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IDA PAPER P-1541

# PLANNING AMPHIBIOUS LIFT FORCES

## APPENDIX
## AMPHIBIOUS SHIP CAPACITY HANDBOOK

Erwin C. Allen
William A. Byrne
Michael L. Plitman
Contributions by Martin B. Betts

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April 1981

*Prepared for*
Office of the Assistant Secretary of Defense
(Program Analysis and Evaluation)

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Alternative loadings are presented for nine different types of amphibious lift ships. For each type of ship, the loadings vary in their allocation of space to types of cargo. The basic source document is the Ship Loading Characteristics Pamphlet (SLCP).

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PROGRAM ANALYSIS DIVISION
400 Army-Navy Drive, Arlington, Virginia 22202

Contract MDA903 79 C 0320
Task 134

i/ii

## PREFACE

(U) This paper has been prepared for the Office of the Assistant Secretary of Defense (Program Analysis & Evaluation) under Task Order PA&E Number 134, "Evaluation of Amphibious Lift Methodology", dated 4 April 1980. The purpose of the task is to evaluate the methodology for calculating lift requirements and capabilities.

(U) The task order schedule called for a draft final report to be delivered on 31 October 1980 and a final report to be delivered on 15 December 1980. This paper fulfills the final deliverable.

(U) This Appendix was prepared by Presearch, Incorporated, for the Institute for Defense Analyses under Purchase Order Number 1519.


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# INTRODUCTION

## PURPOSE

The purpose of this effort is to examine the ship loading characteristics of amphibious ships and determine the capacities of the different classes for loading troops, vehicles, cargo, helicopters, boats and bulk fuel (fingerprints). Since amphibious ships can be loaded in different ways that result in different fingerprints, ship capacity information is developed to show the different loading options and the corresponding fingerprints for each class. Information is presented in the form of an amphibious ship capacity handbook for use by those involved in ship acquisition or ship allocation decisions. It is not intended to replace those documents used in embarkation planning.

## APPROACH

The basic source document for this effort is the Ship Loading Characteristics Pamphlet (SLCP) for each individual ship. Since the SLCP is prepared by each ship after commissioning, there is not yet an SLCP for the LSD-41 Class. Further, SLCPs have not been completed for LHAs 3, 4 and 5. Information on the LSD-41 class is taken from design plans, and information on LHAs 3, 4 and 5 is taken from the SLCP for LHA-1.

Ship Loading Characteristics Phamphlets are designed to show what spaces within the ship are available for what specific types of cargo, i.e., troops, vehicles, helicopters, etc., and what quantities can be handled. Details on deck layout, deck strengths, overhead clearances, hatch sizes, boom/crane

capacities and other factors pertinent to ship loading are provided by the SLCPs. These documents are used to determine the various ways that the different classes can be loaded (loading options) and to derive the specific fingerprint capacities for each loading option. Loading options are presented for LPH-2, LHA-1, LPD-1, LPD-4, LSD-28, LSD-36, LSD-41, LST-1179 and LKA-113 classes of ships.

All loading options used are those which are considered reasonable for use in amphibious assault operations over a range of environmental conditions. Loading options that might be used for administrative loads or only under ideal environmental conditions are not considered. The first loading option presented for each class of ships is the most appropriate option considering the characteristics of the class and overall amphibious lift requirements.

## ASSUMPTIONS

For purposes of this study the lead ship is assumed to be representative of the entire class. The boat and aircraft lift capacities within the classes are consistent and gross ship lift capacities are similar. However, the individual SLCPs indicate substantial variations in troop, vehicle, cargo and bulk POL capacities within the ship classes. The following additional assumptions are used:

- General Assumptions
  - Landing craft in wet well decks are preloaded with vehicles. (Landing craft vehicle capacity with 75% broken stow factor applied is included in ship's vehicle capacity.)
  - Broken stow factor of 80% is used for all vehicle stowage spaces except landing craft.

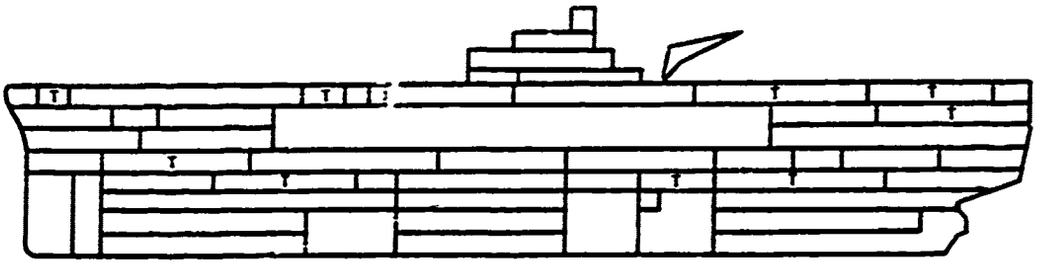
- Broken stow factor of 75% is used for all cargo stowage spaces.
- Ship's organic boats other than LCM-6s and LCM-8s are not counted against the landing craft lift equipment.
- Mixes of landing craft used in loading options are influenced by landing craft inventory.
- Vehicles stowed under mezzanine decks in LSDs are protected from salt water immersion by providing a 50 ft safety space between vehicles and landing craft. (No safety space is used between vehicles and amphibious vehicles of LCAC.)
- LVTs are loaded in groups of 12 or 24 to support 1 or 2 rifle companies.

- <u>Specific Assumptions</u>
  - LCACs will be designed and constructed so that 2 LCACs will fit in wet wells of LPD-1 and 4 class ships. (Some modification to the ships may be required to achieve the 2 LCAC lift.)
  - Cargo is loaded in LHA stowage spaces using the 75% broken stow factor (as in all other ships) even though the LHA cargo spaces are designed for the stowage of specific numbers of pallets.
  - LST-1179 class ships are loaded to permit sideloading causeways and helicopter operations.
  - LPH and LHA aircraft assignments are based on typical composite squadrons including UH-1 D/H, CH-46D and CH-53D/E aircraft.

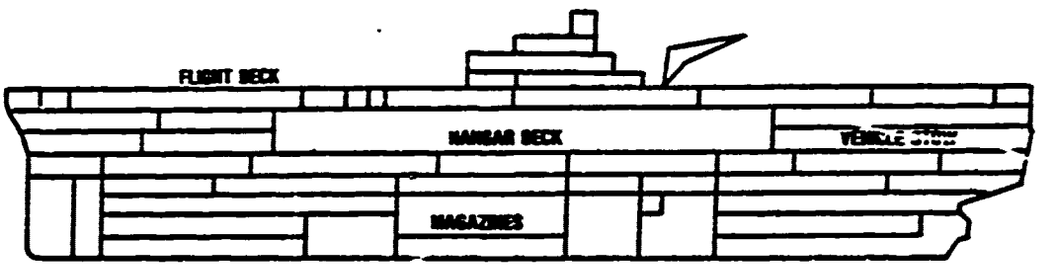
CONTENTS

This handbook contains nine amphibious ship capacity booklets, one for each of nine classes of ships. Each booklet contains two pages of ship capacity information of the ship class, plus one to two pages for each of the several loading options. For each loading option, information is provided on troops, vehicles, cargo, bulk POL, landing craft, amphibious vehicles, and helicopters. This information is given for each deck, and totaled for each ship. The specific number of loading options varies with the ship type. Addendum A provides data on the average capacity by fingerprint category for each class of ships. Addendum B provides information on landing craft characteristics. Addendum C provides a list of abbreviations.

LPH-2



OUTBOARD PROFILE DISPLAYING TROOP ACCOMMODATIONS




INBOARD PROFILE DISPLAYING FLIGHT DECK, HANGAR DECK AND VEHICLE STOWAGE

4-14-81-7

## SHIP'S LOADING CHARACTERISTICS

The LPH-2 is principally a troop transport/aviation ship designed to load, transport and land troops and helicopter transportable equipment and supplies during the vertical envelopment phase of an amphibious operation. This ship is configured with a large flight deck and hangar deck capable of operating with a composite helicopter squadron. Vehicles can be loaded from a pier or a boat by the ship's crane to the hangar deck and driven into the vehicle stowage area. No spaces have been designated for general cargo; however, ammunition holds and vehicle stowage spaces may be used for general cargo

stowage. There are two aircraft elevators which service the flight deck and hangar deck and two cargo elevators which service the ammunition holds.

**SHIP'S BOATS:**

| | |
|---|---|
| LCPL | 2 |
| Motor Whale | 2 |
| Utility | 2 |

**BERTHING ACCOMMODATIONS:**

| | Officer | CPO/SNCO | Other Enlisted | Surge | Total |
|---|---|---|---|---|---|
| Ship's Company | 46 | N/A | 603 | --- | 649 |
| Landing Force | 186 | 47 | 1,279 | 216 | 1,728 |

**CRANES:**

| Rig | Lift Capacity | Lift Cycle Time |
|---|---|---|
| B&A Crane | 18 S/T | 4 min[1] |

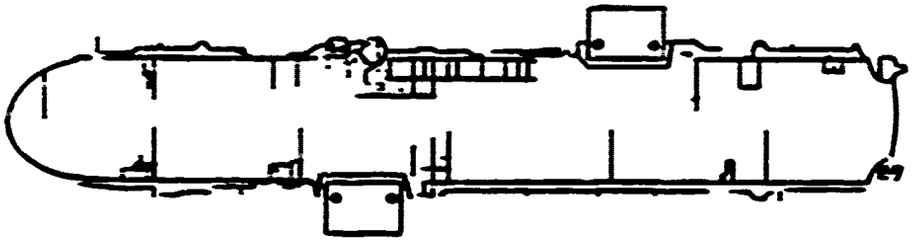
[1] Estimated time.

## LOADING PLAN OPTIONS

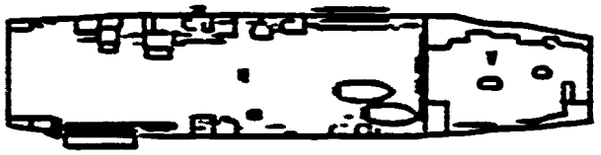
I. Vehicle Stowage: vehicles
Hangar Deck: 4 UH-1D/Hs, 24 CH-46Ds.

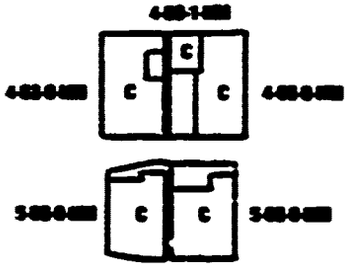
II. Vehicle Stowage: cargo
Hangar Deck: 2 UH-1D/Hs, 20 CH-46Ds, 3 CH-43Ds.

**LPH-2**
**LOADING PLAN OPTION I**



FLIGHT DECK

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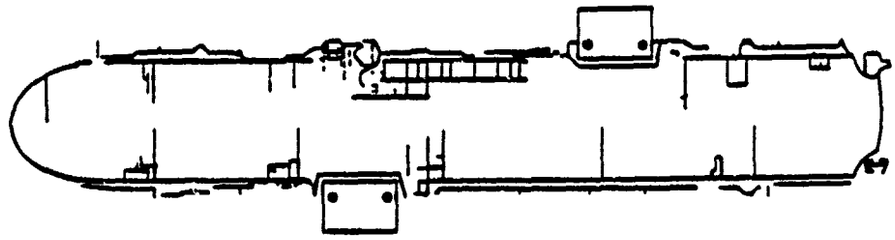
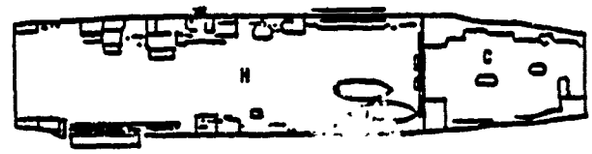
[2] [illegible]
[3] [illegible]
[4] [illegible]

# LPH-2
# LOADING PLAN OPTION II



FLIGHT DECK

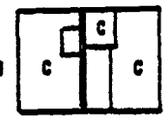
HANGAR DECK




VEHICLE STOWAGE

4-66-1-MM

4-63-6-MM




4-63-6-MM

5-63-6-MM

5-63-6-MM

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE[4] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CE | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| FLIGHT | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| HANGAR | | | | | | | | | | | | | | | | 2 | 28 | 3 | |
| VEHICLE STO. | | | 22.38 | | | | | | | | | | | | | | | | |
| 4-53-6-MM | | | 6.93 | | | | | | | | | | | | | | | | |
| 4-63-6-MM | | | 13.15 | | | | | | | | | | | | | | | | |
| 4-66-1-MM | | | 1.11 | | | | | | | | | | | | | | | | |
| 5-53-6-MM | | | 16.10 | | | | | | | | | | | | | | | | |
| 5-63-6-MM | | | 16.75 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 1728 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | | | 286.0 | | | | | | | | | | | | | |
| TOTALS | 1728 | | 57.40 | | | 286.0 | | | | | | | | | | 2 | 28 | 3 | |

NOTES: 1 Vehicles are in thousands of square feet.

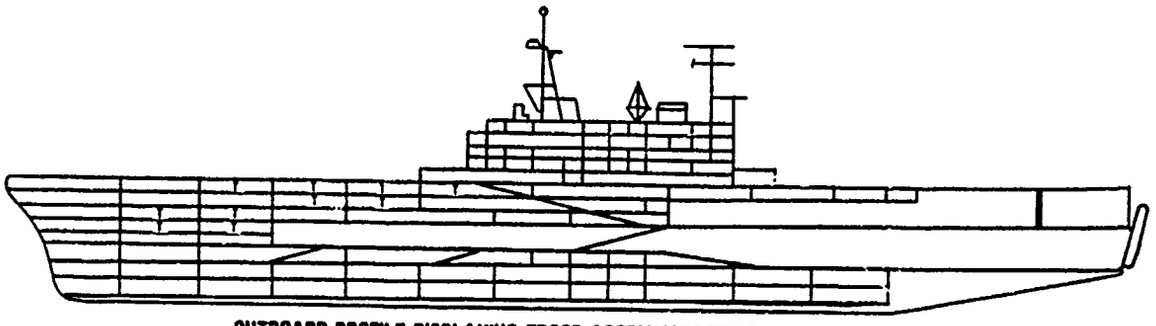
2 Cargo is in thousands of cubic feet.

3 Bulk POL is in thousands of gallons.

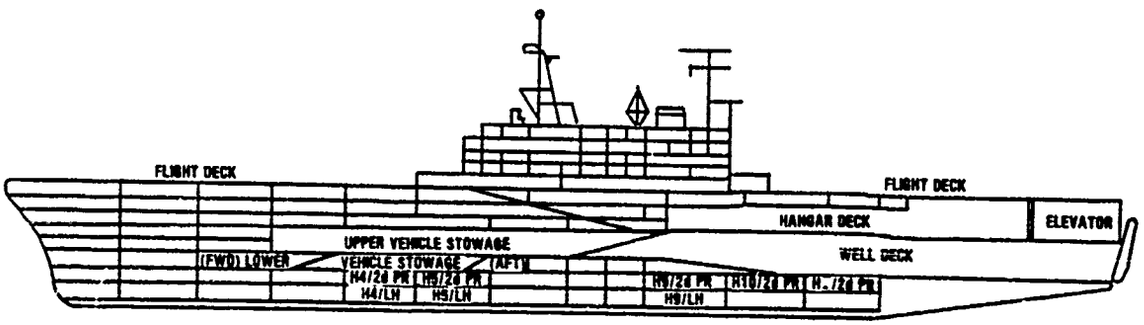
4 Helicopter stowage reflects 70-75% hangar deck and 25-30% flight deck stowage.

4-14-81-6

LHA-1



OUTBOARD PROFILE DISPLAYING TROOP ACCOMMODATIONS




INBOARD PROFILE DISPLAYING FLIGHT DECK, HANGAR DECK, VEHICLE STOWAGE SPACES AND CARGO HOLDS

4-14-81-10

## SHIP'S LOADING CHARACTERISTICS

The LHA-1 is designed to load, transport, ar land troops, vehicles, and equipment simultaneously via surface and air craft during amphibious operations. It is a large general purpose amphibious ship with substantial lift capacities for troops, aircraft, vehicles, boats, dry cargo and bulk fuel. The ship has the capability to embark a large segment of a Marine Amphibious Unit (MAU) with it's equipment and supplies. The aviation facilities are capable of operating with a composite helicopter squadron. The LHA has two LCM-6s that are organic and stowed on the flight deck aft of the island. The well deck

can accommodate all types of landing craft (boats and amphibians) in the current inventory and can transport up to four LCU-1610 class craft. The modern materials handling suite includes forklift trucks, pallet transporters, overhead monorail cranes, horizontal conveyors, and cargo elevators.

SHIP'S BOATS

| | |
|---|---|
| LCPL | 4 |
| LCM-6 | 2 |

BERTHING ACCOMMODATIONS:

| | Officer | CPO/SNCO | Other Enlisted | Surge | Total |
|---|---|---|---|---|---|
| Ship's Company | 78 | 50 | 682 | --- | 810 |
| Landing Force[1] | 172 | 59 | 1,672 | --- | 1,903 |

CRANES:

| Rig | Lift Capacity | Lift Cycle Time |
|---|---|---|
| B&A Crane | 30 S/T | 2.5 min. |

[1] Accommodations for landing force include spaces for naval staff.

LHA-1
LOADING PLAN OPTIONS[1]

I. Well Deck: 2 LCUs; 3 LCM-8s

II. Well Deck: 4 LCM-8s; 2 LCM-6s; 12 LVTs

III. Well Deck: 1 LCAC; 3 LCM-8s; 12 LVTs

IV. Well Deck: 1 LCAC; 1 LCU; 3 LCM-8s

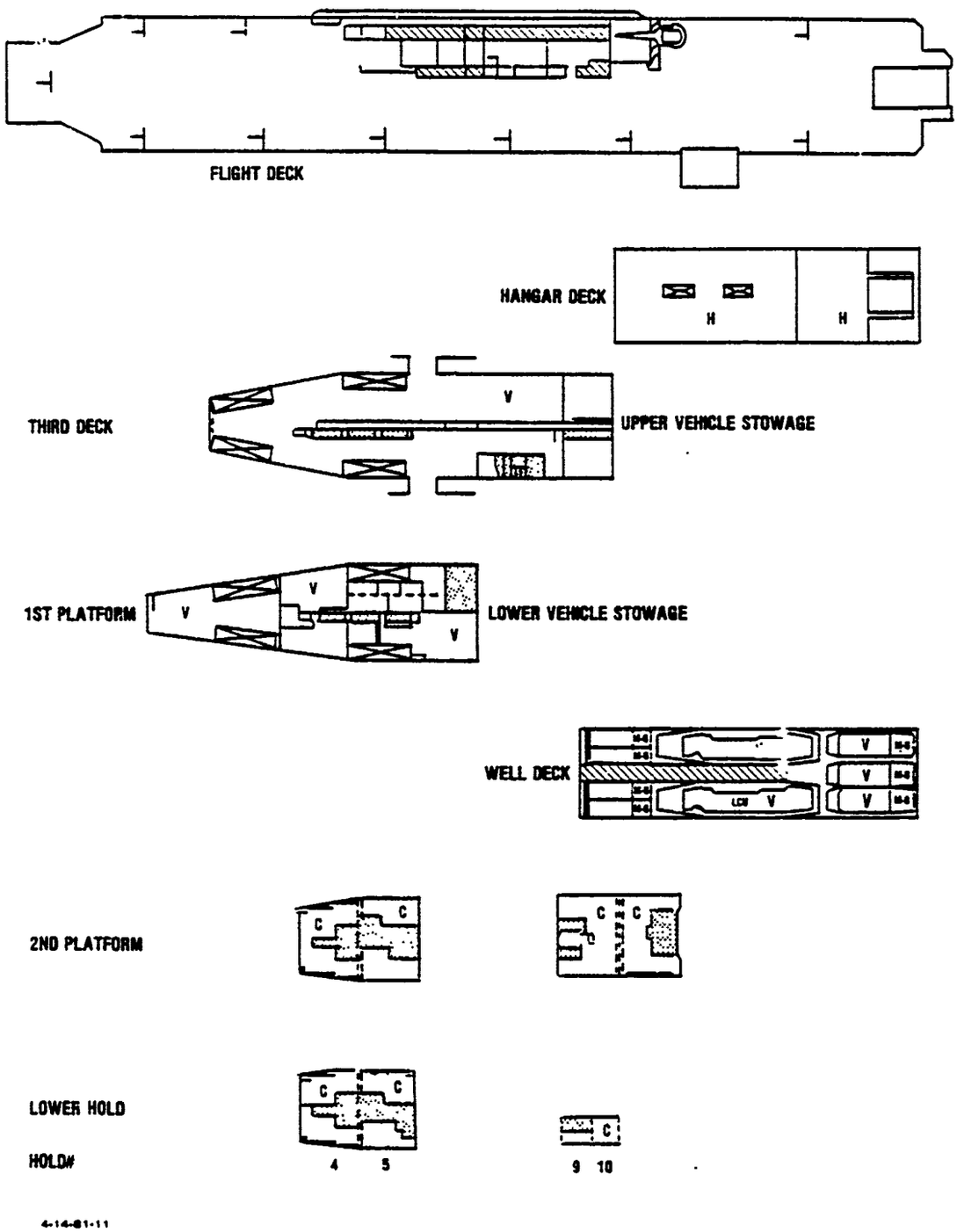
V. Well Deck: 2 LCUs, 2 LCM-8s; 2 LCM-6s

[1] In all options vehicles and cargo are stowed in spaces so designated. Composite squadrons consisting of light, medium and heavy helicopters are stored on the hangar deck.

VI. Well Deck: 12 LVTs aft; vehicles forward

VII. Well Deck: 1 LCAC and 12 LVTs aft; vehicles forward

LHA-1
LOADING PLAN OPTION I



# LHA-1
# LOADING PLAN OPTION I

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE[8] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | RF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCM-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| FLIGHT | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| HANGAR | | | | | | | | | | | | | | | | 4 | 30 | 3 | |
| Hold 4: 2d Flt | | | 14.98 | | | | | | | | | | | | | | | | |
| I.H. | | | 16.71 | | | | | | | | | | | | | | | | |
| Hold 5: 2d Flt | | | 14.30 | | | | | | | | | | | | | | | | |
| I.H. | | | 14.27 | | | | | | | | | | | | | | | | |
| Hold 9: 2d Flt | | | 17.38 | | | | | | | | | | | | | | | | |
| I.H. | | | 3.39 | | | | | | | | | | | | | | | | |
| Hold 10: 2d Flt | | | 12.38[4] | | | | | | | | | | | | | | | | |
| Upper Veh Stg. | | 16.30 | | | | | | | | | | | | | | | | | |
| Lower Veh Stg. (Fwd) | | 2.37 | | | | | | | | | | | | | | | | | |
| Lower Veh Stg. (Aft) | | 4.43[5] | 16.54 | | | | | | | | | | | | | | | | |
| WELL | | | | | | | 4[6] | 3 | | 2 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 1,993 | | | | | | | | | | | | | | | | | | |
| BOATS[7] | | 5.71 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 10 | | 400 | | | | | | | | | | | | | |
| TOTALS | 1,993 | 20.80 | 100.81 | 10 | | 400 | 4[6] | 3 | | 2 | | | | | | 4 | 30 | 3 | |

NOTES. 1 Vehicles are in thousands of square feet.

