



School Training Ship *Empire State V*

(Originally commissioned as Troop Transport USNS Barrett)

Design type: P2-S1-DN3

Official Number: AP-196/ T-AP-196 - MSTs and later MSC



PRINCIPLE CHARACTERISTICS

BUILDER: GEORGE G. SHARP-
NAVAL ARCHITECTURAL FIRM

BUILT: 1952

LOA: 533'-9"

BEAM: 73'-3"

DRAFT: 27'-1 1/2"

SPEED: 19 KNOTS

PROPULSION: TWO B&W WT BOILERS,
SINGLE SCREW, GEARED
STEAM TURBINE,
13,750 SHAFT-HORSEPOWER

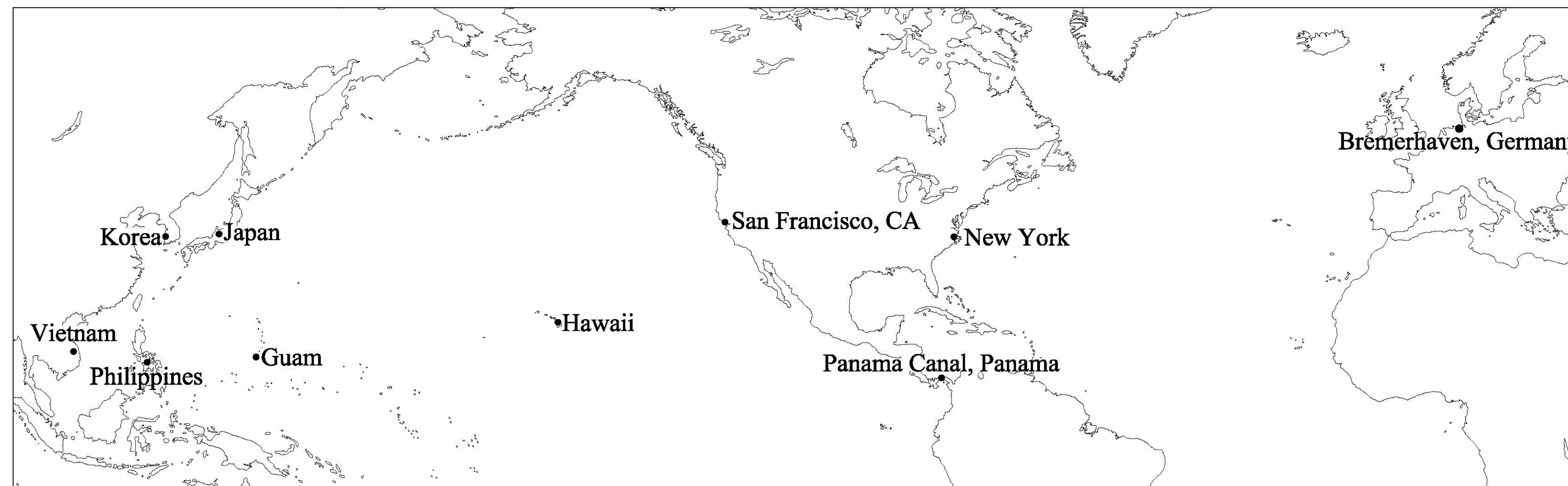
TONNAGE: 13,319 TONS (GROSS)

DISPLACEMENT: 17,630 TONS
(LIGHTWEIGHT)

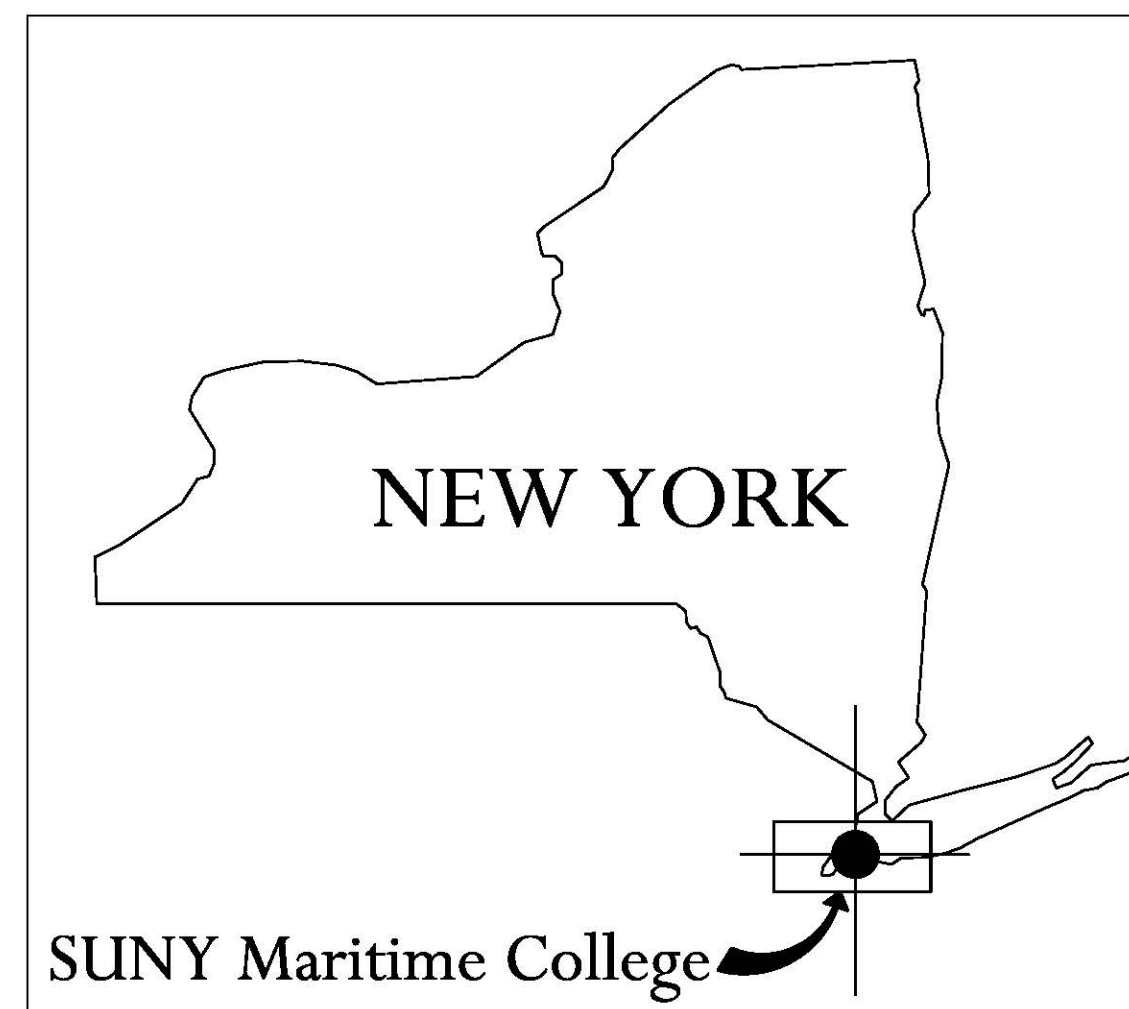
COMPLEMENT: 398 OFFICERS AND
CIVILIANS
1,506 ENLISTED



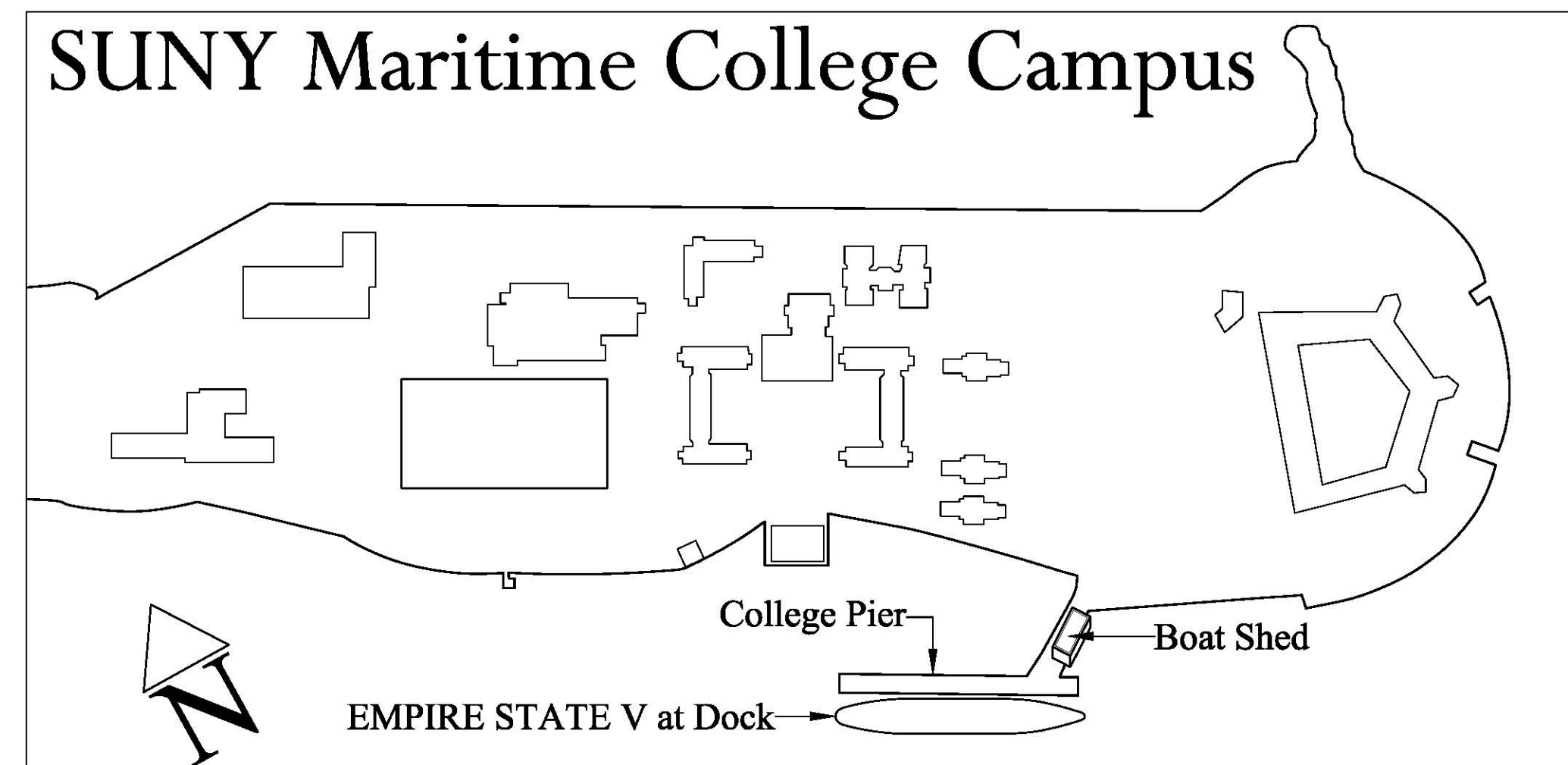
THE EMPIRE STATE V, CIRCA 1952.



NOTE: SELECTED PORTS OF CALL



SUNY Maritime College



MAP OF NEW YORK STATE MARITIME COLLEGE CAMPUS

THE USNS *BARRETT* BEGAN SERVICE AS A TROOPSHIP DURING THE KOREAN WAR ALONG WITH HER TWO SISTER SHIPS, *GEIGER* AND *UPSHUR*. GEORGE G. SHARP, A RENOWNED NAVAL ARCHITECT, DESIGNED THE CLASS AND THE NEW YORK SHIPBUILDING CORPORATION DELIVERED THEM IN 1952. AMERICAN PRESIDENT LINES (APL) ORIGINALLY PLACED THE CONTRACT FOR THREE COMMERCIAL SHIPS, BUT WHEN HOSTILITIES BROKE OUT IN KOREA, THE MARITIME ADMINISTRATION APPROPRIATED THE VESSELS FOR THE U.S. NAVY AND CONVERTED THEM TO TROOPSHIPS. THE NAVY OPERATED THEM THROUGH THE MILITARY SEA TRANSPORTATION SERVICE (MSTS) AND ITS PREDECESSOR MILITARY SEALIFT COMMAND (MSC). THE *BARRETT* SERVED FOR TWENTY-ONE YEARS AS A TROOP TRANSPORT AND PARTICIPATED IN TWO WARS, KOREA AND VIETNAM, BEFORE HER DECOMMISSIONING IN 1973. THE STATE UNIVERSITY OF NEW YORK MARITIME COLLEGE RECEIVED THE *BARRETT* THAT SAME YEAR TO SERVE AS A TRAINING SHIP FOR CADETS AND RENAMED HER *EMPIRE STATE V*. SHE SERVED IN THAT CAPACITY UNTIL HER RETIREMENT IN 1990. AFTERWARD, THE MARITIME ADMINISTRATION PLACED THE VESSEL IN THE NATIONAL DEFENSE RESERVE FLEET (JAMES RIVER) AND SHE REMAINED THERE UNTIL BAY BRIDGE ENTERPRISES DISMANTLED THE *EMPIRE STATE V* IN JULY 2007.

THE PROJECT WAS PREPARED UNDER THE DIRECTION OF TODD CROTEAU (HAER MARITIME PROGRAM COORDINATOR). THE PROJECT WAS COSPONSORED BY THE U.S. MARITIME ADMINISTRATION UNDER THE DIRECTION OF ERHARD KOEHLER AND BARBARA VOUGLARIS. ASHLEY T. WALKER (HAER CONTRACT ARCHITECTS) GENERATED VESSEL DRAWINGS. BRIAN GROGAN (HAER CONTRACT PHOTOGRAPHER) CREATED LARGE FORMAT PHOTOGRAPHS.

HISTORIC AMERICAN ENGINEERING RECORD

EMPIRE STATE V
(*President Jackson*)
(*Barrett*)

HAER No. VA-131

Location: James River Reserve Fleet, Newport News vicinity, Virginia

Type of Craft: Troopship, later school training ship

Trade: Troop transport, education

Principal Dimensions: Length (oa): 533'-9"
Beam (molded): 73'-3"
Draft: 27'-1 ¹/₈"
Displacement: 17,600 long tons
Maximum continuous shaft horsepower: 13,750
Service speed: 19 knots
(The listed dimensions are as built, but it should be noted that draft, displacement, and tonnages were subject to alteration over time as well as variations in measurement.)

Dates of Construction: Keel laying: 1 June 1949
Launching: 27 June 1950
Commissioning: 21 March 1952

Designer: George G. Sharp Company, New York, New York

Builder: New York Shipbuilding Corporation, Camden, New Jersey

Disposition: Dismantled in July 2007 by Bay Bridge Enterprises, Chesapeake, Virginia

Significance: Originally built for American President Lines for commercial purposes, the Military Sea Transportation Service instead converted the *Empire State V* to a troopship. One of three in its class, it was notable for the installation of air conditioning. The *Empire State V* served for twenty-one years as a troop transport in the Korean and Vietnam wars prior to being decommissioned in 1973. The New York State Maritime College later used it as a training ship for cadets until 1990.

Historian: Brian Clayton, HAER Contract Historian, spring 2009

**Project
Information:**

This project is part of the Historic American Engineering Record (HAER), a long-range program to document historically significant engineering and industrial works in the United States. The Heritage Documentation Programs of the National Park Service, U.S. Department of the Interior, administers the HAER program.

The project was prepared under the direction of Todd Croteau (HAER Maritime Program Coordinator). Ashley T. Walker (HAER Contract Architect) generated vessel drawings. Brian Grogan (HAER Contract Photographer) produced the large-format photographs.

BACKGROUND

The U.S. military has historically used various troop transports to carry soldiers to battlefields. During the Spanish-American War, for example, the military converted passenger ships to transport personnel to distant posts around the world. The next large transfer of American troops occurred during World War I when troopships served as the primary way to move soldiers across the Atlantic. World War II fostered the development of specifically-built troopships and scores of conversions. The U.S. Navy requisitioned those same vessels built in World War II for service in the Korean and Vietnam wars.¹

Troopships were the primary mode of transporting both troops and supplies for the military from 1898 to 1973. Not only were they economical and efficient, but also they could carry large numbers of troops, which ensured unit integrity. The U.S. Army and the Marine Corps predominantly utilized the transports for point-to-point transfers, while the Marine Corps also used them for amphibious assaults. Originally, the U.S. Army and U.S. Navy relied upon obtaining and operating their own ships and personnel to support their logistical needs. In 1949, the Department of Defense decided to consolidate the logistical capacity of the armed forces and created the Military Sea Transportation Service (MSTS), which was authorized as the sole administrator of shipping for the Department of Defense. In 1970, the navy changed the name of the service to Military Sealift Command (MSC), but it operated under the same premise and structure as its predecessor. In 1969, Robert McNamara, then Secretary of Defense, ordered a study to determine if any cost-saving measures could be implemented within the military. In one part, the study concluded that air transportation could supplant troopships as the mode for mass transport. As a result, the MSC retired its last two troopships in 1973, *Empire State V* and *Upshur*.²

The U.S. Maritime Administration (MARAD) played a significant role in shaping the U.S. Merchant Marine and in assisting the country during national emergencies and war.³ Created in 1950, the Maritime Administration aided U.S. shipping companies through subsidies for ship construction and operations. The agency was based on the U.S. Maritime Commission (1936-1950) and its predecessor, the U.S. Shipping Board (1916-1933). MARAD supervised two significant programs: the Operating Differential Subsidy (ODS) and the Construction

¹ Graham A. Cosmas, *An Army for Empire: The United States Army in the Spanish-American War* (College Station, TX: Texas A&M Press, 1998), p. 103; Norman Friedman, *U.S. Amphibious Ships and Craft: An Illustrated Design History* (Annapolis, MD: Naval Institute Press, 2002), pp. 26-30; L.A. Sawyer and W.H. Mitchell, *Victory Ships and Tankers: The History of the 'Victory' Cargo Ships and of the Tankers Built during World War II* (Cambridge, MD: Cornell Maritime Press, Inc., 1974), pp. 23-24; Frederic C. Lane, *Ships for Victory: A History of Shipbuilding under the U.S. Maritime Commission in World War II* (Baltimore, MD: Johns Hopkins Press, 1951), pp. 29-30 and 623-624; Winn B. Frank, "Farewell to the Troopship," *Naval History* 11, no. 1 (February 1997): pp. 41-44.

² Frank, "Farewell to the Troopship," pp. 44-45. Additionally, the ships were expensive to build, crew, and maintain versus aircraft.

³ René de la Pedraja, *A Historical Dictionary of the U.S. Merchant Marine and Shipping Industry since the Introduction of Steam* (Westport, CT: Greenwood Press, 1994), p. 369. MARAD also assists the maritime academies through funding and the use of school ships.

Differential Subsidy (CDS).⁴ The two subsidy programs helped defray the costs of U.S. shipping lines competing against foreign firms.

American President Line (APL) was one such shipping line that accepted subsidies from the government. The company was established in 1938 as a transpacific shipping service when its predecessor, Dollar Line, fell into bankruptcy. The Maritime Commission later bought out the company and changed the name. APL is now a subsidiary of Neptune Orient Lines (NOS), headquartered in Singapore. The company took full advantage of MARAD's programs, including assisting with the initial construction of the *President Adams*, *President Hayes*, and *President Jackson* (later called the *Barrett* and then the *Empire State V*).⁵

DESIGN AND CONSTRUCTION

George G. Sharpe, a renowned naval architecture firm in New York City, originally designed the P2-S1-DN1 class as "combo" ships, referring to vessels able to carry both cargo and passengers.⁶ New York Shipbuilding laid the keels in 1949. Halfway through construction, the Korean War broke out, which began to strain the logistical obligations of the Department of Defense.⁷ MARAD requisitioned the three ships in this class halfway through construction for conversion to troopships. A troopship conversion was ideal for this design because "pipe rack" berthing stacked three or four high could be installed in the hold spaces. This conversion had been frequently carried out on vessels during World War II to increase the number of troop carriers available (see *General John Pope*, HAER No. CA-343, and *General Edwin D. Patrick*, HAER No. CA-344). Concurrently, the troopships could be converted back to commercial ships at war's end. The navy therefore retained the basic design, which consisted of two holds forward of an amidships deckhouse and two holds aft and a 400-passenger capacity for transpacific service. Cargo-handling gear (eight 10-ton booms) and related kingposts and masts remained unchanged.⁸

The three ships requisitioned by the navy were renamed *Barrett*, *Geiger*, and *Upshur*, after Marine Corps generals who served in World War II. The ships served in the Military Sea

⁴ In the early 1980s, the government phased out both programs, but MARAD still enforces cargo preferences and other laws affecting merchant shipping. Nancy R. Fox and Lawrence J. White provide an in-depth review of U.S. shipping policies in their article, "U.S. Ocean Shipping Policy: Going Against the Tide," *Annals of the American Academy of Political and Social Science* 553, *Transport at the Millennium* (September 1997), pp. 75-86.

