA	162 X 20 GD	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
Newport News Shipbuilding	292 X 37 GD	2	1	2	1	1	1	2	1	1
	334 X 41 GD	2	1	2	1	1	1	2	2	1
	490 X 75 GD	9	4	5	4	2	2	6	4	1
		13	6	9	6	4	4	10	7	3

1/ LEGEND

Maximum Ship Size
(LOA x Beam)
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SHIP CONSTRUCTION CAPABILITY
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	Beam (m)	21	32	27	31	30	32	23	32	32
SHIPYARD	Metric Units (m)	Quantity of Ships								
GULF COAST										
Alabama Shipyard	290 X 50 LL	4	0	0	0	0	0	0	0	0
		4	0	0	0	0	0	0	0	0
Avondale Industries	(2) 311 X 53 LL	8	2	3	3	2	2	6	3	2
	(2) 265 X 38 LL	2	2	2	2	0	0	2	2	0
		10	4	5	5	2	2	8	5	2

1/ LEGEND

Maximum Ship Size
(LOA x Beam)
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SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

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	Beam (m)	21	32	27	31	30	32	23	32	32
SHIPYARD	Metric Units (m)	Quantity of Ships								
GULF COAST										
Halter Marine - Moss Point	146 X 20 LL	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
Ingalls Shipbuilding	(5) 257 X 53 LL*	25	11	13	11	0	0	16	11	0
	469 X 53 LL*	3	2	2	2	0	0	2	2	0
		28	13	15	13	0	0	18	13	0

* Ship size constrained by maximum launching capability of 259 X 53 meters.

1/ LEGEND

Maximum Ship Size
(LOA x Beam)
SW = Shipway
GD = Graving Dock
FD = Floating Drydock
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LL = Land Level Position

TABLE 1A
SHIP CONSTRUCTION CAPABILITY
BY
SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

		General Cargo						Dry Bulk DWT		
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	Length (m)	145	221	186	208	272	289	174	183	274
	Beam (m)	21	32	27	31	30	32	23	32	32
SHIPYARD	Metric Units (m)	Quantity of Ships								
GULF COAST										
Tampa Shipyards	(2) 226 X 32 GD	2	2	2	2	0	0	2	2	0
		2	2	2	2	0	0	2	2	0
Trinity Marine Group Beaumont Division	259 X 32 SW	1	1	1	1	1	0	1	1	0
		1	1	1	1	1	0	1	1	0

1/ LEGEND

Maximum Ship Size
(LOA x Beam)
SW = Shipway
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TABLE 1A
SHIP CONSTRUCTION CAPABILITY
BY
SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

		General Cargo						Dry Bulk DWT		
BUILDING POSITION 1/ (Number)		Gen. Cargo	Mob. Cargo	Container	RO/RO	LASH	Container	21,300	51,000	100,000
	Length (m)	145	221	186	208	272	289	174	183	274
	Beam (m)	21	32	27	31	30	32	23	32	32
SHIPYARD	Metric Units (m)	Quantity of Ships								
WEST COAST										
National Steel & Shipbuilding	210 X 27 SW	1	0	1	0	0	0	1	0	0
	(2) 274 X 34 SW	2	2	2	2	2	0	2	2	2
	303 X 52 GD	4	1	1	1	1	1	2	1	1
		7	3	4	3	3	1	5	3	3

1/ LEGEND

Maximum Ship Size
(LOA x Beam)
SW = Shipway
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SHIP CONSTRUCTION CAPABILITY
BY
SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

		General Cargo						Dry Bulk DWT		
BUILDING POSITION 1/ (Number)		Gen. Cargo	Mob. Cargo	Container	RO/RO	LASH	Container	21,300	51,000	100,000
	Length (m)	145	221	186	208	272	289	174	183	274
	Beam (m)	21	32	27	31	30	32	23	32	32
SHIPYARD	Metric Units (m)	Quantity of Ships								
WEST COAST										
Portland Ship Repair Yard	183 X 30 LL	1	0	0	0	0	0	0	0	0
	305 X 55 LL	1	1	1	1	0	0	1	1	0
		2	1	1	1	0	0	1	1	0
Tacoma Boatbuilding	(2) 130 X 14 SW*	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0

* Vessel with beam up to 30 meters can be constructed by joining the two shipways.

1/ LEGEND

Maximum Ship Size
(LOA x Beam)
SW = Shipway
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FD = Floating Drydock
MR = Marine Railway
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TABLE 1A
SHIP CONSTRUCTION CAPABILITY
BY
SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

		General Cargo						Dry Bulk DWT		
BUILDING POSITION 1/ (Number)		Gen. Cargo	Mob. Cargo	Container	RO/RO	LASH	Container	21,300	51,000	100,000
	Length (m)	145	221	186	208	272	289	174	183	274
	Beam (m)	21	32	27	31	30	32	23	32	32
SHIPYARD	Metric Units (m)	Quantity of Ships								
WEST COAST										
Todd-Seattle	(2) 168 X 18 SW**	1	0	0	0	0	0	1	0	0
		1	0	0	0	0	0	1	0	0

** Max ship size is 168 X 29 meters using two adjacent 168 X 18 meter SWs.

1/ LEGEND

Maximum Ship Size
(LOA x Beam)
SW = Shipway
GD = Graving Dock
FD = Floating Drydock
MR = Marine Railway
LL = Land Level Position

TABLE 1A
SHIP CONSTRUCTION CAPABILITY
BY
SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

		General Cargo						Dry Bulk DWT		
BUILDING POSITION 1/ (Number)		Gen. Cargo	Mob. Cargo	Container	RO/RO	LASH	Container	21,300	51,000	100,000
	Length (m)	145	221	186	208	272	289	174	183	274
	Beam (m)	21	32	27	31	30	32	23	32	32
SHIPYARD	Metric Units (m)	Quantity of Ships								
GREAT LAKES *										
Erie Marine	375 X 35 GD	1	0	0	0	0	0	1	0	0
		1	0	0	0	0	0	1	0	0
Fraser Shipyards	252 X 23 GD	1	0	0	0	0	0	1	0	0
		1	0	0	0	0	0	1	0	0

* NOTE: Maximum size ship that can exit the St. Lawrence Seaway is 222 meters X 24 meters.

1/ LEGEND

Maximum Ship Size
(LOA x Beam)
SW = Shipway
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TABLE 1A
SHIP CONSTRUCTION CAPABILITY
BY
SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

		General Cargo						Dry Bulk DWT		
BUILDING POSITION 1/ (Number)		Gen. Cargo	Mob. Cargo	Container	RO/RO	LASH	Container	21,300	51,000	100,000
	Length (m)	145	221	186	208	272	289	174	183	274
	Beam (m)	21	32	27	31	30	32	23	32	32
SHIPYARD	Metric Units (m)	Quantity of Ships								
GREAT LAKES *										
Marinette Marine	122 X 24 LL	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
Peterson Builders	125 X 21 LL	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0

* NOTE: Maximum size ship that can exit the St. Lawrence Seaway is 222 meters X 24 meters.