2 Cargo is in thousands of cubic feet.

3 Bulk POL is in thousands of gallons.

4 Designed to carry packaged POL.

5 This space partially loaded with Aviation Consolidated Allowance List (AVCAL) material.

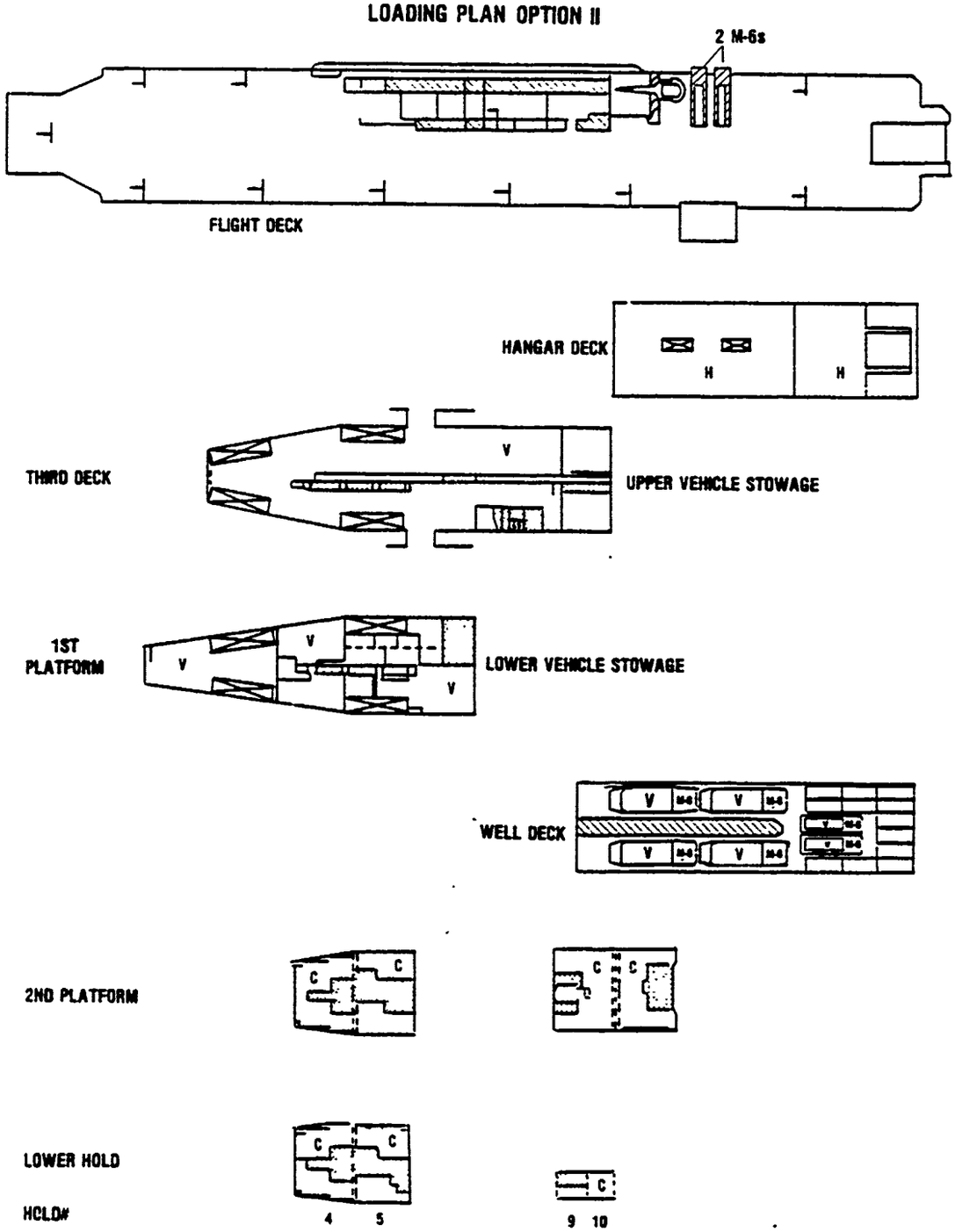
6 Two LCM-6s are organic.

7 The cargo areas of boats in well decks are loaded with vehicles.

8 Helicopter stowage reflects 70-75% hangar deck and 25-30% flight deck stowage.

6 14 04 12

LHA-1
LOADING PLAN OPTION II



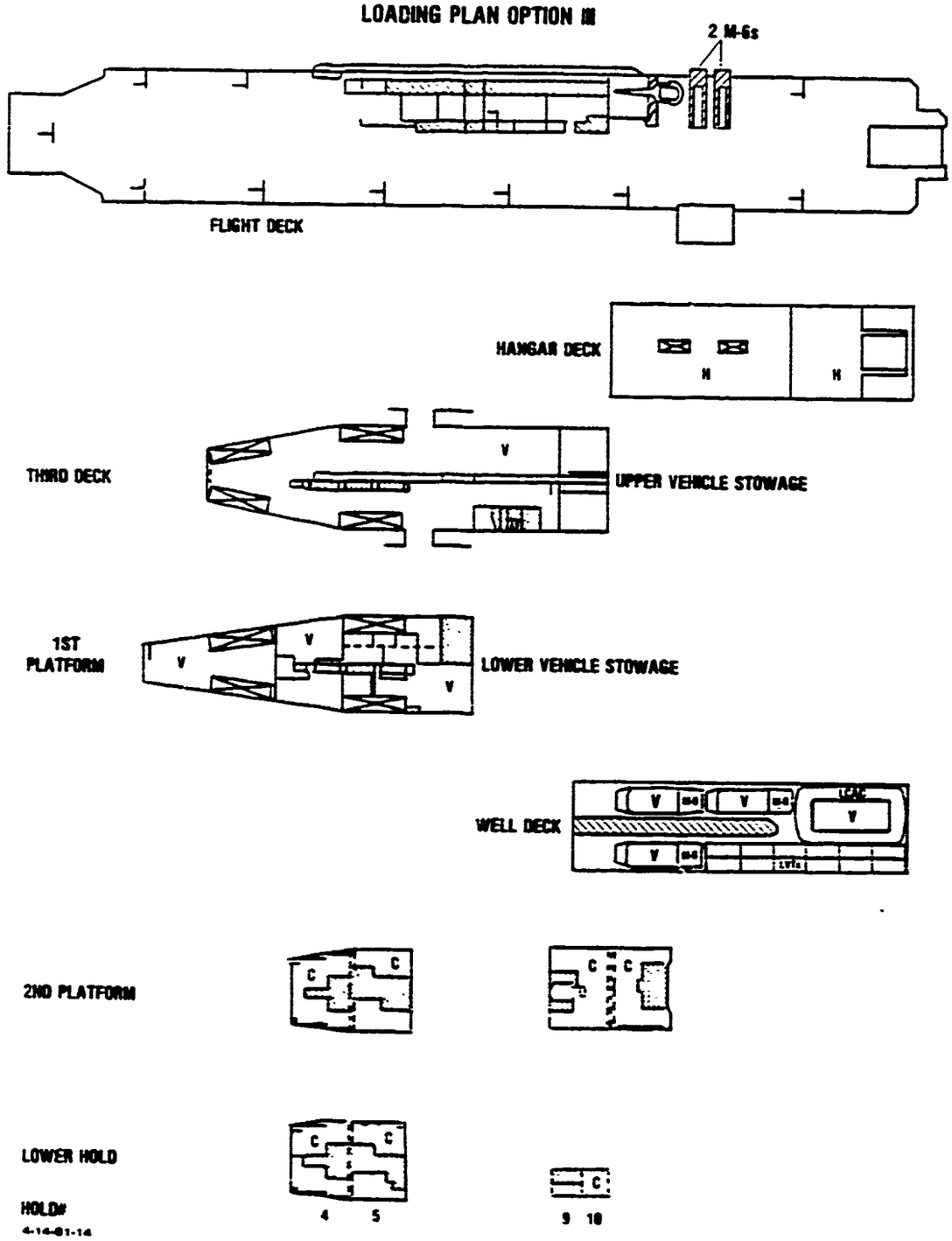
# LHA-1
# LOADING PLAN OPTION II

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE[9] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF 2 | JP 5 | LCM 6 | LCM 8 | LCM 9 | LCU 1610 | LCAC | CS | PCS | LVT | LVA | UH 1D/H | CH 46D | CH 53D | CH 53E |
| FLIGHT | FLIGHT OPERATIONS | | | | | | [4] | | | | | | | | | | | | |
| HANGAR | | | | | | | | | | | | | | | | 4 | 27 | 5 | |
| Hold 4: 2d PLT | | | 14.00 | | | | | | | | | | | | | | | | |
| I.M. | | | 16.71 | | | | | | | | | | | | | | | | |
| Hold 5: 2d PLT | | | 14.30 | | | | | | | | | | | | | | | | |
| I.M. | | | 14.27 | | | | | | | | | | | | | | | | |
| Hold 6: 2d PLT | | | 17.30 | | | | | | | | | | | | | | | | |
| I.M. | | | 3.30 | | | | | | | | | | | | | | | | |
| Hold 10: 2d PLT | | | 17.30[5] | | | | | | | | | | | | | | | | |
| Upper Veh Stg. | | 10.20 | | | | | | | | | | | | | | | | | |
| Lower Veh Stg. (Fwd) | | 4.43 | 10.54[6] | | | | | | | | | | | | | | | | |
| Lower Veh Stg. (Aft) | | | | | | | | | | | | | | | | | | | |
| WELL | | 3.00[7] | | | | | 2 | 4 | | | | | | 12 | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 1,003 | | | | | | | | | | | | | | | | | | |
| BOATS[8] | | 2.03 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 10 | | 400 | | | | | | | | | | | | | |
| TOTALS | 1,003 | 26.00 | 100.01 | 10 | | 400 | 4 | 4 | | | | | | 12 | | 4 | 27 | 5 | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Two LCM 6s are organic.
5 Designed to carry packaged POL.
6 This space partially loaded with Aviation Consolidated Allowance List (AVCAL) material.
7 Amphibious square is included in well deck vehicle square.
8 The cargo areas of boats in well decks are loaded with vehicles.
9 Helicopter stowage reflects 70-75% hangar deck and 25-30% flight deck stowage.

0 1 1 0 4 1 3

LHA-1
LOADING PLAN OPTION III

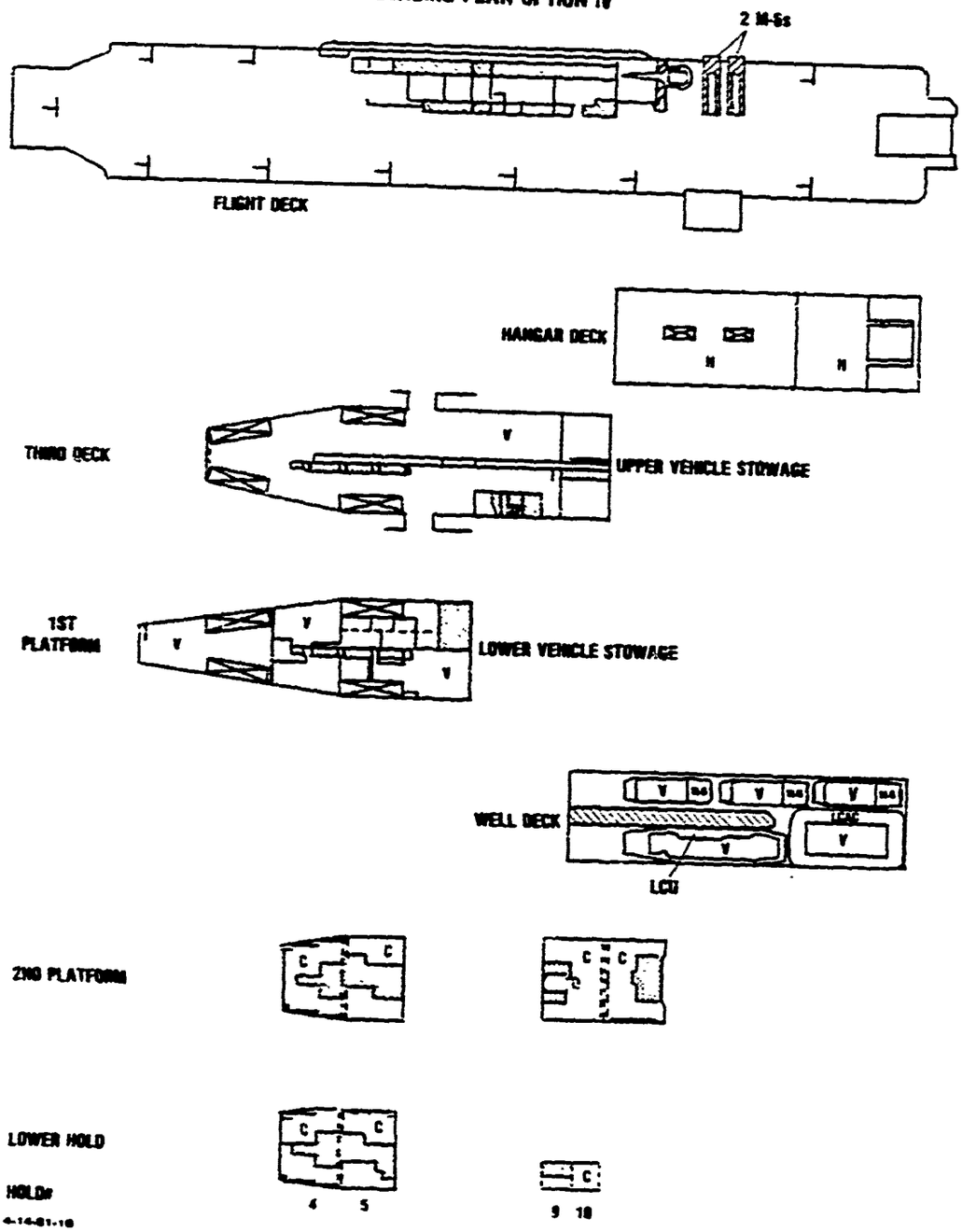


# LHA-1
## LOADING PLAN OPTION III

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE[9] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | JP 5 | JP 5 | LCM 8 | LCM 8 | LCM 8 | LCU 1610 | LCAC | CB | PCS | LVT | LVA | UH 1N/H | CH 46D | CH 53D | CH 53E |
| FLIGHT | FLIGHT OPERATIONS | | | | | | [illegible] | | | | | | | | | | | | |
| HANGAR | | | | | | | | | | | | | | | | 2 | 10 | 3 | |
| Hold 5, 30 Pft | | | [illegible] | | | | | | | | | | | | | | | | |
| 1.5ft | | | [illegible] | | | | | | | | | | | | | | | | |
| Hold 6, 30 Pft | | | [illegible] | | | | | | | | | | | | | | | | |
| 1.5ft | | | [illegible] | | | | | | | | | | | | | | | | |
| Hold 8, 30 Pft | | | [illegible] | | | | | | | | | | | | | | | | |
| 1.5ft | | | [illegible] | | | | | | | | | | | | | | | | |
| Hold 10, 30 Pft | | | [illegible] | | | | | | | | | | | | | | | | |
| Upper Tub Sta. | | [illegible] | | | | | | | | | | | | | | | | | |
| Lower Tub Sta. (Fwd) | | [illegible] | [illegible] | | | | | | | | | | | | | | | | |
| Lower Tub Sta. (Aft) | | [illegible] | | | | | | | | | | | | | | | | | |
| WELL | | [illegible] | | | | | | 3 | | | 1 | | | 12 | | | | | |
| OUTDOOR | [illegible] | | | | | | | | | | | | | | | | | | |
| DECK | | [illegible] | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | [illegible] | | [illegible] | | | | | | | | | | | | | |
| TOTALS | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | 2 | 3 | | | 1 | | | 12 | | 2 | 31 | 3 | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Two LCM 8s are organic.
5 Designed to carry package POL.
6 This space partially loaded with Aviation Consolidated Allowance List (AVCAL) material.
7 Amphibious square is included in well deck vehicle square.
8 The cargo areas of boats in well decks are loaded with vehicles.
9 Helicopter stowage reflects 70-75% hanger deck and 25-30% flight deck stowage.

LHA-1
LOADING PLAN OPTION IV

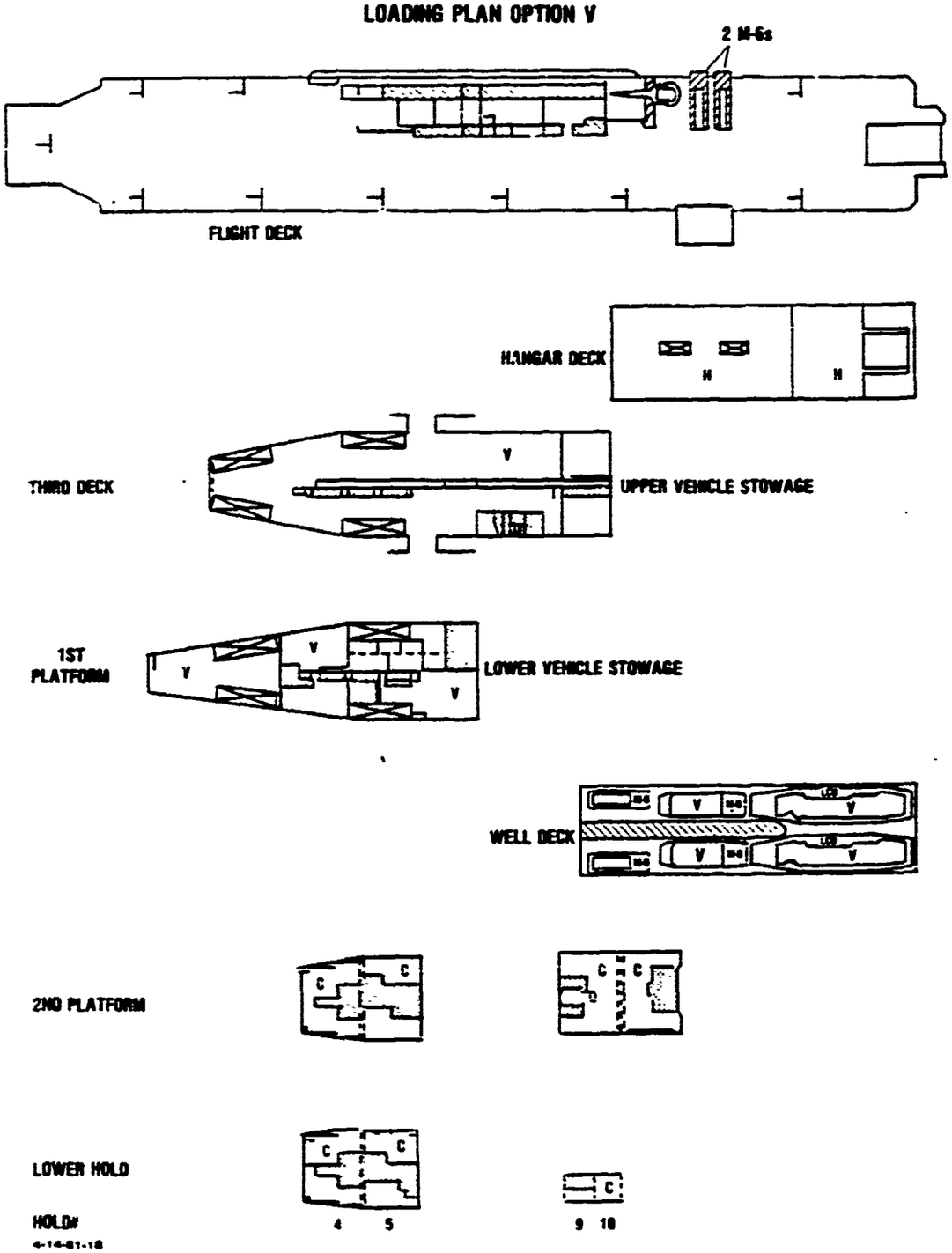


# LHA-1
# LOADING PLAN OPTION IV

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE[8] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF 2 | JP 5 | LCM 8 | LCM 8 | LCM 8 | LCM 1010 | LCAC | CS | PCS | LVT | LVA | UH 1B/H | CH 46D | CH 53D | CH 53E |
| FLIGHT | FLIGHT OPERATIONS | | | | | | 2[4] | | | | | | | | | | | | |
| HANGAR | | | | | | | | | | | | | | | | 4 | 20 | 3 | |
| Hold 4: 2d Flt | | | 14.80 | | | | | | | | | | | | | | | | |
| L.H. | | | 16.71 | | | | | | | | | | | | | | | | |
| Hold 5: 2d Flt | | | 14.28 | | | | | | | | | | | | | | | | |
| L.H. | | | 14.27 | | | | | | | | | | | | | | | | |
| Hold 9: 2d Flt | | | 17.20 | | | | | | | | | | | | | | | | |
| L.H. | | | 3.20 | | | | | | | | | | | | | | | | |
| Hold 10: 2d Flt | | | 12.30[5] | | | | | | | | | | | | | | | | |
| Upper Veh Sta. | | 16.20 | | | | | | | | | | | | | | | | | |
| Lower Veh Sta. (Fwd) | | 3.97 | | | | | | | | | | | | | | | | | |
| Lower Veh Sta. (Aft) | | 4.43 | 10.64[6] | | | | | | | | | | | | | | | | |
| WELL | | | | | | | | 3 | | 1 | 1 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 1,993 | | | | | | | | | | | | | | | | | | |
| BOATS[7] | | 4.20 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 10 | | 400 | | | | | | | | | | | | | |
| TOTALS | 1,993 | 27.54 | 100.80 | 10 | | 400 | 2 | 3 | | 1 | 1 | | | | | 4 | 20 | 3 | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Two LCM 8s are organic.
5 Designed to carry package POL.
6 This space partially loaded with Aviation Consolidated Allowance List (AVCAL) material.
7 The cargo areas of boats in well decks are loaded with vehicles.
8 Helicopter stowage reflects 70-75% hangar deck and 25-30% flight deck stowage.