⁵ Pedraja, *Historical Dictionary*, pp. 369-370; Brian J. Cudahy, *Box Boats: How Container Ships Changed the World* (New York: Fordham University Press, 2006), p. 70.

⁶ During the 1950s, shipping lines began to introduce "combo" ships, which were part freighter and part cruise ship. The design faded by the end of the decade with the advent of air travel, which was promoted as providing faster service to destinations around the world.

⁷ After World War II, the U.S. military was actively involved in supplying equipment and personnel to countries participating in NATO (North Atlantic Treaty Organization) and to outposts in the Pacific. The Cold War waged against the Soviet Union also used U.S. resources, so when the Korean War broke out, the military experienced a shortage of ships needed to keep pace with its requirements around the globe.

⁸ Sawyer and Mitchell, *Victory Ships and Tankers*, pp. 23-24; Cudahy, *Box Boats*, pp. 4-5; Salvatore R. Mercogliano, "Military Sealift Command Ships of the Line," available at <http://www.usmm.org/msts/line.html>, accessed 7 November 2007.

Transportation Service (MSTS) and its successor, Military Sealift Command (MSC), for twenty-one years before being supplanted by air transportation in 1973.⁹

DESCRIPTION

The machinery space housed a proven propulsion system that engineers developed during World War II and was typically placed in the P-2 transport ships of the era. Two Babcock and Wilcox boilers created high-pressure steam, carried by pipes to a General Electric cross-compound turbine. The geared turbine turned a single screw at 13,750-shaft horsepower, which propelled the ship to a maximum speed of 19 knots. The fuel tanks carried 13,762 barrels of fuel oil, allowing a cruising distance of 15,000 nautical miles.¹⁰ The engine room also contained auxiliary equipment located on raised flats. Three steam-powered turbo generators on the starboard flat provided service power to the ship. There were also components for the air conditioning system on the same side. The opposite flat supported auxiliary equipment for the ship's distilling plant. The machinery space also held numerous pumps used in the operation of the ship.¹¹

The bridge deck housed a number of spaces related to the navigation and safety of the vessel. The wheelhouse was in the forward room with an engine order telegraph, gyro repeater, helm, and radar. The helm sent electric signals to the steering room where an electric-hydraulic ram, manufactured by C.H. Wheeler, turned a rudder. Two bridge wings extended off each side and were equipped with navigation equipment. Aft of the wheelhouse on the port side were three rooms with berths for the radar tech, assistant radio operator, and chief radio operator. The starboard side contained a chartroom aft of the wheelhouse, a radio office, a gyro room, and fan room. Off the centerline, but on the starboard side next to the radio office, were two small spaces designated for batteries and elevator machinery.

The majority of the space onboard the ship was devoted to berthing; after the conversion to troopship, there was berthing available for 1,506 enlisted personnel in holds one, two, six, and seven. The converted holds contained "standee bunks" (or "pipe racks") stacked three or four high. Space was available in the bottom decks to carry equipment or supplies. Six access hatches were on top of the holds, three of which were located forward of the amidships house and three aft. These allowed personnel to move freely about the ship, and they also provided quick access to the outside in the event of the ship sinking. Private staterooms in the ship's superstructure along with berths were located on the A deck.

⁹ Frank, "Farewell to the Troopship," pp. 41, 44. Under a restructuring of the U.S. military in 1949, the U.S. Navy sought to manage all military shipping. The Pentagon awarded the contract to the navy, and it created a new agency within its department to administer the shipping fleet, Military Sea Transportation Service (MSTS). In 1970, the navy changed the MSTS to Military Sealift Command (MSC), and it continues to be the sole administrator of shipping for the Department of Defense. See Charles Gibson and E. Kay Gibson, *Overseas: U.S. Army Maritime Operations, 1898 through the Fall of the Philippines*, p. 169, fn 15.

¹⁰ "T-AP 196 Barrett," available at <http://www.globalsecurity.org/military/systems/ship/tap-196.htm>, accessed 17 March 2009; "Class Design—P2-S1-DN3 (V-2000)," available at <http://www.apl.com/history/timeline/stat7.htm>, accessed 5 March 2009.

¹¹ The following description is based on Ship Plans, MA27-2 – MA27-19, "The Maritime Administration Collection of Ship Plans (1939-1970)," National Museum of American History, Washington, DC.

There were two sizable galleys and three separate dining areas for the crew, passengers, and troops. The main galley was amidships on the B deck, along with accompanying preparation rooms that serviced the forward passenger dining room and the aft troop cafeteria. On the same deck, but amidships starboard side, there was a small galley and mess for the crew. Beneath the troop cafeteria on the C deck was another troop galley and accompanying food preparation spaces. Separate food storage areas comprised of both dry stores and cold storage reefers were beneath the passenger and troop galleys. Elevators in the two separate areas brought the food up to the galleys for preparation.

There were lounges for the ship's crew and passengers, as well as a recreation space for the troops. The ship's officers had their lounge in the aft section of the sun deck, while the crew's day room was on the A deck in the forward section of the ship on the starboard side. A communal library was located in front of the day room. The troops had a recreation space on the same level on the port side next to hold 2. There was a store and soda fountain shop near hold 2 as well. Two more recreation spaces were near hatches 6 and 7 on the A deck. Passengers and officers had access to a lounge in the aft section of the promenade deck. A small playpen for children passenger was on the sun deck between the smoke stack masts.

Sanitation was an important part of ship life. There were sufficient showers, toilets, and washrooms on the ship's five decks for all onboard, as well as a generous supply of fresh water in holding tanks coupled to the water treatment plant. Troops shared communal toilets and showers on the A deck. First-class passengers retained private bathrooms and showers in their cabins, while the ship's officers and crew shared the same amenities through adjoining doors. Laundry facilities and a barbershop helped promote good hygiene while the ship was underway.

Health was also a concern given the number of people that could be transported on the ship, so there was a medical area on the upper deck at the aft end of the ship. This area included a clinic, doctor's office, nurse's station, and pharmacy, as well as an evaluation room, treatment center, and recovery area. A nursery for infants was in the front of the clinic. For serious injuries requiring surgery, there was an operating room in the same vicinity.

The large troop-carrying capacity of the ship mandated that it have adequate safety equipment. The ship carried numerous lifeboats on the bridge and boat decks to accommodate the crew, passengers, and troops while underway. These lifeboats sat in cradles, and lines lowered them into the water.

OPERATIONAL HISTORY

After the conversion to a troopship, the Military Sea Transportation Service (MSTS) renamed the vessel the *Barrett* after Maj. Gen. Charles Dodson Barrett (1885-1943). Barrett began his military service in World War I. Between the world wars, he studied at the Ecole de Guerre in Paris and then served as an instructor at the Marine Corps School in Quantico, Virginia. During World War II, he was a commanding officer and held various positions, including Assistant to the Commandant of the Marine Corps from 1941-1942. Barrett was awarded the Distinguished

Service Medal posthumously after being accidentally killed in the South Pacific on 8 October 1943.¹² The *Barrett's* maiden voyage began in June 1952 with an Atlantic crossing. Bound for Bremerhaven, German, the ship carried a full load of civilians and soldiers destined for NATO outposts. After a short layover, the ship returned to the United States' East Coast and continued rotating military troops and other personnel between the United States and Germany for the rest of the year.¹³

On 15 January 1953, the *Barrett* departed New York bound for its new homeport of San Francisco. After making a port of call in Puerto Rico, the ship transited the Panama Canal and continued westward, stopping in Hawaii and Japan before returning to San Francisco on 27 February 1953. From 1953 to 1964, the ship continued to supply equipment, civilian administrators, military dependents, and troops to strategic military installations in the Pacific, including Guam, Korea, the Philippines, and Japan.

With the start of the Vietnam War, the *Barrett* was diverted from its previous routine and ordered to carry U.S. troops to Vietnam. On 15 August 1966, the ship carried the last civilian dependents from foreign bases to San Francisco. The ship continued transporting personnel and supplies to and from Vietnam until March 1973, when its final voyage from Vietnam to the United States took place. On 1 July 1973, the U.S. Navy struck the ship from its list of active duty ships.

The ship's second career was as a school training ship for the New York State Maritime College. The Maritime Administration loaned the ship to the school in 1973, and the college renamed it the *Empire State V*. During two-month summer sea terms onboard the *Empire State V*, cadets learned navigation and engineering and were able to practically apply their classroom knowledge by sailing to the Caribbean or Europe and making ports of call. The cadets lived onboard with the school's officers. The ship was used for this purpose for seventeen years until its retirement in 1990. New York State Maritime College continues to provide a summer sea term for its cadets on another ship, named the *Empire State VI*.¹⁴

CONCLUSION

After a long and successful career as a troopship and training vessel, the Maritime Administration moved the *Empire State V* to its mothball fleet in the James River near Newport News, Virginia, where it awaited scrapping. While part of the James River Reserve Fleet, the military saw the ship as the ideal training platform for commandos to simulate takeover boarding

¹² Biographical information on Major General Barrett from <http://www.navsourc.org/archives/09/22/22196.htm>, accessed 9 March 2009.

¹³ Operational history derived from "USNS Barrett (T-AP 196)," <http://usnsbarrett.com/>, accessed 9 March 2009. Jon L. Gateley, a Military Department crewmember (YN2) from March 15, 1955, to the end of March 1956, created this website dedicated to the ship. The website contains vignettes from various persons who either sailed as crewmembers or passengers onboard the ship.

¹⁴ "Empire State V," available at <http://www.sunymaritime.edu/Maritime%20Museum/TrainingShipWing/EmpireStateV.aspx>, accessed 9 March 2009.

raids. The Maritime Administration paid Bay Bridge Enterprises \$851,194 to dismantle the ship in July 2007.¹⁵

¹⁵ U.S. Department of Transportation, Department of Public Affairs, “Two More Ships to Leave James River Reserve Fleet,” press release, June 13, 2007; Office of the Governor Timothy M. Kaine, “Governor Kaine Announces Troop Transport Vessel *State* to Leave James River Reserve Fleet on Wednesday,” press release, July 17, 2007.

Appendix: Historic Images



Figure 1: USNS *Barrett* underway, n.d. From Photographic Section—MSC Files, Naval Historical Center, U.S. Department of the Navy.



Figure 2: USNS *Barrett* underway, n.d. From Photographic Section—MSC Files, Naval Historical Center, U.S. Department of the Navy.



Figure 3: USNS *Barrett* leaving San Francisco Bay, n.d. From Photographic Section—MSC Files, Naval Historical Center, U.S. Department of the Navy.

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HISTORIC AMERICAN ENGINEERING RECORD

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(*President Jackson*)
(*Barrett*)
James River Reserve Fleet
Newport News vicinity
Virginia

HAER VA-131

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David Haas, photographer, 2007

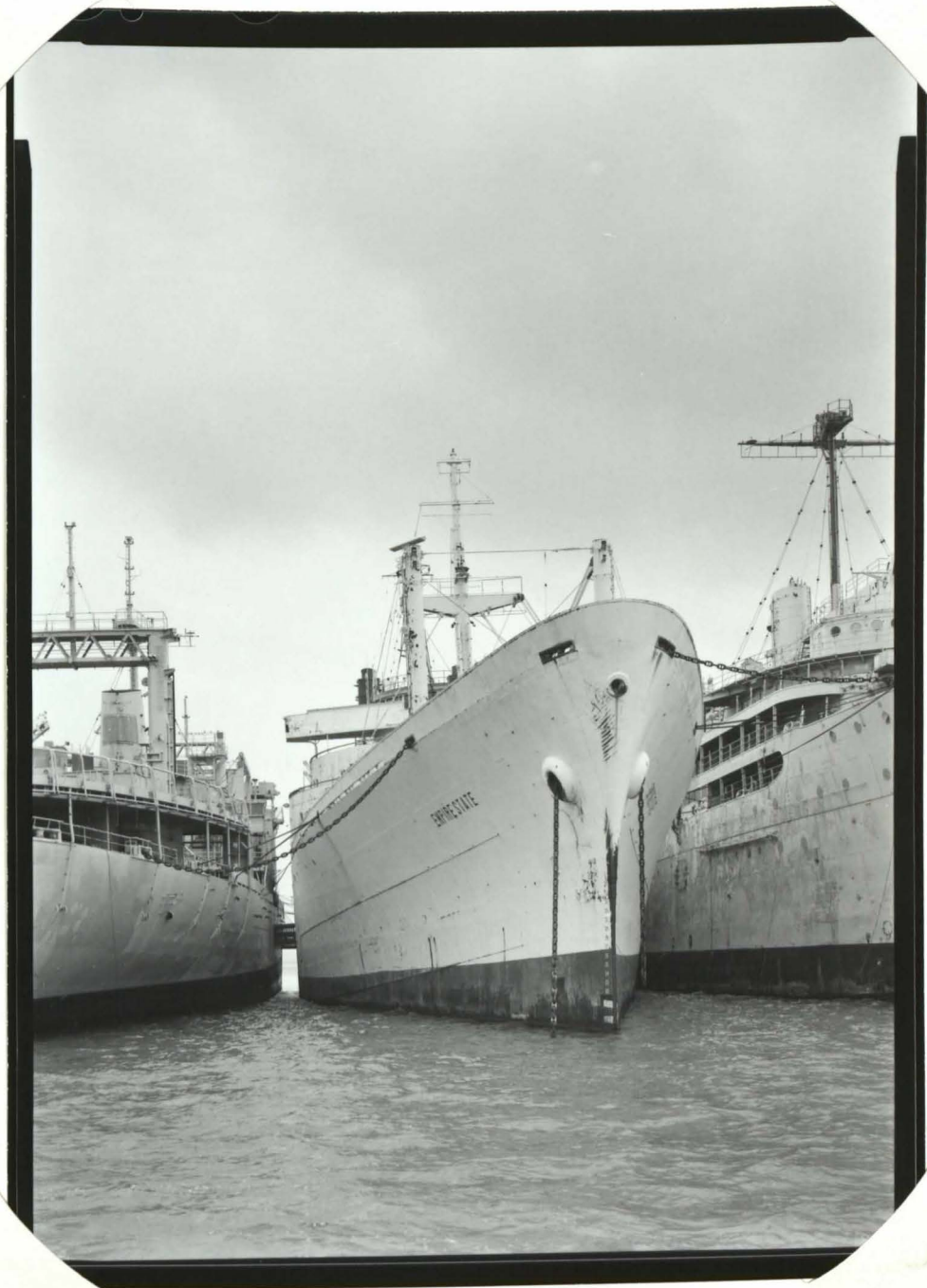
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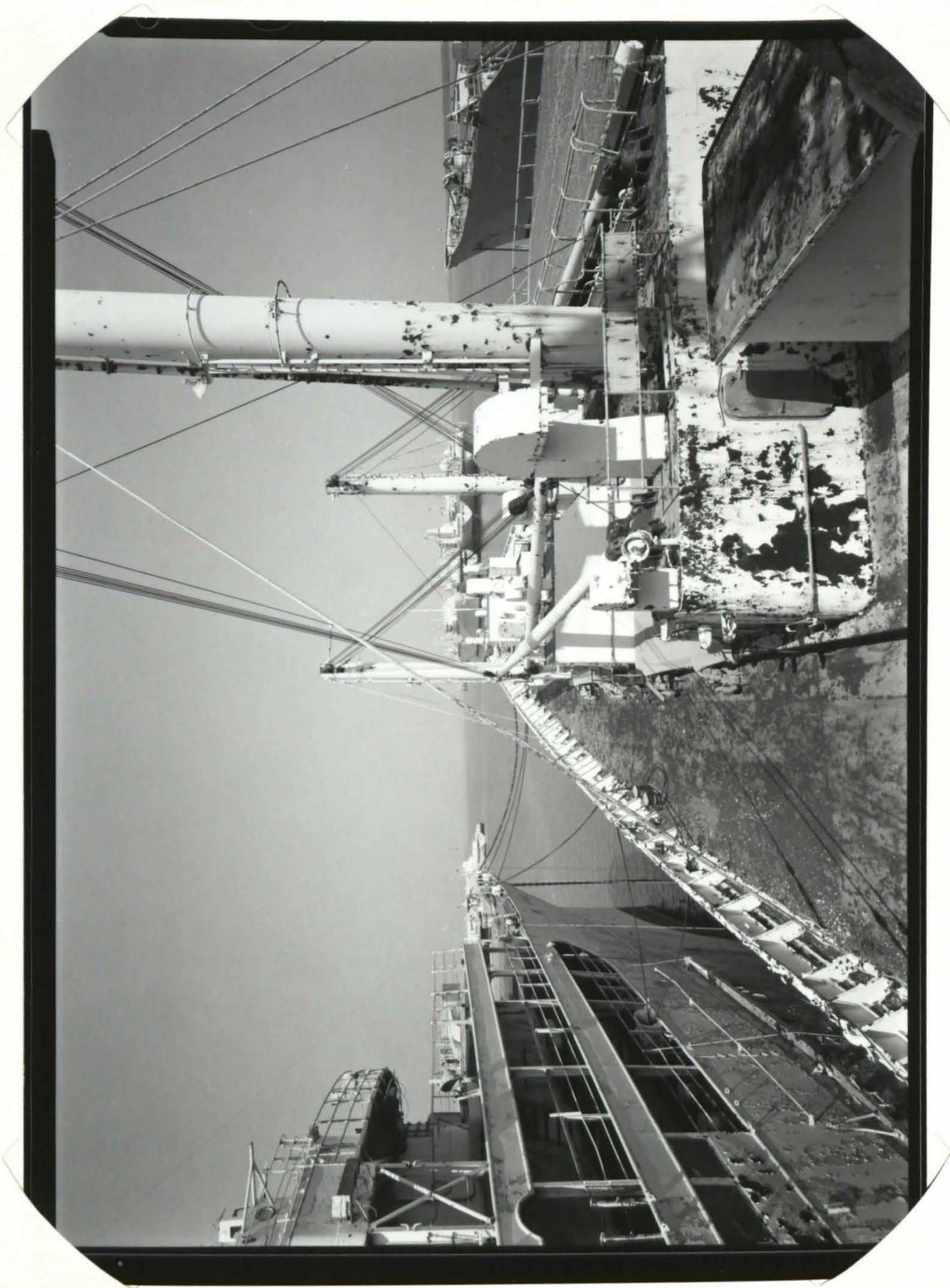
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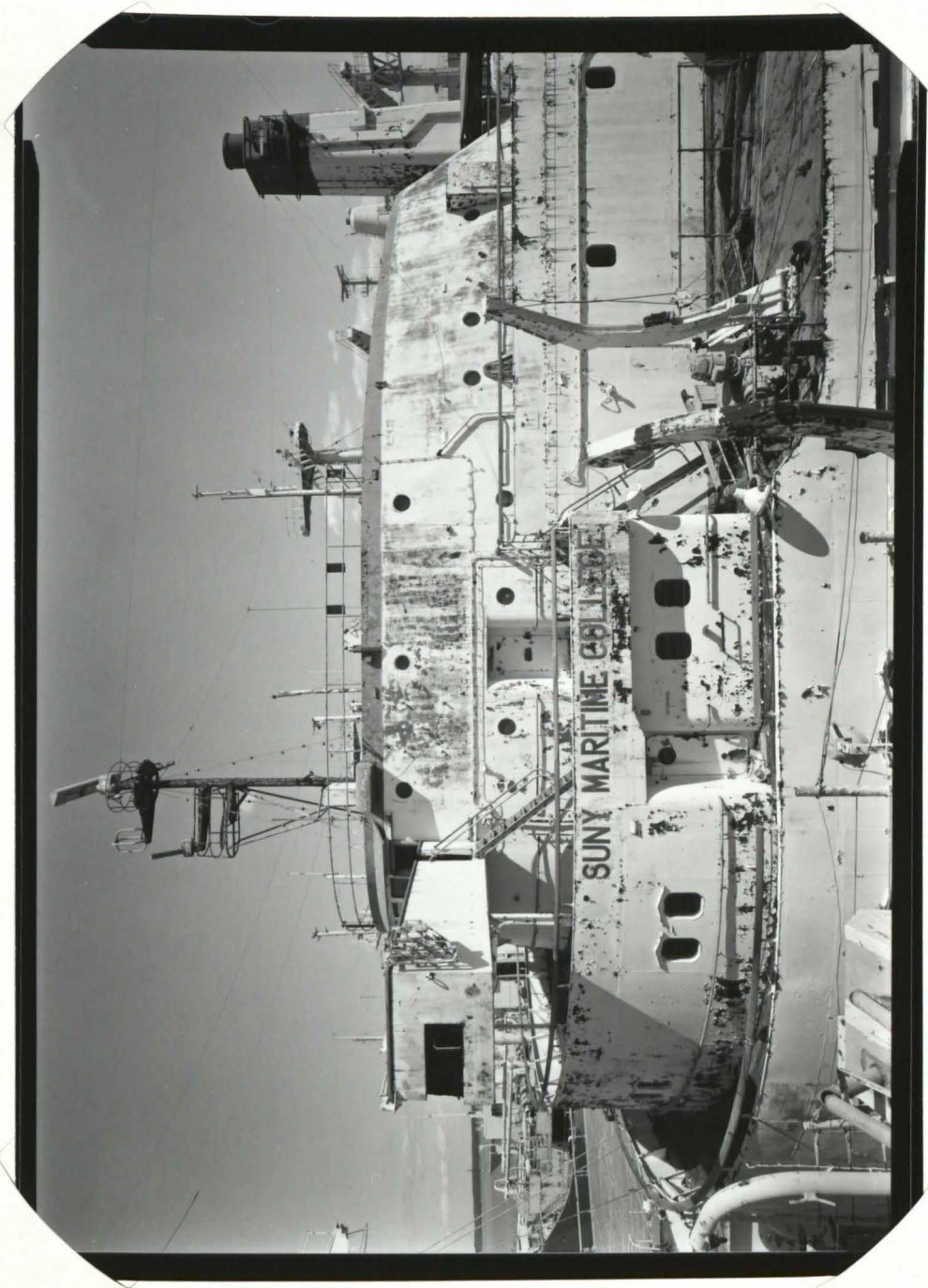
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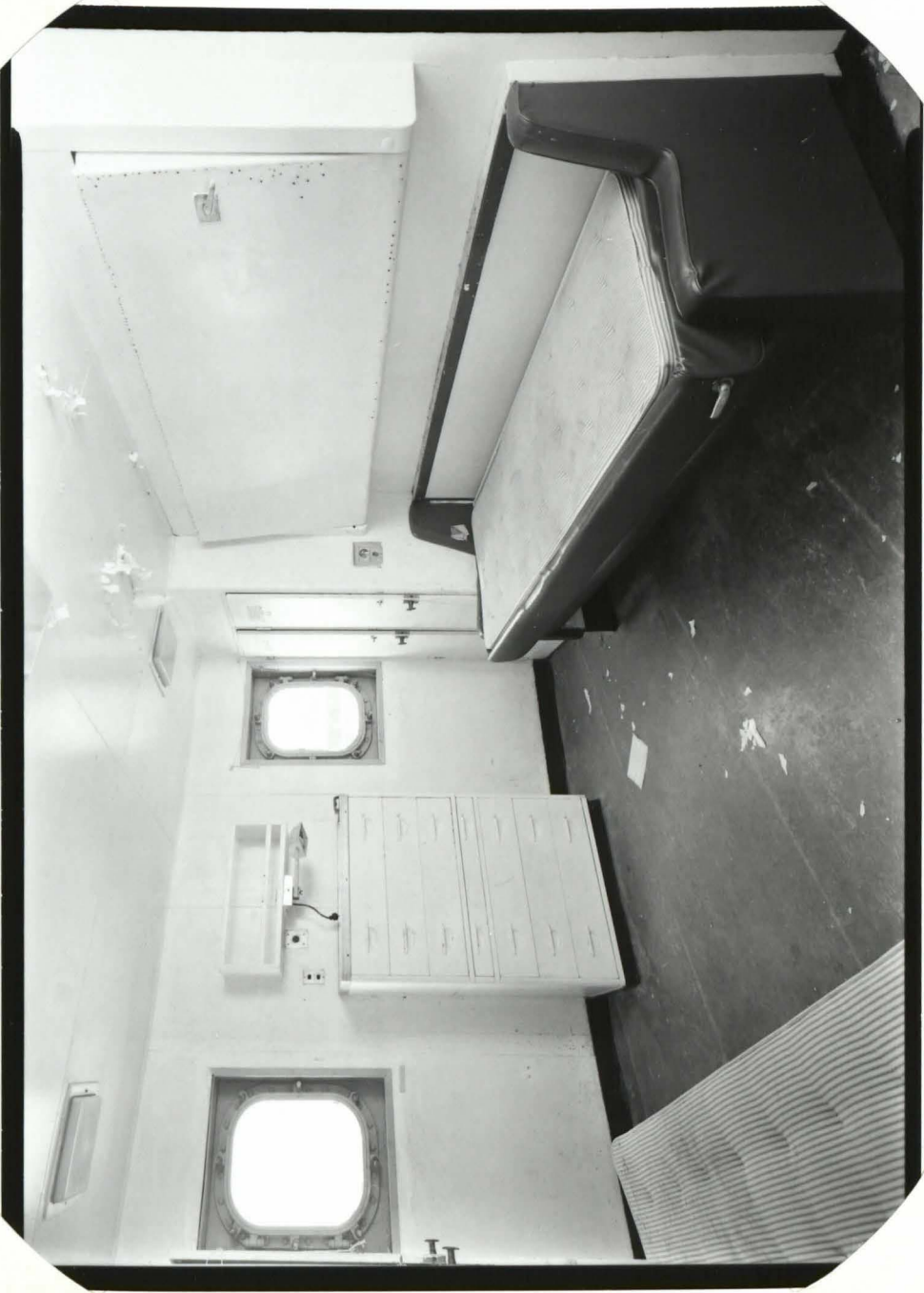
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HAER No. VA-131-12