1/ LEGEND

Maximum Ship Size
(LOA x Beam)
SW = Shipway
GD = Graving Dock
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MR = Marine Railway
LL = Land Level Position

TABLE 1B
SHIP CONSTRUCTION CAPABILITY
BY
SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

		Tanker							OBO	
BUILDING POSITION 1/ (Number)	DWT	25,000	38,000	89,000	120,000	(LNG) 125,000 Cu.m.	225,000	265,000	80,000	160,000
	Length (m)	189	210	272	280	284	335	335	270	304
	Beam (m)	21	27	32	42	43	43	54	32	444
SHIPYARD	Metric Units (m)	Quantity of Ships								
EAST COAST										
Bath Iron Works	219 X 34 SW	1	1	0	0	0	0	0	0	0
	219 X 39 SW	1	0	0	0	0	0	0	0	0
	213 X 26 SW	1	1	0	0	0	0	0	0	0
		3	2	0	0	0	0	0	0	0
BethShip Sparrows Point Yard	(2) 244 X 32 SW	2	2	0	0	0	0	0	0	0
	365 X 59 GD	3	2	1	1	1	1	1	1	1
		5	4	1	1	1	1	1	1	1

1/ LEGEND

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(LOA x Beam)
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TABLE 1B
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BY
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		Tanker							OBO	
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	Length (m)	189	210	272	280	284	335	335	270	304
	Beam (m)	21	27	32	42	43	43	54	32	444
SHIPYARD	Metric Units (m)	Quantity of Ships								
EAST COAST										
Intermarine USA	162 X 20 GD	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
Newport News Shipbuilding	292 X 37 GD	1	1	1	0	0	0	0	1	0
	334 X 41 GD	1	1	1	0	0	0	0	1	0
	490 X 75 GD	6	4	2	1	1	1	1	2	1
		9	7	4	1	1	1	1	4	1

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SHIP CONSTRUCTION CAPABILITY
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SHIPYARD	Metric Units (m)	Quantity of Ships								
GULF COAST										
Alabama Shipyard	(4) 290 X 50 LL	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
Avondale Industries	(2) 311 X 53 LL	3	3	2	2	2	1	1	2	1
	(2) 265 X 38 LL	4	3	0	0	0	0	0	0	0
		7	6	2	2	2	1	1	2	1

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SHIPYARD	Metric Units (m)	Quantity of Ships								
GULF COAST										
Halter Marine - Moss Point	146 X 20 SW	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
Ingalls Shipbuilding	(5) 257 X 53 LL *	16	13	0	0	0	0	0	0	0
	469 X 53 LL *	2	2	0	0	0	0	0	0	0
		18	15	0	0	0	0	0	0	0

* Ship size constrained by maximum launching capability of 259 meters X 53 meters.

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SHIPYARD	Metric Units (m)	Quantity of Ships								
GULF COAST										
Tampa Shipyards	(2) 226 X 32 GD	2	2	0	0	0	0	0	0	0
		2	2	0	0	0	0	0	0	0
Trinity Marine Group Beaumont Division	259 X 32 SW	1	1	1	0	0	0	0	0	0
		1	1	1	0	0	0	0	0	0

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SHIPYARD	Metric Units (m)	Quantity of Ships								
WEST COAST										
National Steel & Shipbuilding	210 X 27 SW	1	1	0	0	0	0	0	0	0
	(2) 274 X 34 SW	2	2	2	0	0	0	0	2	0
	303 X 52 GD	2	1	1	1	1	0	0	1	0
		5	4	3	1	1	0	0	3	0
Portland Ship Repair Yard	183 X 30 LL	0	0	0	0	0	0	0	0	0
	305 X 55 LL	1	1	0	0	0	0	0	0	0
		1	1	0	0	0	0	0	0	0

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SHIPYARD	Metric Units (m)	Quantity of Ships								
WEST COAST										
Tacoma Boatbuilding	(2) 130 X 14 SW*	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
Todd-Seattle	(2) 168 X 18 SW**	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0

* Vessel with beam up to 30 meters can be constructed by joining the two shipways.
** Max ship size is 169 X 29 meters using two adjacent 168 X 18 meter SWs.

1/ LEGEND

Maximum Ship Size
(LOA x Beam)
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	Length (m)	189	210	272	280	284	335	335	270	304
	Beam (m)	21	27	32	42	43	43	54	32	444
SHIPYARD	Metric Units (m)	Quantity of Ships								
GREAT LAKES *										
Erie Marine	375 X 35 GD	1	0	0	0	0	0	1	0	0
		1	0	0	0	0	0	1	0	0
Fraser Shipyards	252 X 23 GD	1	0	0	0	0	0	1	0	0
		1	0	0	0	0	0	1	0	0

* NOTE: Maximum size ship that can exit the St. Lawrence Seaway is 222 meters X 24 meters.

1/ LEGEND

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	Beam (m)	21	27	32	42	43	43	54	32	444
SHIPYARD	Metric Units (m)	Quantity of Ships								
GREAT LAKES *										
Marinette Marine	122 X 24 LL	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
Peterson Builders	125 X 22 LL	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0

* NOTE: Maximum size ship that can exit the St. Lawrence Seaway is 222 meters X 24 meters.

SHIP CONSTRUCTION CAPABILITY BY SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

TABLE 1A SUMMARY

	General Cargo						Dry Bulk DWT		
	Gen. Cargo	Mob. Cargo	Container	RO/RO	LASH	Container	21,300	51,000	100,000
Length (m)	145	221	186	208	272	289	174	183	274
Beam (m)	21	32	27	31	30	32	23	32	32
REGION	Quantity of Ships								
EAST COAST	22	10	17	12	5	5	18	13	4
GULF COAST	45	20	23	21	3	2	29	21	2
WEST COAST	10	4	5	4	3	1	7	4	3
GREAT LAKES *	2	0	0	0	0	0	2	0	0
TOTAL BUILDING POSITIONS - ALL YARDS	79	34	45	37	11	8	56	38	9

* NOTE: Maximum size ship that can exit the St. Lawrence Seaway is 222 meters X 24 meters.