LHA-1
LOADING PLAN OPTION V



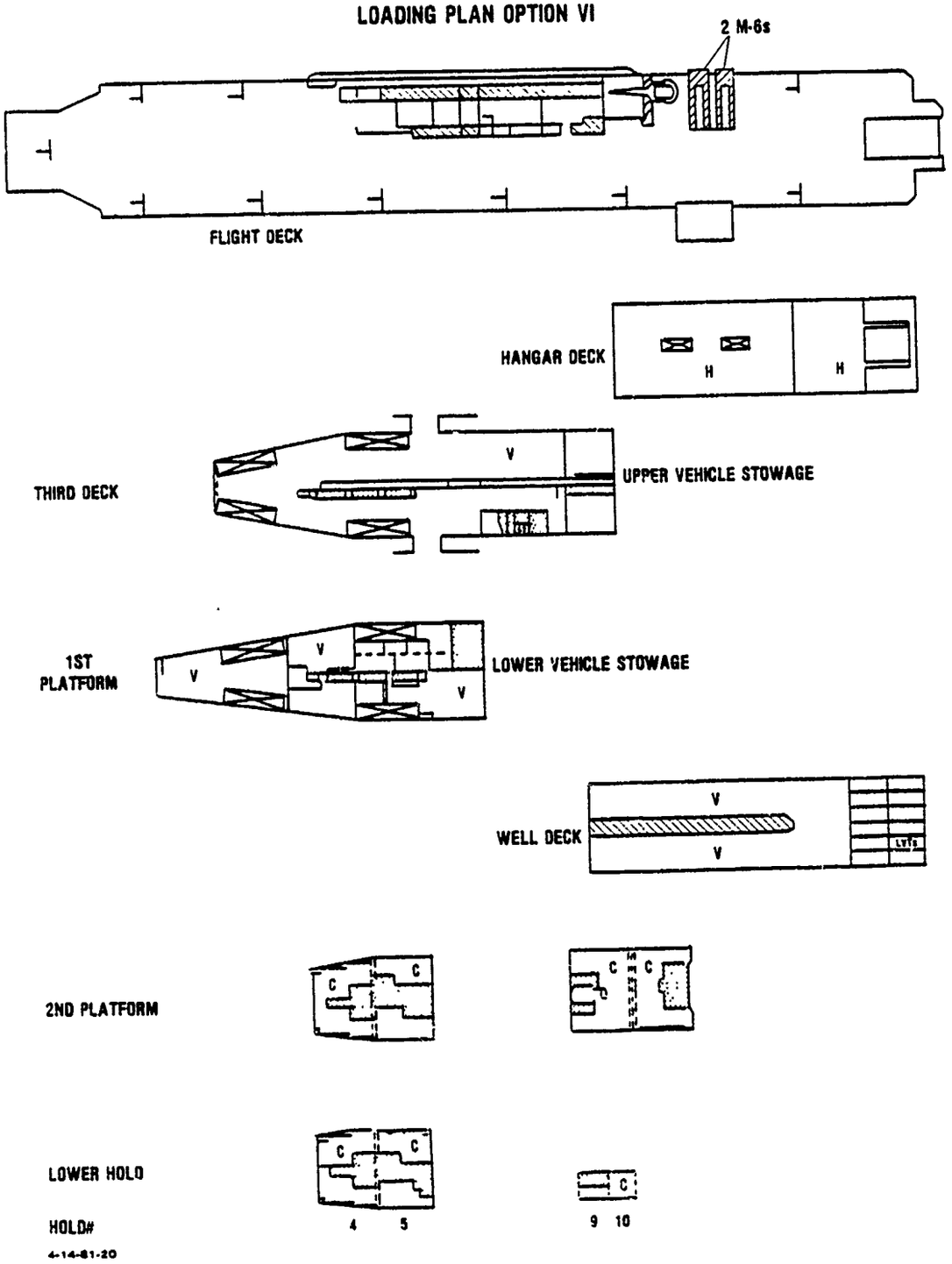
# LHA-1
# LOADING PLAN OPTION V

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE[8] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | SF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| FLIGHT | FLIGHT OPERATIONS | | | | | | 2[4] | | | | | | | | | | | | |
| HANGAR | | | | | | | | | | | | | | | | 4 | 27 | 6 | |
| Hold 4, 2d Flt | | | 14.[illegible] | | | | | | | | | | | | | | | | |
| LH | | | 16.71 | | | | | | | | | | | | | | | | |
| Hold 5, 2d Flt | | | 14.[illegible] | | | | | | | | | | | | | | | | |
| LH | | | 14.27 | | | | | | | | | | | | | | | | |
| Hold 6, 2d Flt | | | 17.[illegible] | | | | | | | | | | | | | | | | |
| LH | | | 3.[illegible] | | | | | | | | | | | | | | | | |
| Hold 10, 2d Flt | | | 12.[illegible][5] | | | | | | | | | | | | | | | | |
| Upper Veh Stg. | | 16.[illegible] | | | | | | | | | | | | | | | | | |
| Lower Veh Stg. (Fwd) | | 3.37 | | | | | | | | | | | | | | | | | |
| Lower Veh Stg. (Aft) | | 4.43 | 16.[illegible][5] | | | | | | | | | | | | | | | | |
| WELL | | | | | | | 2 | 2 | | 2 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 1,[illegible] | | | | | | | | | | | | | | | | | | |
| BOATS[7] | | 4.[illegible] | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 10 | | 400 | | | | | | | | | | | | | |
| TOTALS | 1,[illegible] | 27.70 | 100.81 | 10 | | 400 | 4 | 2 | | 2 | | | | | | 4 | 27 | 6 | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Two LCM-8s are organic.
5 Designed to carry packaged POL.
6 This space partially loaded with Aviation Consolidated Allowance List (AVCAL) material.
7 The cargo areas of boats in well decks are loaded with vehicles.
8 Helicopter stowage reflects 70-75% hangar deck and 20-25% flight deck stowage.

4140110

LHA-1
LOADING PLAN OPTION VI



# LHA-1
# LOADING PLAN OPTION VI

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STOWAGE[8] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-6 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| FLIGHT | FLIGHT OPERATIONS | | | | | | 2[4] | | | | | | | | | | | | |
| HANGAR | | | | | | | | | | | | | | | | 2 | 31 | 3 | |
| Hold 4: 2d Plt | | | 14.90 | | | | | | | | | | | | | | | | |
| L.H. | | | 16.71 | | | | | | | | | | | | | | | | |
| Hold 5: 2d Plt | | | 14.30 | | | | | | | | | | | | | | | | |
| L.H. | | | 14.27 | | | | | | | | | | | | | | | | |
| Hold 9: 2d Plt | | | 17.30 | | | | | | | | | | | | | | | | |
| L.H. | | | 3.30 | | | | | | | | | | | | | | | | |
| Hold 10: 2d Plt | | | 17.30[5] | | | | | | | | | | | | | | | | |
| Upper Veh Stg. | | 16.30 | | | | | | | | | | | | | | | | | |
| Lower Veh Stg. (Fuel) | | 3.37 | | | | | | | | | | | | | | | | | |
| Lower Veh Stg. (AN) | | 4.43 | 16.54[6] | | | | | | | | | | | | | | | | |
| WELL | | 12.62[7] | | | | | | | | | | | | 12 | | | | | |
| BERTHING | 1,983 | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 10 | | 400 | | | | | | | | | | | | | |
| TOTALS | 1,983 | 36.80 | 108.81 | 10 | | 400 | 2 | | | | | | | 12 | | 2 | 31 | 3 | |

NOTES. 1 Vehicles are in thousands of square feet.

2 Cargo is in thousands of cubic feet.

3 Bulk POL is in thousands of gallons.

4 Two LCM-6s are organic.

5 Designed to carry packaged POL.

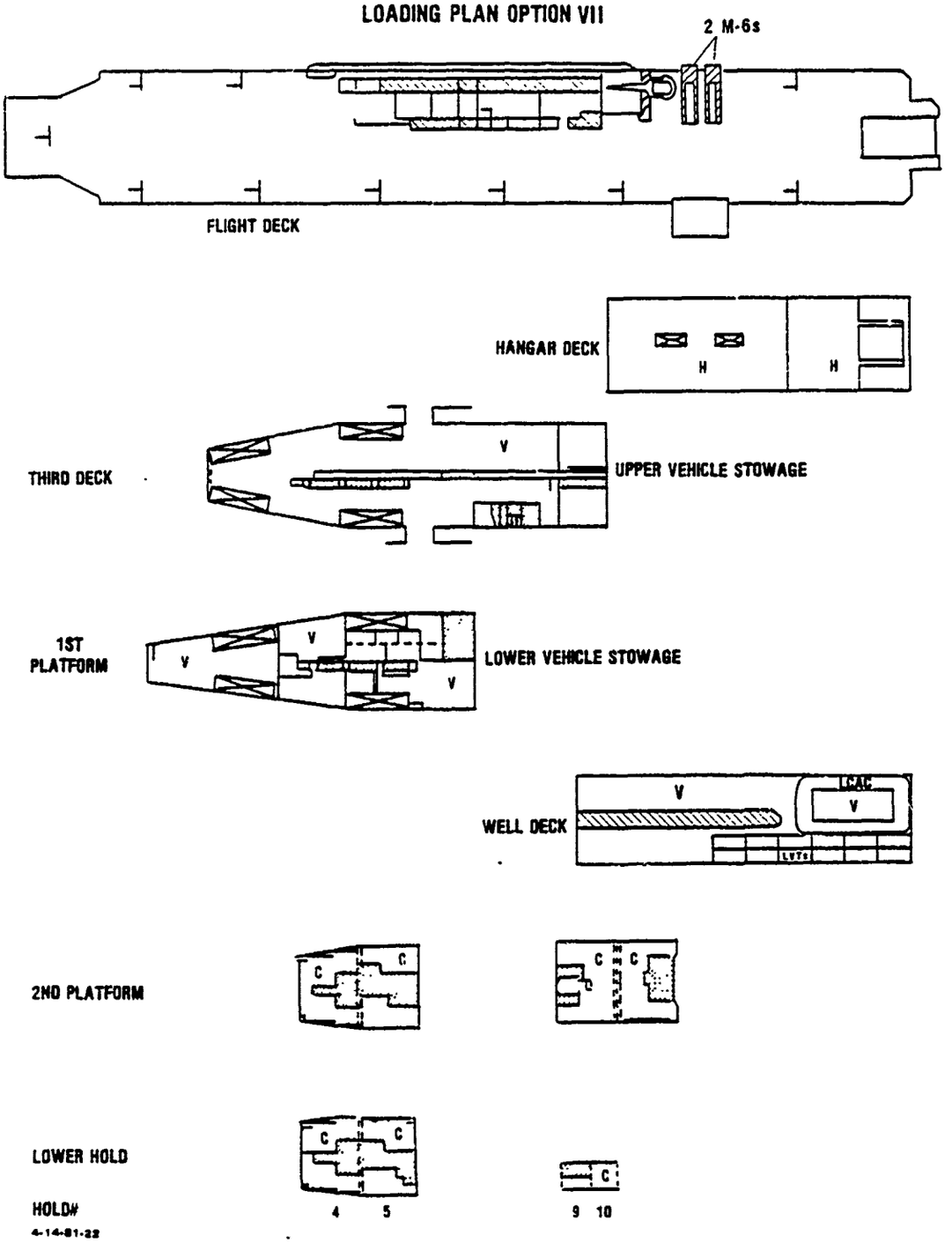
6 This space partially loaded with Aviation Consolidated Allowance List (AVCAL) material.

7 The cargo areas of boats in well decks are loaded with vehicles.

8 Helicopter stowage reflects 70-75% hangar deck and 25-30% flight deck stowage.

6-14-81 21

LHA-1
LOADING PLAN OPTION VII



# LHA-1
# LOADING PLAN OPTION VII

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE[9] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU 1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| FLIGHT | FLIGHT OPERATIONS | | | | | | 2[4] | | | | | | | | | | | | |
| HANGAR | | | | | | | | | | | | | | | | 4 | 30 | 3 | |
| Hold 4: 2d Plt | | | 14.00 | | | | | | | | | | | | | | | | |
| L.H. | | | 16.71 | | | | | | | | | | | | | | | | |
| Hold 5: 2d Plt | | | 14.30 | | | | | | | | | | | | | | | | |
| L.H. | | | 14.27 | | | | | | | | | | | | | | | | |
| Hold 6: 2d Plt | | | 17.30 | | | | | | | | | | | | | | | | |
| L.H. | | | 3.30 | | | | | | | | | | | | | | | | |
| Hold 10: 2d Plt | | | 12.30[5] | | | | | | | | | | | | | | | | |
| Upper Veh Stg. | | 16.30 | | | | | | | | | | | | | | | | | |
| Lower Veh Stg. (Fwd) | | 2.37 | | | | | | | | | | | | | | | | | |
| Lower Veh Stg. (Aft) | | 4.43 | 10.54[6] | | | | | | | | | | | | | | | | |
| WELL | | 10.50[7] | | | | | | | | | 1 | | | 12 | | | | | |
| BERTHING | 1,003 | | | | | | | | | | | | | | | | | | |
| BOATS[8] | | 1.30 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 10 | | 400 | | | | | | | | | | | | | |
| TOTALS | 1,003 | 26.13 | 100.01 | 10 | | 400 | 2 | | | | 1 | | | 12 | | 4 | 30 | 3 | |

NOTES: 1 Vehicles are in thousands of square feet

2 Cargo is in thousands of cubic feet.

3 Bulk POL is in thousands of gallons.

4 Two LCM-8s are organic.

5 Designed to carry packaged POL.

6 This space partially loaded with Aviation Consolidated Allowance List (AVCAL) material.

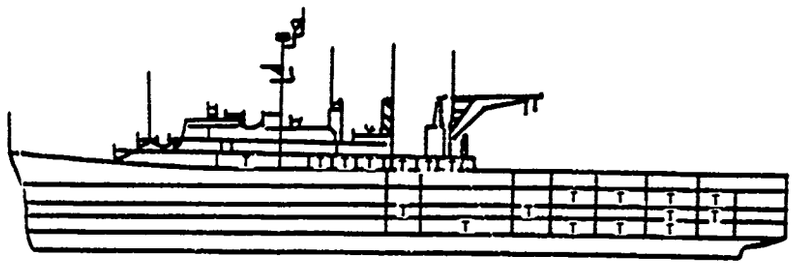
7 Amphibian square is included in well deck vehicle square.

8 The cargo areas of boats in well decks are loaded with vehicles.

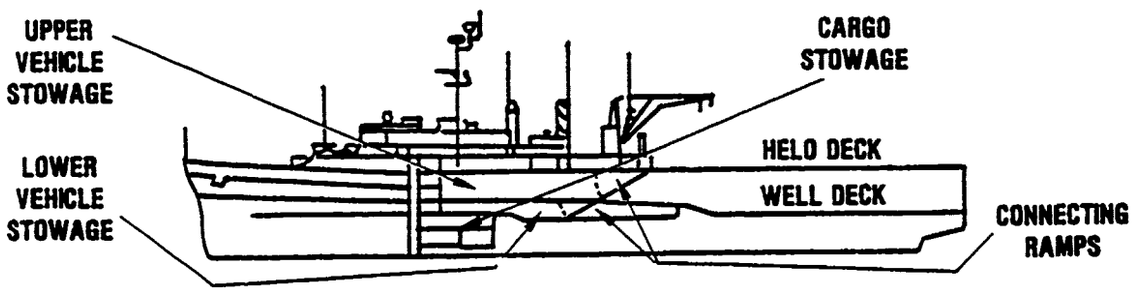
9 Helicopter stowage reflects 70.75% hanger deck and 25.30% flight deck stowage.

6 14 01 23

LPD-1



OUTBOARD PROFILE DISPLAYING TROOP ACCOMMODATIONS




4-14-81-24 INBOARD PROFILE DISPLAYING UPPER AND LOWER VEHICLE STOWAGE, CONNECTING RAMPS, HELO DECK, AND WELL DECK

## SHIP'S LOADING CHARACTERISTICS

The LPD-1 is designed to load, transport and land troops, vehicles, and equipment in amphibious operations. The ship has a helicopter deck, upper and lower vehicle stowage decks and a well deck. It is a general purpose amphibious ship with substantial lift capacities for troops, vehicles, landing craft, dry cargo and bulk fuel plus a limited capacity for helicopters. Materials Handling Equipment (MHE) includes one 30-ton B&A crane, an overhead bridge crane system, vertical pallet conveyors and a cargo elevator. Vehicles can move about the various decks by a series of power operated ramps. Troops, vehicles and equipment can be loaded/offloaded by helicopter and

landing craft simultaneously. The well deck of the LPD-1 can accommodate all types of landing craft (boats and amphibians) currently in the amphibious forces inventory. It is anticipated that the LPD will be able to accommodate two Landing Craft Air Cushion (LCAC); however, some modification to the ramp may be required to achieve this.

SHIP'S BOATS:

Utility . . . . . 2
LCPL . . . . . 2
Motor Whale . . . . . 1

BERTHING ACCOMMODATIONS:

| | Officer | CPO/SNCO | Other Enlisted | Surge | Total |
|---|---|---|---|---|---|
| Ship's Company | 27 | 30 | 429 | --- | 486 |
| Landing Force | 73 | 20 | 647 | 188 | 928 |

CRANES:

| Rig | Lift Capacity | Lift Cycle Time |
|---|---|---|
| B&A Crane | 10 S/T | 8 min |
| B&A Crane | 30 S/T | 20 min |
| Sideport Booms | 3 S/T | 5 min |

LOADING PLAN OPTIONS:

I. Well Deck: 4 LCM-8s
Upper Vehicle Stowage: vehicles
Lower Vehicle Stowage: vehicles

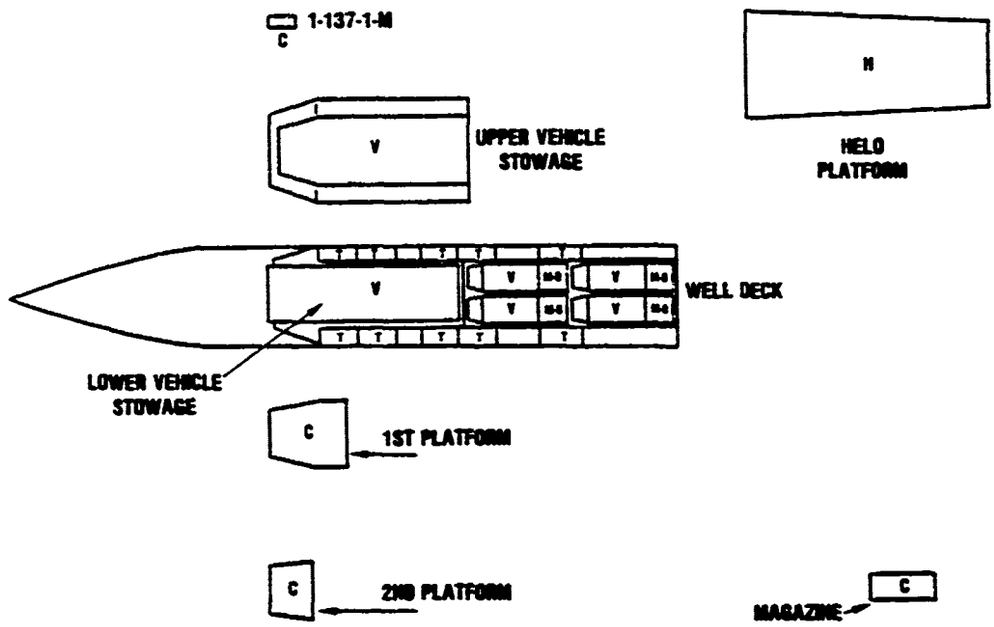
II. Well Deck: 2 LCACs
Upper Vehicle Stowage: vehicles
Lower Vehicle Stowage: cargo

III. Well Deck: 2 LCM-6s and 1 LCU
Upper Vehicle Stowage: vehicles
Lower Vehicle Stowage: cargo

IV. Well Deck: 24 LVTs
Upper Vehicle Stowage: vehicles
Lower Vehicle Stowage: vehicles

V. Well Deck: 12 LVAs
Upper Vehicle Stowage: vehicles
Lower Vehicle Stowage: vehicles

## LPD-1
## LOADING PLAN OPTION I




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK FOL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-6 | LCM-8 | LCM-1010 | LCAC | CS | PCS | LVT | LVA | [illegible] | [illegible] | [illegible] | [illegible] |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | 1 | 1 | | |
| 1-137-1-M | | | 8.87 | | | | | | | | | | | | | | | | |
| UP VEH STG. | | 3.92 | | | | | | | | | | | | | | | | | |
| LOW VEH STG. | | 4.78 | | | | | | | | | | | | | | | | | |
| WELL | | | | | | | | 4 | | | | | | | | | | | |
| 1st PLATFORM | | | 9.28 | | | | | | | | | | | | | | | | |
| 2nd PLATFORM | | | 2.98 | | | | | | | | | | | | | | | | |
| 5-84-8-M | | | 4.92 | | | | | | | | | | | | | | | | |
| BERTHING | 928 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 2.92 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 28 | | 228 | | | | | | | | | | | | | |
| TOTALS | 928 | 10.70 | 17.97 | 28 | | 228 | | 4 | | | | | | | | 1 | 1 | | |

NOTES: 1 Vehicles are in thousands of square feet.

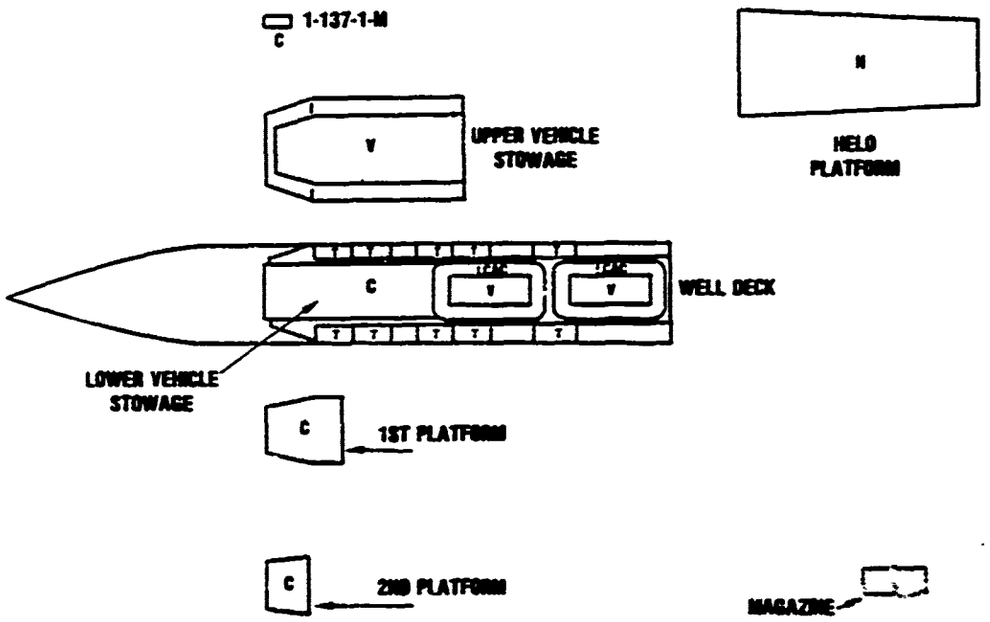
2 Cargo is in thousands of cubic feet.

3 Bulk FOL is in thousands of gallons.

4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-26

## LPD-1
## LOADING PLAN OPTION II

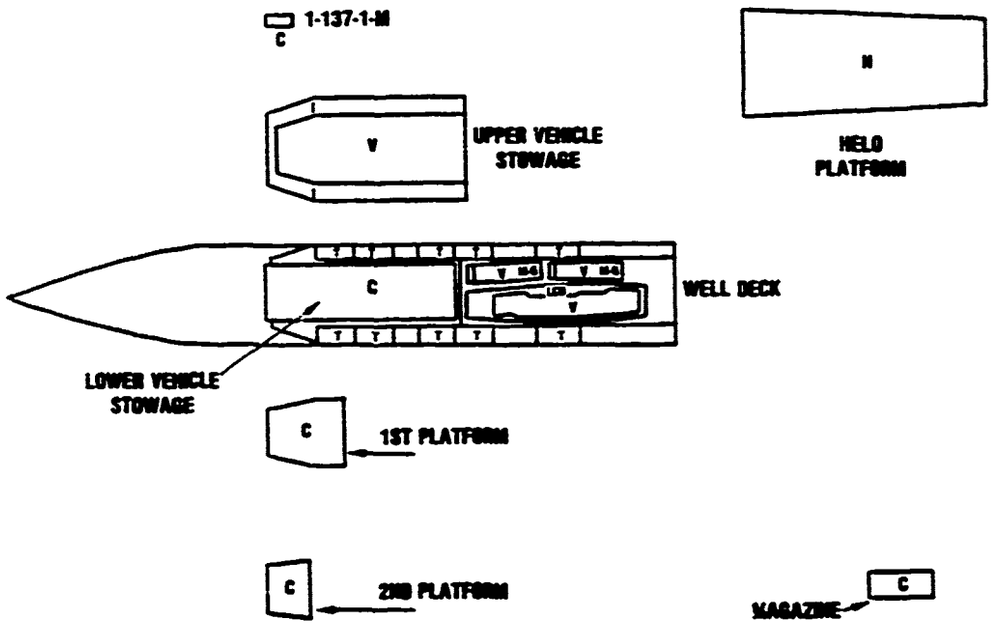



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER S[illegible] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | SF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | [illegible] | CH-[illegible] | [illegible] | [illegible] |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | 1 | 1 | | |
| 1-137-1-M | | | [illegible] | | | | | | | | | | | | | | | | |
| UP VEH STG. | | 3.92 | | | | | | | | | | | | | | | | | |
| LOW VEH STG. | | | [illegible] | | | | | | | | | | | | | | | | |
| WELL | | | | | | | | | | | 2 | | | | | | | | |
| 1st PLATFORM | | | 9.20 | | | | | | | | | | | | | | | | |
| 2nd PLATFORM | | | 2.98 | | | | | | | | | | | | | | | | |
| 6-84-6-M | | | 4.92 | | | | | | | | | | | | | | | | |
| BERTHING | 520 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 2.71 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 20 | | 220 | | | | | | | | | | | | | |
| TOTALS | 520 | [illegible] | 47.80 | 20 | | 220 | | | | | 2 | | | | | 1 | 1 | | |

NOTES: [1] Vehicles are in thousands of square feet.
[2] Cargo is in thousands of cubic feet.
[3] Bulk POL is in thousands of gallons.
[4] The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-20

## LPD-1
## LOADING PLAN OPTION III




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK FOL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | [illegible] | LVA | CH-[illegible] | CH-[illegible] | CH-[illegible] | CH-[illegible] |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | 1 | 1 | | |
| 1-137-1-M | | | [illegible] | | | | | | | | | | | | | | | | |
| UP VEH STG. | | [illegible] | | | | | | | | | | | | | | | | | |
| LOW VEH STG. | | | [illegible] | | | | | | | | | | | | | | | | |
| WELL | | | | | | | 2 | | | 1 | | | | | | | | | |
| 1st PLATFORM | | | [illegible] | | | | | | | | | | | | | | | | |
| 2nd PLATFORM | | | [illegible] | | | | | | | | | | | | | | | | |
| [illegible] | | | [illegible] | | | | | | | | | | | | | | | | |
| BERTHING | [illegible] | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | [illegible] | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | [illegible] | | [illegible] | | | | | | | | | | | | | |
| TOTALS | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] | 2 | | | 1 | | | | | | 1 | 1 | | |

NOTES: 1 Vehicles are in thousands of square feet.