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HAER No. *VA-131-13*



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HAER No. *VA-131-17*



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HAER No. VA-131-18



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HISTORIC AMERICAN ENGINEERING RECORD
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HAER No. *VA-131-20*



HISTORIC AMERICAN ENGINEERING RECORD
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HAER No. VA-131-21



HAER No. VA-131-22



HISTORIC AMERICAN ENGINEERING RECORD
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HAER No. VA-131-23



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HAER No. VA-131-24



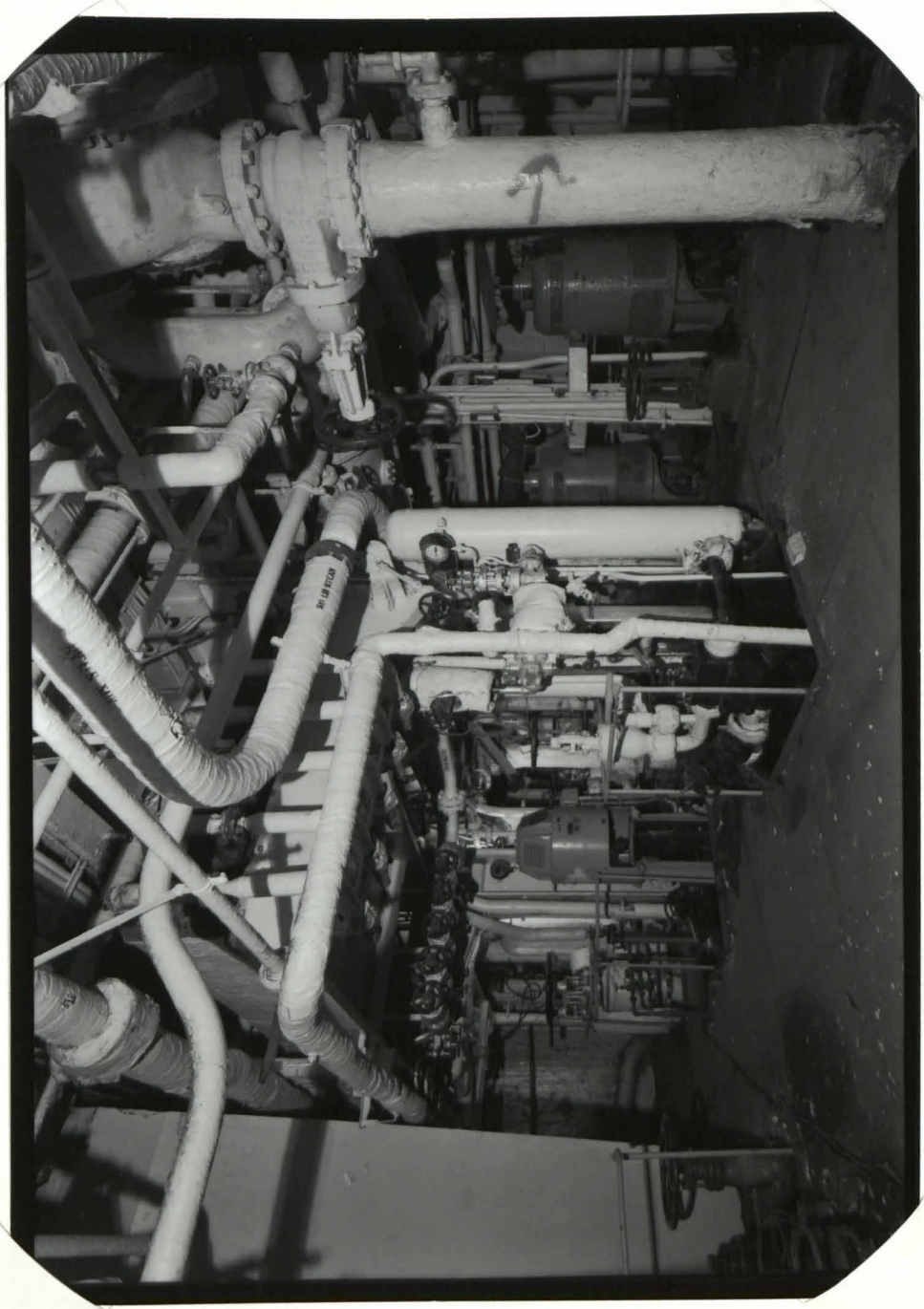
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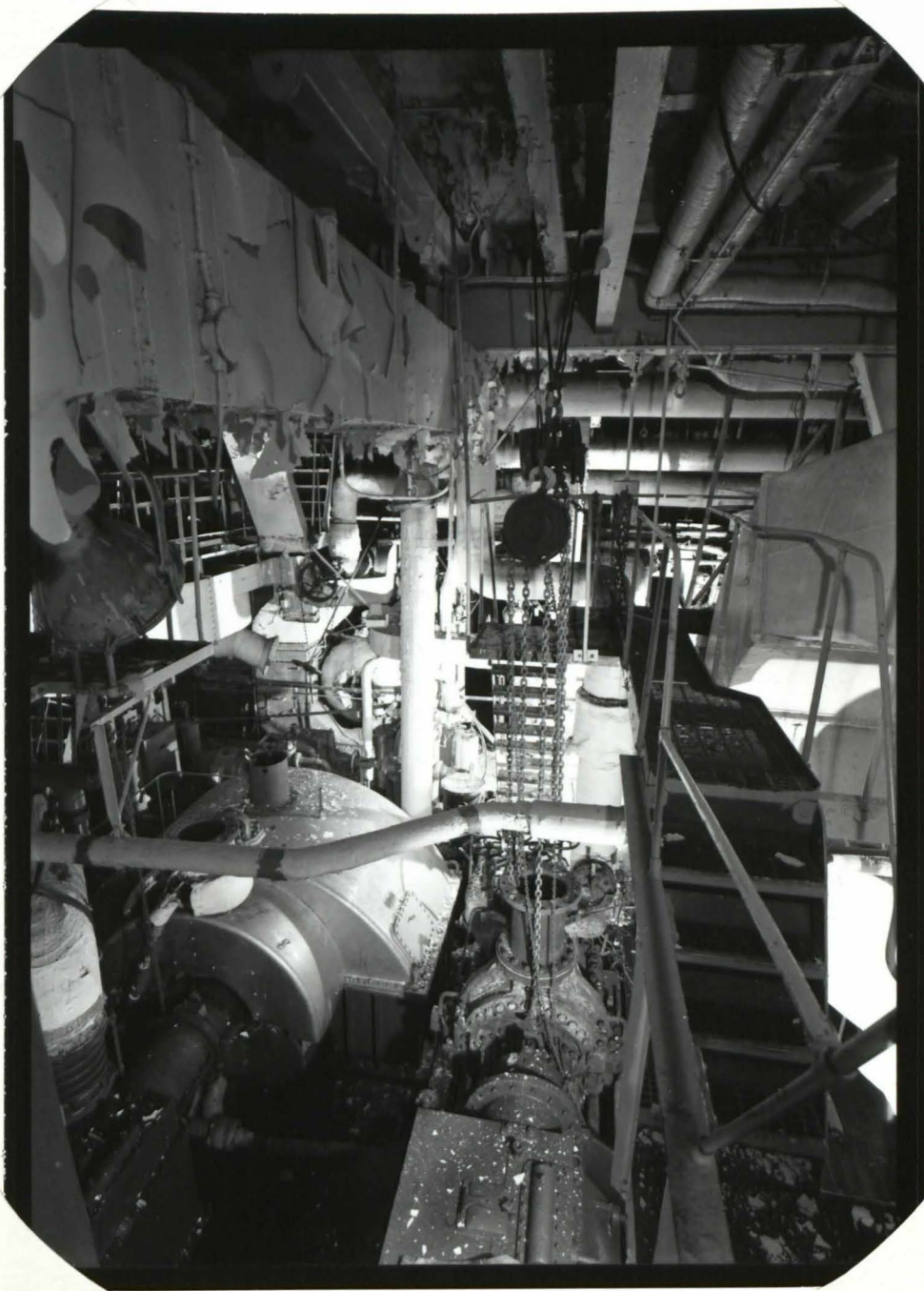
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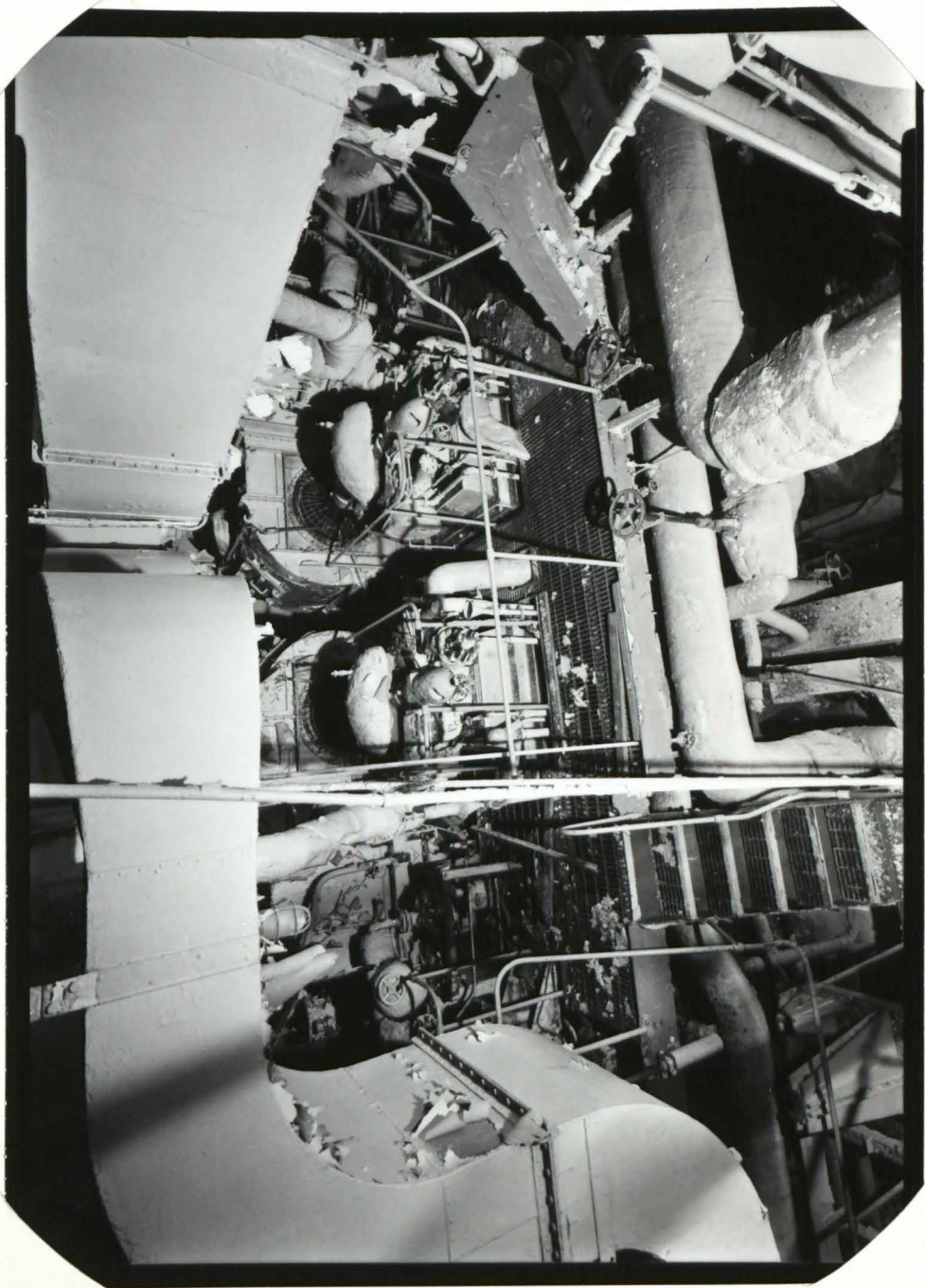