SHIP CONSTRUCTION CAPABILITY BY SHIP TYPES HISTORICALLY DELIVERED TO COMMERCIAL SERVICE

TABLE 1B SUMMARY

	Tanker							OBO	
	25,000	38,000	89,000	120,000	(LNG) 125,000 Cu.m.	225,000	265,000	80,000	160,000
Length (m)	189	210	272	280	284	335	335	270	304
Beam (m)	21	27	32	42	43	43	54	32	444
REGION	Quantity of Ships								
EAST COAST	17	13	5	2	2	2	2	5	2
GULF COAST	28	24	3	2	2	1	1	2	1
WEST COAST	6	5	3	1	1	0	0	3	0
GREAT LAKES *	1	0	0	0	0	0	0	0	0
TOTAL BUILDING POSITIONS - ALL YARDS	52	42	11	5	5	3	3	10	3

* NOTE: Maximum size ship that can exit the St. Lawrence Seaway is 222 meters X 24 meters.

TABLE 2

NUMBER OF SHIPBUILDING POSITIONS BY LENGTH

(MAXIMUM SHIP SIZE)

NUMBER OF SHIPBUILDING POSITIONS BY LENGTH (MAXIMUM SHIP SIZE) *

Length OA (in meters):	122	137	152	168	183	198	213	229	244	259	274	290	305	320	335	351	366	396	427	488
EAST COAST																				
Bath Iron Works	3	3	3	3	3	3	3													
BethShip, Sparrows Point Yard	3	3	3	3	3	3	3	3	3	1	1	1	1	1	1	1				
General Dynamics, E. Boat **																				
Intermarine USA	1	1	1																	
Newport News Shipbuilding	7	7	7	7	7	3	3	3	3	3	3	3	2	2	1	1	1	1	1	1
TOTAL	14	14	14	13	13	9	9	6	6	4	4	4	3	3	2	2	1	1	1	1
GULF COAST																				
Alabama Shipyards	1	1	1	1	1	1	1	1	1	1	1	1								
Avondale Industries	6	6	5	5	5	5	5	5	5	5	2	2	2							
Halter Marine - Moss Point	1	1																		
Ingalls Shipbuilding	6	6	6	6	6	6	6	6	6	1										
Tampa Shipyards	2	2	2	2	2	2	2													
Trinity Marine Group - Beaumont Div.	1	1	1	1	1	1	1	1	1	1	-	-	-							
TOTAL	17	17	15	15	15	15	15	13	13	8	3	3	2							
WEST COAST																				
National Steel & Shipbuilding	4	4	4	4	4	4	3	3	3	3	3	1								
Portland Ship Repair Yard	2	2	2	2	2	1	1	1	1	1	1	1	1							
Tacoma Boatbuilding	2																			
Todd-Seattle	2	2	2	2	-	-	-	-	-	-	-	-	-							
TOTAL	10	8	8	8	6	5	4	4	4	4	4	2	1							
GREAT LAKES ***																				
Erie Marine	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Fraser Shipyards	2	2	2	2	2	1	1	1	1											
Marinette Marine	1																			
Peterson Builders	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
TOTAL	5	3	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1			
GRAND TOTAL ALL COASTS AND GREAT LAKES	46	42	40	39	37	31	30	25	25	17	12	10	7	4	3	3	2	1	1	1

* Including Shipways, Graving Docks and Land Level positions.
** Engaged exclusively in U.S. Navy submarine construction.
*** Maximum size ship that can exit St. Lawrence Seaway locks is 222 meters X [illegible] meters.

APPENDIX A

STANDARD FORM 17

FACILITIES AVAILABLE FOR THE CONSTRUCTION OR REPAIR OF SHIPS

Standard Form 17 (Rev. 3-93)

DEPARTMENT OF THE NAVY
(NAVSEASYSCOM)
& MARITIME ADMINISTRATION
Coordinator for Ship Repair
and Conversion (DOD-DOC)

FACILITIES AVAILABLE FOR THE CONSTRUCTION OR REPAIR OF SHIPS

Form Approved
OMB No. 0703-0006
Expires 2-28-96

DATE

TO: *(Complete departmental address)*

SHIPYARD AND ADDRESS

INSTRUCTIONS

Forward original copy to appropriate Department of Defense Office or Maritime Administration, Washington, D.C.

BUILDING WAYS (M.L.W.)

NO. OF WAY	LAUNCHING (*X one*)		DIMENSIONS	MAXIMUM SHIP SIZE (*Ton 2,240 lbs.*)	DEPTH OF WATER		CONDITION OF WAY	CRANES SERVING WAY		
					OVER WAY END	AT DROP OFF		NO.	TYPE (*Plus hook height for bridge cranes*)	LIFT CAPACITY (*Std. Tons*)
		End	Length	Length O.A.						
		Side	Width	Beam						
		Basin	Depth	Weight						
		End	Length	Length O.A.						
		Side	Width	Beam						
		Basin	Depth	Weight						
		End	Length	Length O.A.						
		Side	Width	Beam						
		Basin	Depth	Weight						
		End	Length	Length O.A.						
		Side	Width	Beam						
		Basin	Depth	Weight						
		End	Length	Length O.A.						
		Side	Width	Beam						
		Basin	Depth	Weight						
		End	Length	Length O.A.						
		Side	Width	Beam						
		Basin	Depth	Weight						
		End	Length	Length O.A.						
		Side	Width	Beam						
		Basin	Depth	Weight						
		End	Length	Length O.A.						
		Side	Width	Beam						
		Basin	Depth	Weight						
		End	Length	Length O.A.						
		Side	Width	Beam						
		Basin	Depth	Weight						
		End	Length	Length O.A.						
		Side	Width	Beam						
		Basin	Depth	Weight						

LENGTH OF LAUNCHING RUN	DEPTH OF RUN AT M.L.W.	TIDAL RANGE (*Difference M.L.-M.H.*)	IS FIRE PROTECTION AVAILABLE ON BUILDING WAY? ☐ YES ☐ NO	IS SNUBBING NECESSARY ☐ YES ☐

Merchan e Act of 1936, as amended. *Previous editi obsolete.* Pag

1117/208

SHIP'S BERTHS (PIERS, WHARVES, BULKHEADS, MOORING DOLPHINS (M.L.W.))