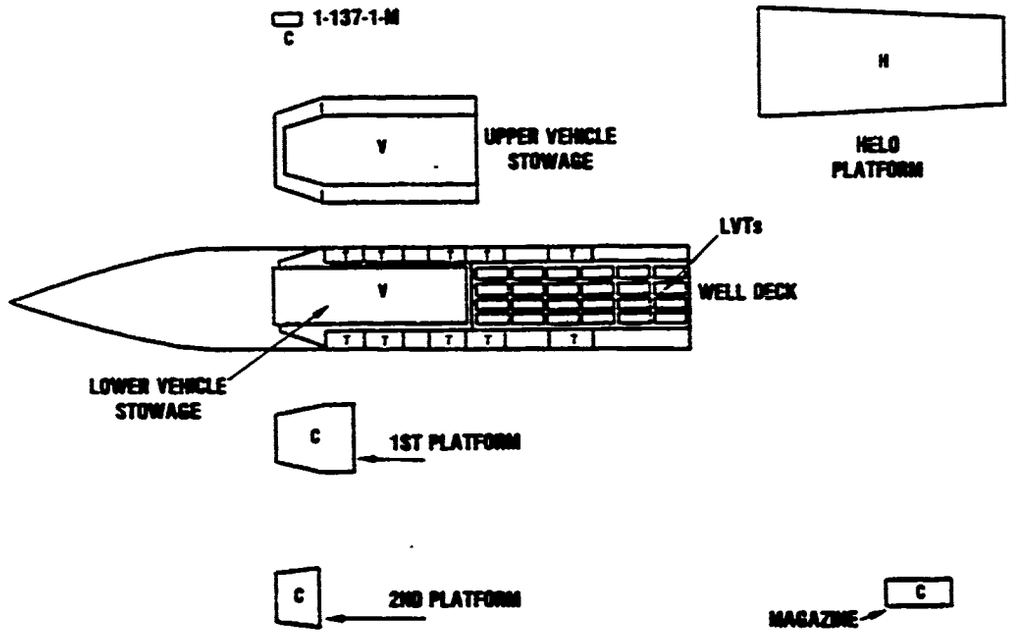
2 Cargo is in thousands of cubic feet.

3 Bulk FOL is in thousands of gallons.

4 The surge areas of boats in well decks are loaded with vehicles.

4-14-81-27

# LPD-1
# LOADING PLAN OPTION IV

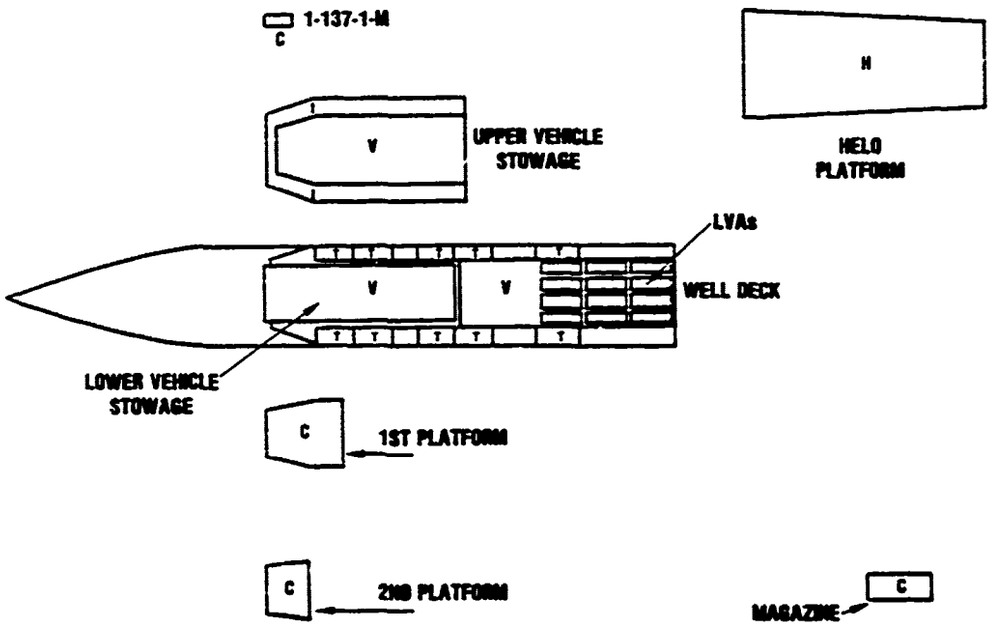



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK FUEL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF2 | JP5 | LCM6 | LCM8 | LCM8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | CH-53A | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | 1 | 1 | | |
| 1-137-1-M | | | 8.87 | | | | | | | | | | | | | | | | |
| UP VEH STG. | | 3.72 | | | | | | | | | | | | | | | | | |
| LOW VEH STG. | | 4.76 | | | | | | | | | | | | | | | | | |
| WELL | | 6.74[4] | | | | | | | | | | | | 24 | | | | | |
| 1st PLATFORM | | | 9.28 | | | | | | | | | | | | | | | | |
| 2nd PLATFORM | | | 7.98 | | | | | | | | | | | | | | | | |
| 5-84-84 | | | 4.92 | | | | | | | | | | | | | | | | |
| SEATING | 928 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 28 | | 228 | | | | | | | | | | | | | |
| TOTALS | 928 | 15.38 | 17.97 | 28 | | 228 | | | | | | | | 24 | | 1 | 1 | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Amphibian square is included in well deck vehicle square.

4-14-81-28

## LPD-1
## LOADING PLAN OPTION V




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCM-1000 | LCAC | CS | PCS | LVT | LVA | UH-46/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | 1 | 1 | | |
| 1-137-1-M | | | 8.87 | | | | | | | | | | | | | | | | |
| UP VEH STG. | | 3.92 | | | | | | | | | | | | | | | | | |
| LOW VEH STG. | | 4.72 | | | | | | | | | | | | | | | | | |
| WELL | | 7.81[4] | | | | | | | | | | | | | 12 | | | | |
| 1st PLATFORM | | | 9.20 | | | | | | | | | | | | | | | | |
| 2nd PLATFORM | | | 2.90 | | | | | | | | | | | | | | | | |
| 6-84-8-M | | | 4.92 | | | | | | | | | | | | | | | | |
| BERTHING | 928 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 28 | | 228 | | | | | | | | | | | | | |
| TOTALS | 928 | 16.28 | 17.97 | 28 | | 228 | | | | | | | | | 12 | 1 | 1 | | |

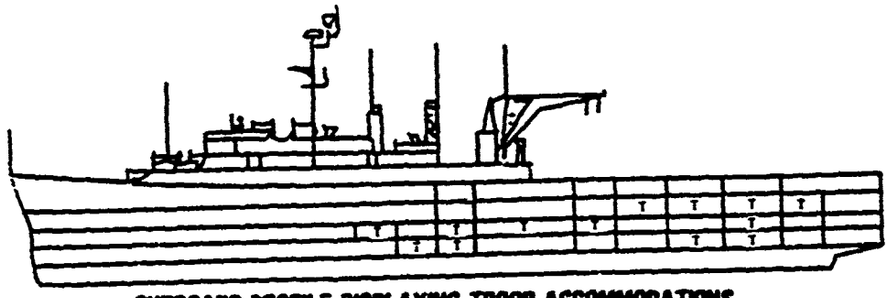
NOTES: 1 Vehicles are in thousands of square feet.

2 Cargo is in thousands of cubic feet.

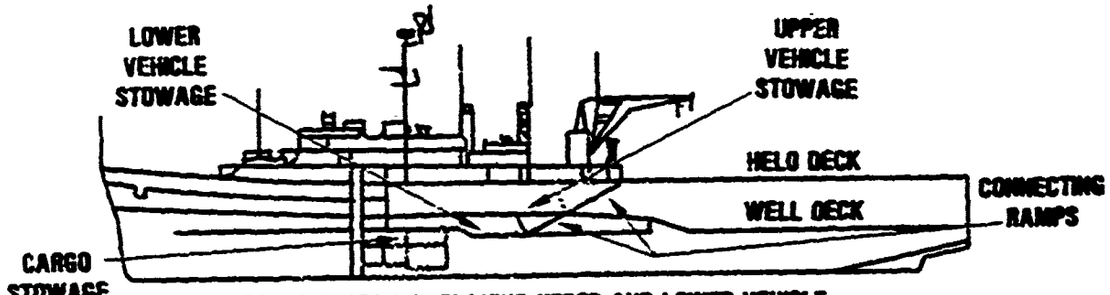
3 Bulk POL is in thousands of gallons.

4 Amphibian square is included in well deck vehicle square.

4-14-81-29



OUTBOARD PROFILE DISPLAYING TROOP ACCOMMODATIONS




INBOARD PROFILE DISPLAYING UPPER AND LOWER VEHICLE STOWAGE, CONNECTING RAMPS, HELO DECK, AND WELL DECK

S-14-81-30

## SHIP'S LOADING CHARACTERISTICS

The LPD-4 is designed to load, transport and land troops, vehicles and equipment in amphibious operations. The ship has a helicopter deck, upper and lower vehicle stowage decks and a well deck. It is a general purpose amphibious ship with substantial lift capacities for troops, vehicles, landing craft, dry cargo and bulk fuel plus a limitied capacity for helicopters. Materials handling equipment (MHE) includes one 30-ton B&A crane, an overhead monorail crane system, vertical pallet conveyor, and a cargo elevator. Vehicles can move about the various decks by a series of power operated ramps. Troops, vehicles and equipment can be loaded/offloaded by helicopter and landing craft

simultaneously. The well deck of the LPD-4 can accommodate all types of landing craft (boats and amphibians) currently in the amphibious forces inventory. It is anticipated that the LPD will be able to accommodate two Landing Craft Air Cushion (LCAC); however, some modification to the ramp may be required to achieve this.

SHIP'S BOATS:

| | |
|---|---|
| LCPL | 2 |
| Motor Whale | 1 |
| LCVP | 2 |

BERTHING ACCOMMODATIONS:

| | Non-Flag Configuration | | | | |
|---|---|---|---|---|---|
| | Officer | CPO/SNCO | Enlisted | Surge | Total |
| Ship's Crew | 25 | 15 | 413 | --- | 453 |
| Landing Force | 69 | -- | 650 | 194 | 913 |
| Naval Staff | -- | -- | --- | --- | --- |

| | Flag Configuration[1] | | | | |
|---|---|---|---|---|---|
| | Officer | CPO/SNCO | Enlisted | Surge | Total |
| Ship's Crew | 34 | 31 | 532 | --- | 597 |
| Landing Force | 78 | 26 | 756 | --- | 860 |
| Naval Staff | 32 | 3 | 27 | --- | 62 |

[1]The flag configured ship has an "C" level deck added to accommodate a naval staff and an increase in ship's company and landing force berthing spaces. LPDs 7-13 are flag configured.

SHIP'S CRANES:

| Rig | Lift Capacity | Lift Cycle Time |
|---|---|---|
| B&A Crane | 30 S/T | 8 min |
| B&A Crane | 10 S/T | 12 min |

## LOADING PLAN OPTIONS

I. Well Deck: 4 CLM-8s
   Upper Vehicle Stowage: vehicles
   Lower Vehicle Stowage: vehicles

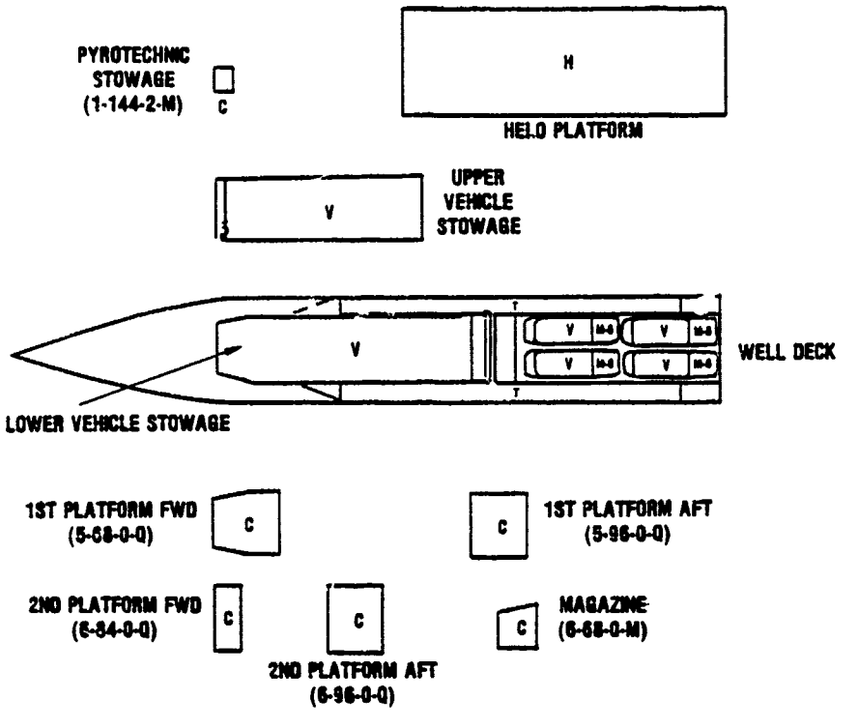
II. Well Deck: 2 LCACs
   Upper Vehicle Stowage: vehicles
   Lower Vehicle Stowage: vehicles

III. Well Deck: 3 LCM-6s and 1 LCU
   Upper Vehicle Stowage: vehicles
   Lower Vehicle Stowage: cargo

IV. Well Deck: 24 LVTs
   Upper Vehicle Stowage: vehicles
   Lower Vehicle Stowage: vehicles

V. Well Deck: 12 LVAs aft, vehicles forward
   Upper Vehicle Stowage: vehicles
   Lower Vehicle Stowage: vehicles

# LPD-4
# LOADING PLAN OPTION I

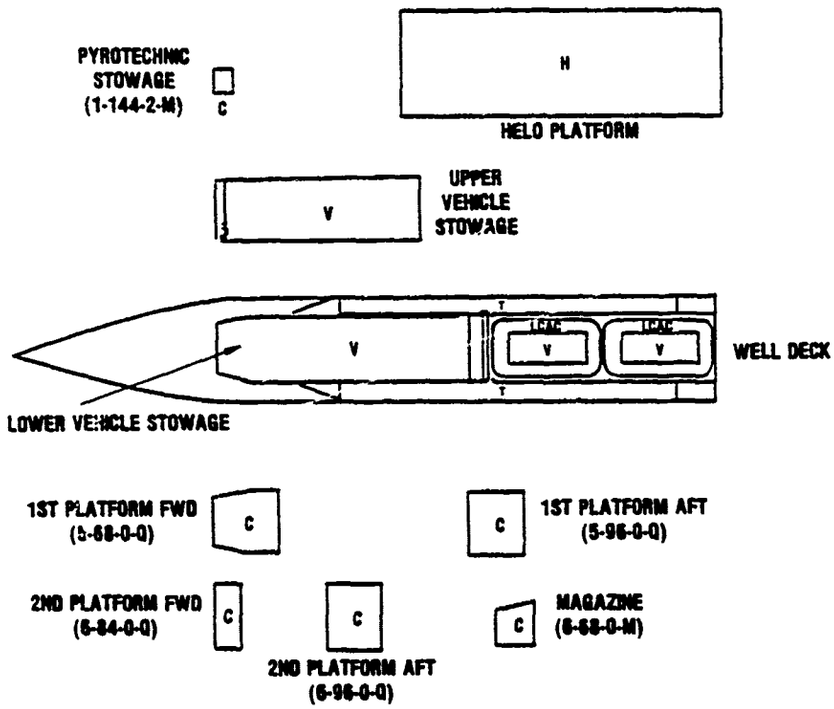



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | | LVT | LVA | UH-60/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | 1 | 1 | | |
| 1-144-2-M | | | 1.22 | | | | | | | | | | | | | | | | | |
| UP VEH STG. | | 5.57 | | | | | | | | | | | | | | | | | | |
| LOW VEH STG. | | 6.31 | | | | | | | | | | | | | | | | | | |
| WELL | | | | | | | | 4 | | | | | | | | | | | | |
| 5-68-0-Q | | | 12.15 | | | | | | | | | | | | | | | | | |
| 5-96-0-Q | | | 11.88 | | | | | | | | | | | | | | | | | |
| 6-68-0-M | | | 3.74 | | | | | | | | | | | | | | | | | |
| 6-84-0-Q | | | 5.62 | | | | | | | | | | | | | | | | | |
| 6-96-0-Q | | | 8.98 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| BERTHING | 913 | | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 2.02 | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 22.3 | | 224.5 | | | | | | | | | | | | | | |
| TOTALS | 913 | 13.9 | 43.40 | 22.3 | | 224.5 | | 4 | | | | | | | | | 1 | 1 | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-31

## LPD-4
## LOADING PLAN OPTION II

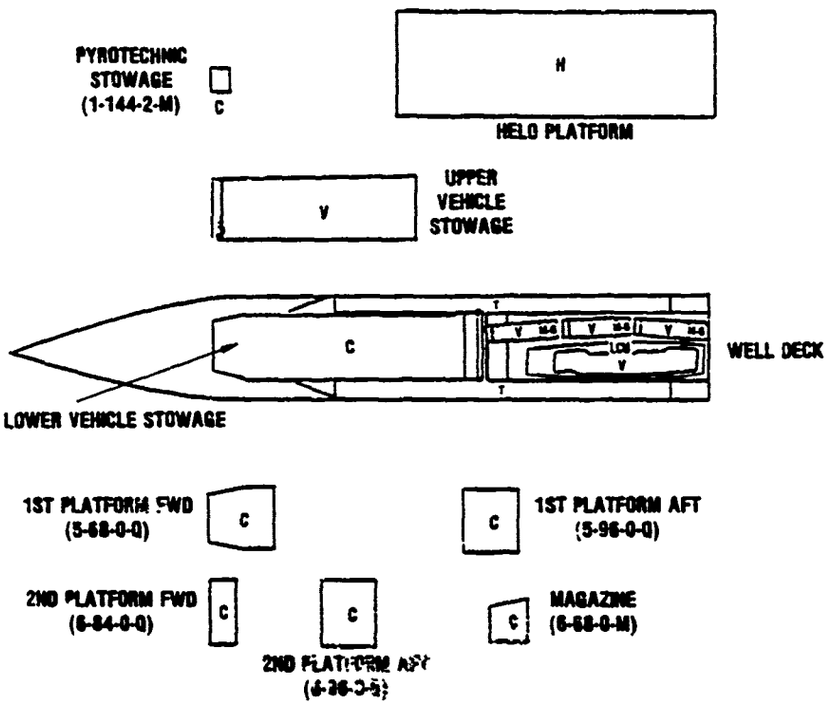



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | 1 | 1 | | |
| 1-144-2-M | | | 1.22 | | | | | | | | | | | | | | | | |
| UP VEH STG. | | 2.57 | | | | | | | | | | | | | | | | | |
| LOW VEH STG. | | 6.31 | | | | | | | | | | | | | | | | | |
| WELL | | | | | | | | | | | 2 | | | | | | | | |
| 5-68-0-Q | | | 12.15 | | | | | | | | | | | | | | | | |
| 5-96-0-Q | | | 11.88 | | | | | | | | | | | | | | | | |
| 6-68-0-M | | | 3.74 | | | | | | | | | | | | | | | | |
| 6-84-0-Q | | | 5.82 | | | | | | | | | | | | | | | | |
| 6-96-0-Q | | | 6.98 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 913 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 2.71 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 72.3 | | 224.5 | | | | | | | | | | | | | |
| TOTALS | 913 | 14.59 | 43.40 | 72.3 | | 224.5 | | | | | 2 | | | | | 1 | 1 | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-32

# LPD-4
# LOADING PLAN OPTION III




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LC[illegible] | [illegible] | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | 1 | 1 | | |
| 1-144-2-M | | | 1.22 | | | | | | | | | | | | | | | | |
| UP VEH STB. | | 5.57 | | | | | | | | | | | | | | | | | |
| LOW VEH STB. | | | 55.46 | | | | | | | | | | | | | | | | |
| WELL | | | | | | | 3 | | | | | | | | | | | | |
| 5-96-0-Q | | | 12.15 | | | | | | | | | | | | | | | | |
| 5-96-0-Q | | | 11.88 | | | | | | | | | | | | | | | | |
| 6-68-0-M | | | 3.74 | | | | | | | | | | | | | | | | |
| 6-84-0-Q | | | 5.02 | | | | | | | | | | | | | | | | |
| 6-36-0-Q | | | 8.98 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 913 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 2.43 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 22.3 | | 224.5 | | | | | | | | | | | | | |
| TOTALS | 913 | 8.00 | 98.86 | 22.3 | | 224.5 | 3 | | | 1 | | | | | | 1 | 1 | | |

NOTES: 1 Vehicles are in thousands of square feet.

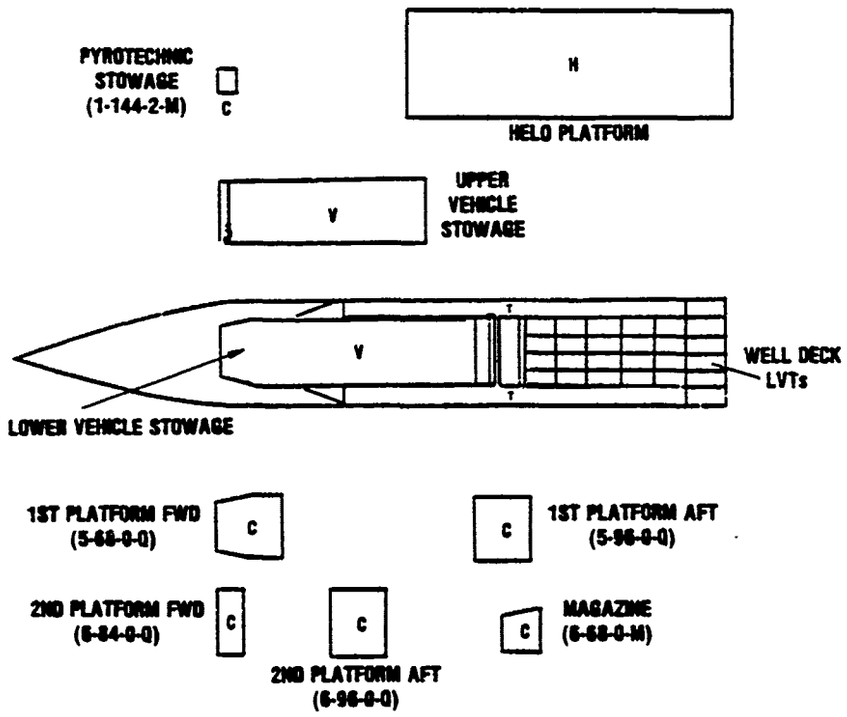
2 Cargo is in thousands of cubic feet.