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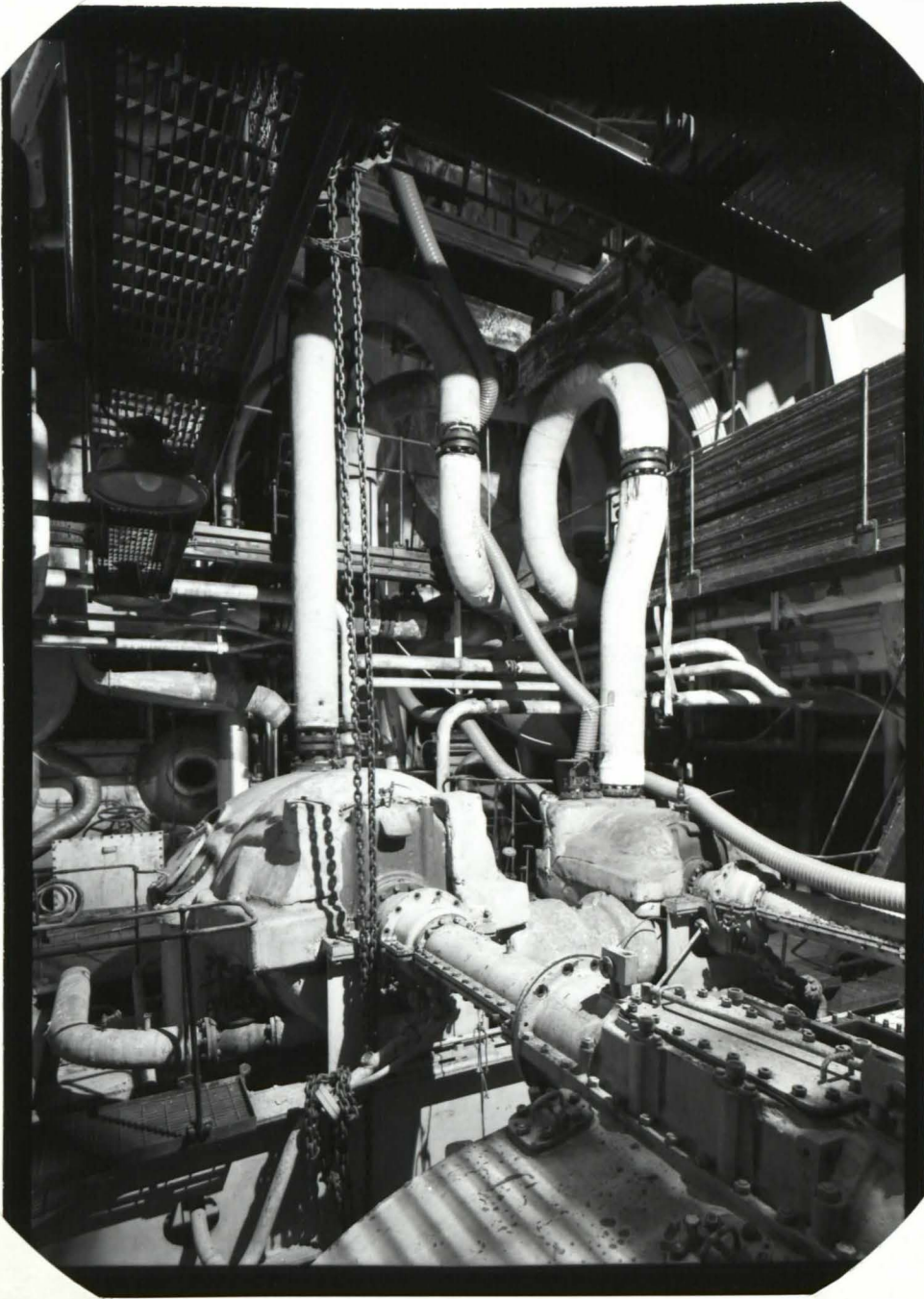
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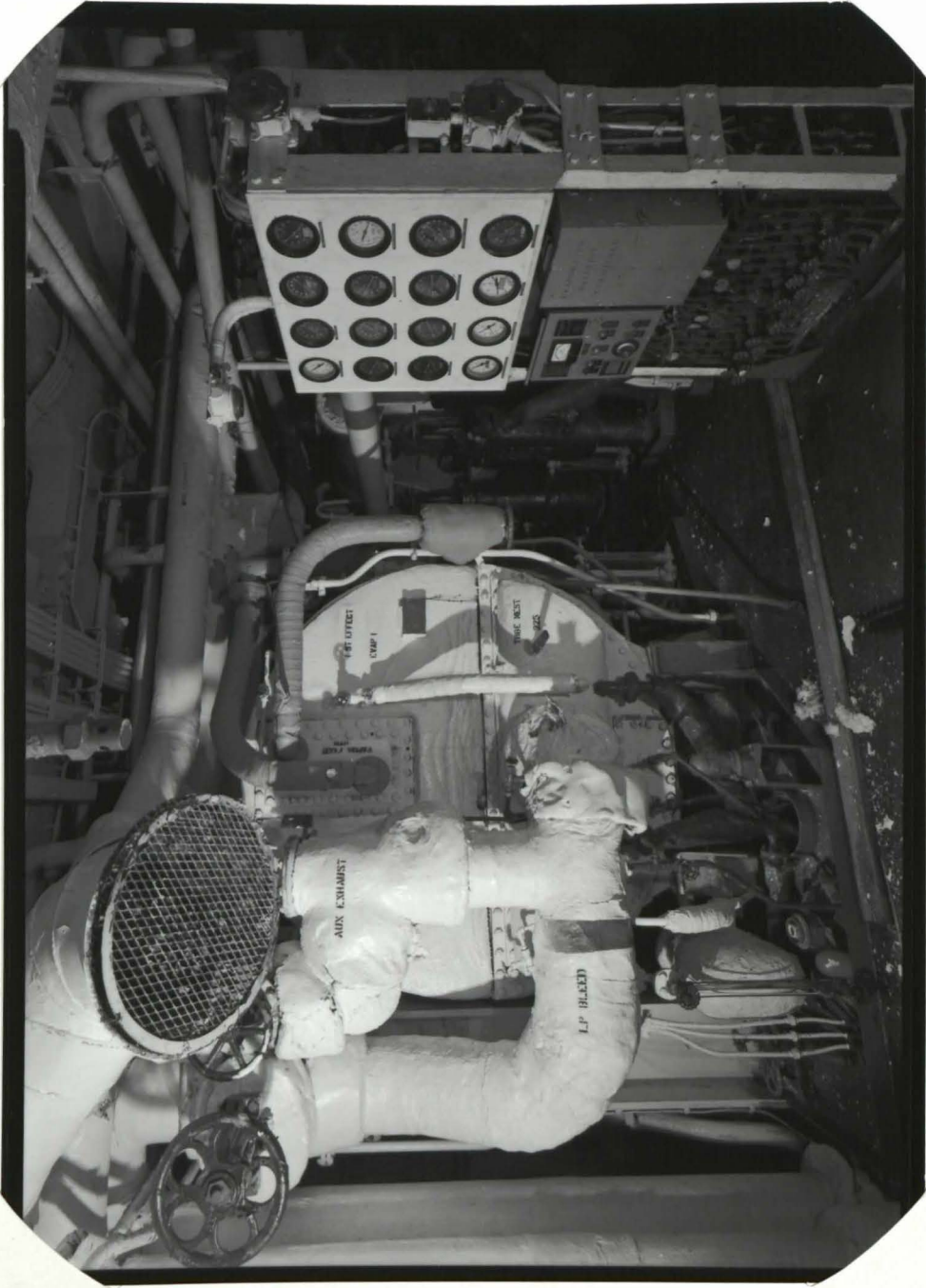
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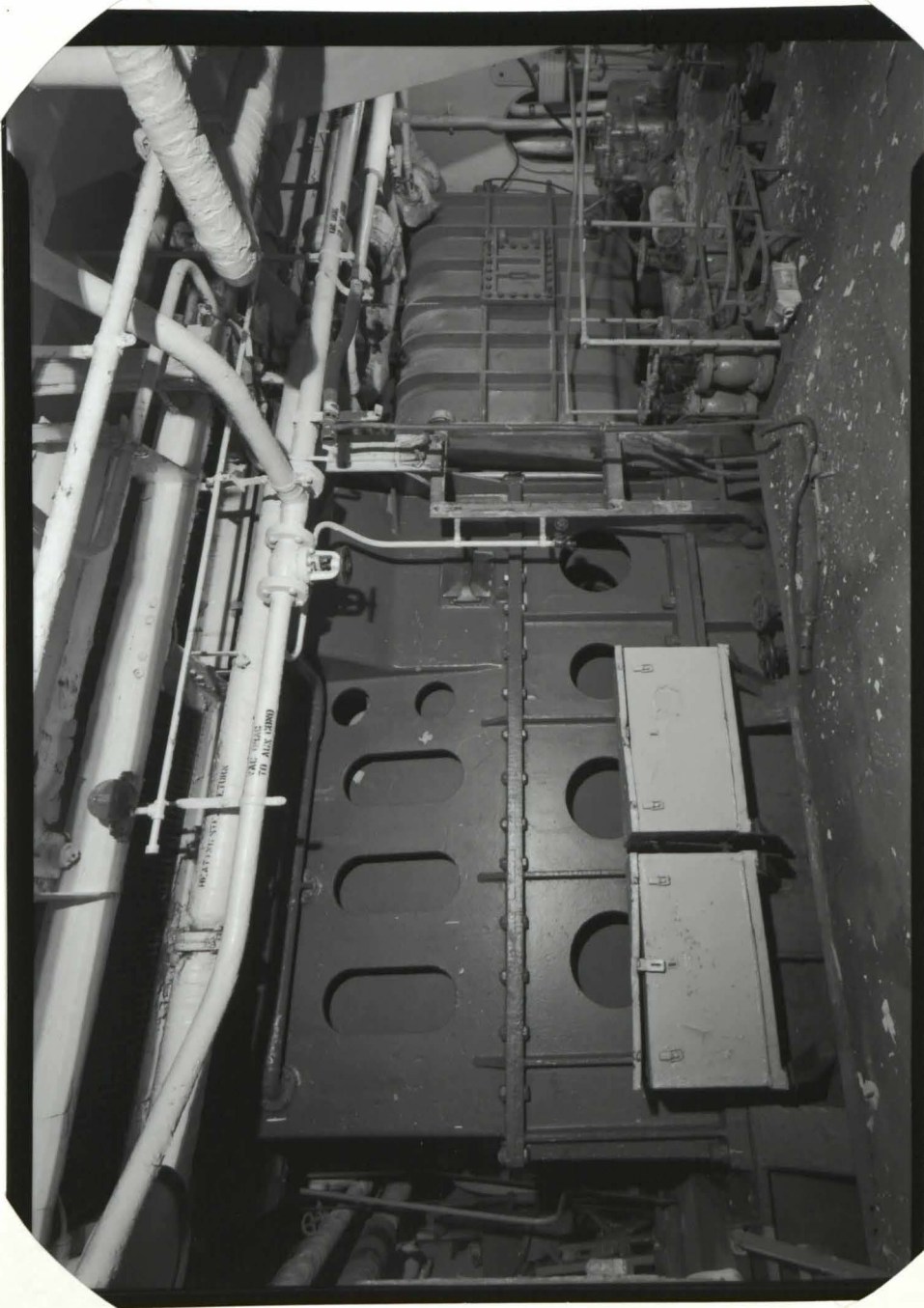
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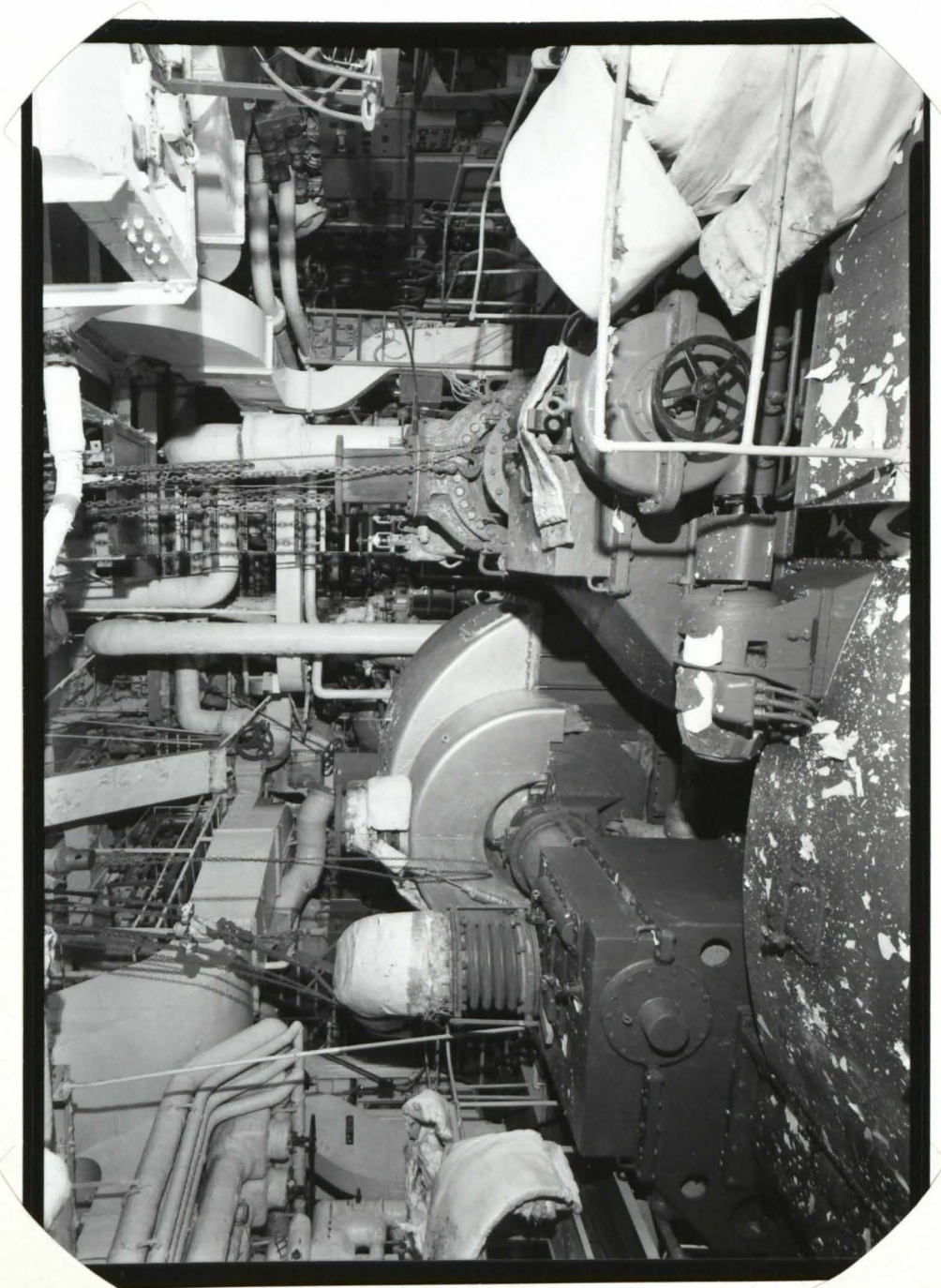
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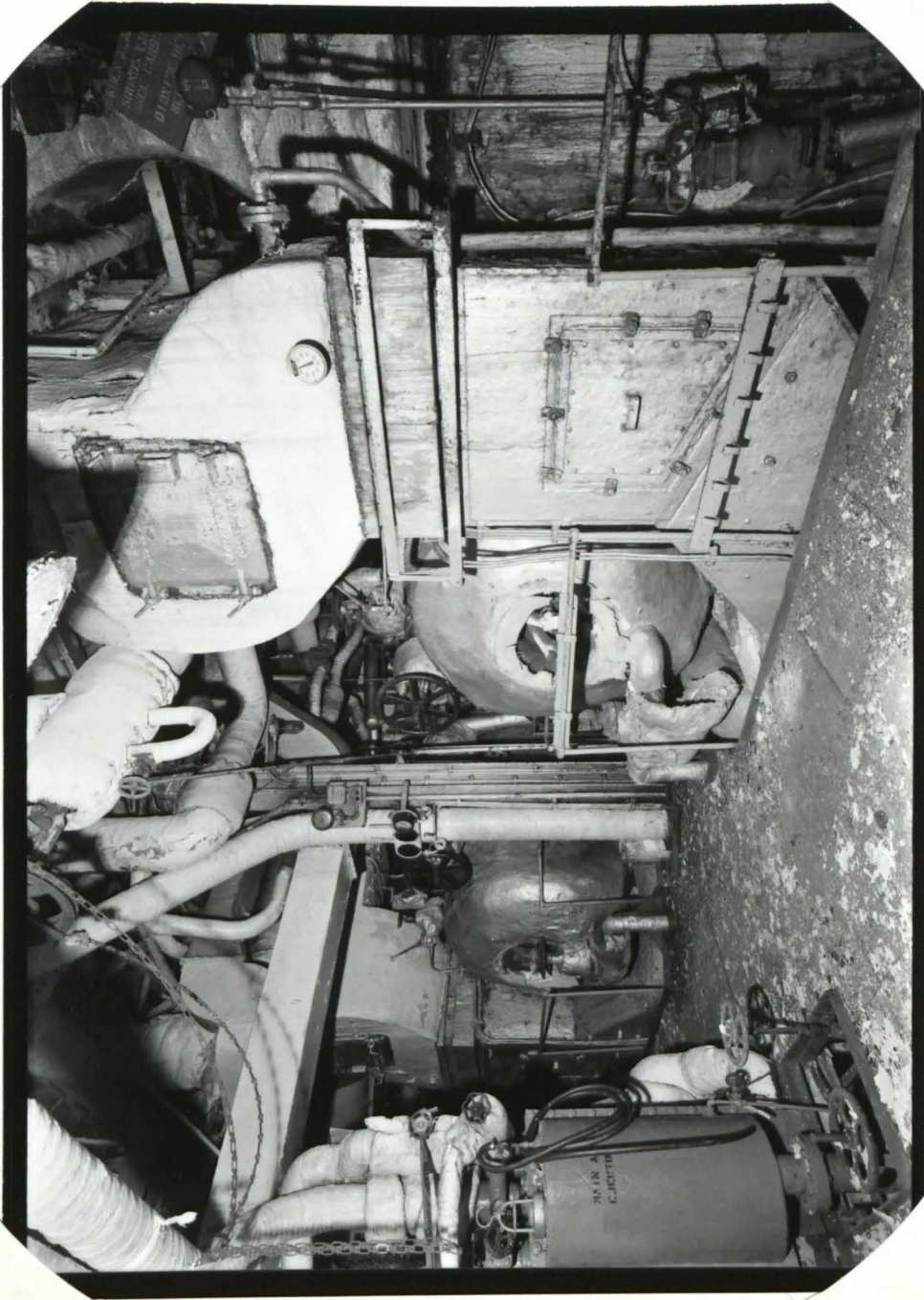
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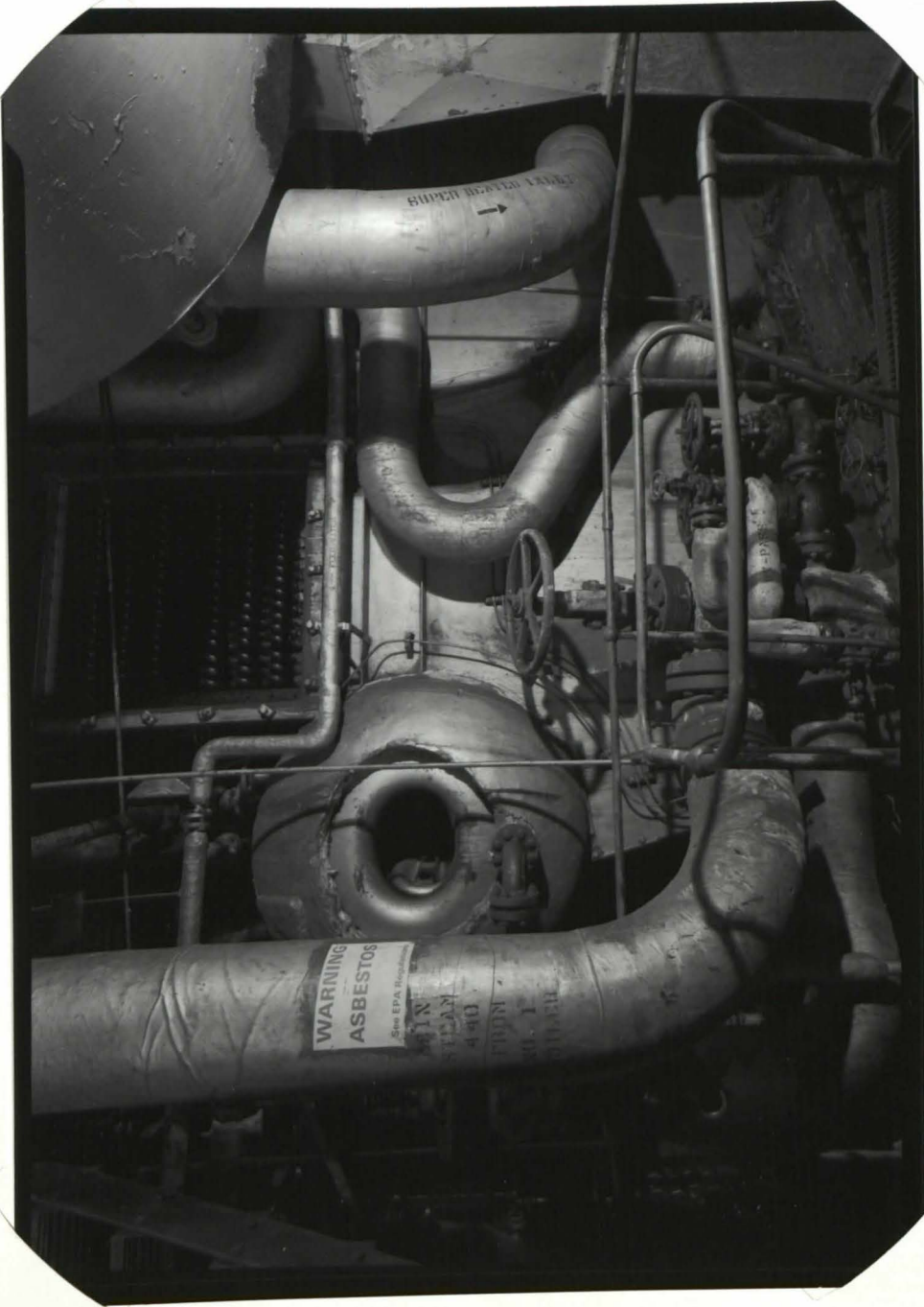
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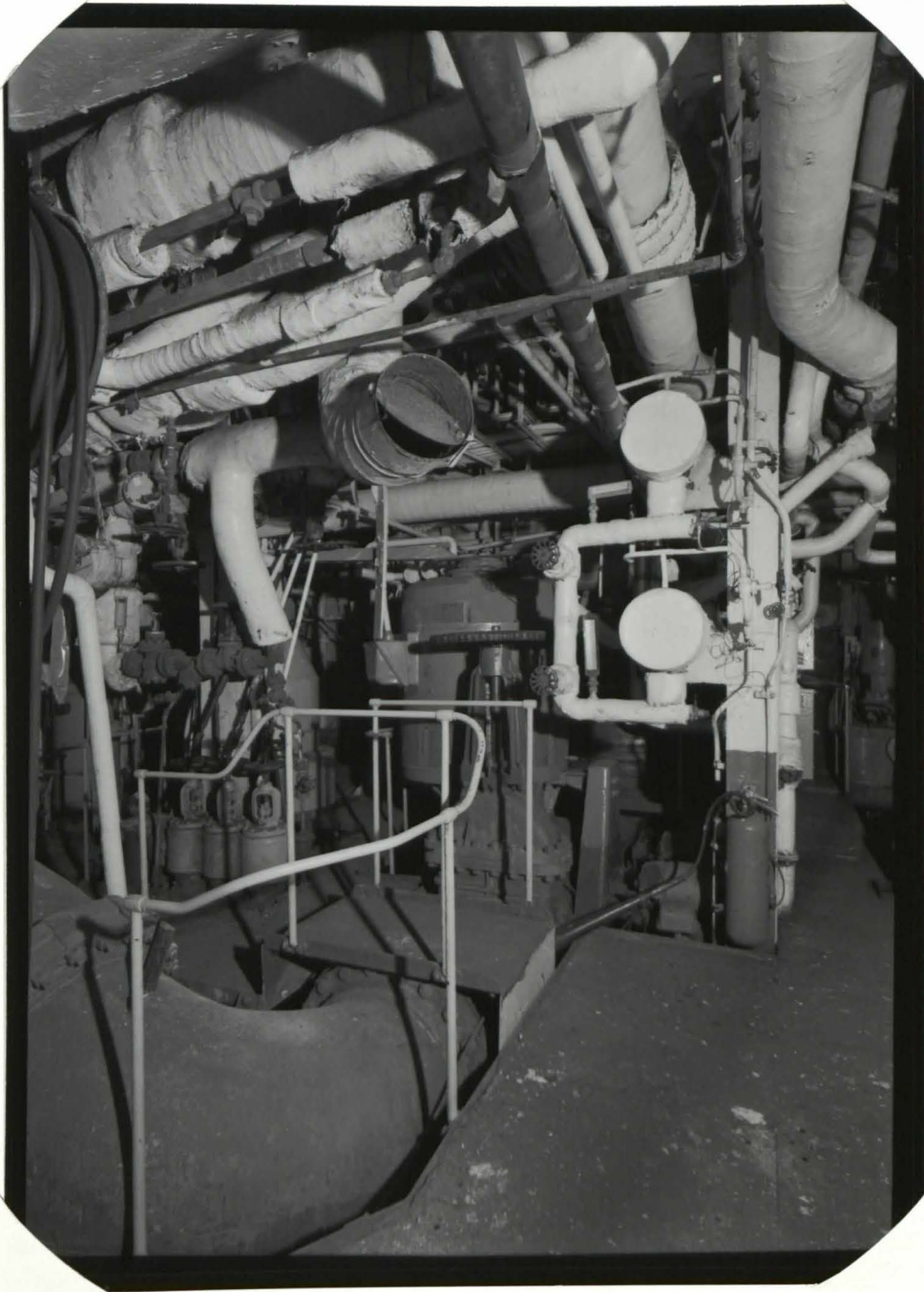
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HISTORIC AMERICAN ENGINEERING RECORD
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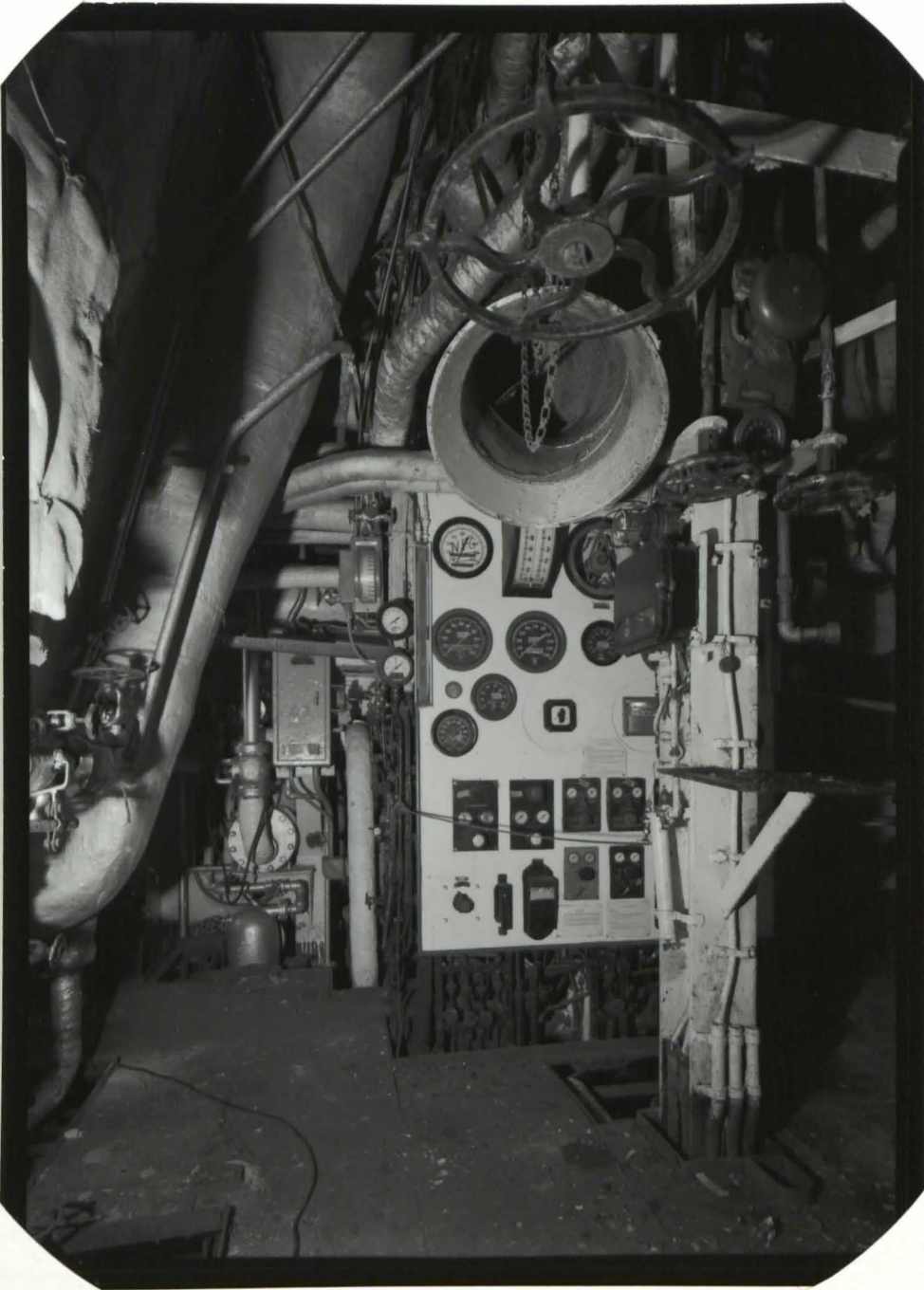
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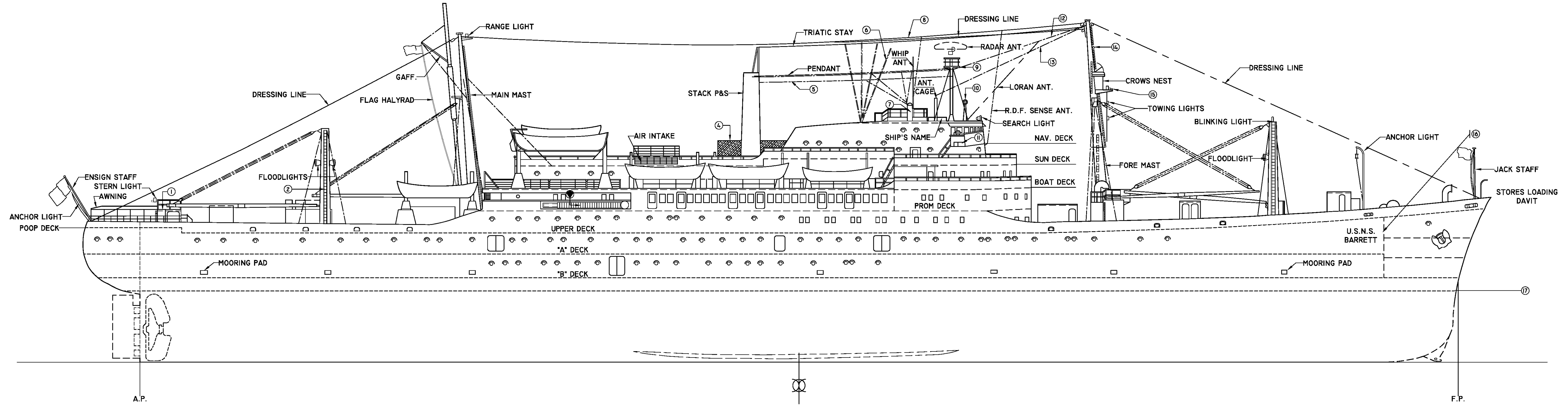