NO.	TYPE	LENGTH (*Actual and usable*)	WATER DEPTH		HEIGHT OF DOCK	USE REPAIR AND/OR OUTFITTING	SERVICE AVAILABLE (*Use abbreviations of services and units of measure notated under legend*)	CRANES SERVING BERTHS, ETC.		
			INBOARD	OUTBOARD				NO.	TYPE (*Hook height above M.L.W.*)	LIFT CAPACITY (*Std. Tons*)
		Act.								Lift
		Use.								Reach
		Act.								Lift
		Use.								Reach *
		Act.								Lift
		Use.								Reach
		Act.								Lift
		Use.								Reach
		Act.								Lift
		Use.								Reach
		Act.								Lift
		Use.								Reach
		Act.								Lift
		Use.								Reach
		Act.								Lift
		Use.								Reach

DRYDOCKS (mean HIGH water) (*List building docks under building ways*)

DOCK NO.	MATERIAL CONSTD. OF-TYPE FLOATING - (FD); GRAVING - (GD); MARINE RAILWAY - (MR)	MAXIMUM SHIP SIZE ACCOMMODATED LENGTH OA-BEAM	LENGTH			CLEAR WIDTH		DEPTH / DRAFT			LIFTING CAPACITY (*Ton 2,240 lbs.*)
			OVERALL	AT COPING (GD); ON PONTOONS (FD)	AT KEEL BLOCKS; ON CRADLE (MR)	AT TOP; CRADLE (MR)	AT KEEL BLOCKS	OVER SILL (GD)	OVER FLOOR	OVER KEEL BLOCKS	

LEGEND: (Abbreviations of Services)
Fresh water .... F.W. - G.P.M. - P.S.I.
Salt water .... S.W. - G.P.M. - P.S.I
Steam .... S - P/HR - P.S.I.
Air .... A - C.F.M. - P.S.I.
Electric power .... E-V-AC-AMP
Electric power .... E-V-DC-AMP
* Fire protection .... FP - G.P.M. - P.S.I
Sanitary sewer .... SS - Yes or No

PRINCIPAL SHOPS AND BUILDINGS

NAME OF SHOP OR BUILDING	DIMENSIONS OF SHOP OR BUILDING	MATERIALS PROCESSED *(See note)*	LARGEST EXIT		WEIGHT OF MATERIAL OR NUMBER AND SIZE OF UNITS PRODUCED PER 8 HOURS *(See note)*	ALL OTHER SHOPS *(List names and dimensions, include mold loft, if any)*
			WIDTH	HEIGHT		
FABRICATING						
PLATE						
SHEET METAL						
SUBASSEMBLY						
CARPENTER						
WOODWORKING						
BOAT ASSEMBLY OR MOLDING						
MACHINE						
ELECTRICAL						
ELECTRONIC						
PIPE						
GALVANIZING						
FOUNDRY						
RIGGER						

NOTE - Indicate materials as steel, aluminum, reinforced plastic, wood, plywood, sheet metal, etc.

SHOP OR YARD CRANES *(5 tons or over)*

BRIDGE TYPE				STATIONARY, RAIL OR MOBILE							
CAP. *(Std. tons)*	MAX. SPAN	HEIGHT OF HOOK	AREA / SHOP SERVICED	TYPE	CAP. *(Std. tons)*	MAX. REACH	CAPACITY AT REACH	BOOM LENGTH	HEIGHT HINGE	AREA SERVICED	HGT. OF HOOK ABOVE BASE AT OUT REACH

MAJOR ITEMS OF MACHINE TOOLS AND EQUIPMENT *(List briefly such of the large items as will indicate the capacities of all important shops in maximum work piece size, e.g., 30' plate bending rolls, 10' plate shears, 400 ton Hyd. press, 30' plate furnace, engine lathe 36" x 20" b.c., etc.)*

STORAGE SPACE *(Sq. ft.)* **FOR COMPONENTS AND MATERIALS** *(Less boat storage) (List dimensions for each area, plus type material stored)*

RAW STEEL STORAGE *(Sq. ft.)*	**WELDING AND ASSEMBLY** *(Sq. ft.)*

ACREAGE LEGALLY CONTROLLED

IN USE	**DEVELOPED** *(Including in use)*	**TOTAL** *(Including undeveloped)*

EXISTING LOCAL ORDINANCES LIMITING PRODUCTIVE USE

LIMITATIONS IMPOSED BY PROPERTY ZONING CLASSIFICATION

YARD LAYOUT - PLEASE FURNISH A PLOT PLAN OF YARD OR PLANT, IF AVAILABLE

LOCATION OF PRODUCTION FACILITIES FOR PRODUCTS LISTED IN ITEM 8 OF STD. FORM 129

ON WATERFRONT ☐ YES ☐ NO

EMPLOYMENT	CURRENT	CURRENT NO. SHIFTS	MOBILIZATION - SHIFTS	
MANAGEMENT, ADMINISTRATION				
PROFESSIONAL, ENGINEERING				
PROFESSIONAL, TECHNICAL *(all others)*				
PRODUCTION, SKILLED				
PRODUCTION, SEMISKILLED				
PRODUCTION, UNSKILLED				
NONPRODUCTION				
TOTAL				

NUMBER OF PRODUCTION PERSONNEL PRESENTLY ENGAGED IN SHIP AND/OR BOAT

CONSTRUCTION ( ); REPAIR ( ).

APPROXIMATE TOTAL EMPLOYMENT OF ALL AFFILIATED CONCERNS ONLY LISTED IN ITEM 6, OF STD. FORM 129
(*NOTE* - An affiliate is a concern that directly, or indirectly through one or more intermediaries controls, or is controlled by, or is under common control with, the reporting firm. Common ownership of stock by individuals does not in itself, constitute affiliation.)

DISTANCE TO NEAREST RAILROAD CONNECTION

DISTANCE TO NEAREST AIRPORT - IDENTIFY

LARGEST CONVEYANCE AVAILABLE AND MAXIMUM DIMENSIONS OF LOAD, FOR OVERLAND TRANSPORTATION OF FINISHED PRODUCTS *(Not to exceed limitations imposed by local ordinances)*

NAVIGATIONAL RESTRICTIONS (INDICATE ALL AT M.L.W.)

MINIMUM CHANNEL TO TIDEWATER

MINIMUM HORIZONTAL AND VERTICAL BRIDGE CLEARANCES TO TIDEWATER *(Identify structures)*

LIMITING LOCK DIMENSIONS TO TIDEWATER *(Identify locks)*

PROJECTS UNDER CONSTRUCTION WHICH WILL ALTER NAVIGATIONAL RESTRICTIONS *(Specify projects and state effect and estimated completions)*

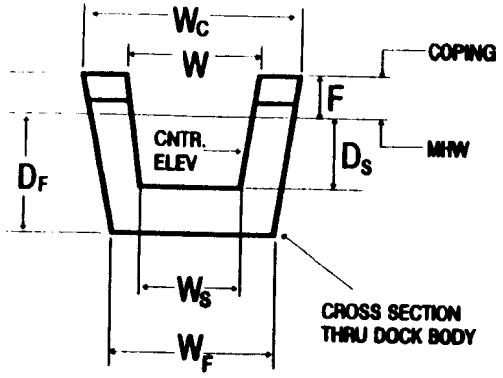
DESCRIPTION OF TYPES OF WORK NORMALLY SUBCONTRACTED

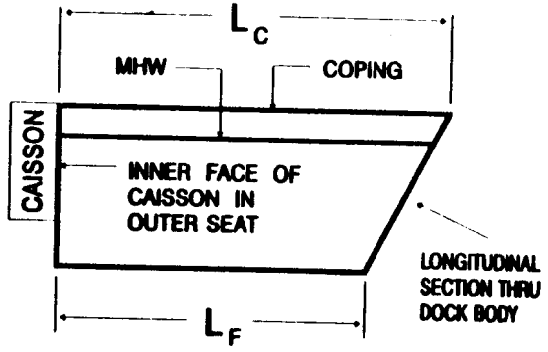
06

PRODUCTION EXPERIENCE *(List at least three of the largest and the most complex ships or boats constructed, indicating (1) date completed, (2) hull length, beam, and molded depth, (3) type propulsion unit (fully described), (4) horsepower, (5) electrical and/or electronic installation, (6) special piping features, (7) size and tensile strength of plates, if steel, or type hull material, if other than steel, (8) special annealing, heat treating, or stress relieving problems encountered, if steel, plus, (9) any other important problems resolved.)* (*NOTE* - If no previous construction experience give detailed description of major conversion or industrial manufacturing work considered comparable to ship or boat construction.)