3 Bulk POL is in thousands of gallons.

4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-33

## LPD-4
## LOADING PLAN OPTION IV

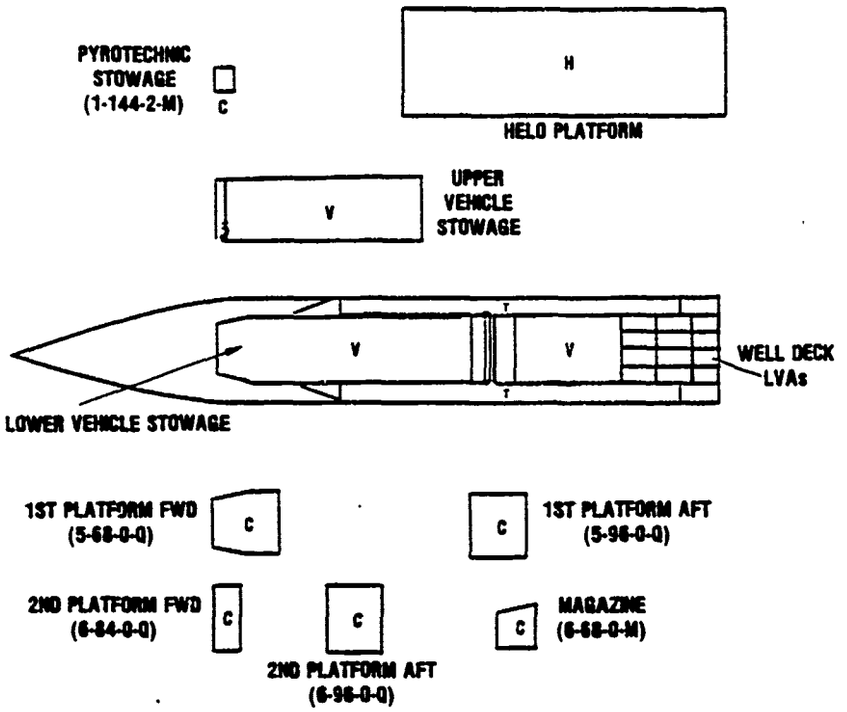



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-6 | LCM-6 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | 1 | 1 | | |
| 1-144-2-M | | | 1.22 | | / | | | | | | | | | | | | | | |
| UP VEH STG. | | 5.57 | | | | | | | | | | | | | | | | | |
| LOW VEH STG. | | 6.31 | | | | | | | | | | | | | | | | | |
| WELL | | 6.76[4] | | | | | | | | | | | | 24 | | | | | |
| 5-68-0-0 | | | 12.15 | | | | | | | | | | | | | | | | |
| 5-96-0-0 | | | 11.88 | | | | | | | | | | | | | | | | |
| 6-68-0-M | | | 3.74 | | | | | | | | | | | | | | | | |
| 6-84-0-0 | | | 5.82 | | | | | | | | | | | | | | | | |
| 6-96-0-0 | | | 8.98 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 913 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 22.3 | | 224.5 | | | | | | | | | | | | | |
| TOTALS | 913 | 18.58 | 43.48 | 22.3 | | 224.5 | | | | | | | | 24 | | 1 | 1 | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Amphibian square is included in well deck vehicle square.

4-14-81-34

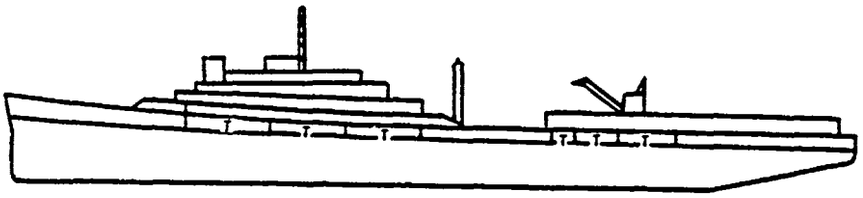
## LPD-4
## LOADING PLAN OPTION V



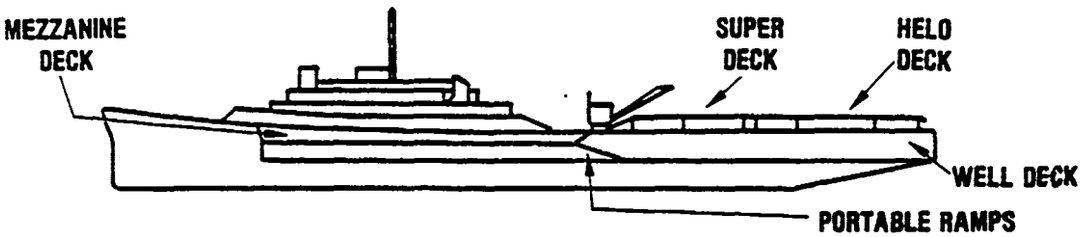

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | 1 | 1 | | |
| 1-144-2-M | | | 1.22 | | | | | | | | | | | | | | | | |
| UP VEH STG. | | 5.57 | | | | | | | | | | | | | | | | | |
| LOW VEH STG. | | 8.31 | | | | | | | | | | | | | | | | | |
| WELL | | 7.04[4] | | | | | | | | | | | | | 12 | | | | |
| 5-68-0-Q | | | 12.15 | | | | | | | | | | | | | | | | |
| 5-96-0-Q | | | 11.88 | | | | | | | | | | | | | | | | |
| 6-68-0-M | | | 3.74 | | | | | | | | | | | | | | | | |
| 6-84-0-Q | | | 5.62 | | | | | | | | | | | | | | | | |
| 6-96-0-Q | | | 9.98 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 913 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | | 22.3 | | 224.5 | | | | | | | | | | | | |
| TOTALS | 913 | 18.92 | 43.48 | | 22.3 | | 224.5 | | | | | | | | 12 | 1 | 1 | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Amphibian square is included in well deck vehicle square.

4-14-81-36



OUTBOARD PROFILE DISPLAYING TROOP ACCOMMODATIONS




INBOARD PROFILE DISPLAYING WELL DECK, MEZZANINE DECK, SUPER DECK, HELO DECK AND PORTABLE RAMP

4-14-81-36

## SHIP'S LOADING CHARACTERISTICS

The LSD-28 is designed to load and transport landing craft and vehicles with attendant personnel in amphibious operations. Major spaces for carrying vehicles and/or cargo or conducting helicopter operations are the helicopter platform, the super deck, the mezzanine deck and the wet well deck. The mezzanine deck, super deck and helicopter platform are constructed so that they can be removed and stored ashore should assigned operations dictate. Mezzanine decks are frequently removed but super-decks and helicopter platforms are rarely removed. Vehicles may be loaded aboard via landing craft into the wet well deck or lifted aboard by crane to the superdeck for transit via ramps to other decks for storage. The well deck is capable of accommodating all types of landing craft and amphibian vehicles currently in the amphibious forces inventory. Vehicles stored in the well deck should be at least 50 ft forward of any

landing craft to minimize potential salt water immersion during ballasting operations. There are no designated general cargo stowage spaces aboard the LSD-28; however, cargo with proper preservation may be stowed on the mezzanine deck. Two magazines are available for storing troop ammunition.

SHIP'S BOATS:

LCPL . . . . . 2
LCVP . . . . . 2

BERTHING ACCOMMODATIONS:

| | Officer | CPO/SNCO | Other Enlisted | Surge | Total |
|---|---|---|---|---|---|
| Ship's Company | 20 | 18 | 323 | --- | 361 |
| Landing Force | 29 | 12 | 283 | --- | 324 |

CRANES:

| Rigs | Lift Capacity | Lift Cycle Time |
|---|---|---|
| Port Crane | 50 S/T | 6 min |
| Starboard Crane | 50 S/T | 6 min |

LOADING PLAN OPTIONS

I. Well Deck: 1 LCU, 2 LCM-6s, 2 LCM-8s aft, vehicles forward
Mezzanine Deck: vehicles
Super Deck: vehicles

II. Well Deck: 1 LCU, 5 LCM-6s aft, vehicles forward
Mezzanine Deck: cargo
Super Deck: vehicles

III. Well Deck: 2 LCACs aft, vehicles forward
Mezzanine Deck: vehicles
Super Deck: vehicles

IV. Well Deck: 24 LVTs aft, vehicles forward
Mezzanine Deck: vehicles
Super Deck: vehicles

V. Well Deck: 24 LVTs aft, vehicles forward
Mezzanine Deck: cargo
Super Deck: vehicles

VI. Well Deck: 6 LCM-6s aft, vehicles forward
Mezzanine Deck: vehicles
Super Deck: vehicles

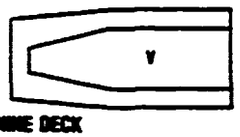
VII. Well Deck: 12 LCM-6s aft, vehicles forward
Mezzanine Deck: vehicles
Super Deck: vehicles

VIII. Well Deck: 3 LCACs aft, 12 LVTs and vehicles forward
No Mezzanine Deck
Super Deck: vehicles

IX. Well Deck: 4 causeways aft, vehicles forward
Mezzanine Deck: vehicles
Super Deck: vehicles

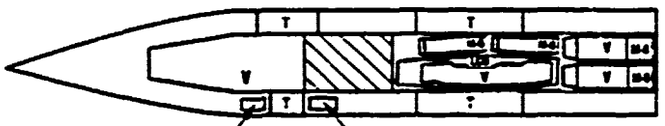
X. Well Deck: 99 containers
Mezzanine Deck: cargo
Super Deck: vehicles

## LSD-28
## LOADING PLAN OPTION I




MEZZANINE DECK

1-189-2-M

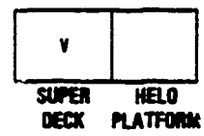


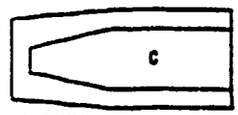

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK FUEL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STOWAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-46W | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.32 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 4.47 | | | | | | | | | | | | | | | | | |
| 1-189-2-M | | | 3.85 | | | | | | | | | | | | | | | | |
| 3-84-2-M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-188-2-M | | | 3.98 | | | | | | | | | | | | | | | | |
| WELL | | 4.24 | | | | | 2 | 2 | | 1 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 326 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 2.11 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 114 | | 38.0 | | | | | | | | | | | | | |
| TOTALS | 326 | 14.86 | 2.12 | 114 | | 38.0 | 2 | 2 | | 1 | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-37

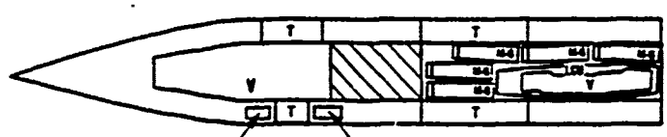
## LSD-28
## LOADING PLAN OPTION II




MEZZANINE DECK

1-189-2-M



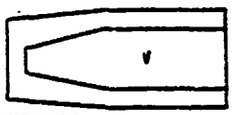

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-6 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.32 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | 11.69 | | | | | | | | | | | | | | | | |
| 1-189-2-M | | | 0.86 | | | | | | | | | | | | | | | | |
| 3-84-2-M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-168-2-M | | | 0.56 | | | | | | | | | | | | | | | | |
| WELL | | 4.15 | | | | | 5 | | | 1 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 224 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 3.81 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 11.4 | | 38.8 | | | | | | | | | | | | | |
| TOTALS | 224 | 9.48 | 13.19 | 11.4 | | 38.8 | 5 | | | 1 | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-36

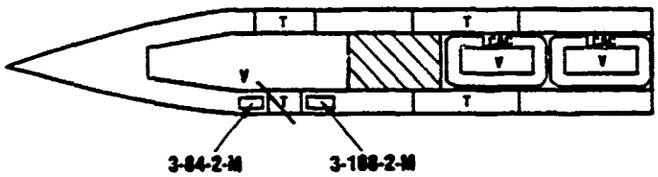
## LSD-28
## LOADING PLAN OPTION III

SUPER DECK — HELO PLATFORM




MEZZANINE DECK

1-189-2-M



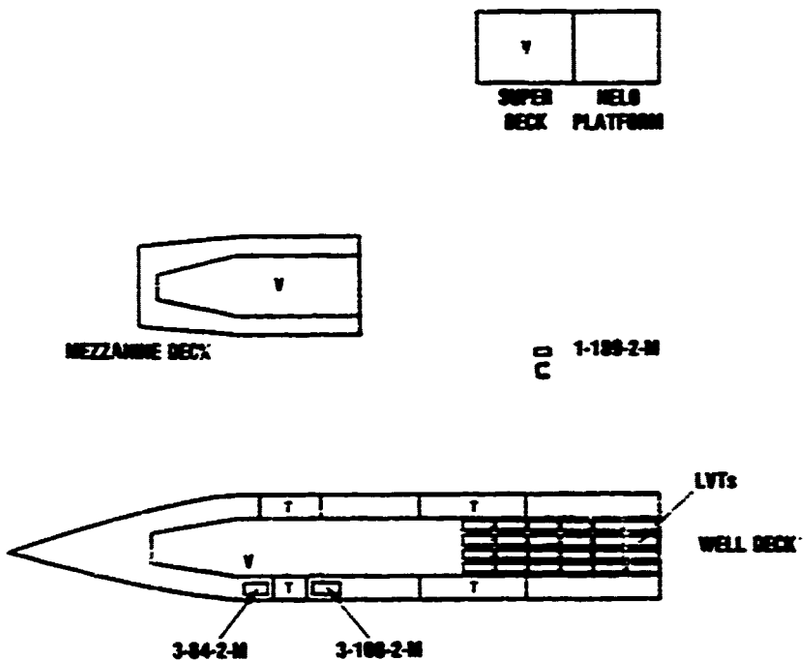

WELL DECK

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | JP-2 | JP-5 | LCM-6 | LCM-8 | LCM-6 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-46/H | CH-46B | CH-53B | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.32 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 4.47 | | | | | | | | | | | | | | | | | |
| 1-189-2-M | | | 9.86 | | | | | | | | | | | | | | | | |
| 3-84-2-M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-188-2-M | | | 8.98 | | | | | | | | | | | | | | | | |
| WELL | | 5.87 | | | | | | | | | 2 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 324 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 2.71 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 11.4 | | 35.0 | | | | | | | | | | | | | |
| TOTALS | 324 | 15.37 | 2.12 | 11.4 | | 35.0 | | | | | 2 | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-30

## LSD-28
## LOADING PLAN OPTION IV

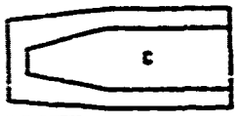



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK FBL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-9 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | CH-46D | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.32 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 4.47 | | | | | | | | | | | | | | | | | |
| 1-189-2-M | | | 3.85 | | | | | | | | | | | | | | | | |
| 3-84-2-M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-108-2-M | | | 3.50 | | | | | | | | | | | | | | | | |
| WELL | | 15.43[4] | | | | | | | | | | | | 24 | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 324 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 11.4 | | 30.0 | | | | | | | | | | | | | |
| TOTALS | 324 | 22.22 | 2.12 | 11.4 | | 30.0 | | | | | | | | 24 | | | | | |

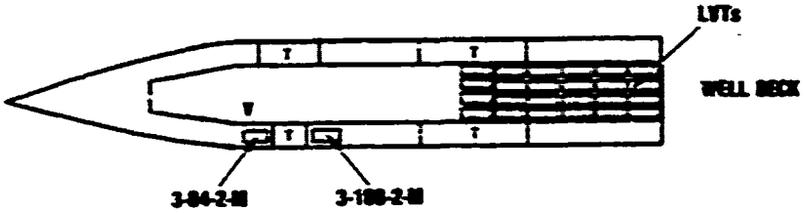
NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk FBL is in thousands of gallons.
4 Amphibian square is included in well deck square.

4-14-81-40

## LSD-28
## LOADING PLAN OPTION V




1-188-2-M



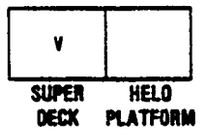

| DECK | TROOPS [1] | CARGO [2] | | SUBS FUEL [3] | | | LANDING CRAFT | | | | | | | AMPHIBIOUS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | | | | | | | | | | | | | | | | | | |
| SUPER | | [illegible] | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | [illegible] | | | | | | | | | | | | | | | | |
| [illegible] | | | [illegible] | | | | | | | | | | | | | | | | |
| [illegible] | | | [illegible] | | | | | | | | | | | | | | | | |
| [illegible] | | | [illegible] | | | | | | | | | | | | | | | | |
| WELL | | [illegible] [4] | | | | | | | | | | | | [illegible] | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| [illegible] | [illegible] | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| [illegible] | | | | [illegible] | [illegible] | | | | | | | | | | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | | | | | | | | [illegible] | | | | | |

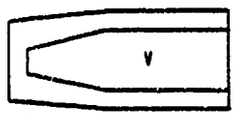
NOTES: [1] Values are in thousands of square feet.
[2] Cargo is in thousands of cubic feet.
[3] Sub FOL is in thousands of gallons.
[4] Amphibious square is included in well deck square.

NOTE: Cargo storage on expansion deck is constrained by weight limitation of [illegible] short. Cargo capacity is calculated using a density of [illegible] lb/ft³.

4-14-81-41

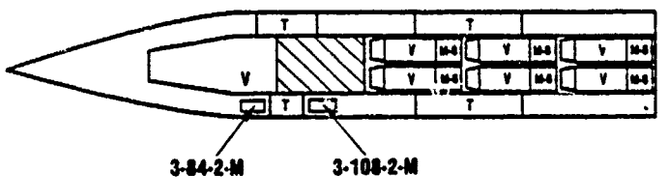
# LSD-28
## LOADING PLAN OPTION VI




MEZZANINE DECK

1-189-2-M




WELL DECK

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-6 | LCM-6 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.32 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 4.47 | | | | | | | | | | | | | | | | | |
| 1-189-2-M | | | 0.86 | | | | | | | | | | | | | | | | |
| 3-84-2-M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-108-2-M | | | 0.88 | | | | | | | | | | | | | | | | |
| WELL | | 4.22 | | | | | | 6 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 324 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 3.04 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 11.4 | | 38.8 | | | | | | | | | | | | | |
| TOTALS | 324 | 14.05 | 2.12 | 11.4 | | 38.8 | | 6 | | | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.

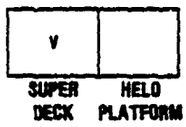
2 Cargo is in thousands of cubic feet.

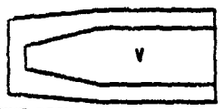
3 Bulk POL is in thousands of gallons.

4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-42

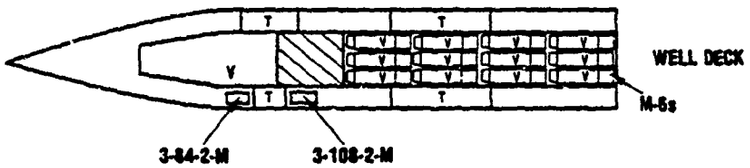
# LSD-28
# LOADING PLAN OPTION VII




MEZZANINE DECK

1-189-2-M




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-9 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.32 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 4.47 | | | | | | | | | | | | | | | | | |
| 1-189-2-M | | | 0.86 | | | | | | | | | | | | | | | | |
| 3-84-2-M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-108-2-M | | | 0.98 | | | | | | | | | | | | | | | | |
| WELL | | 4.14 | | | | | 12 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 324 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 3.88 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 11.4 | | 39.8 | | | | | | | | | | | | | |
| TOTALS | 324 | 14.98 | 2.12 | 11.4 | | 39.8 | 12 | | | | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.

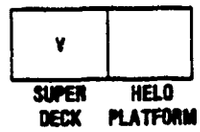
2 Cargo is in thousands of cubic feet.

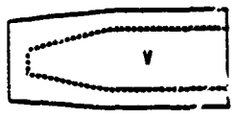
3 Bulk POL is in thousands of gallons.

4 The cargo stows of boats in well deck are limited with vehicles.

4-14-81-43

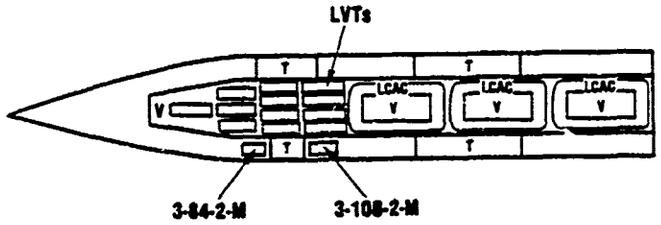
# LSD-28
## LOADING PLAN OPTION VIII




MEZZANINE DECK REMOVED

1-189-2-M




WELL DECK

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-9 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.32 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | | | | | | | | | | | | | | | | | |
| 1-189-2-M | | | 0.85 | | | | | | | | | | | | | | | | |
| 3-84-2-M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-108-2-M | | | 0.98 | | | | | | | | | | | | | | | | |
| WELL | | 4.22[4] | | | | | | | | | 3 | | | 12 | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 324 | | | | | | | | | | | | | | | | | | |
| BOATS[5] | | 4.07 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 11.4 | | 39.9 | | | | | | | | | | | | | |
| TOTALS | 324 | 10.61 | 2.12 | 11.4 | | 39.9 | | | | | 3 | | | 12 | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.

2 Cargo is in thousands of cubic feet.

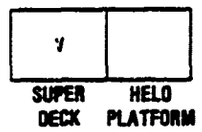
3 Bulk POL is in thousands of gallons.

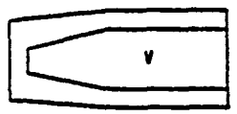
4 Amphibian square is included in well deck vehicle square.

5 The cargo areas of boats in well deck are loaded with vehicles.

4-14-81-44

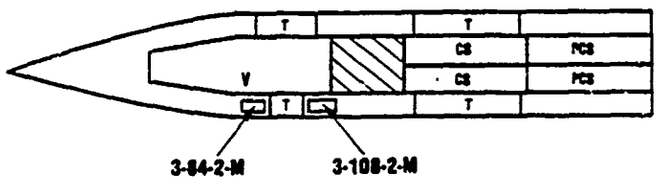
# LSD-28
# LOADING PLAN OPTION IX




MEZZANINE DECK

1-189-2-M



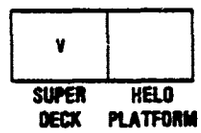

WELL DECK

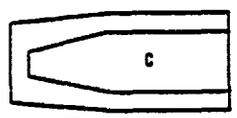
| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.32 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 4.47 | | | | | | | | | | | | | | | | | |
| 1-189-2-M | | | 0.86 | | | | | | | | | | | | | | | | |
| 3-84-2-M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-108-2-M | | | 0.99 | | | | | | | | | | | | | | | | |
| WELL | | 8.71 | | | | | | | | | | 2 | 2 | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 324 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 4.75 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 114 | | 38.8 | | | | | | | | | | | | | |
| TOTALS | 324 | 20.25 | 2.12 | 114 | | 38.8 | | | | | | 2 | 2 | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.