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SEE INDEX TO PHOTOGRAPHS FOR CAPTION

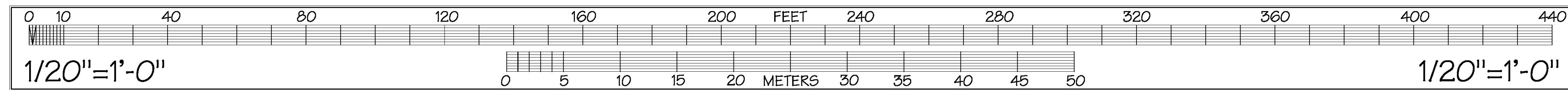
HAER No. VA-131-38



Training Ship "USS Empire State V"



OUTBOARD PROFILE

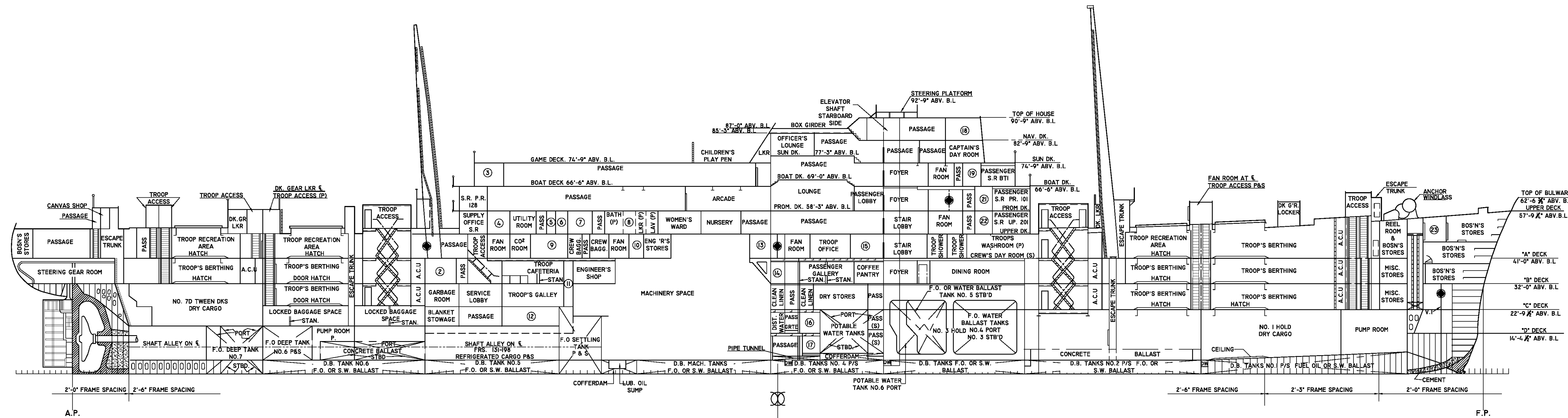


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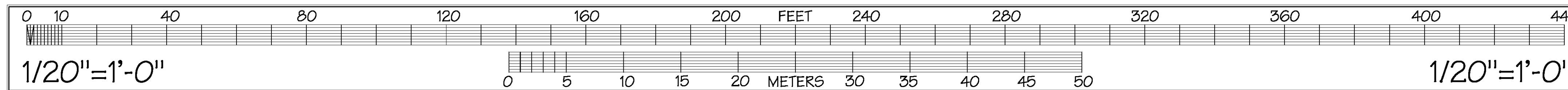
SCHEDULE OF ROOMS & FEATURES OF VESSEL

NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	DOCKING BRIDGE	5	8 M.C. DOUBLET ANTENNA	9	RADAR PLATFORM	13	RADIO TELEPHONE ANTENNA	17	27'-0" MAX. SUBDIVISION DRAFT
2	KING POST P&S	6	SIGNAL FLAG HALYARD	10	RADAR DIRECT FINDER	14	SIGNAL YARD		
3	ACCOMMODATION LADDER STOWER	7	ANTENNA TRUNK	11	SIDE LIGHT	15	MAST HEAD LIGHT		
4	CHILDREN'S PLAY PEN	8	MAIN TRANS. ANTENNA	12	STAY FOR LORAN ANTENNA	16	FOR CONT. 486 GEIGER. FOR CONT. 487 UP SHUR.		

Training Ship "USS Empire State V"



INBOARD PROFILE

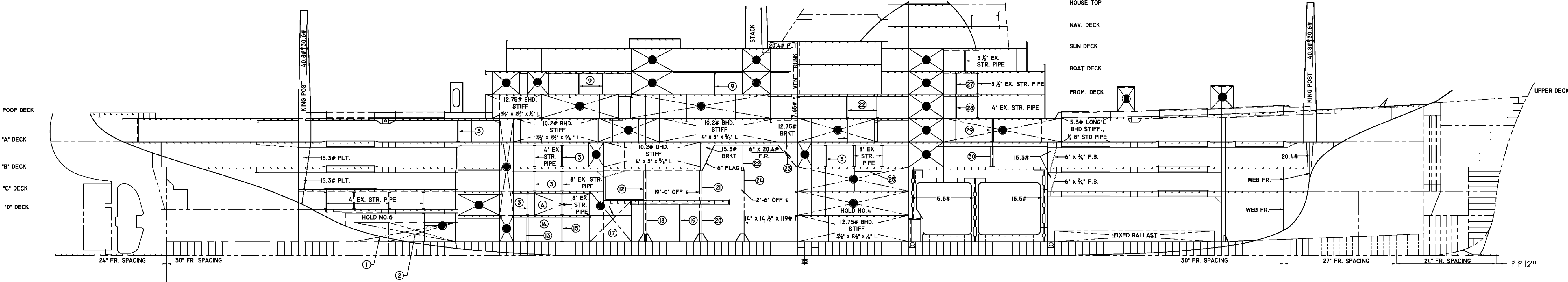


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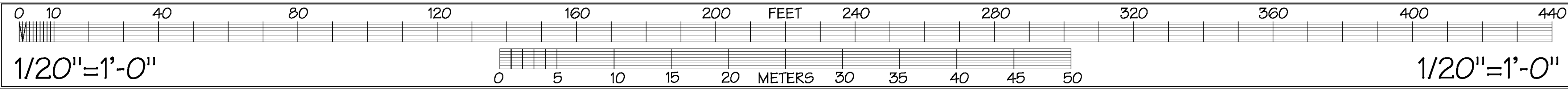
SCHEDULE OF ROOMS & FEATURES OF VESSEL

NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	ACCESS (PORT) CREW LAUNDRY (S)	5	LINEN LOCKER	9	SURGEONS DRESS ROOM ENG. YEOMAN'S OFFICE	13	STORES LOADING PASSAGE	17	POTATOES GRATE
2	AIR CONDITIONER	6	MEDICAL STORE	10	LUB. OIL GRAV. TANK (P)	14	SERVICE ACCESS	18	WHEELHOUSE
3	CHILDREN'S PLAY ROOM	7	STERILIZER ROOM	11	DUMB WAITER P&S BHD ON CENTER LINE	15	TROOP & CREW ENTRANCE LOBBY	19	S.R. BTI TOILET
4	SUPPLY OFF OFFICE (P) ISOLATION WARD (S)	8	DIET PANTRY (P) 3- EMERGENCY GEN. ROOM	12	MEDICAL STORES (P) CHAPLAINS STORES (S)	16	BUTCHER SHOP	20	PASSENGER LAUNDRY (P) TROOP COMM. OFFICE (S) STEWARDS LOCKER (P)
								21	P.E. 101 TOILET
								22	U.P. 201 TOILET
								23	CAPTAIN'S EQUIPMENT ROOM
								24	FORE PEAK S.W. BALLAST

Training Ship "USS Empire State V"