GRAVING DOCK CHARACTERISTICS SUMMARY

GRAVING DOCK NOMENCLATURE





KEY

- MHW - Mean High Water
- D_F - Depth of Dock from MHW to Floor
- D_S - Depth of Dock from MHW to Sill
- L_C - Length of Dock at Coping
- L_F - Length of Dock at Floor
- W - Width of Dock at Top of Entrance
- W_C - Width of Dock at Coping or maximum clear width above Dock Floor
- W_F - Width at Dock Floor
- W_S - Width of Dock at Entrance (Sill)
- F - Freeboard. Distance from MHW to top of coping. Indicate if part of Freeboard may be superflooded.

GRAVING DOCK IDENTIFIER	LENGTH		ENTRANCE DIMENSIONS			DOCK BODY DIMENSIONS				SUPERFLOODING	STANDARD DEFINITION	AVAILABLE ELECTRICAL SERVICE (SHORE POWER TO VESSEL)			REMARKS
			WIDTH		DEPTH	WIDTH		DEPTH	FREEBOARD						
	FLOOR L_F	COPING L_C	SILL W_S	COPING W	MHW D_S	FLOOR W_F	COPING W_C	MHW D_F	F		$\frac{L_C \times W_C \times D_S}{D_F}$	VOLTS	AMPS	HERTZ	(e.g. indicate dimensions of pits in dock floor)

FLOATING DRYDOCK CHARACTERISTICS SUMMARY

FLOATING DRYDOCK IDENTIFIER	MAXIMUM LENGTH OF PONTOON	MAXIMUM DEPTH OVER BLOCKS	CLEAR WIDTH BETWEEN WINGWALLS	LIFT CAPACITY (TONS)	NORMAL KEEL BLOCK HEIGHT	AVAILABLE ELECTRICAL SERVICE (SHORE POWER TO VESSEL)			REMARKS (Indicate existence of hauling blocks, if end selection can be lowered, and max. length of ship DD can accommodate).
						VOLTS	AMPS	HERTZ	

INTENTIONALLY LEFT BLANK

APPENDIX B

MAJOR U.S. SHIPBUILDING, REPAIR (WITH DRYDOCKING), AND TOPSIDE REPAIR FACILITIES

SHIPYARD CLASSIFICATION DEFINITIONS

CLASSIFICATION DEFINITIONS

- Shipbuilding: Facilities that are open, having at least one shipbuilding position capable of accommodating 122 meters in length and over. With few exceptions, these shipbuilding facilities are also major repair facilities with drydocking capability.

- Repair (With Drydocking): Drydocking facilities for ships 122 meters in length and over. These facilities may also be capable of constructing vessels less than 122 meters in length.

- Topside Repair: Facilities with sufficient berth/pier space for topside repair of ships 122 meters in length and over. These facilities may also be capable of constructing and/or drydocking vessels less than 122 meters in length.

GENERAL REQUIREMENTS

The shipyard must own or have in place a long-term lease (1 year or more) on the facility in which they intend to accomplish the work.

There must be no dimensional obstructions in the waterway leading to open ocean (i.e., locks, bridges).

Water depth in the channel to the facility must be a minimum of 3.7 meters.

NOTE

The following criteria were developed to establish the maximum ship size that could be accommodated in each drydock:

For floating drydocks, the maximum ship length is as given by the shipyards. The maximum beam was determined by allowing a 0.6 meter clearance at each side between the ship and wing wall.

For graving docks, the maximum ship length was determined by allowing a 0.6 meter clearance at each end between the ship and the inside of the dock at the floor. The maximum beam was determined by allowing a 0.6 meter clearance on each side between the ship and each side of the dock entrance at the sill, unless the shipyard indicated more clearance is required.

There are several types of floating drydocks and graving docks, and under certain circumstances additional clearance would be necessary between the ship and the dock body. Permissible ship sizes requiring additional clearance may be determined by simple calculation from the above criteria.

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address*	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
EAST COAST	***Shipbuilding Yards***		
Bath Iron Works Corp. 700 Washington Street Bath, ME 04530	213 X 26 SW 219 X 34 SW 219 X 39 SW	259 869	1/ Construction, conversion and repair - all types of vessels. 2/ 8,663
Bethlehem Steel Corp. BethShip Sparrows Point Yard Sparrows Point, MD 21219	(2) 244 X 32 SW 365 X 59 GD 274 X 40 FD	384 1920	1/ Construction, conversion and repair of vessels. 2/ 617
General Dynamics Electric Boat Division 75 Eastern Point Road Groton, CT 06340-4989		229 1067	1/ Engaged exclusively in construction, conversion and repair of submarines for the U.S. Navy. 2/ 17,912* * Includes Groton & Quonset Point
Intermarine, USA 301 North Lathrop Avenue P.O. Box 3045 Savannah, GA 31402-3045	162 X 20 GD *	366 597	1/ MHC construction. 2/ 583
Newport News Shipbuilding 4101 Washington Avenue Newport News, VA 23607	292 X 37 GD * 334 X 41 GD * 197 X 27 GD ** 262 X 31 GD ** 139 X 21 GD ** 159 X 21 GD ** 490 X 75 GD * 195 X 41 FD (4) 183 X 12 LL	418 2577	1/ Construction, conversion and repair - all types of vessels. 2/ 22,501 * Used for construction. ** Used for repair and overhaul.