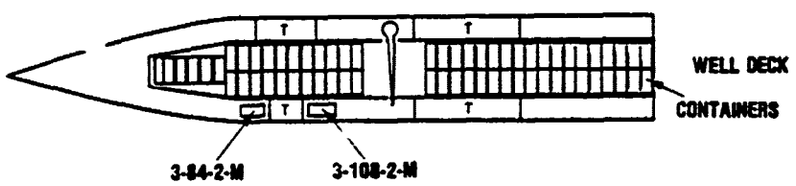
4-14-81-48

# LSD-28
# LOADING PLAN OPTION X




1-189-2-M



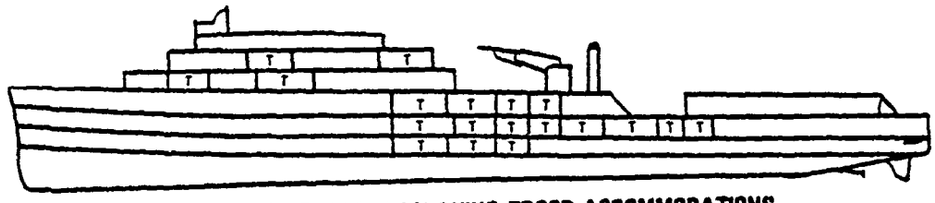

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.32 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | 11.07 | | | | | | | | | | | | | | | | |
| 1-189-2-M | | | 0.05 | | | | | | | | | | | | | | | | |
| 3-84-2-M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-108-2-M | | | 0.98 | | | | | | | | | | | | | | | | |
| WELL | | | 77.72 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 324 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 114 | | 38.0 | | | | | | | | | | | | | |
| TOTALS | 324 | 2.32 | 90.91 | 114 | | 38.0 | | | | | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.

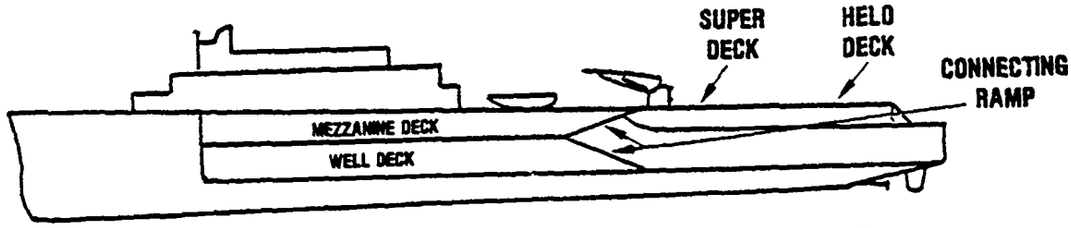
NOTE: Cargo stowage on mezzanine deck is constrained by weight limitation of 140 s/tons. Cargo capacity is estimated using a density of 25.3 lbs/ft$^3$.

4-14-81.46

LSD-36



OUTBOARD PROFILE DISPLAYING TROOP ACCOMMODATIONS




INBOARD PROFILE DISPLAYING WELL DECK, MEZZANINE DECK, HELO DECK, SUPER DECK AND CONNECTING RAMPS

4-14-81-47

## SHIP'S LOADING CHARACTERISTICS

The LSD-36 is designed to load and transport landing craft and vehicles with attendant personnel in amphibious operations. Major spaces for carrying vehicles and/or cargo or conducting helicopter operations are the helicopter platform, the superdeck, the mezzanine deck and the wet well deck. The mezzanine deck, superdeck and helicopter platform are constructed so that they can be removed and stored ashore should assigned operations dictate. Mezzanine decks are frequently removed but superdecks and helicopter platforms are rarely removed. Vehicles may be loaded via landing craft into the wet well decks or lifted abcard by crane to the superdeck for transit via ramps, to other decks for stowage. This ship has an LCM-6 which is organic and stowed on the wingwall forward of the superdeck. The well

deck is capable of accommodating all types of landing craft and amphibian vehicles currently in the amphibious forces inventory. Vehicles stowed in the well deck should be at least 50 ft forward of any landing craft to minimize potential salt-water immersion during ballasting operations. There are no designated general cargo stowage spaces aboard the LSD-36; however, cargo with proper preservation may be stowed on the mezzanine deck. Two magazines are available for stowing troop ammunition.

SHIP'S BOATS:

LVCP . . . . . 1
LCPL . . . . . 2
LCM-6 . . . . . 1

BERTHING ACCOMMODATIONS:

| | Officer | CPO/SNCO | Other Enlisted | Surge | Total |
|---|---|---|---|---|---|
| Ship's Company | 26 | 25 | 408 | --- | 459 |
| Landing Force | 25 | 8 | 304 | --- | 337 |

CRANES:

| Rigs | Lift Capacity | Lift Cycle Time |
|---|---|---|
| Single Whip | 20 S/T | 4 min |
| Double Whip | 50 S/T | 7 min |

LOADING PLAN OPTIONS

I. Well Deck: 2 LCUs, 4 LCM-6s aft, vehicles forward.
Mezz Deck: Vehicles. Super Deck: vehicles.

II. Well Deck: 6 LCM-8s aft, vehicles forward.
Mezz Deck: vehicles. Super Deck: vehicles.

III. Well Deck: 2 LCACs aft, vehicles forward.
Mezz Deck: vehicles. Super Deck: vehicles.

IV. Well Deck: 22 LVTs aft, vehicles forward.
Mezz Deck: vehicles. Super Deck: vehicles.

V. 1 LCU, 2 LCM-6s, 2 LCM-8s aft, vehicles forward.
Mezz Deck: cargo. Super Deck: vehicles.

VI. Well Deck: 2 LCACs aft, vehicles forward.
Mezz Deck: cargo. Super Deck: 2 LCM-6s, vehicles.

VII. Well Deck: 22 LVTs aft, vehicles forward.
Mezz Deck: cargo. Super Deck: vehicles.

VIII. Well Deck: 3 LCUs, 6 LCM-6s.
Mezz Deck: removed. Super Deck: vehicles.

IX. Well Deck: 3 LCACs aft, vehicles forward.
Mezz Deck: removed. Super Deck: vehicles.

X. Well Deck: 10 LCM-8s.
Mezz. Deck: removed. Super Deck: vehicles

XI. Well Deck: 6 LCM-9s.
Mezz Deck: removed. Super Deck: vehicles.

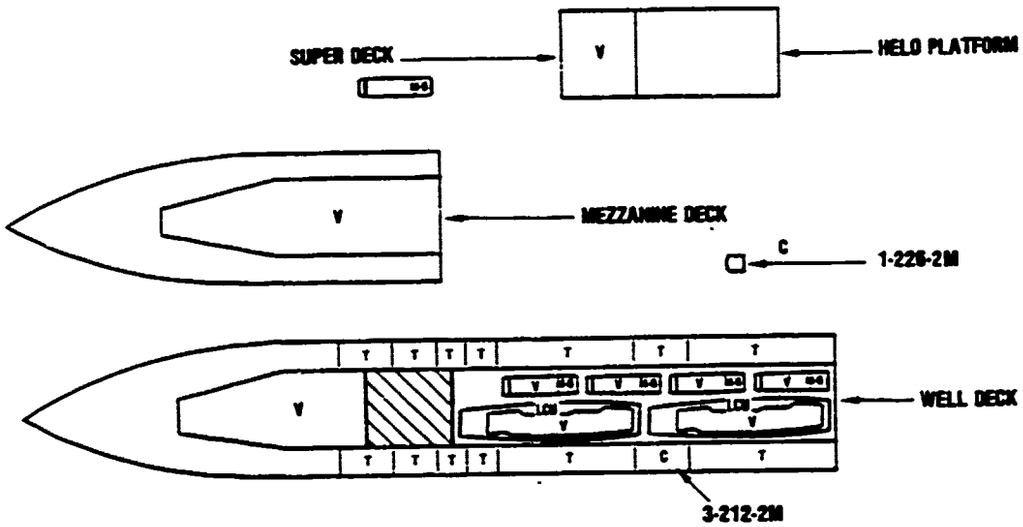
XII. Well Deck: 3 LCACs each loaded with 2 LVTs.
Mezz Deck: removed. Super Deck: vehicles.

XIII. Well Deck: 22 LVAs aft, vehicles forward.
Mezz Deck: vehicles. Super Deck: vehicles

XIV. Well Deck: 8 causeways, 4 loaded with vehicles.
Mezz Deck: vehicles. Super Deck: vehicles.

XV. Well Deck: 111 containers
Mezz Deck: cargo

# LSD-36
# LOADING PLAN OPTION I




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK FUEL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-6 | LCM-6 | LCM-1000 | LCAC | CS | PCS | LVT | LVA | CH-46/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.27 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 5.30 | | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.90 | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 8.30 | | | | | | | | | | | | | | | | |
| WELL | | 3.33 | | | | | 4 | | | 2 | | | | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 4.20 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.0 | | 30.0 | | | | | | | | | | | | | |
| TOTALS | 337 | 15.30 | 1.90 | 2.0 | | 30.0 | 5 | | | 2 | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.

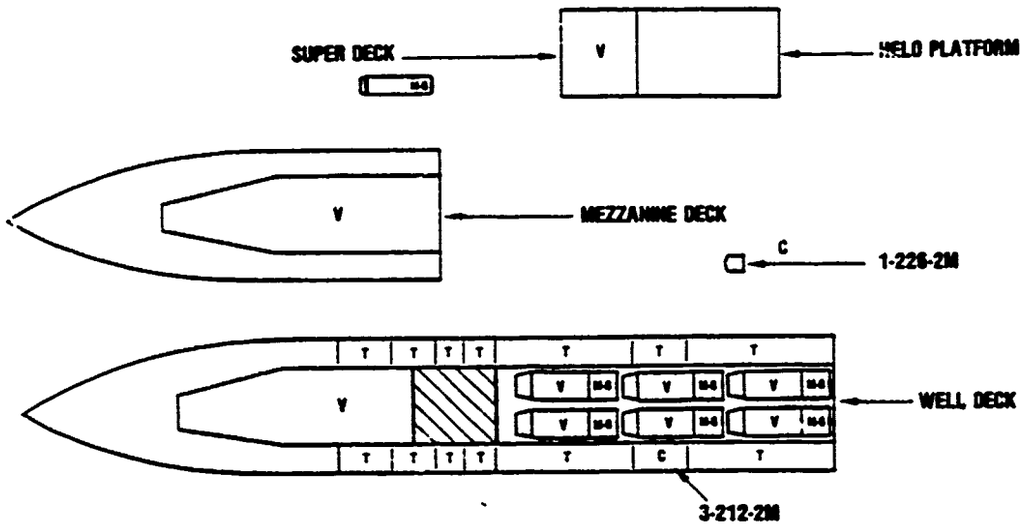
2 Cargo is in thousands of cubic feet.

3 Bulk POL is in thousands of gallons.

4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-08

# LSD-36
# LOADING PLAN OPTION II

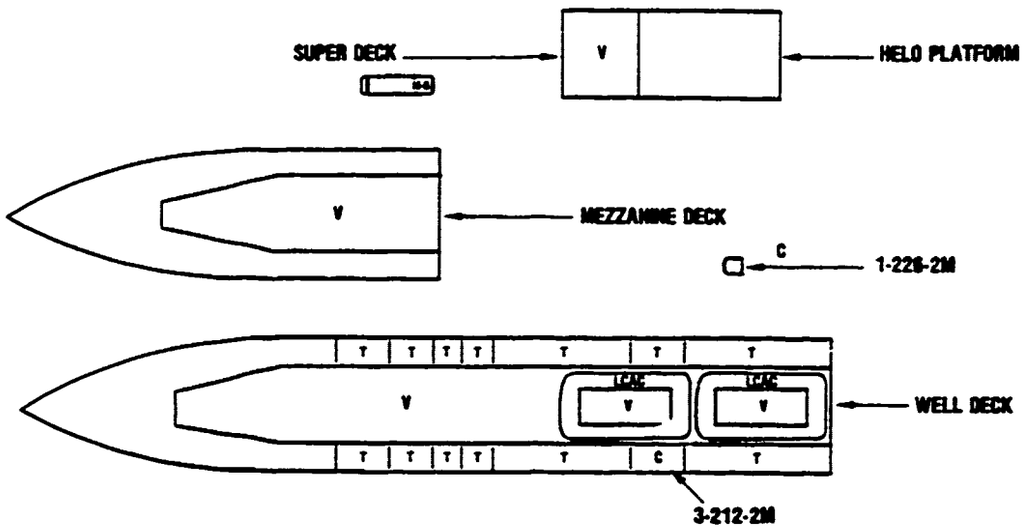



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | | LVT | LVA | UH-60M | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.77 | | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 5.98 | | | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.88 | | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 0.18 | | | | | | | | | | | | | | | | | |
| WELL | | 5.43 | | | | | | 6 | | | | | | | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 3.84 | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.8 | | 38.9 | | | | | | | | | | | | | | |
| TOTALS | 337 | 18.24 | 1.98 | 2.8 | | 38.9 | 1 | 6 | | | | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-4B

## LSD-36
## LOADING PLAN OPTION III

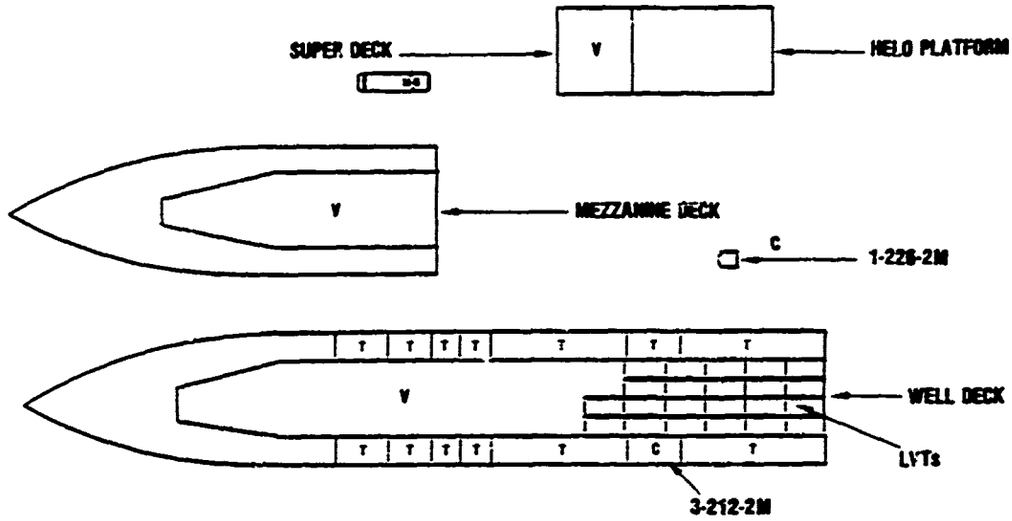



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STOWAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-6 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.77 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 5.58 | | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.80 | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 8.10 | | | | | | | | | | | | | | | | |
| WELL | | 8.67 | | | | | | | | | 2 | | | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 207 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 2.71 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.8 | | 38.8 | | | | | | | | | | | | | |
| TOTALS | 207 | 19.15 | 1.80 | 2.8 | | 38.8 | 1 | | | | 2 | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are limited with vehicles.

4-14-81-40

## LSD-36
## LOADING PLAN OPTION IV

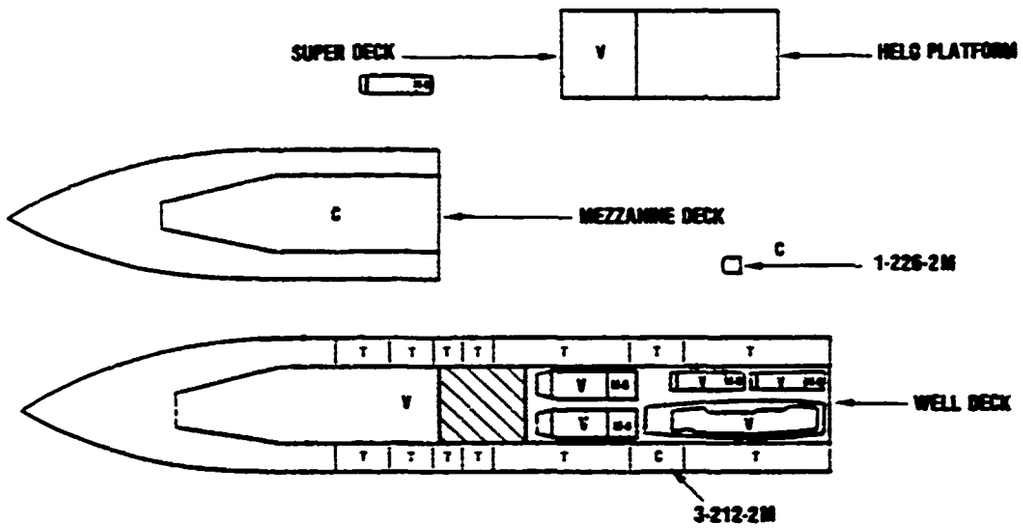



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIOUS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-6 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.77 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 5.98 | | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.89 | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 8.16 | | | | | | | | | | | | | | | | |
| WELL | | 17.88[4] | | | | | | | | | | | | 22 | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.8 | | 38.9 | | | | | | | | | | | | | |
| TOTALS | 337 | 25.66 | 1.98 | 2.8 | | 38.9 | 1 | | | | | | | 22 | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Amphibious square is included in well deck vehicle square.

4-14-81-00

## LSD-36
## LOADING PLAN OPTION V




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | JP-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | [illegible] | [illegible] | [illegible] | [illegible] |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.27 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | 15.[illegible] | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.[illegible] | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 9.[illegible] | | | | | | | | | | | | | | | | |
| WELL | | 5.74 | | | | | 2 | 2 | | 1 | | | | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 3.11 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.[illegible] | | [illegible] | | | | | | | | | | | | | |
| TOTALS | 337 | 11.12 | 17.[illegible] | 2.[illegible] | | [illegible] | 3 | 2 | | 1 | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.

2 Cargo is in thousands of cubic feet.

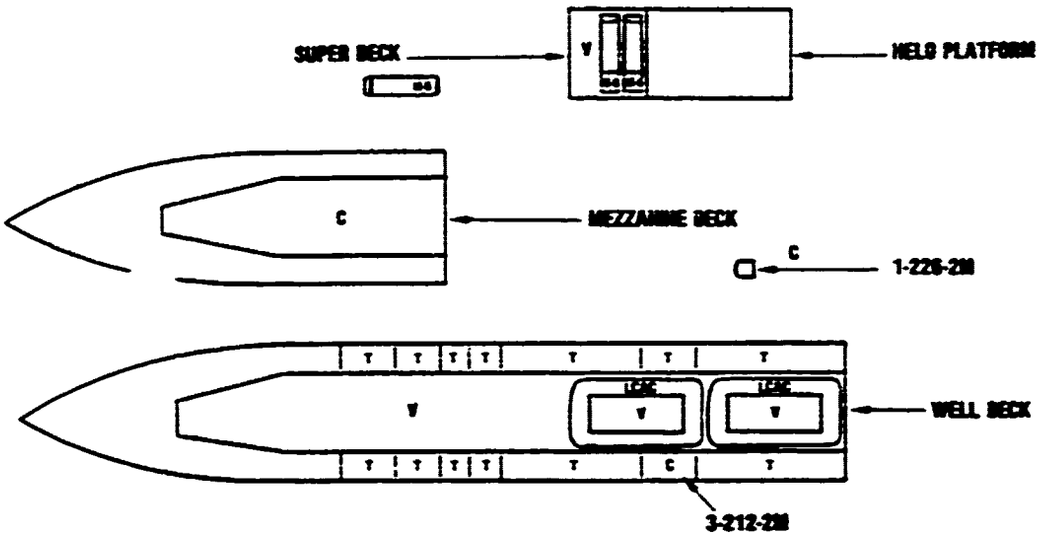
3 Bulk POL is in thousands of gallons.

4 The cargo areas of boats in well decks are mated with vehicles.

NOTE: Cargo stowage on mezzanine deck is constrained by weight limitation of 200 s/tons. Cargo capacity is estimated using a density of 25.3 lbs/ft$^3$.

4-14-81-61

# LSD-36
## LOADING PLAN OPTION VI



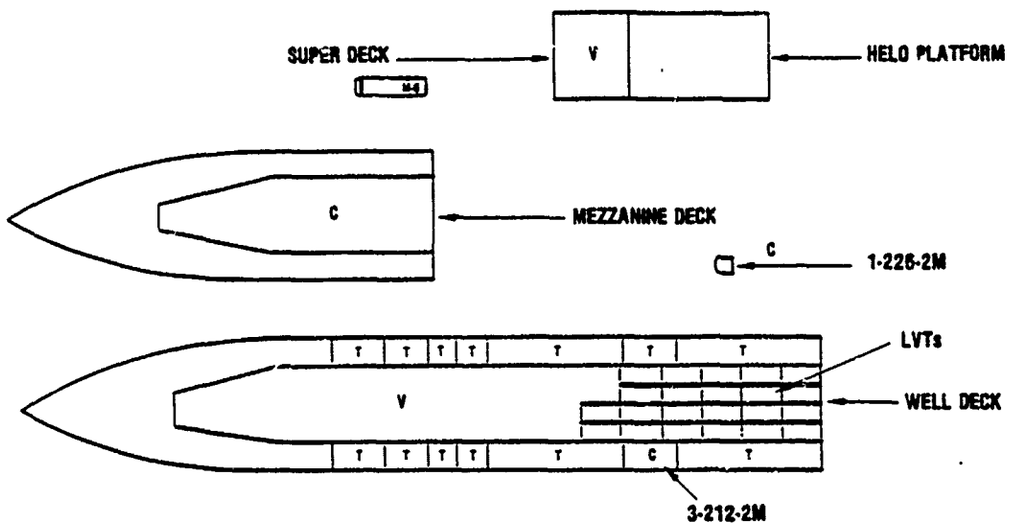

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK FOL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-9 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | [illegible] | [illegible] | [illegible] | [illegible] |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 9.70 | | | | | 2 | | | | | | | | | | | | |
| MEZZANINE | | | 15.01 | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.00 | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 9.70 | | | | | | | | | | | | | | | | |
| WELL | | 9.57 | | | | | | | | | 2 | | | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BORROWS | 3.97 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 2.71 | | | | | | | | | | | | | | | | | |
| CHANGE | | | | 2.8 | | 39.9 | | | | | | | | | | | | | |
| TOTALS | 3.97 | 12.38 | 17.00 | 2.8 | | 39.9 | 3 | | | | 2 | | | | | | | | |

NOTES: [1] Vehicles are in thousands of square feet.
[2] Cargo is in thousands of cubic feet.
[3] Bulk FOL is in thousands of gallons.
[4] The cargo areas of boats in well decks are loaded with vehicles.

NOTE: Cargo stowage on Mezzanine deck is constrained by weight [illegible] of 200 [illegible]. Cargo capacity is estimated using a density of 25.3 lbs/ft$^3$.