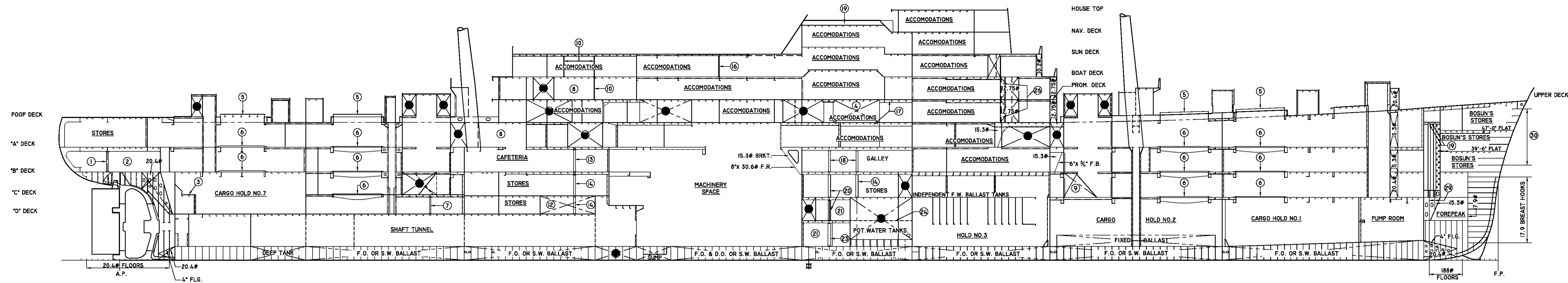
STRUCTURAL PROFILE 16'-0" OFF CENTER LINE



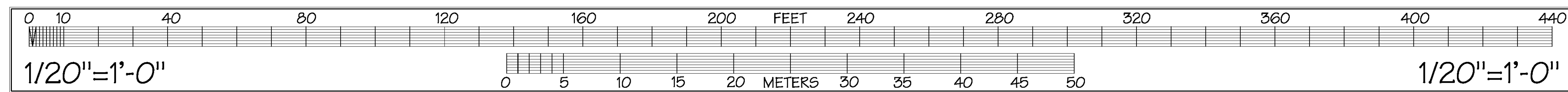
SCHEDULE OF ROOMS & FEATURES OF VESSEL

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1	FIXED BALLAST PORT	6	10.2# BHD. STIFF. 4" x 3" x 1/4" L	11	10.2# BHD. STIFF. 3 1/2" x 2 1/2" x 1/4" L	16	153# STR. GR. 2'-6" WIDE 8" x 25.6# E. R	21	14" x 12" x 84# I	26	15.3# BHD. STIFF. 3" x 2 1/2" x 1/4" L	31	10.2# BHD. STIFF. 6" x 4" x 7/16" L
2	FIXED BALLAST STARBOARD	7	12.5# BHD. STIFF. 3" x 2 1/2" x 5/16" L	12	14" x 14 1/2" x 127# I	17	22.0# BHD STIFF CUT FROM 13" x 4" x 31.0# [	22	5" EX. STR. PIPE	27	6" x 6" x 3/8" L STANCH.		
3	6" EX. STR. PIPE	8	10.2# BHD. STIFF. 3 1/2" x 2 1/2" x 5/16" L	13	12" x 12" x 79# I	18	14" x 16" x 150# I	23	4" x 5" x 5/16" L	28	6" x 6" x 1/2" L STANCH.		
4	10.2# BHD. STIFF. 3" x 2 1/2" x 1/4" L	9	2 1/2" EX. STR. PIPE	14	HOLD NO. 5 STORES	19	8" x 8" x 35# I	24	14" x 14 1/2" x 87# I	29	10" x 10" x 66# I		
5	12.25# BHD. STIFF. 4" x 3" x 1/4" L	10	15.3# BHD. STIFF. 3 1/2" x 2 1/2" x 1/4" L	15	8" x 8" x 31.0# I	20	14" x 14 1/2" x 111# I	25	5" x 5" x 1/2" L	30	14" x 14" x 103# I		

Training Ship "USS Empire State V"



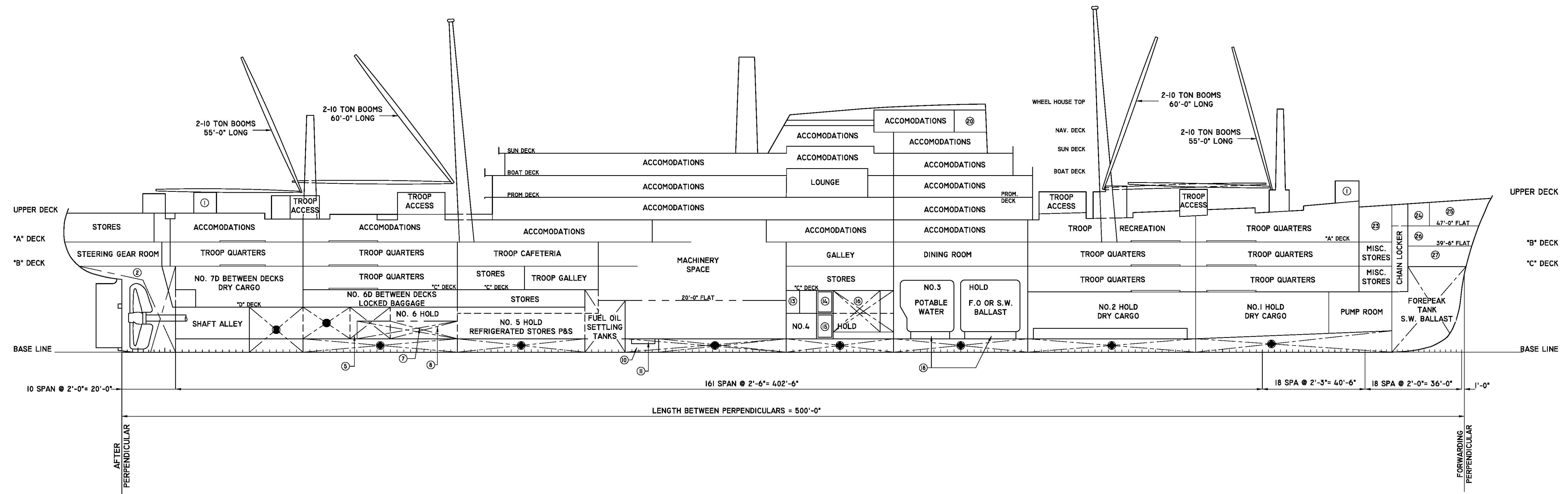
STRUCTURAL PROFILE ON CENTER LINE



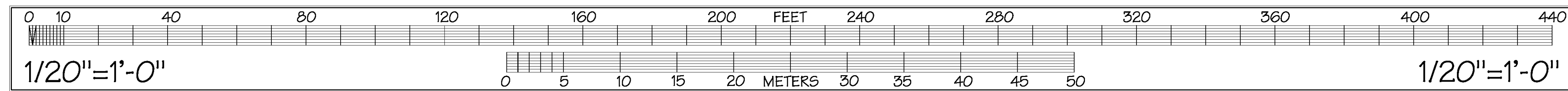
SCHEDULE OF ROOMS & FEATURES OF VESSEL

NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	8" x 8" x 31.0# I	6	METAL LUMBER HATCH COVERS	11	15.3# BHD. STIFF. 3" x 4" x 5/16" L	16	2 1/2" EX. STR. PIPE 2'-0" OFF CENTER LINE	21	STORES	26	PIPE TRUNK STANCH.
2	STEERING GEAR	7	4" EX. STR. PIPE	12	12.75# BHD. STIFF. 3 1/2" x 2 1/2" x 5/16" L	17	2'-6" OFF CENTER LINE	22	20.4# BHD. STIFF. 8" x 4" x 7/16" L	27	7.65# BHD. STIFF 3" FLAG
3	23'-9" FLAT	8	ACCOMMODATIONS	13	8" x 8" x 35.0# I	18	8" EX. STR. PIPE	23	12" EX. STR. PIPE	28	10.3# BHD. STIFF. 3" x 1/2" F.B.
4	10.2# BHD. STIFF. 3 1/2" x 2 1/2" x 1/4" L	9	10.2# BHD. STIFF. 3 1/2" x 2 1/2" x 1/2" L 2'-0" OFF CENTER LINE	14	8" x 8" x 58.0# I	19	15.3# PROPERTY LINE SIDE OF BOX GIRDER 18" OFF CENTER LINE	24	22.8# STRG. 3.6" WIDE 10" FLAG	29	4" x 3" x 3/8" INV. L
5	FOLDING HATCH COVER	10	2" EX. STR. PIPE 2'-0" OFF CENTER LINE	15	F.O. SETTLING TANKS	20	10" EX. STR. PIPE	25	7.65# BHD. STIFF. 2 1/2" x 2" x 3/16" L	30	16.5# BREAST HOOKS WITH 3" FLAG

Training Ship "USS Empire State V"



CAPACITY PLAN INBOARD PROFILE

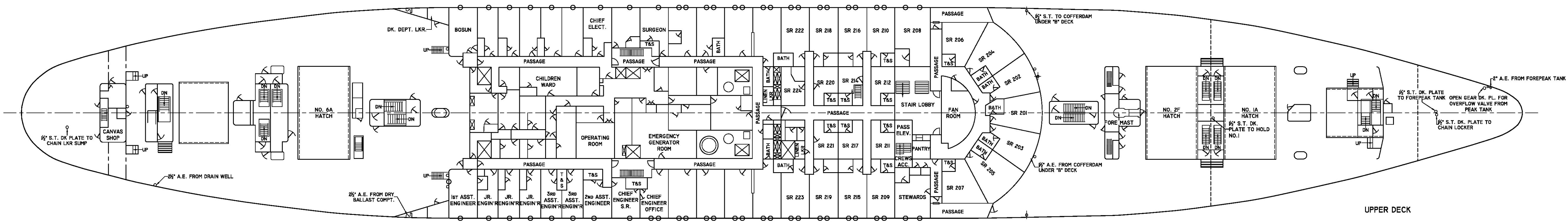


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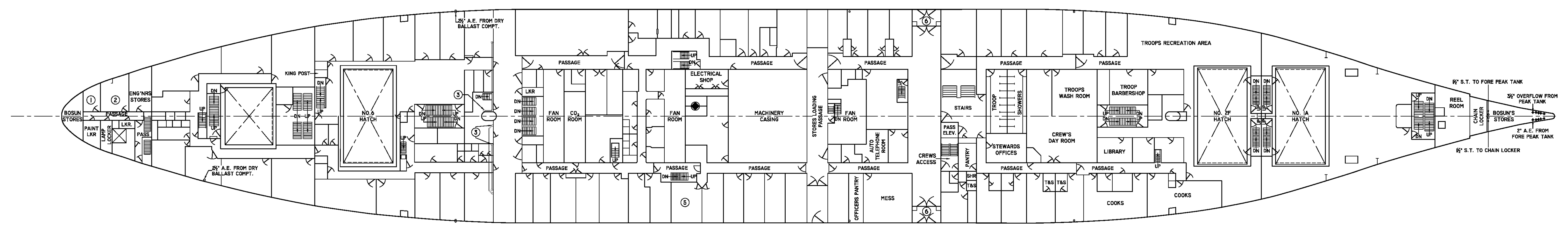
SCHEDULE OF ROOMS & FEATURES OF VESSEL

NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	TROOP ACCESS	6	DBL. BOT. TANKS NO. 6 F.O. OR S.W. BALLAST	11	L.O. SUMP	16	POTABLE WATER	21	DBL. NOT. TANKS NO. 2 F.O. OR S.W. BALLAST
2	AFTER PEAK TANK S.W. BALLAST	7	FIXED BALLAST P.	12	DBL. BOT. TANKS M F.O. & D.O. OR S.W. BALLAST	17	DBL. BOT. TANKS NO. 4 F.O. OR S.W. BALLAST	22	DBL. BOT. TANKS NO. 1 F.O. OR S.W. BALLAST
3	DEEP TANK NO. 7	8	FIXED BALLAST S.	13	DISTILLED WATER	18	C.O. HTG. TANK	23	REEL ROOM BOSUN'S STORES
4	DEEP TANK NO. 6	9	DBL. BOT. TANKS NO. 5 F.O. OR S.W. BALLAST	14	BUTCHER SHOP	19	DBL. BOT. TANKS NO. 3 F.O. OR S.W. BALLAST	24	CAPSTAN EQUIPMENT ROOM
5	P. ROOM P. ONLY	10	COFFERDAM	15	POTATOES	20	WHEEL HOUSE	25	UPPER BOSUN'S STORES

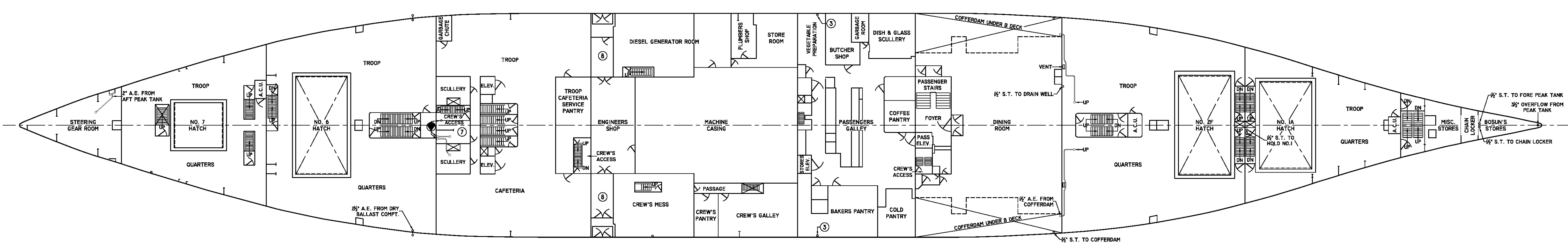
Training Ship "USS Empire State V"



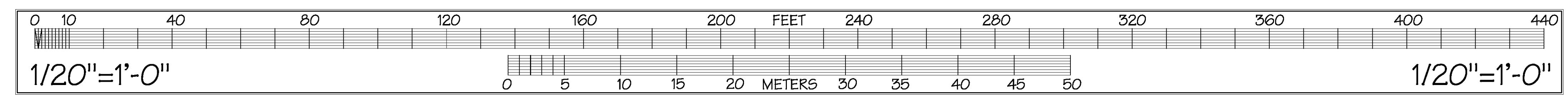
UPPER DECK



"A" DECK



"B" DECK

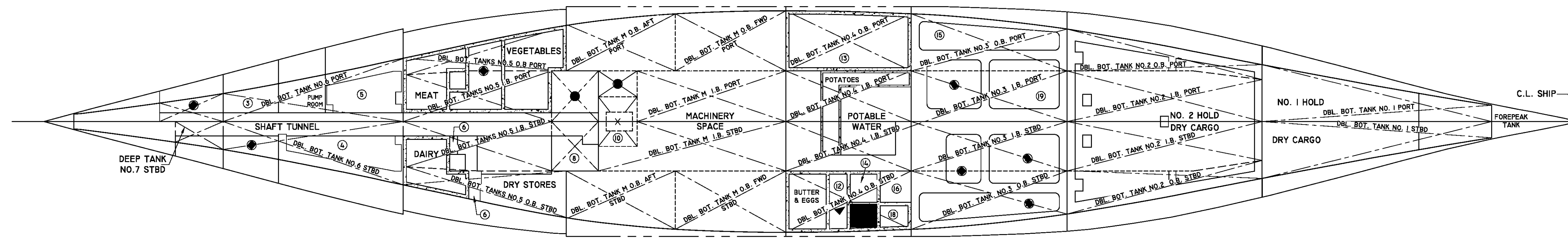


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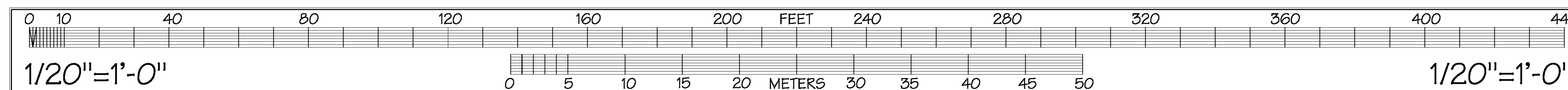
SCHEDULE OF ROOMS & FEATURES OF VESSEL

NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	RESISTOR ROOM	3	2½" A.E. FROM DRAIN WELL FOR REFRIG. SPACE DRAINS	5	3- AB SEAMEN 1- WHEELMAN	7	AIR CONDITIONER
2	CARPENTER SHOP	4	LUB. OIL GRAVITY TANK	6	PASSENGER ENTRANCE	8	FUEL OIL STATION & ENGINEER'S STORES

Training Ship "USS Empire State V"



CAPACITY PLAN DOUBLE BOTTOM

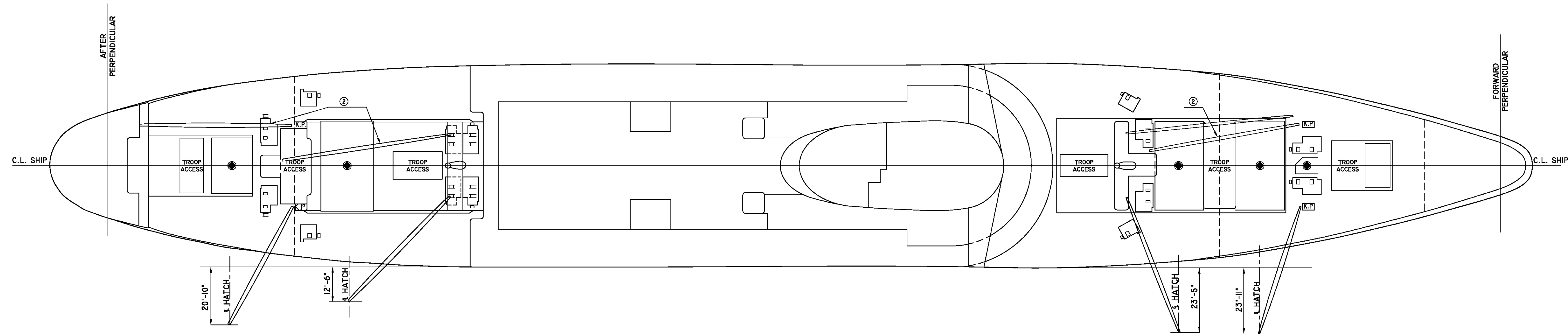


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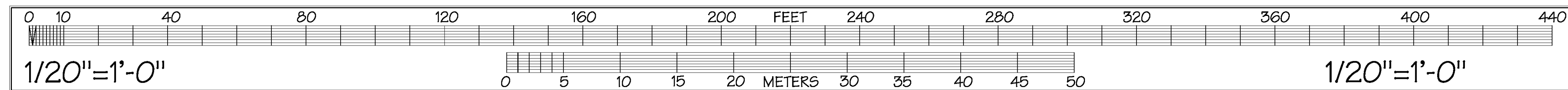
SCHEDULE OF ROOMS & FEATURES OF VESSEL

NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	DEEP TANK NO. 7 PORT	5	NO. 6 HOLD PORT FIXED BALLAST	9	FUEL OIL SETTLING TANK PORT	13	FRUITS & VEGETABLES	17	POTABLE WATER TANK NO. 6	21	F.O. OR S.W. BALLAST TANK NO. 3
2	DEEP TANK NO. 6 STBD	6	LOCKER	10	COFFERDAM	14	BEVERAGES	18	ICE STOWAGE	22	F.O. OR S.W. BALLAST TANK NO. 1
3	DEEP TANK NO. 6 PORT	7	BUTCHER SHOP & THAW ROOM	11	CLEAN DIESEL OIL TANK	15	F.O. OR S.W. BALLAST TANK NO. 2	19	F.O. OR S.W. BALLAST TANK NO. 4		
4	NO. 6 HOLD STARBOARD FIXED BALLAST	8	FUEL OIL SETTLING TANK STARBOARD	12	ICE CREAM	16	ICE MAKING & ICE CREAM PREP. ROOM	20	F.O. OR S.W. BALLAST TANK NO. 5		

Training Ship "USS Empire State V"