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift		Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
EAST COAST				
	Repair Yards with Drydock Facilities			
Atlantic Dry Dock Corp. 8500 Heckscher Drive Jacksonville, FL 32226-3311	137 X 23	MR	305 694	1/ Construction of small vessels. Repair and overhaul of small and medium size vessels. 2/ 603 * * Includes Atlantic Marine's Fort George Island employees.
Bath Iron Works Corp. 40 Commercial St. Portland, ME 04101	257 X 41	FD	305 457	1/ Ship repair and conversion. 2/ 594
Boston Marine Industrial Park (EDIC) 38 Chauncy Street Boston, MA 02211	350 X 34	GD	274 597	1/ Leases public drydock in former Boston Naval Annex to local ship repair companies. 2/ 0
Caddell Dry Dock & Repair Company, Inc. P.O. Box 327 Staten Island, NY 10310	137 X 25	FD	169 712	1/ General ship repair. 2/ 179
Colonna's Shipyard, Inc. 400 E. Indian River Rd. Norfolk, VA 23523	122 X 22 195 X 25	MR FD	457 1272	1/ General ship repair. 2/ 355
Detyens Shipyard, Inc. Rt. 2, Box 180 Mt. Pleasant, SC 29464	152 X 25 152 X 20	FD FD	155 363	1/ General ship repair and conversion. 2/ 312

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
EAST COAST	***Repair Yards with Drydock Facilities***		
G. Marine Diesel of New York P.O. Box 050221 Brooklyn, NY 11205	(2) 330 X 43 GD	233 503	1/ General ship repair. 2/ 95
General Ship Corp. 400 Border Street East Boston, MA 02128-2533	208 X 24 GD *	274 771	1/ Ship repair, overhaul and modernization. 2/ 132 * GD is long-term leased from Boston Marine Industrial Park in the former Boston Naval Annex.
Metro Machine Corp. P.O. Box 1860 Norfolk, VA 23501	201 X 29 FD	239 885	1/ Ship repair and conversion. 2/ 467
New York Shipyard Corp. One Beard Street Brooklyn, NY 11231	217 X 27 GD 198 X 29 FD	351 2291	1/ General ship repair. 2/ 12
Norfolk Shipbuilding & Drydock Corporation P.O. Box 2100 750 Berkley Ave Norfolk, VA 23501-2100	218 X 29 FD 335 X 48 FD	314 2388	1/ Ship conversion and repair - all types of vessels. 2/ 1,818
North Florida Shipyards, Inc. P.O. Box 3255 Jacksonville, FL 32206	122 X 16 FD	290 966	1/ Ship repair and conversion. 2/ 459

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
EAST COAST			
Repair Yards with Drydock Facilities			
MPN Industries Co. Building #62 Brooklyn Navy Yard Brooklyn, NY 11205	219 X 34 GD	259 731	1/ General Ship repair. 2/ 100

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
EAST COAST			
		Topside Repair Yards	
American Shipyard Corp. One Washington Street Newport, RI 02840		731 1615	1/ General ship repair. 2/ 100 * Includes Quonset Point facility.
Associated Naval Architects, Inc. 3400 Shipwright Street Portsmouth, VA 23703		137 439	1/ General ship repair and overhaul. 2/ 63
Boston Graving Dock Corp. 256 Marginal Street East Boston, MA 02128		311 948	1/ General ship repair. 2/ 55
Delta Marine, Inc. P.O. Box 2191, Hwy 421 North Wilmington, NC 28402		274 503	1/ General ship repair. 2/ 71
General Ship Repair Corp. 1449 Key Highway Baltimore, MD 21230		133 258	1/ General ship repair. 2/ 40
JOMAR Corporation of Tidewater P.O. Box 5119 Suffolk, VA 23435		152 152	1/ General ship repair. 2/ 30
Jonathan Corporation Little Creek Shipyard Virginia Beach, VA 23455		170 340	1/ General ship repair and overhaul. 2/ 108

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
EAST COAST			
		Topside Repair Yards	
Jonathan Corporation 701 Front Street Norfolk, VA 23510		236 360	1/ Ship repair and overhaul. 2/ 610
Marine Hydraulics International, Inc. 800 East Indian River Rd. Norfolk, VA 23523		244 580	1/ General ship repair. 2/ 237
Melville Marine Industries One Little Harbor Landing Portsmouth, RI 02871		366 731	1/ General ship repair. 2/ 165
Metal Trades, Inc. P.O. Box 129 Hollywood, SC 29449-0129		226 396	1/ General ship repair. 2/ 182
Moon Engineering Co. 545 Front Street Norfolk, VA 23510		168 354	1/ General ship repair, primarily for Navy. 2/ 10
Moon Engineering Two Harper Avenue Portsmouth, VA 23707		231 905	1/ General ship repair. 2/ 228
Norfolk Shipbuilding & Drydock Corporation Brambleton Division Norfolk, VA 23501		183 1886	1/ Ship conversion and repair - all types of vessels. 2/ 500

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
EAST COAST			
		Topside Repair Yards	
Promet Marine Services Corp. 242 Allens Ave. Providence, RI 02905		183 366	1/ General ship repair. 2/ 18
Reynolds Shipyard Corp. 200 Edgewater Street P.O. Box 0500/10 Staten Island, NY 10305		134 134	1/ General ship repair. 2/ 20
Steel Style, Inc. 401 South Water Street Newburgh, NY 12550		183 335	1/ General ship repair. 2/ 18
Virginia Drydock Co. 307 Campostella Rd. Norfolk, VA 23523		152 305	1/ General ship repair. 2/ 39

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
GULF COAST			
	Shipbuilding Yards		
Alabama Shipyard, Inc. P.O. Box 3201 Mobile, AL 36652	290 X 50 LL	328 642	1/ Ship construction, conversion and repair. 2/ 264
Avondale Industries, Inc. P.O. Box 50280 New Orleans, LA 70150-0280	265 X 38 SW **3/ 137 X 27 SW *** (2) 311 X 53 LL * (2) 265 X 38 LL ** 305 X 66 FD * 229 X 35 FD **	521 1431	1/ Modular ship construction, conversion, and repair - all types of vessels. 2/ 5,045 3/ Can accommodate ship up to 366 meters in length. * Upper main yard. ** Lower main yard. *** Westwego Plant.
Halter Marine, Inc. Moss Point P.O. Box 767 Moss Point, MS 39563	146 X 20 LL	146 230	1/ Construction, conversion and repair of ships, boats, barges. 2/ 407
Ingalls Shipbuilding, Inc. P.O. Box 149 Pascagoula, MS 39568-0149	259 X 53 FD * (5) 257 X 53 LL * 469 X 53 LL *	792 1774	1/ Construction, conversion, and repair - all types of vessels. 2/ 15,289 * West Bank can only launch ships up to 259 meters X 53 meters. Land Level Positions constrained by launching capability.