4-14-81-02

## LSD-36
## LOADING PLAN OPTION VII



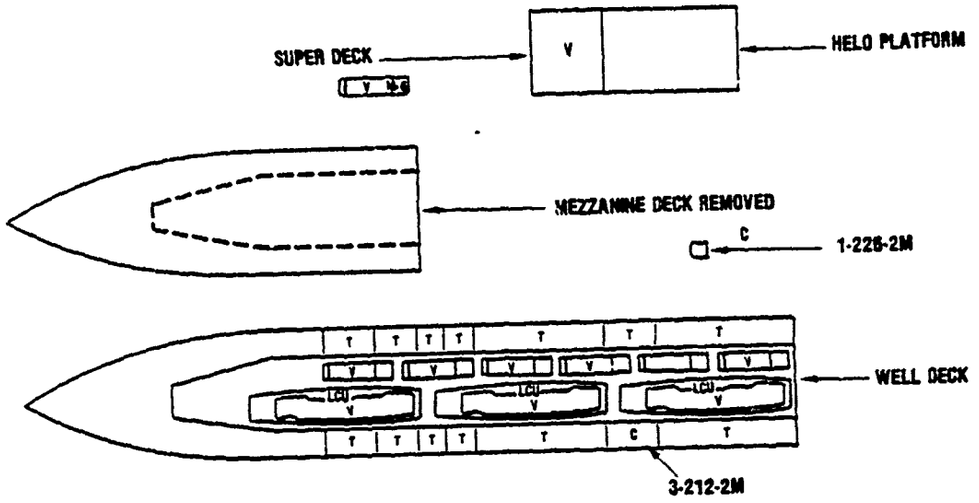

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | UF 2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-10/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.27 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | 15.81 | | | | | | | | | | | | | | | | |
| 3-212 2M | | | 1.80 | | | | | | | | | | | | | | | | |
| 1 226-2M | | | 0.10 | | | | | | | | | | | | | | | | |
| WELL | | 17.88[4] | | | | | | | | | | | | 22 | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.0 | | 30.9 | | | | | | | | | | | | | |
| TOTALS | 337 | 20.15 | 17.88 | 2.0 | | 30.9 | 1 | | | | | | | 22 | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Amphibian square is included in well deck vehicle square.

NOTE: Cargo stowage on [illegible] deck is constrained by weight limitation of 200 [illegible] density is estimated using a density of 25.3 lbs/

4-14-81-63

## LSD-36
## LOADING PLAN OPTION VIII

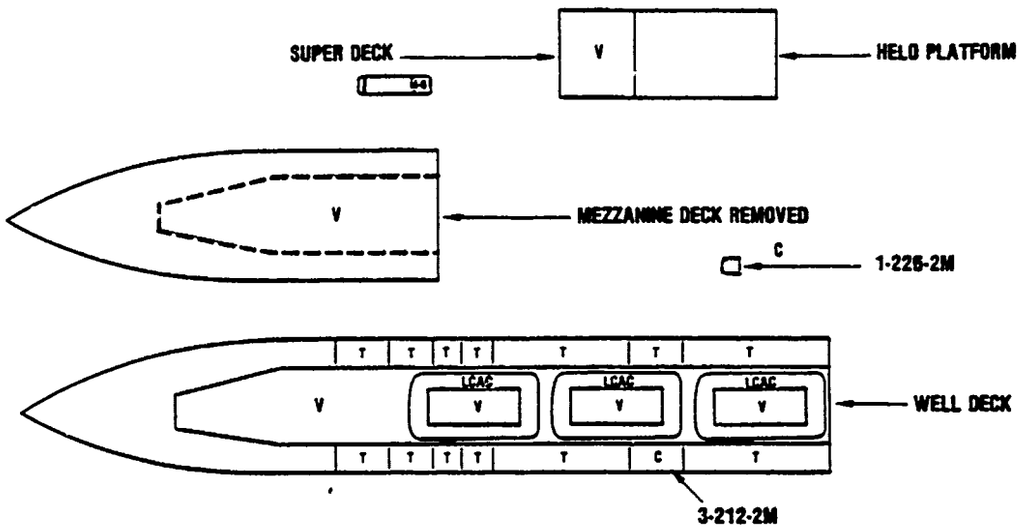



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| S-212M | | 2.27 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.30 | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 0.18 | | | | | | | | | | | | | | | | |
| WELL | | | | | | | 6 | | | 3 | | | | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 0.29 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.0 | | 30.0 | | | | | | | | | | | | | |
| TOTALS | 337 | 0.56 | 1.30 | 2.0 | | 30.0 | 7 | | | 3 | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-64

## LSD-36
## LOADING PLAN OPTION IX

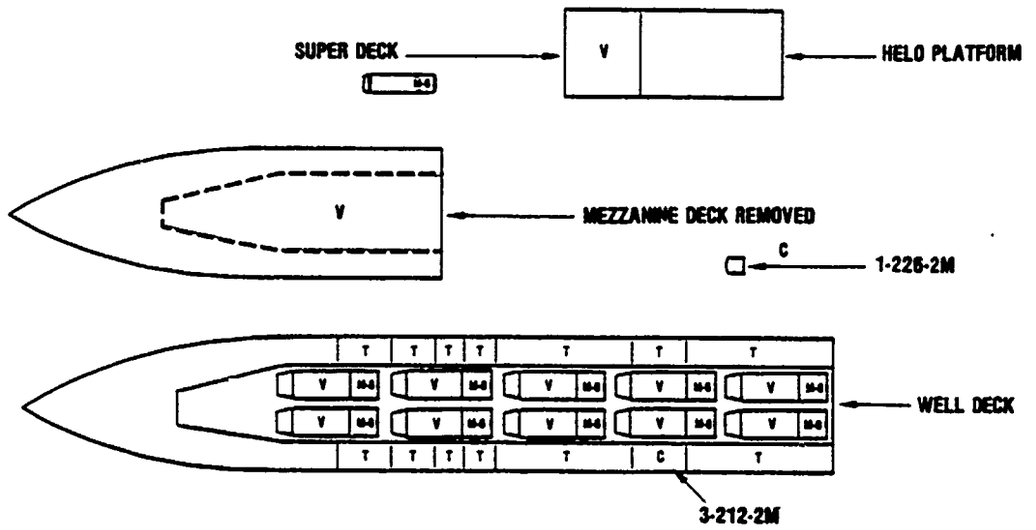



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/N | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.27 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.88 | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 0.16 | | | | | | | | | | | | | | | | |
| WELL | | 4.79 | | | | | | | | | 3 | | | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 4.08 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.0 | | 38.9 | | | | | | | | | | | | | |
| TOTALS | 337 | 11.15 | 1.98 | 2.0 | | 38.9 | 1 | | | | 3 | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-68

## LSD-36
## LOADING PLAN OPTION X

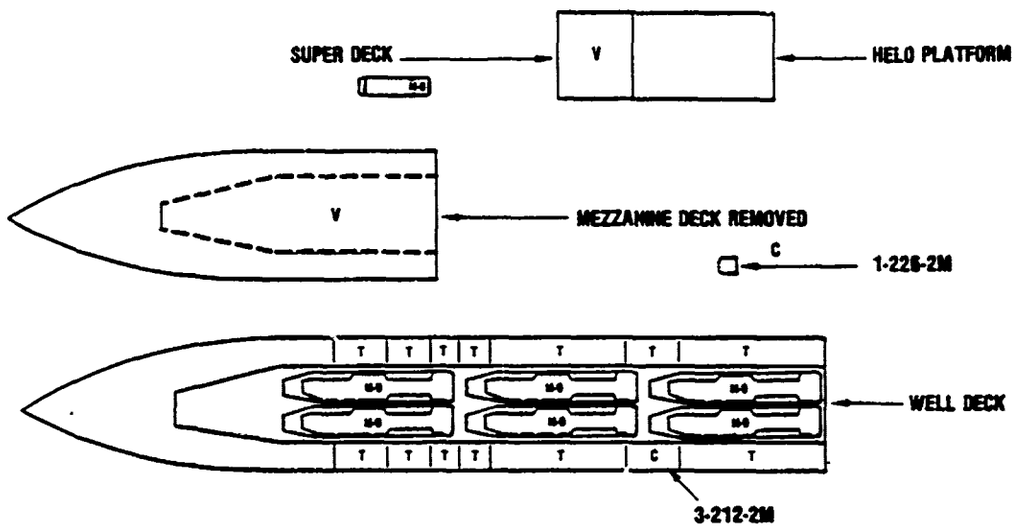



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-6 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 7.27 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | | | | | | | | | | | | | | | | | |
| 3-212 2M | | | 1.88 | | | | | | | | | | | | | | | | |
| 1 226-2M | | | 0.16 | | | | | | | | | | | | | | | | |
| WELL | | | | | | | | 18 | | | | | | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 5.82 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.8 | | 38.9 | | | | | | | | | | | | | |
| TOTALS | 337 | 7.27 | 1.99 | 2.8 | | 38.9 | 1 | 18 | | | | | | | | | | | |

NOTES: [1] Vehicles are in thousands of square feet.
[2] Cargo is in thousands of cubic feet.
[3] Bulk POL is in thousands of gallons.
[4] The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-66

# LSD-36
# LOADING PLAN OPTION XI

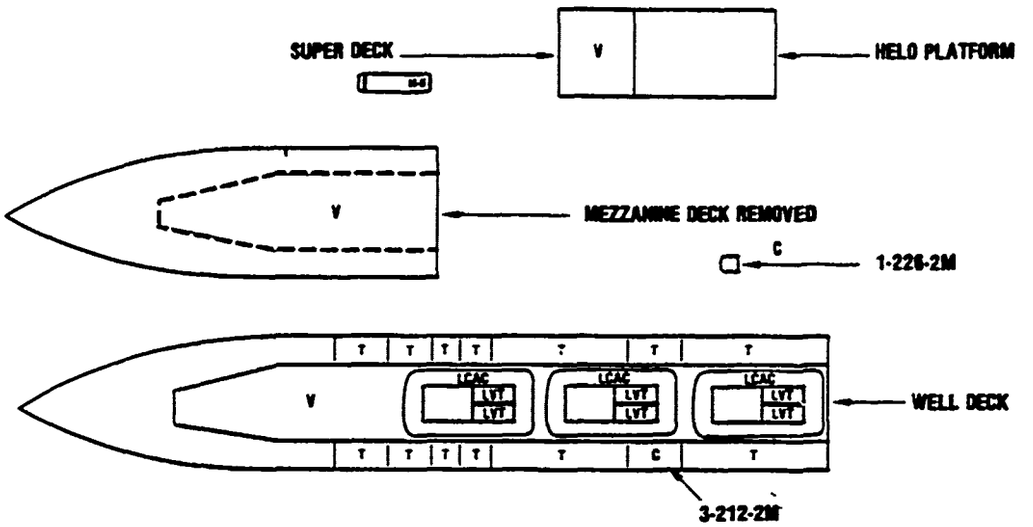



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STOWAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.27 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.88 | | | | | | | | | | | | | | | | |
| 1-279-2M | | | 8.10 | | | | | | | | | | | | | | | | |
| WELL | | | | | | | | | 6 | | | | | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 9.28 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.8 | | 38.9 | | | | | | | | | | | | | |
| TOTALS | 337 | 8.47 | 1.38 | 2.8 | | 38.9 | 1 | | 6 | | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-67

## LSD-36
## LOADING PLAN OPTION XII

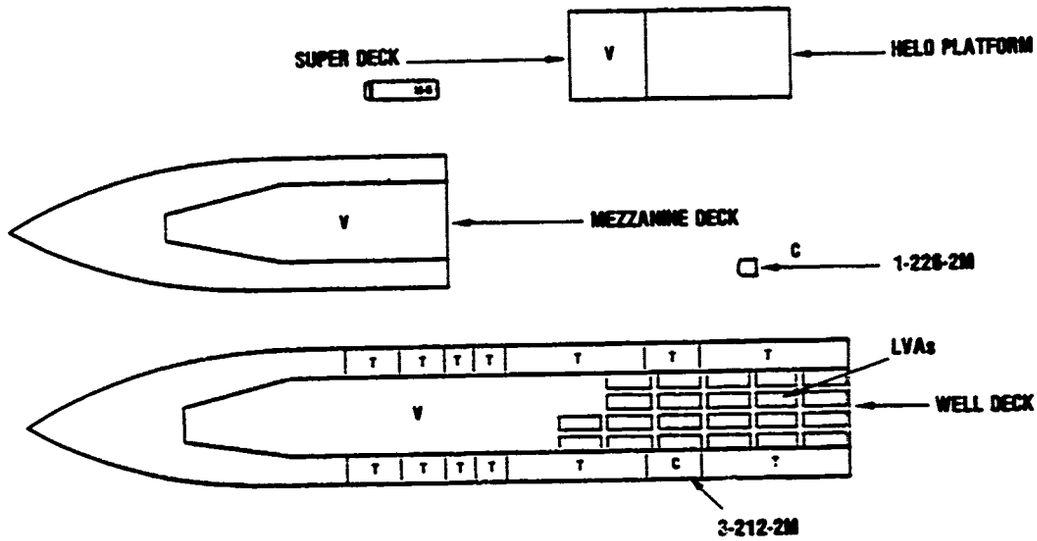



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.27 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.80 | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 0.10 | | | | | | | | | | | | | | | | |
| WELL | | 4.70 | | | | | | | | | 3 | | | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 1.67[5] | | | | | | | | | | | | 6 | | | | | |
| TANKAGE | | | | 2.8 | | 38.9 | | | | | | | | | | | | | |
| TOTALS | 337 | 8.73 | 1.90 | 2.8 | | 38.9 | 1 | | | | 3 | | | 6 | | | | | |

NOTES: [1] Vehicles are in thousands of square feet.
[2] Cargo is in thousands of cubic feet.
[3] Bulk POL is in thousands of gallons.
[4] The cargo areas of boats in well decks are loaded with vehicles.
[5] LVTs loaded in LCACs entered as vehicle square.

4-14-81-00

# LSD-36
# LOADING PLAN OPTION XIII

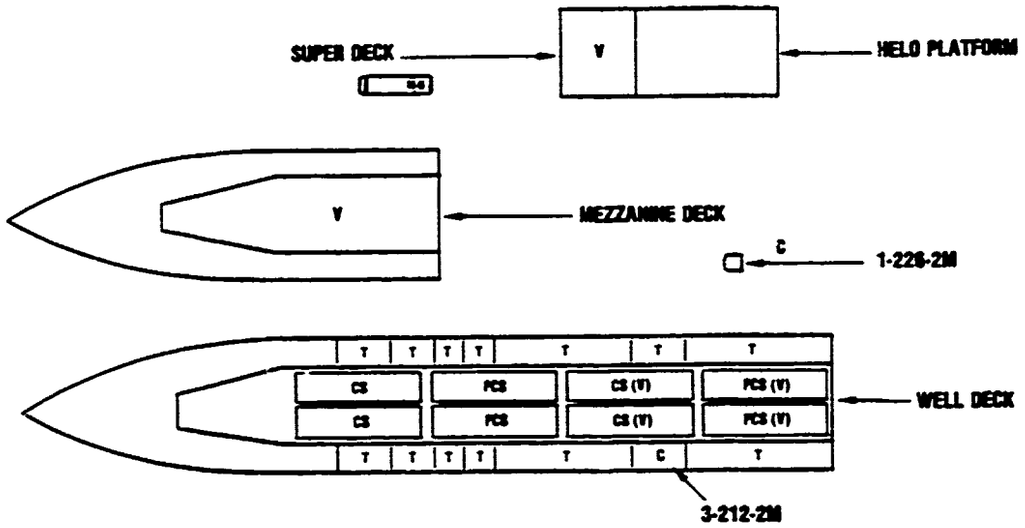



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.27 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 5.98 | | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.89 | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 8.10 | | | | | | | | | | | | 22 | | | | |
| WELL | | 16.80[4] | | | | | | | | | | | | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.8 | | 38.9 | | | | | | | | | 22 | | | | |
| TOTALS | 337 | 24.80 | 1.98 | 2.8 | | 38.9 | 1 | | | | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Amphibian square is included in well deck vehicle square.

4-14-81-60

# LSD-36
# LOADING PLAN OPTION XIV

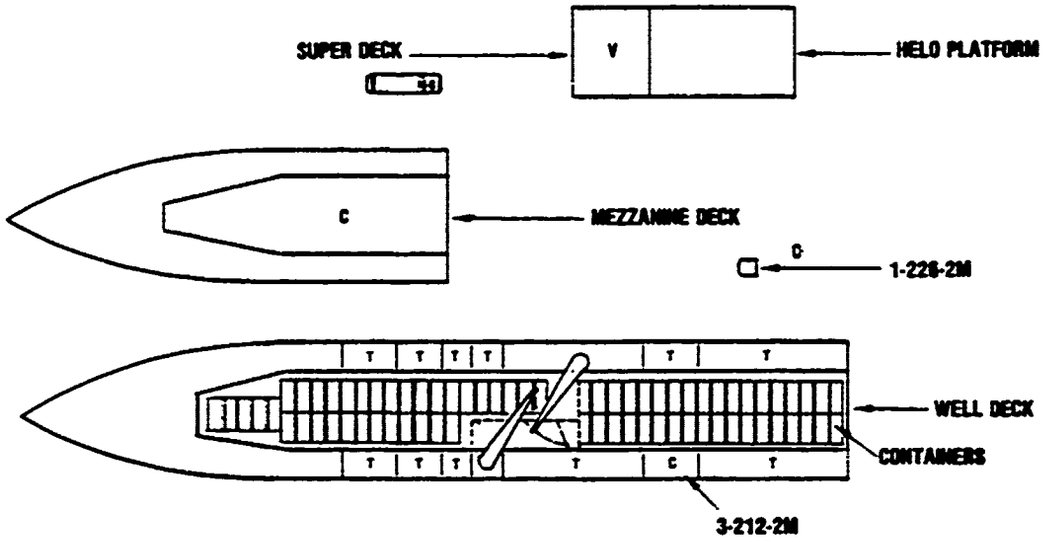



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK FUEL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF2 | JP-5 | LCM-8 | LCM-6 | LCM-8 | LCM-1600 | LCAC | CS | PCS | LVT | LVA | UH-60A | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.27 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | 5.98 | | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.80 | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 8.10 | | | | | | | | | | | | | | | | |
| WELL | | | | | | | | | | | | 4 | 4 | | | | | | |
| WEATHER | | | | | | | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 5.02[5] | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.8 | | 38.9 | | | | | | | | | | | | | |
| TOTALS | 337 | 12.79 | 1.90 | 2.8 | | 38.9 | 1 | | | | | 4 | 4 | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.
5 Four causeways aft of mezz deck loaded with vehicles.
Vehicle load per causeway cannot exceed 60 short tons.

4-14-81-61

## LSD-36
## LOADING PLAN OPTION XV



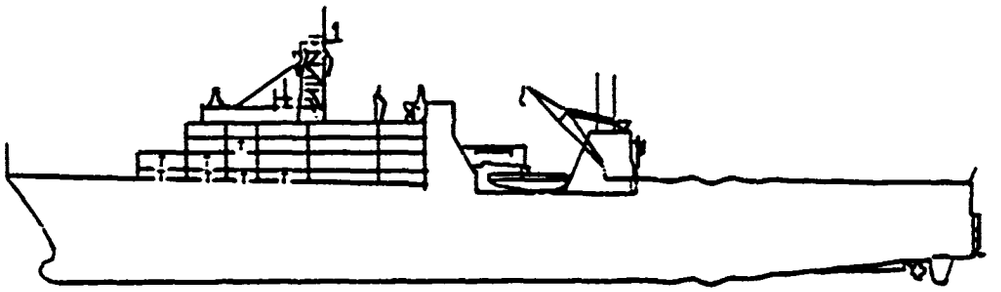

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK FUEL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-46A | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 2.27 | | | | | | | | | | | | | | | | | |
| MEZZANINE | | | 15.81 | | | | | | | | | | | | | | | | |
| 3-212-2M | | | 1.88 | | | | | | | | | | | | | | | | |
| 1-226-2M | | | 8.16 | | | | | | | | | | | | | | | | |
| WELL | | | 57.14 | | | | | | | | | | | | | | | | |
| WEATHER | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 337 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 2.8 | | 38.9 | | | | | | | | | | | | | |
| TOTALS | 337 | 2.27 | 104.99 | 2.8 | | 38.9 | | | | | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk FUEL is in thousands of gallons.

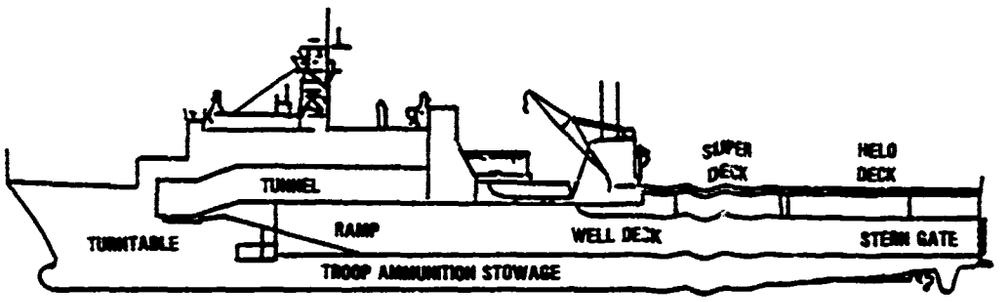
NOTE: Cargo stowage on weatherdeck is constrained by weight limitation of 200 s/tons. Cargo capacity is estimated using a density of 25.3 lbs/ft$^3$.

4-14-81-62

LSD-41



PROFILE DISPLAYING TROOP ACCOMMODATIONS




INBOARD PROFILE DISPLAYING WELL DECK, RAMP, TURNTABLE, TUNNEL, SUPER DECK, HELO DECK, AND TROOP AMMUNITION STOWAGE

4-14-81-63

## SHIP'S LOADING CHARACTERISTICS[1]

The LSD-41 is not yet under construction. The ship's design has been developed to load and transport landing craft and vehicles with attendant personnel in amphibious operations. Primary spaces for carrying vehicles and conducting helicopter operations are the helicopter deck, super deck, and the well deck. Helicopter transportable vehicles may be delivered to the helicopter deck for transit to the well deck via fixed and movable ramps, superstructure tunnel, and turntable. The well

[1] Data extracted from preliminary design plans.

deck design is oriented toward LCAC operation. The well deck is designed with a foldable water barrier 300 feet forward of the stern. Three spaces are provided for the stowage of troop munitions.

SHIP'S BOATS:

LCPL . . . . . 2
Motor Whale . . . . . 1

BERTHING ACCOMMODATIONS:

| | Officer | CPO/SNCO | Other Enlisted | Surge | Total |
|---|---|---|---|---|---|
| Ship's Company | 13 | 12 | 591 | --- | 616 |
| Landing Forces | 27 | 9 | 430 | 37 | 503 |

CRANES:

| Rig | Lift Capacity | Lift Cycle Time |
|---|---|---|
| Single Boom | 20 S/T | 4 min |
| Single Boom | 60 S/T | 8 min |

LOADING PLAN OPTIONS

I. Well Deck: 4 LCACs aft, vehicles forward. (Water Barrier--down)

Super Deck: vehicles

II. Well Deck: 2 LCACs, 12 LVTs aft, vehicles forward. (Water Barrier--down)

Super Deck: vehicles

III. Well Deck: 1 LCAC, 1 LCU-1610, 2 LCM-8s, 2 LCM-6s, vehicles forward. (Water Barrier--up)

IV. Well Deck: 3 LCACs, 12 LVTs, vehicles forward. (Water Barrier--down)

Super Deck: vehicles

V. Well Deck: 2 LCACs, 6 LCM-6s, vehicles forward. (Water Barrier--up)

Super Deck: vehicles

VI. Well Deck: 2 LCACs, 24 LVTs, vehicles forward. (Water Barrier--up)

Super Deck: vehicles

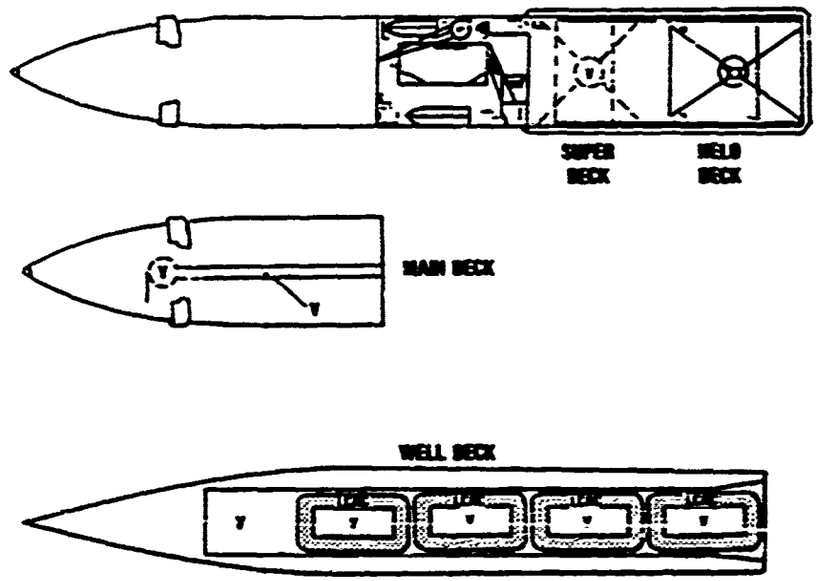
VII. Well Deck: 6 LCM-8s, 3 LCM-6s, vehicles forward. (Water Barrier--up)

Super Deck: vehicles

VIII. Well Deck: 160 containers

Super Deck: vehicles

## LSD-41
## LOADING PLAN OPTION I




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK FOL[3] | | | LANDING CRAFT | | | | | | | AMMUNITION | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCMG | LCMG | LCMG | LCU-1600 | LCAC | CS | PCS | LIFT | CNA | [illegible] | [illegible] | [illegible] | [illegible] |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 5.84 | | | | | | | | | | | | | | | | | |
| PYRO: 2d Dk | | | 8.53 | | | | | | | | | | | | | | | | |
| PYRO: 3d Dk | | | 8.00 | | | | | | | | | | | | | | | | |
| AMMO: 3d Dk | | | 3.53 | | | | | | | | | | | | | | | | |
| TUNNEL | | 1.40 | | | | | | | | | | | | | | | | | |
| WELL | | 3.86 | | | | | | | | | 4 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 504 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 5.40 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | | | | | | | | | | | | | | | | |
| TOTALS | 504 | 15.81 | 4.71 | | | | | | | | 4 | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.