WEATHER DECKS



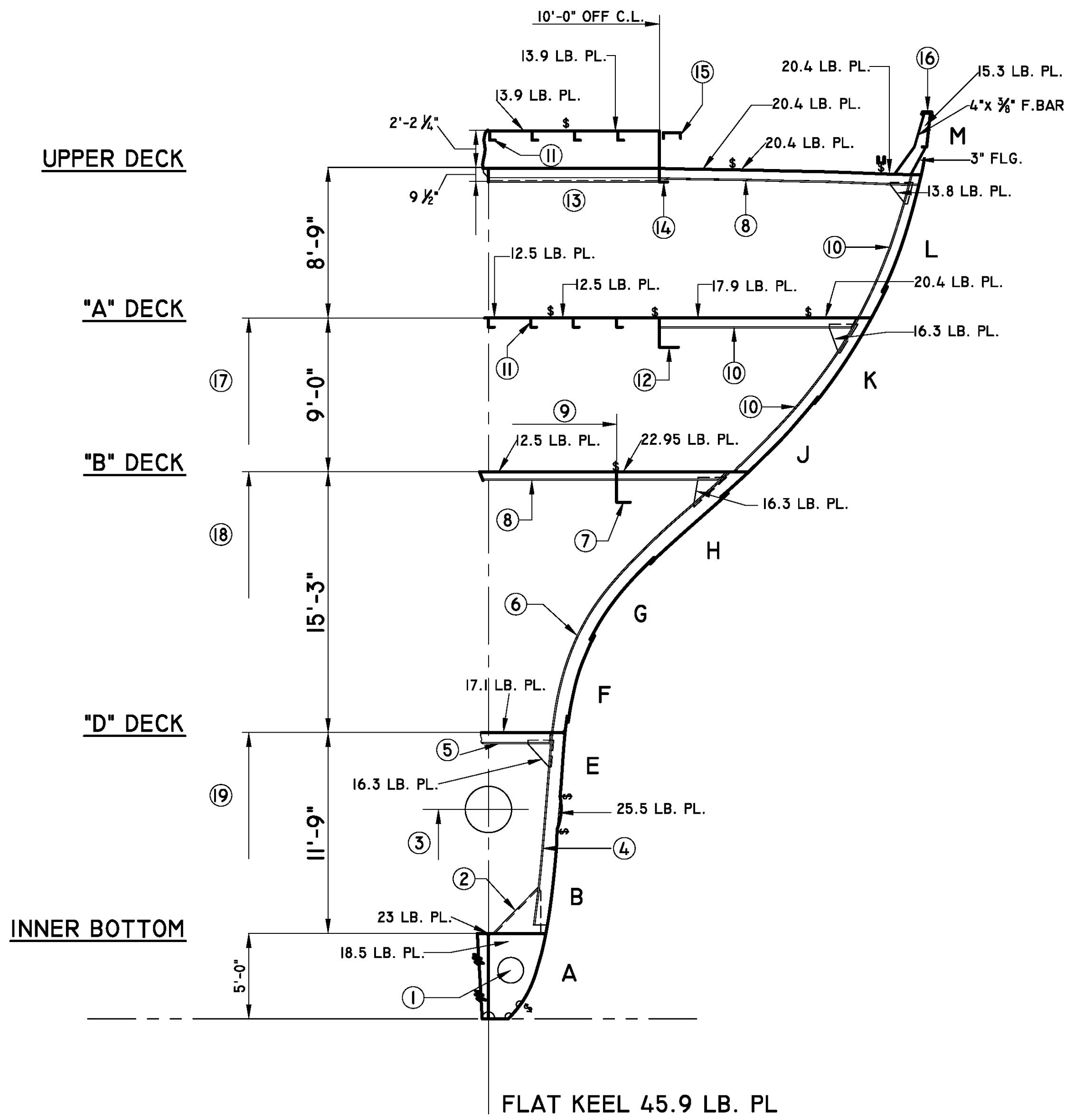
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SCHEDULE OF ROOMS & FEATURES OF VESSEL

NO.	NAME/ TITLE	NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	HATCH NO. 7 14'-0" x 20'-0"	3	HATCH NO. 6A 17'-6" x 32'-0"	5	HATCH NO. 1A 17'-6" x 32'-0"
2	BOOMS STOWES	4	HATCH NO. 2F 17'-6" x 32'-0"	6	DECK GEAR LOCKER

Training Ship "USS Empire State V"

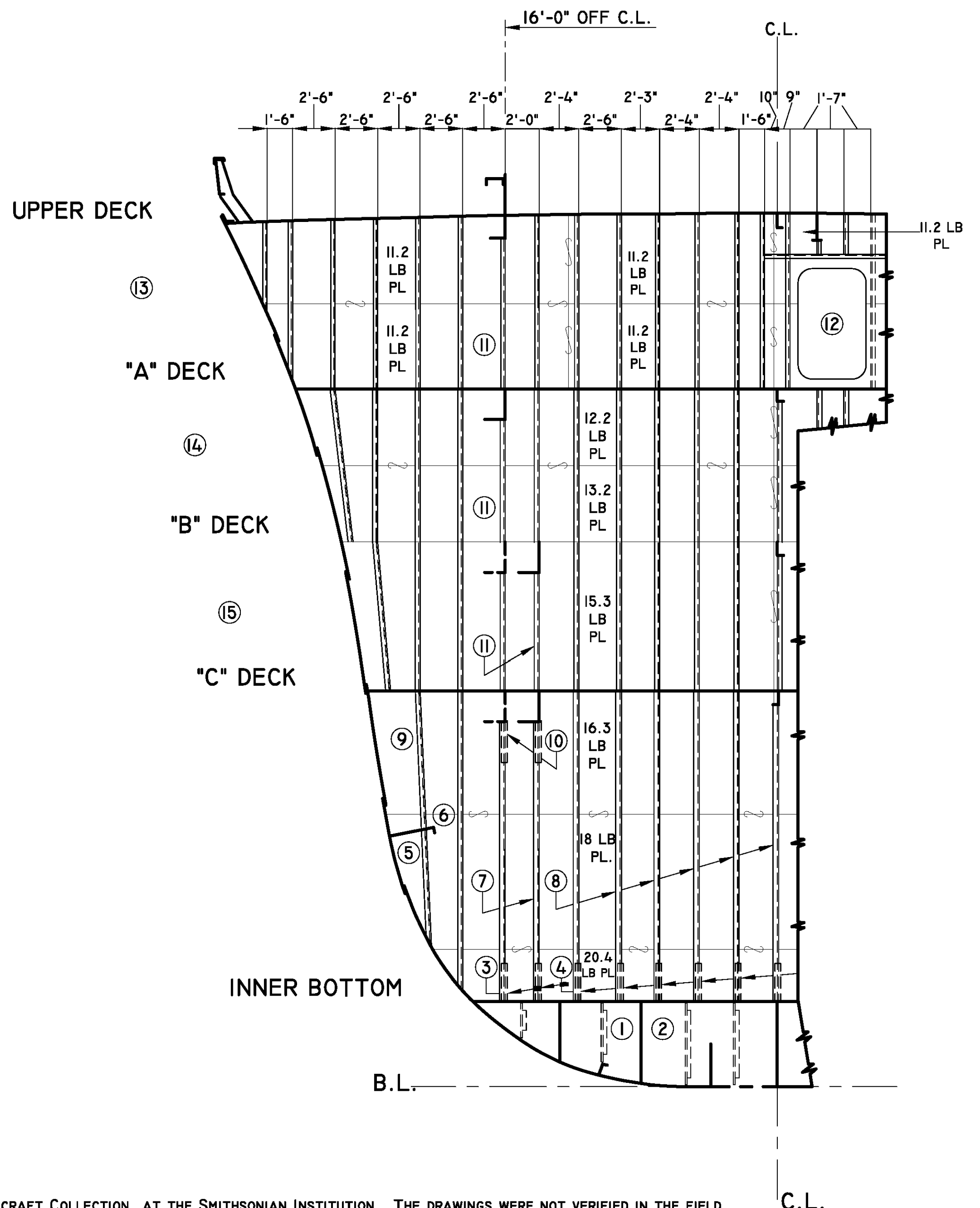
SCHEDULE OF FEATURES OF VESSEL			
NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	18" DIAMETER	11	LONG'L BEAMS 7" x 4" x 13.6 LB. INV. L
2	28.05 LB. PL. WITH 4" FLAG	12	2 1/2" x 14" x 30.6/ 40.8 LB. PL.
3	CENTER LINE SHAFT 12'-3" ABOVE BASE LINE	13	DEEP BEAM 17.9 LB. FLAG PL. 9" FLAG WITH 1/2" - 2" STG. PIPE AT FR. 198
4	9" x 4" x 26.3 LB. INV. L	14	17.9 LB. WEB PL. WITH 6" x 20.4 LB. FC. PL.
5	8" x 4" x 17.2 LB. INV. L	15	12" x 4" x 50 LB. [
6	9" x 4" x 21.3 LB. INV. L	16	7" x 3 1/2" x 13.6 LB. B.A.
7	22 5/16" x 9" x 20.4/ 25.5 LB. PL.	17	41'-0" ABOVE BASE LINE
8	6" x 4" x 12.3 LB. INV. L	18	32'-0" ABOVE BASE LINE
9	7'-6" OFF CENTER LINE	19	16'-9" ABOVE BASE LINE
10	7" x 4" x 13.6 LB. INV. L		



SECTION AT FR. 195- LOOKING AFT.

SCALE: 3/16" = 1'-0"

SCHEDULE OF FEATURES OF VESSEL			
NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	23 LB. 6" x 4" x STIFF.	9	6" x 3 1/2" x 11.7 LB. INV. L
2	OIL TIGHT FLOOR 12.3 LB. INV. L	10	27" x 15.3 LB. PL. BRACKET 2 3/4" FLAG
3	BRACKET CUT FROM 15" x 4" x 30 LB. [	11	15" x 3 1/2" x 40 LB. [
4	BRACKET CUT FROM 13" x 4" x 31.8 LB. [	12	48" x 78" W.T. SLIDING DOOR
5	5" x 3" x 8.2 LB. INV. L	13	ALL STIFFINERS 4" x 3" x 7.2 LB. INV. L EXCEPT AS NOTED
6	15" x 3 1/2" < CUT FROM 15" x 3 1/2" x 40 LB. [	14	ALL STIFFINERS 5" x 3 1/2" x 8.7 LB. INV. L EXCEPT AS NOTED
7	15" x 4" x 50 LB. [15	ALL STIFFINERS 6" x 3 1/2" x 11.7 INV. L EXCEPT AS NOTED
8	13" x 4" < CUT FROM 13" x 4" x 31.8 LB. [



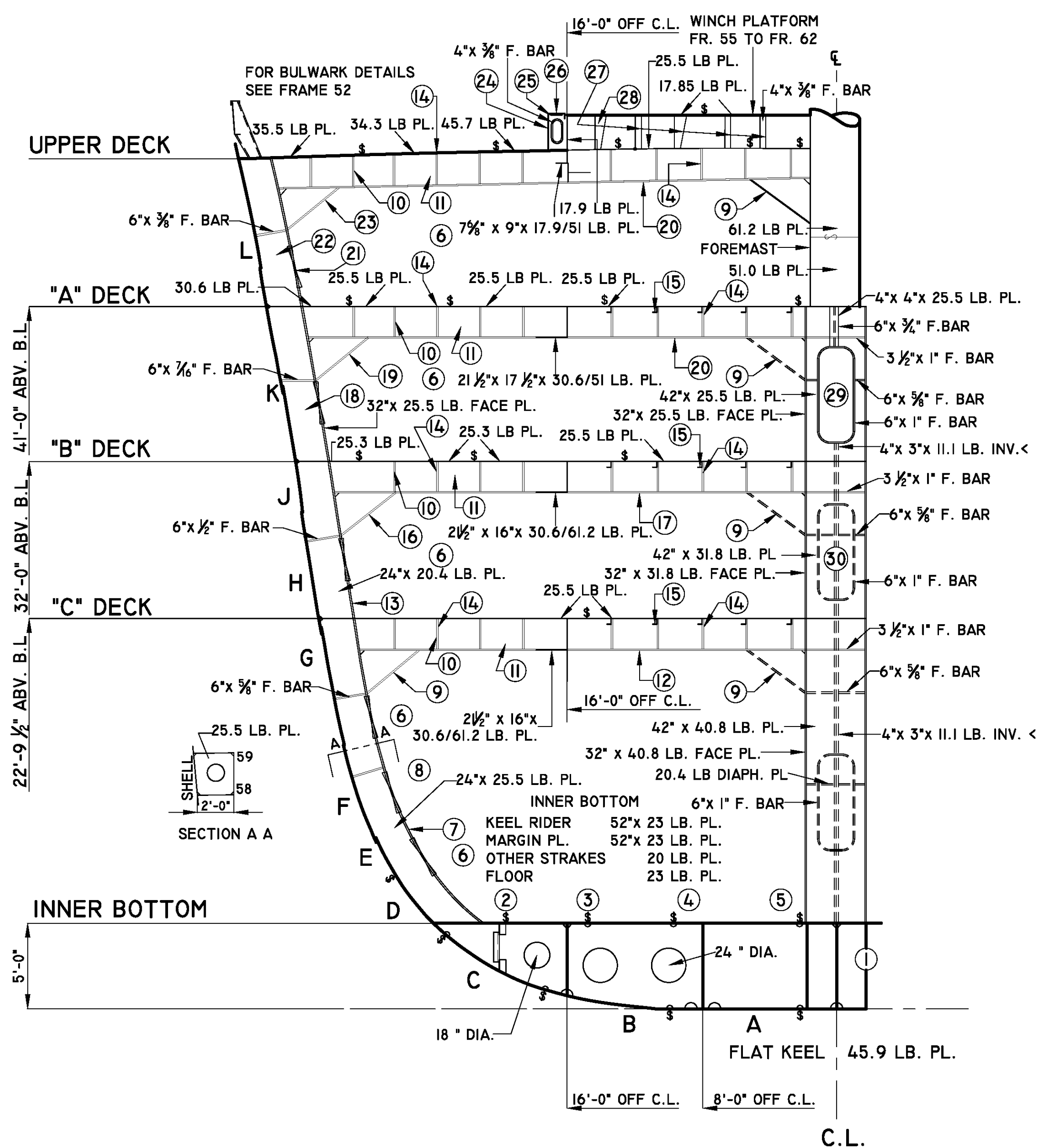
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TYPICAL BULKHEAD- FR. 46 SHOWN- LOOKING AFT

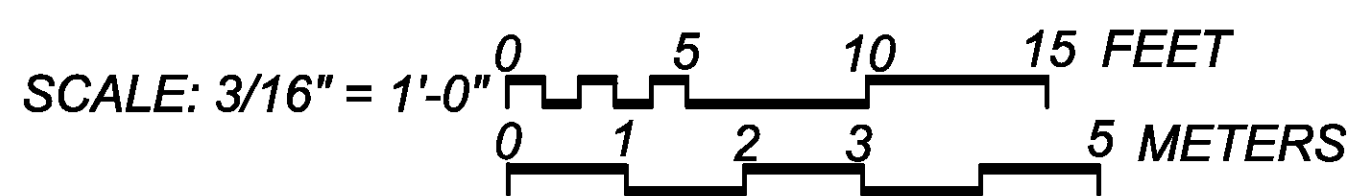
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Training Ship "USS Empire State V"

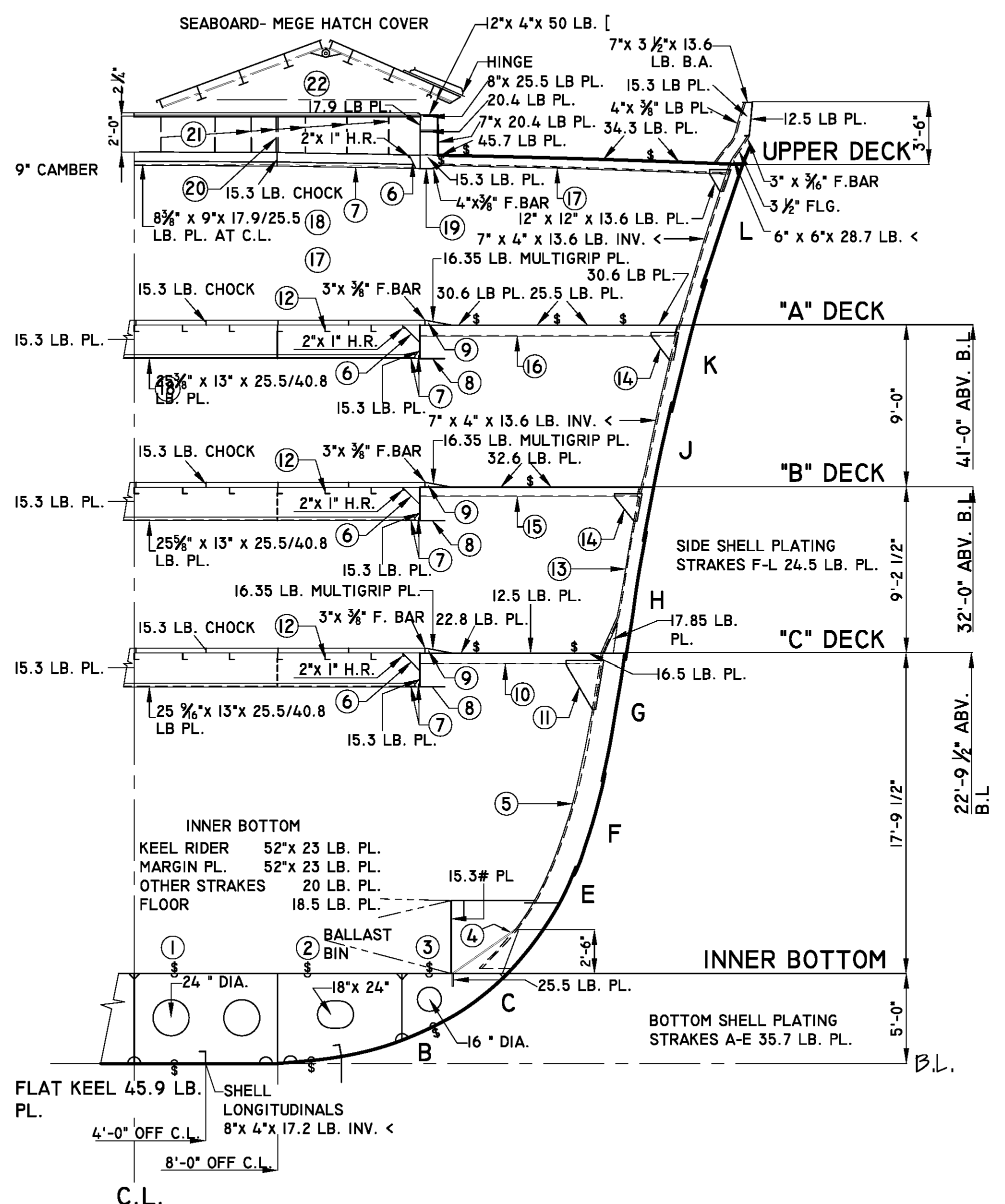
SCHEDULE OF FEATURES OF VESSEL			
NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	VERTICAL KEEL 23 LB. PL. OIL TIGHT	16	42" x 30" x 20.4 LB. FLAG PL. 6" FLAG
2	8" x 4" x 17.2 LB < CONT. 5" x 3 1/2" x 12 LB. < STRUTS	17	38" x 81.6 LB. FACE PL. W/ 12" x 18" LIGHTENING HOLES
3	23 LB. OIL TIGHT CONTINUOUS SIDE GIRDER	18	24" x 17.9 LB. PL.
4	18.5 LB. N.T. INTERCOASTAL SIDE GIRDER	19	42" x 30" x 17.9 LB. FLAG PL. 6" FLAG
5	30.6 LB. NN.T. INTERCOASTAL SIDE GIRDER FR. 57 TO 60	20	38" x 71.5 LB. FACE PL. WITH LIGHTENING AND ACCESS HOLES
6	15" x 30" ACCESS HOLE WITH 10.2 LB. PL. COVER	21	24" x 15.5 LB. PL.
7	32" x 38.4 LB. FACE PL.	22	15" x 30" ACCESS HOLE WITH 10.2 LB. PL. COVER
8	15" x 23" ACCESS HOLE WITH 10.2 LB. PL. COVER	23	42" x 30" x 15.5 LB. FLAG PL. 6" FLAG
9	42" x 30" x 25.5 LB. FLAG PL. 6" FLAG	24	17.9 LB. FLAG PL. 4" FLAG
10	3 1/2" x 5/8" F. BAR	25	8" x 25.5 LB. PL.
11	2 1/2" x 30.6 LB. PL.	26	12" x 40" x 30 LB. [
12	38" x 58.8 LB. FACE PL. W/ 12" x 18" LIGHTENING HOLES	27	17.85 LB. PL. GIRDER WITH 15" x 2" LIGHTENING HOLES
13	32" x 30.6 LB. FACE PL.	28	8" x 4" x 15.3 LB. PL.
14	30.6 LB. DIAPH. PL. - FAR	29	24" x 66" ARCH 12" SILL
15	DECK LONG'LS. 4" x 3" x 7.2 LB. INV. <	30	24" x 66" H.T. DOOR 12" SILL