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam)		Berths/Piers Usable Length	Remarks
	SW–Shipway			1/ Type of work usually engaged in
	GD–Graving Drydock			
	FD–Floating Drydock		Longest	2/ Employment - Mid-1993
	MR–Marine Railway		Total linear	
	LL–Land Level Position			
	SL–Syncrolift			Lengths are in Meters
GULF COAST				
			Shipbuilding Yards	
Tampa Shipyards, Inc.	165 X 22	GD *	258	1/ Ship construction, conversion and repair.
P.O. Box 1277	273 X 44	GD *	1103	
Tampa, FL 33601	(2) 226 X 32	GD **		2/ 1,410
				* Used for ship repair.
				** Used for ship construction.
Trinity Marine Group -	259 X 32	SW	328	1/ Ship construction, conversion and repair.
Beaumont Division	183 X 25	FD	1041	
P.O. Box 3600	198 X 32	FD		
Beaumont, TX 77704				2/ 218

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
GULF COAST			
Repair Yards with Drydock Facilities			
Atlantic Marine, Inc. - Mobile P.O. Box 3202 Mobile, AL 36652	217 X 26 FD 305 X 49 FD	345 990	1/ Ship repair and overhaul. 2/ 776
Bender Shipbuilding & Repair Co., Inc. 265 South Water Street Mobile, AL 36601	201 X 27 FD 126 X 17 FD 126 X 14 FD 183 X 36 FD	258 968	1/ Construction of vessels up to 91.44 meters in length. Also Also repair and conversion. 2/ 796
BethShip Sabine Yard P.O. Box 1448 Port Arthur, TX 77641	274 X 36 FD	213 213	1/ Repair of ships and offshore oil rigs. 2/ 257
Bludworth Bond Shipyard Inc. P.O. Box 5065 8114 Huckley Houston, TX 77262-5065	130 X 24 FD *	244 671	1/ General ship repair. 2/ 130 * Two drydocks are combined.
Gulf Coast Fabrication, Inc. P.O. Box 539 Laskeshore, MS 39558	127 X 44 GD	671 671	1/ Small vessel construction and repair. 2/ 130
International Ship Repair & Marine Services, Inc. 1616 Penny Street Tampa, FL 33605	134 X 32 FD 137 X 29 FD	549 1183	1/ General ship repair. 2/ 139

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest / Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
GULF COAST	*Repair Yards with Drydock Facilities*		
McDermott, Inc. P.O. Box 188 Morgan City, LA 70381	122 X 32 FD	143 363	1/ Construction and repair of tugs, supply boats, barges, and drill rigs. 2/ 620
Newpark Shipbuilding & Repair, Inc. 8502 Cypress Houston, TX 77012	122 X 22 FD	610 610	1/ Small vessel construction and repair. 2/ 251
Texas Drydock, Inc. P.O. Box 968 Orange, TX 77631-0968	168 X 37 FD	549 823	1/ General ship repair. 2/ 176

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
GULF COAST			
		Topside Repair Yards	
American Marine Corp. 3900 Jourdan Rd. P.O. Box 8126 New Orleans, LA 70182		549 549	1/ Construction and repair of offshore oil vessels and barges. 2/ 180
AMFELS, Inc. Hwy. 48, P.O. Box 3107 Brownsville, TX 78523		610 610	1/ General ship repair. 2/ 392
Avondale Industries, Inc. Algiers Division 3103 Patterson Drive New Orleans, LA 70114		588 1112	1/ Ship conversion, repair, and overhaul. 2/ 55
Boland Marine Manufacturing Co., Inc. P.O. Box 53287 New Orleans, LA 70153		319 563	1/ General ship repair and conversions. 2/ 157
Bollinger Machine Shop and Shipyard, Inc. P.O. Box 250 Lockport, LA 70374-0250		1646 3712	1/ Coast Guard vessel construction. 2/ 600 * Max ship = 122 meters LOA.
Buck Kreihs Co., Inc. P.O. Box 53305 New Orleans, LA 70153		341 341	1/ Ship repair and conversion. 2/ 165 * Max ship = 122 meters LOA.
Century Marine, Inc. 200 Pier Road Orange, TX 77630		457 457	1/ General ship repair. 2/ 300

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
GULF COAST			
		Topside Repair Yards	
Coastal Marine Service of Texas, Inc. 1051 Houston Avenue Port Arthur, TX 77640		0 0	1/ General ship repair. 2/ 65 (subcontracted) * Vessels as long as 274 meters LOA berthed alongside waterfront barges.
Dixie Machine Welding & Metal Works, Inc. 1031 Anunciation St. New Orleans, LA 70130		406 406	1/ General ship repair. 2/ 273
Frederman Shipyard, Inc. P.O. Box 129 Sulphur, LA 70664-0129		137 518	1/ Construction and repair of offshore vessels. 2/ 90
Gulf Copper & Manufacturing Corp. 320 Houston Avenue Port Arthur, TX 77640		290 1265	1/ General ship repair. 2/ 114
Gulf Marine Repair Corp. 1200 Sertoma Drive Tampa, FL 36605		152 152	1/ Ship repair and overhaul. 2/ 145
Halter Marine, Inc. Equitable Shipyards 4325 France Road New Orleans, LA 70126		122 402	1/ Construction and repair of small vessels and barges. 2/ 283
Hendry Corp. 5107 S. Westshore Blvd. Tampa, FL 33611		305 305	1/ General ship repair. 2/ 58

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
GULF COAST			
Topside Repair Yards			
Houston Ship Repair, Inc. Brady Island Ship Repair Facility 8510 Cypress Street Houston, TX 77012		259 259	1/ General ship repair and conversion. 2/ 148
Houston Ship Repair, Inc. Orange Division P.O. Box 2392 Orange, TX 77630		229 625	1/ General ship repair and conversion. 2/ 337
Jay Bludworth, Inc. P.O. Box 2441 Corpus Christi, TX 78403		122 232	1/ General ship repair. 2/ 30
John Bludworth Marine, Inc. 1600 N. Witter Pasadena, TX 77506		259 750	1/ General ship repair. 2/ 118
Textron Marine Systems 6600 Plaza Drive New Orleans, LA 70127-2584		274 488	1/ LCAC construction. 2/ 704
Vessel Repair, Inc. P.O. Box 2207 Port Arthur, TX 77643		335 640	1/ General ship repair. 2/ 34

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
WEST COAST			
	Shipbuilding Yards		
National Steel & Shipbuilding Co. Harbor Drive & 28th St. San Diego, CA 92186-5278	210 X 27 SW (2) 274 X 34 SW 303 X 52 GD 229 X 42 FD	305 2210	1/ Construction, conversion, and repair - all types of vessels. 2/ 4,085 Graving dock and piers at U.S. Naval Station also leased, as required.
Portland Ship Repair Yard 5555 N. Channel Avenue Building 50 Portland, OR 97217 Facilities also leased by: 1. Cascade General, Inc. 2. West State, Inc.	183 X 30 LL 305 X 55 LL 198 X 26 FD 247 X 33 FD 351 X 55 FD	335 3353	1/ Ship construction, repair and conversion - all types of vessels. 2/ 1,560 * * Includes employees of lessors.
Tacoma Boatbuilding Co. 1840 Marine View Drive Tacoma, WA 98422	(2) 130 X 14 SW *	212 597	1/ Shipconstruction, repair, and conversion - all types of vessels. 2/ 40 * Vessel with beam up to 30 meters can be constructed by joining the two shipways.
Todd Pacific Shipyards Corp. Seattle Division 1801-16th Avenue, S.W. Seattle, WA 98134	(2) 168 X 18 SW 128 X 19 FD 198 X 26 FD 287 X 41 FD	427 1834	1/ Ship construction, repair, and conversion - all types of vessels. 2/ 902

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
WEST COAST			
	Repair Yards with Drydock Facilities		
AK-WA, Inc. 401 Alexander Avenue Building 9588 Tacoma, WA 98421	162 X 24 FD	198 533	1/ Ship repair and conversion. 2/ 220
Maritime Contractors, Inc. 201 Harris Avenue Bellingham, WA 98225	122 X 17 FD	366 533	1/ General ship repair. 2/ 150
San Francisco Drydock Co. Foot of 20th Street San Francisco, CA 94120-7644	290 X 44 FD 213 X 29 FD	244 1023	1/ Ship repair and overhaul. 2/ 227
Southern Oregon Marine, Inc. 1746 Coos River Hwy Coos Bay, OR 97420	122 X 30 MR	268 322	1/ General ship repair and barge construction. 2/ 114
Southwest Marine, Inc. P.O. Box 13308 Foot of Sampson Street San Diego, CA 92170-0308	200 X 31 FD 127 X 19 FD	213 589	1/ Ship repair, overhaul, and conversion. 2/ 1,556 Graving dock at Naval Station can be leased as required.
Southwest Marine, Inc. San Pedro Division 985 So. Seaside Avenue Terminal Island, CA 90731-7331	128 X 16 FD 213 X 29 FD	547 1116	1/ Ship repair, overhaul, and conversion. 2/ 388
United Marine Shipbuilding, Inc. 1441 N. Northlake Way N. Seattle, WA 98103	122 X 17 FD	122 252	1/ General ship repair. 2/ 60

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
WEST COAST			
		Topside Repair Yards	
Al Larson Boat Shop 1046 S. Seaside Aveue Terminal Island, CA 90731		107 168	1/ Ship and boat repair. 2/ 100
San Pedro Boat Works Berth 44, Outer Harbor San Pedro, CA 90731		189 189	1/ General ship repair. 2/ 92
Campbell Industries P.O. Box 1870 501 E. Harbor Drive San Diego, CA 92112		175 471	1/ General ship repair and construction of vessels up to 91 meters in length. 2/ 138
Continental Maritime of San Diego, Inc. 1995 Bay Front Street San Diego, CA 92113-2122		213 1326	1/ General ship repair. 2/ 622
Foss Shipyard 660 West Ewing Street Seattle, WA 98119		146 788	1/ Vessel repair, alteration, and overhaul. 2/ 114
Lake Union Drydock Co. 1515 Fairview Avenue East Seattle, WA 98102		381 750	1/ Ship repair and conversion. 2/ 66
Pacific Fishermen, Inc. 5351 24th Avenue, N.W. Seattle, WA 98107		152 254	1/ Construction and repair of small vessels. Topside repair of large vessels. 2/ 60

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
WEST COAST			
Topside Repair Yards			
Puglia Shipbuilding, Inc. P.O. Box 651 Tacoma, WA 98401		183 366	1/ Construction and general ship repair. 2/ 36
Service Engineering Co. Pier 50 San Francisco, CA 94120		335 792	1/ General ship repair and conversion. 2/ 226

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift		Berths/Piers Usable Length Longest / Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
GREAT LAKES				
Shipbuilding Yards				
(Maximum ship size that can exit the St. Lawrence Seaway locks is 222 meters X 24 meters)				
Erie Marine Enterprises Inc. Div. of Jonathan Corp. Foot of Holland Street P.O. Box 1730 Erie, PA 16507-0730	375 X 35	GD	366 859	1/ Ship construction, repair, and and conversion. 2/ 27
Fraser Shipyards, Inc. P.O. Box 997 Superior, WI 5488	252 X 23 189 X 17	GD GD	274 527	1/ Ship construction, repair, and conversion. 2/ 66
Marinette Marine Corp. Foot of Ely Street Marinette, WI 54143	122 X 24	LL	651 651	1/ Ship construction, repair, and conversion. 2/ 104
Peterson Builders, Inc. 101 Pennsylvania St. P.O. Box 650 Sturgeon Bay, WI 54235-0650	125 X 21	LL	168 687	1/ Ship construction, repair, and conversion. 2/ 652

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift		Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters
GREAT LAKES				
Repair Yards with Drydock Facilities				
(Maximum ship size that can exit the St. Lawrence Seaway locks is 222 meters X 24 meters)				
Bay Shipbuilding Corp. 605 North Third Ave. Sturgeon Bay, WI 54235	195 X 20 351 X 41 222 X 32	FD GD SW	305 2162	1/ Ship repair and conversion. 2/ 111
Toledo Ship Repair Co. 2245 Front Toledo, OH 43605	165 X 21 250 X 24	GD GD	244 491	1/ Ship repair and conversion. 2/ 70

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters

GREAT LAKES

Topside Repair Yards

(Maximum ship size that can exit the St. Lawrence Seaway locks is 222 meters x 24 meters)

H. Hanson Industries Riverside Marine Industries, Inc. 2824 Summit Street Toledo, OH 43611	226 451	1/ General ship repair. 2/ 48
Nicholson Terminal & Dock Company P.O. Box 18066 River Rouge, MI 48218	701 1097	1/ General ship repair. 2/ 80

MAJOR U.S. SHIPBUILDING AND REPAIR FACILITIES
(Vessels 122 m in Length and Over)

Name and Address	Maximum Ship Size (LOA–Beam) SW–Shipway GD–Graving Drydock FD–Floating Drydock MR–Marine Railway LL–Land Level Position SL–Syncrolift	Berths/Piers Usable Length Longest Total linear	Remarks 1/ Type of work usually engaged in 2/ Employment - Mid-1993 Lengths are in Meters

NON-CONUS

Shipbuilding Yards

NONE

Repair Yards with Drydock Facilities

Marisco, Ltd. 91-607 Malakola Road Ewa Beach, HI 96707	152 X 24	FD	*	1/ General ship repair. 2/ 87 * Leased from Port Commission.
Puerto Rico Drydock & Marine Terminals P.O. Box 2209 San Juan, PR 00903	193 X 30	GD	396 945	1/ General ship repair. 2/ 200

Topside Repair Yards

Honolulu Shipyard, Inc. P.O. Box 30989 Honolulu, HI 96820			183 183	1/ General ship repair and overhaul. 2/ 266