SECTION AT BELT FRAME- FR. 58- LOOKING AFT



SCHEDULE OF FEATURES OF VESSEL			
NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	VERTICAL KEEL 23 LB. PL. OIL TIGHT CONTINUOUS	12	4" x 3" 7.2 LB. INV. <
2	18.5 LB. PL. NON-TIGHT INTERCOASTAL SIDE GIRDER	13	8" x 4" x 17.2 LB. INV. <
3	23 LB. OIL TIGHT CONTINUOUS SIDE GIRDER	14	16" x 16" x 16.3 LB. PL.
4	28.05# FLAG PL. 4" FLAG	15	6" x 3 1/2" x 11.7 LB. INV. <
5	15" x 3 3/8" x 40 LB. [, CUT <	16	7" x 4" x 13.6 LB. INV. <
6	15.3 LB. CONICAL CHAFING PL. AT HATCH CORNERS	17	PORTABLE HATCH BEAMS FOR HATCHES BELOW UPPER DECK 21" x 8 1/4" x 68 LB. W.F.
7	2" E. STG. 1/2 PIPE	18	HATCHES BELOW UPPER DECK FITTED WITH METAL LUMBER COVERS
8	2 1/2" x 16" x 30.6/ 61.2 LB. PL.	19	8" x 51 LB. FACE PL.
9	15.3 LB. CHOCK 4'-0" C/C	20	17.85 LB. FLAG PL. BRACKET
10	7" x 4" x 13.6 LB. INV. <	21	17.85 LB. PL. GIRDER
11	24" x 30" x 22 LB. PL.	22	TOP OF HATCH- CLOSED



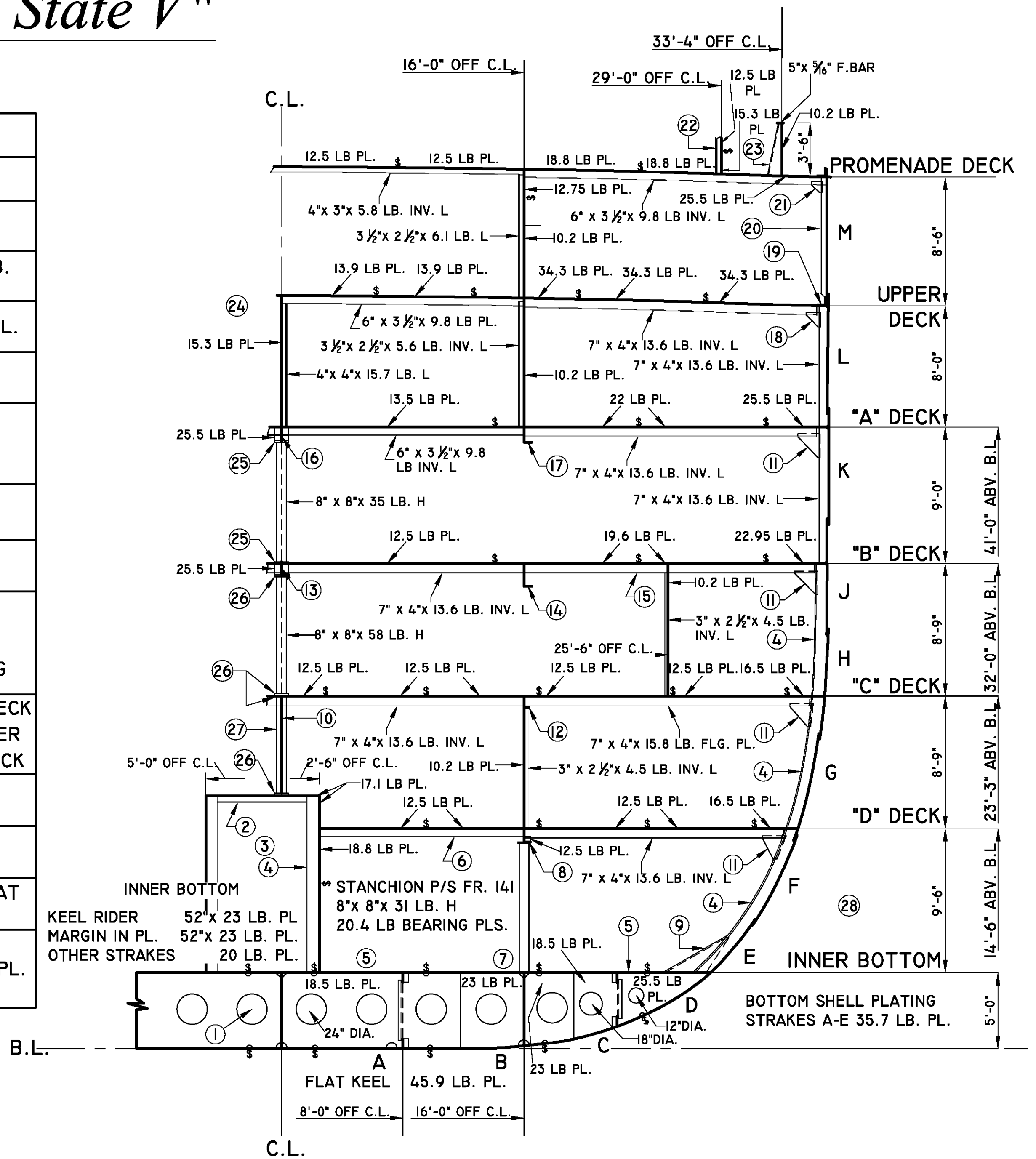
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SECTION AT FR. 52- NO. 2 HOLD- LOOKING AFT

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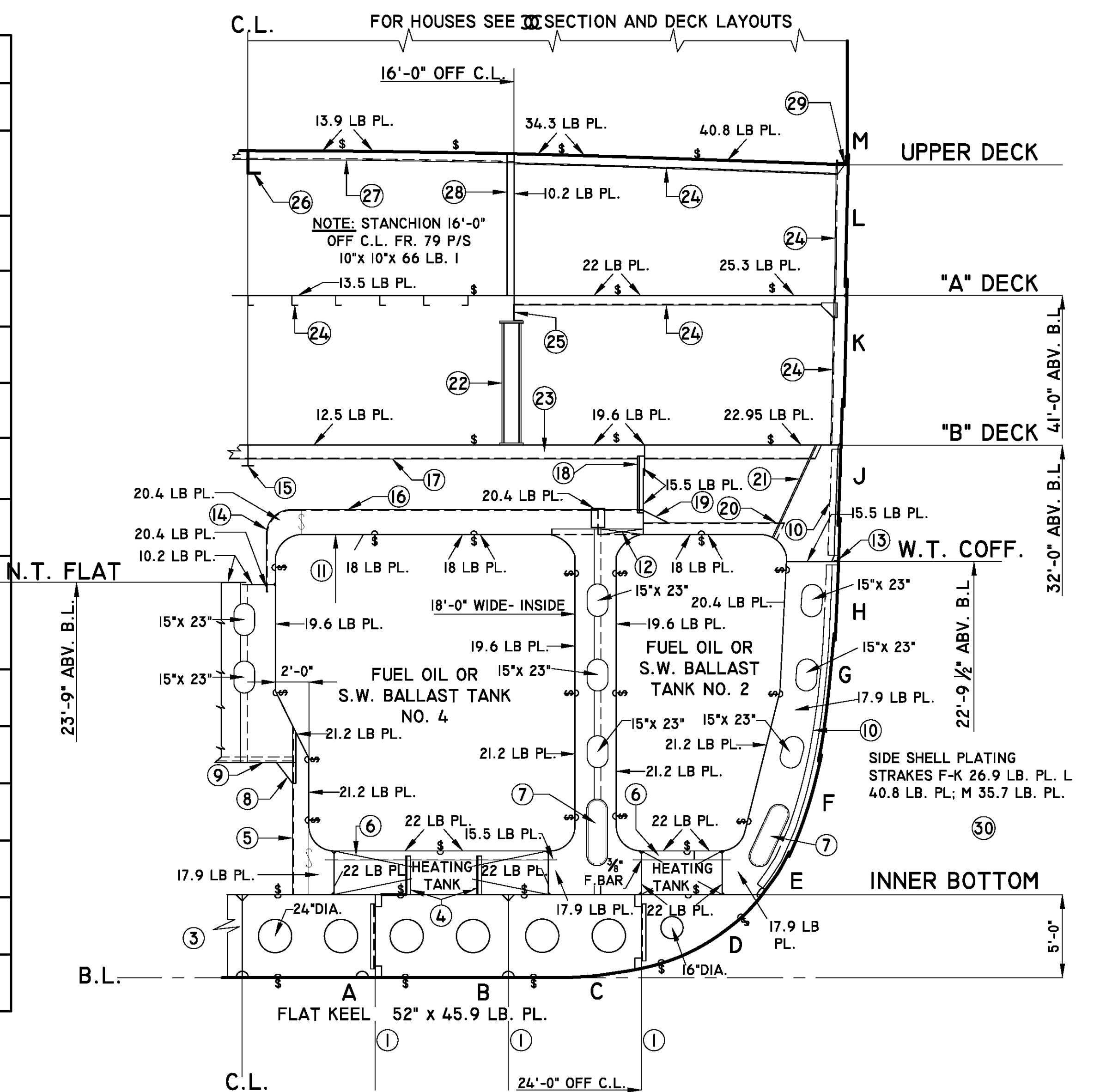
SCHEDULE OF FEATURES OF VESSEL			
NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	VERTICAL KEEL 23 LB. PL. O.T.	15	9" x 4" x 17.2 LB. INV. L
2	5" x 3 1/2" x 10.4 LB. INV. L	16	10 1/2" x 5 1/2" x 20.4/ 30.6 LB. PL.
3	SHAFT ALLEY AFT. OF FRAME 131	17	12" x 6" x 15.3 LB. FLAG PL.
4	9" x 4" x 23.8 LB. L	18	9" x 9" x 15.3 LB. PL.
5	NON-TIGHT LONG'L 8" x 4" x 17.2 INV. L 5" x 3 1/2" x 12 LB. < STRUTS	19	6" x 6" x 28.7 LB. L
6	6" x 4" x 12.3 LB. INV. L	20	5" x 3 1/2" x 8.7 LB. INV. L
7	OIL TIGHT 23 LB. PL. SIDE GIRDER	21	6" x 6" x 12.75 LB. PL.
8	10" x 7 1/2" x 15.3/ 30.6 LB. PL.	22	4" x 3" x 7.2 LB. INV. L
9	28.05 LB. FLAG PL. 4" FLAG	23	10.2 LB. FLAG PL. 3" FLAG
10	C.L. BHD. FR. 137 TO FR. 145 12.75 LB. PL. FR. 137 TO 145 3" x 2 1/2" x 56 LB INV < STIFF	24	9" CHAMBER FOR UPPERDECK & DECKS ABV. NO CHAMBER FOR DKS BELOW UPPERDECK
11	16" x 16" x 16.3 LB. PL.	25	11" x 11" x 20.4 LB. PL.
12	9" x 4" x 15.3 LB. FLAG PL.	26	11" x 11" x 30.6 LB. PL.
13	9" x 6" x 20.4/ 40.8 LB. PL.	27	8" x 8" x 58 LB. H STIFF AT FRAME 140
14	18" x 6" x 20.4/ 30.6 LB. PL.	28	SIDE SHELL PLATING STRAKES F-K = 26.9 LB. PL. L AND M = 30.6 LB. PL.



SECTION AT FR. 140- LOOKING AFT.

SCALE: 3/16" = 1'-0" 0 5 10 15 FEET
0 1 2 3 4 5 METERS

SCHEDULE OF FEATURES OF VESSEL			
NO.	NAME/ TITLE	NO.	NAME/ TITLE
1	8" x 4" x 17.2 LB. INV. L CONTINUOUS 5" x 3 1/2" x 12 LB. < STRUTS	16	18" x 5" x 20.4 LB. FLAG PL.
2	23 LB. O.T. CONTINUOUS SIDE GIRDER	17	10" x 4" 33.6 LB. [, CUT <
3	VERTICAL KEEL 23 LB. PL. OIL TIGHT	18	4" x 3" x 8.5 LB. INV. L
4	3 1/2" x 3 1/2" x 8.5 LB. L	19	9" x 18" x 20.4 LB. PL.
5	12" x 3 1/2" x 30.9 LB. [CUT <	20	9" x 4" x 20.4 LB. FLAG PL.
6	6" x 4" x 12.3 LB. INV. L	21	15.5 LB. PL, 5" FLAG
7	15" x 4'-0" 6" x 1/2" F. BAR	22	STANCHION 79 P/S 14" x 14 1/2" x 10.3 LB. L
8	12" x 15" x 15.5 LB. PL.	23	66" x 25.5 LB. WEB FRAME AT FRAME 75
9	3" x 4" x 8.5 LB. PL.	24	7" x 4" x 13.6
10	6 3/4" x 17.9 LB. PL.	25	18" x 6" x 15.3 LB. FLAG PL.
11	19'-0" HIGH INSIDE	26	16 1/2" x 8 1/2" x 17.9/ 40.8 LB. PL.
12	15.5 LB. PL. LINER	27	6" x 3 1/2" x 9.8 LB. INV. <
13	3" x 3" x 8.3 LB. L	28	3 1/2" x 2 1/2" x 4.5 LB. INV. <
14	4 1/2" x 1/2" F. BAR	29	6" x 6" x 28.7 LB. <
15	15" x 8 1/2" 20.4/ 35.7 LB. PL.	30	BOTTOM SHELL PLATING STRAKES A-F 35.7 LB. PL.



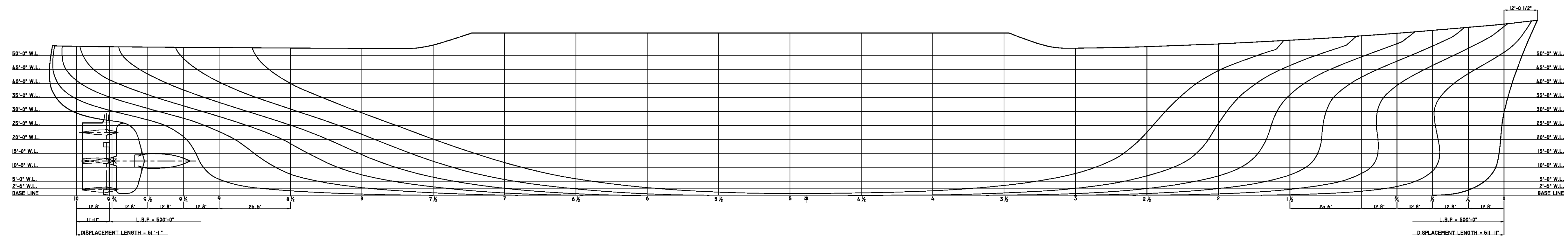
SECTION THROUGH CARGO OIL TANKS- FR. 78- LOOKING AFT.

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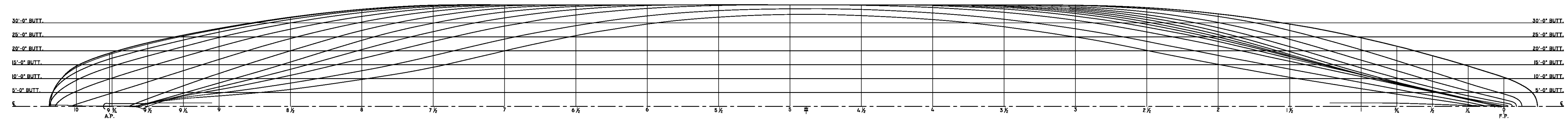
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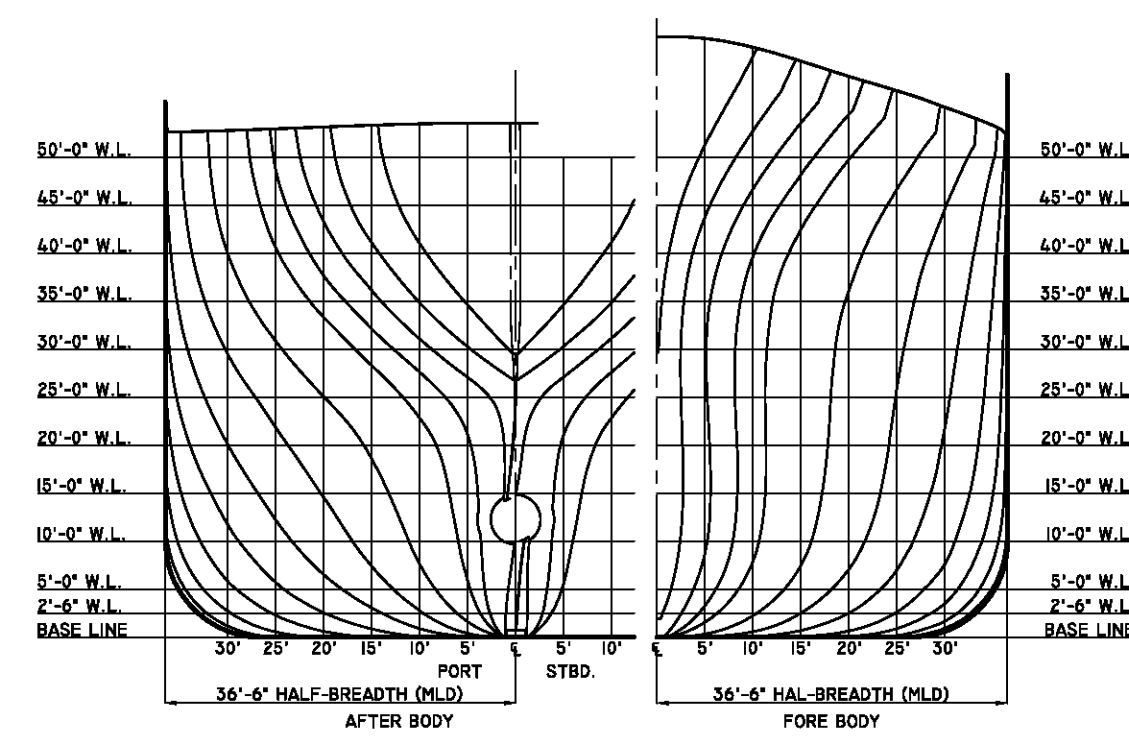
Lines



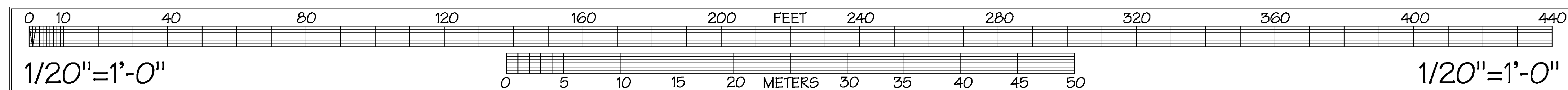
SHEER PLAN



HALF-BREADTH PLAN



BODY PLAN



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