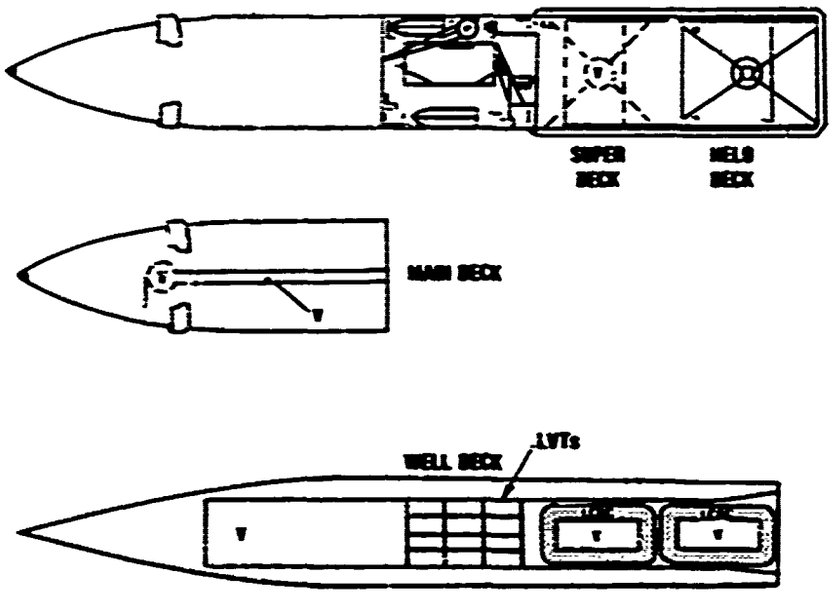
2 Cargo is in thousands of cubic feet.

3 Bulk FOL is in thousands of gallons.

4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-64

## LSD-41
## LOADING PLAN OPTION II

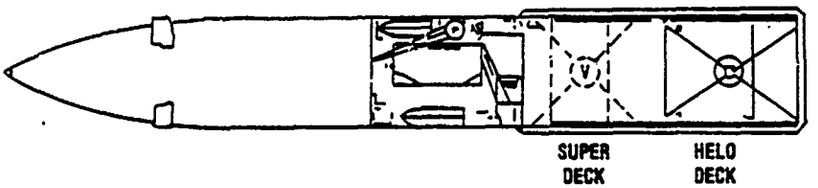


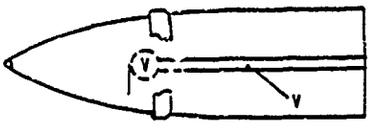

| DECK | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | | | | | | | | | | | | | | | | | | |
| [illegible] | | [illegible] | | | | | | | | | | | | | | | | | |
| [illegible] | | | [illegible] | | | | | | | | | | | | | | | | |
| [illegible] | | | [illegible] | | | | | | | | | | | | | | | | |
| [illegible] | | | [illegible] | | | | | | | | | | | | | | | | |
| [illegible] | | [illegible] | | | | | | | | | | | | | | | | | |
| [illegible] | | [illegible] | | | | | | | | | 2 | | | 12 | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| [illegible] | [illegible] | | | | | | | | | | | | | | | | | | |
| [illegible] | | [illegible] | | | | | | | | | | | | | | | | | |
| [illegible] | | | | | | | | | | | | | | | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | | | | | | | | 2 | | | 12 | | | | | |

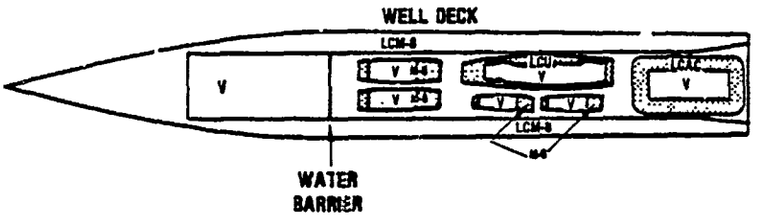
NOTES: 1 [illegible]
2 [illegible]
3 [illegible]
4 [illegible]
5 [illegible]

4-14-81-00

## LSD-41
## LOADING PLAN OPTION III




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | .... | UH-1D/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 5.84 | | | | | | | | | | | | | | | | | |
| PYRO: 2d Dk | | | 0.53 | | | | | | | | | | | | | | | | |
| PYRO: 3d Dk | | | 0.83 | | | | | | | | | | | | | | | | |
| AMMO: 1d Dk | | | 3.56 | | | | | | | | | | | | | | | | |
| TUNNEL | | 1.48 | | | | | | | | | | | | | | | | | |
| WELL | | 5.51 | | | | | 2 | 2 | | 1 | 1 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 584 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 4.47 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | | | | | | | | | | | | | | | | |
| TOTALS | 584 | 17.31 | 4.71 | | | | 2 | 2 | | 1 | 1 | | | | | | | | |

NOTES. 1 Vehicles are in thousands of square feet.

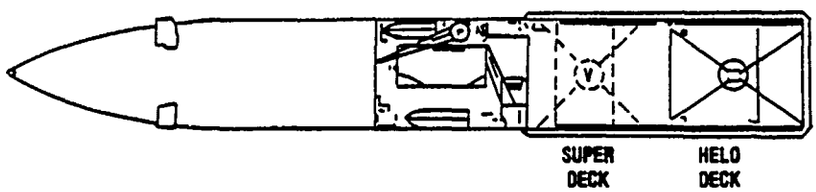
2 Cargo is in thousands of cubic feet.

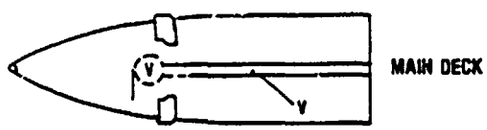
3 Bulk POL is in thousands of gallons.

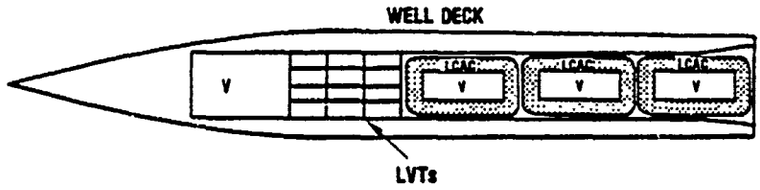
4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-68

## LSD-41
## LOADING PLAN OPTION IV



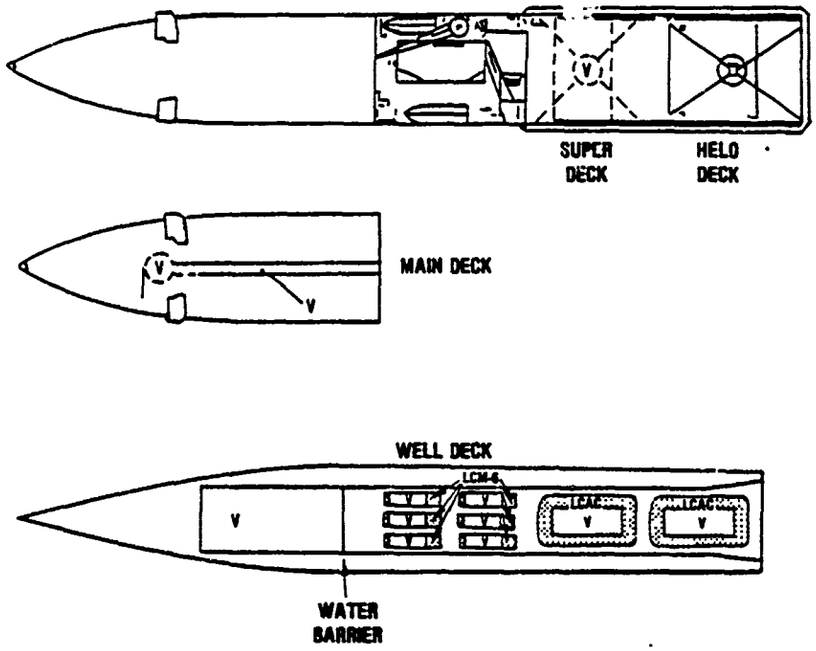




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 5.84 | | | | | | | | | | | | | | | | | |
| PYRO: 2d Ck | | | 0.53 | | | | | | | | | | | | | | | | |
| PYRO: 3d Ck | | | 0.03 | | | | | | | | | | | | | | | | |
| AMMO: 3d Ck | | | 3.56 | | | | | | | | | | | | | | | | |
| TUNNEL | | 1.48 | | | | | | | | | | | | | | | | | |
| WELL | | 8.78[4] | | | | | | | | | 3 | | | 12 | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 594 | | | | | | | | | | | | | | | | | | |
| BOATS[5] | | 4.87 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | | | | | | | | | | | | | | | | |
| TOTALS | 594 | 18.18 | 4.71 | | | | | | | | 3 | | | 12 | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Amphibian square is included in well deck vehicle square.
5 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-67

## LSD-41
## LOADING PLAN OPTION V

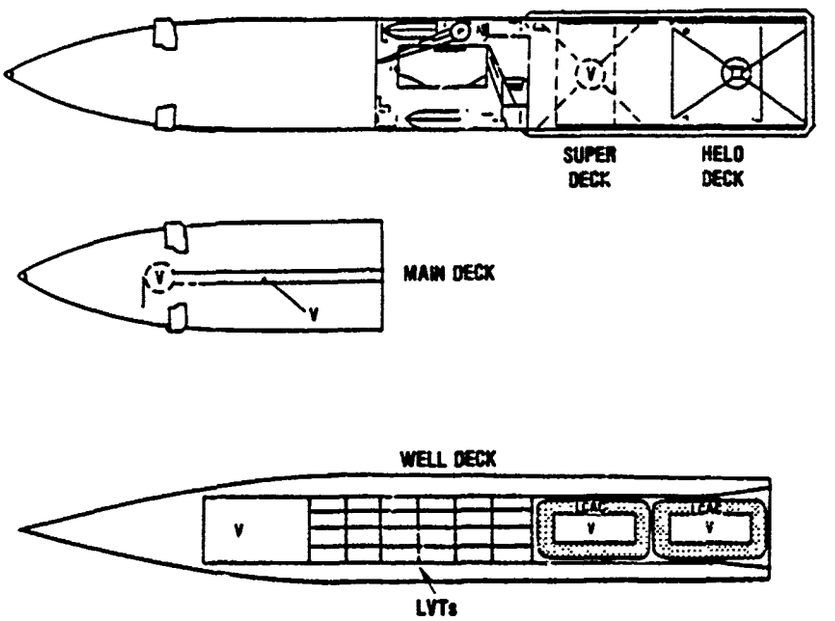



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 5.84 | | | | | | | | | | | | | | | | | |
| PYRO: 2d Dk | | | 0.53 | | | | | | | | | | | | | | | | |
| PYRO: 3d Dk | | | 0.83 | | | | | | | | | | | | | | | | |
| AMMO: 3d Dk | | | 3.56 | | | | | | | | | | | | | | | | |
| TUNNEL | | 1.48 | | | | | | | | | | | | | | | | | |
| 1 | | 5.19[4] | | | | | 6 | | | | 2 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 584 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 4.54 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | | | | | | | | | | | | | | | | |
| TOTALS | 584 | 17.02 | 4.71 | | | | 6 | | | | 2 | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-66

## LSD-41
## LOADING PLAN OPTION VI

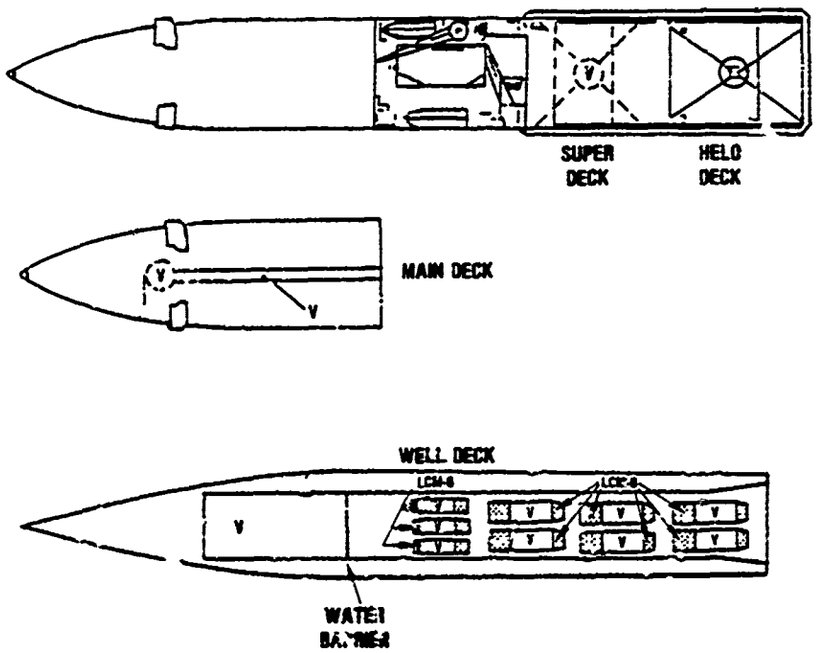



| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 5.84 | | | | | | | | | | | | | | | | | |
| PYRO: 2d Dk | | | 0.53 | | | | | | | | | | | | | | | | |
| PYRO: 3d Dk | | | 0.83 | | | | | | | | | | | | | | | | |
| AMMO: 3d Dk | | | 3.56 | | | | | | | | | | | | | | | | |
| TUNNEL | | 1.48 | | | | | | | | | | | | | | | | | |
| WELL | | 11.89[4] | | | | | | | | | 2 | | | 26 | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 584 | | | | | | | | | | | | | | | | | | |
| BOATS[5] | | 2.71 | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | | | | | | | | | | | | | | | | |
| TOTALS | 384 | 21.88 | 4.71 | | | | | | | | 2 | | | 26 | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Amphibian square is included in well deck vehicle square.
5 The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-00

## LSD-41
## LOADING PLAN OPTION VII




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK FOL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCB | LVT | LVA | UH-46/H | CH-46B | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 5.84 | | | | | | | | | | | | | | | | | |
| PYRO: 2d Ok | | | 8.53 | | | | | | | | | | | | | | | | |
| PYRO: 3d Ok | | | 8.22 | | | | | | | | | | | | | | | | |
| AMMO: 3d Ok | | | 3.56 | | | | | | | | | | | | | | | | |
| TUNNEL | | 1.69 | | | | | | | | | | | | | | | | | |
| WELL | | 5.15 | | | | | 3 | 6 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 584 | | | | | | | | | | | | | | | | | | |
| BOATS[4] | | 3.9[illegible] | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | | | | | | | | | | | | | | | | |
| TOTALS | 584 | [illegible] | | | | | 3 | 6 | | | | | | | | | | | |

NOTES: [1] Vehicles are in thous[illegible] square feet.

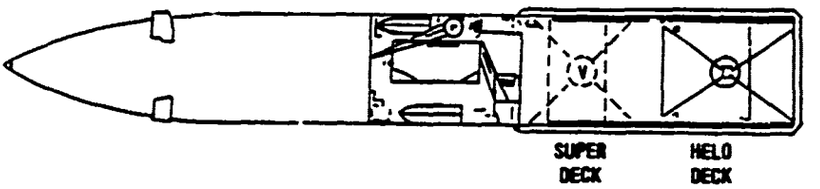
[2] Cargo is in thousands of cubic feet.

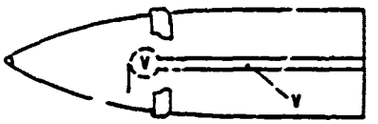
[3] Bulk FOL is in th[illegible] of gallons.

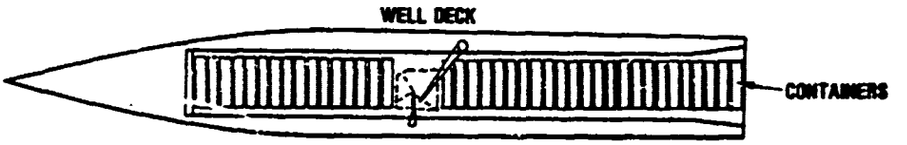
[4] The cargo areas of boats in well decks are loaded with vehicles.

4-14-81-70

## LSD-41
## LOADING PLAN OPTION VIII



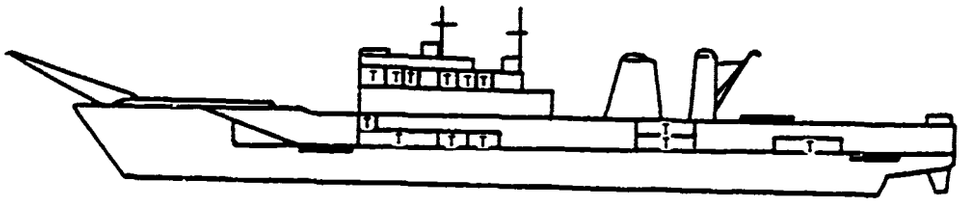




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60H | CH-46D | CH-53D | CH-53E |
| HELO | FLIGHT OPERATIONS | | | | | | | | | | | | | | | | | | |
| SUPER | | 5.06 | | | | | | | | | | | | | | | | | |
| PYRO: 2d Dk | | | 8.53 | | | | | | | | | | | | | | | | |
| PYRO: 3d Dk | | | 8.83 | | | | | | | | | | | | | | | | |
| AMMO: 3d Dk | | | 3.56 | | | | | | | | | | | | | | | | |
| TURRET | | 1.48 | | | | | | | | | | | | | | | | | |
| WELL | | | 125.00 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BERTHING | 584 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | | | | | | | | | | | | | | | | |
| TOTALS | 584 | 15.01 | 138.31 | | | | | | | | | | | | | | | | |

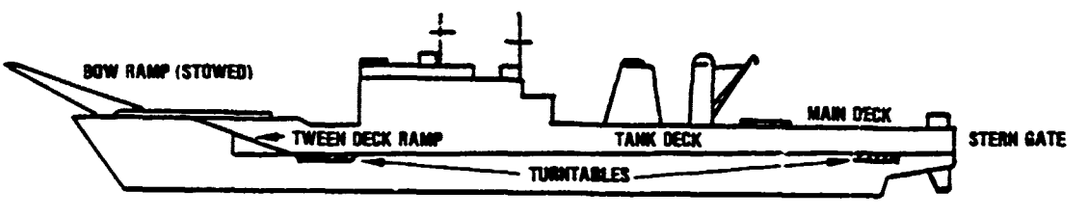
NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.

4-14-81-71

LST-1179



OUTBOARD PROFILE DISPLAYING TROOP ACCOMMODATIONS




INBOARD PROFILE DISPLAYING MAIN DECK, TANK DECK, TURNTABLES, RAMPS AND STERN GATE

4-14-81-72

## SHIP'S LOADING CHARACTERISTICS

The LST-1179 is designed to load, transport and land tank and other combat vehicles with their attendant personnel during amphibious operations. The primary method for embarkation/debarkation of vehicles is over the bow ramp. The ship is equipped with a stern gate for launching amphibian vehicles while underway or at anchor. Under favorable weather conditions, landing craft may marry to the stern gate to load and offload. The tank deck is equipped with turntables, one forward and one aft. The turntables provide a means of turning vehicles within the tank deck. The LST does not usually transport large quantities of palletized cargo, but it is equipped with two 10-ton cargo booms. The LST, the principle transporter of pontoon causeqays, can carry up to 4 side-loaded pontoon causeways.

The ship's payload is constrained by stability and weight and is limited to 2,000 long tons including vehicles, cargo, pontoon causeways and bulk cargo fuel.

SHIP'S BOATS:

LCVP . . . . . 3
LCPL . . . . . 1

BERTHING ACCOMMODATIONS:

| | Officer | CPO/SNCO | Other Enlisted | Surge | Total |
|---|---|---|---|---|---|
| Ship's Company | 14 | 13 | 193 | --- | 220 |
| Landing Force | 18 | 21 | 309 | 27 | 375 |

CRANES:

| Rig | Lift Capacity | Lift Cycle Time |
|---|---|---|
| (2) Booms | 10 S/T | 4 min |

LOADING PLAN OPTIONS

I. With Causeways, LVTs and Heavy Vehicle Load

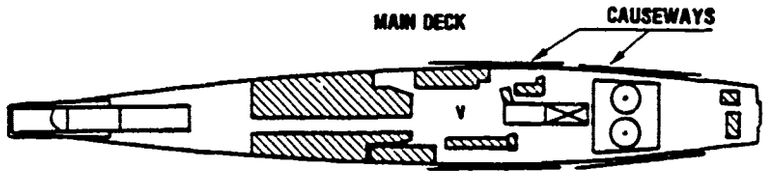
II. Without Causeways, with Heavy Vehicle Load

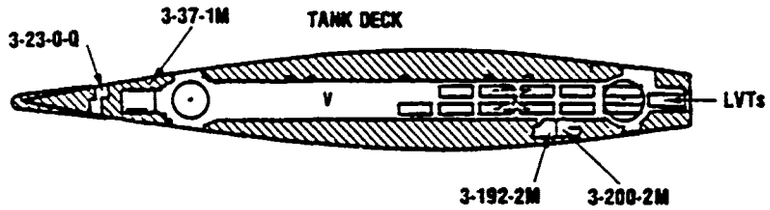
III. With Causeways and Heavy Vehicle Load

IV. Without Causeways, with Medium Cargo and Heavy Vehicle Load

V. With Causeways, LVAs and Heavy Vehicle Load

## LST-1179
## LOADING PLAN OPTION I




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-60W | CH-46D | CH-53D | CH-53E |
| MAIN | | 5.46 | | | | | | | | | | | | | | | | | |
| 3-37-1M | | | 1.86 | | | | | | | | | | | | | | | | |
| 3-200-2M | | | 0.88 | | | | | | | | | | | | | | | | |
| 3-192-2M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-23-0-Q | | | 1.07 | | | | | | | | | | | | | | | | |
| TANK | | 10.19[4] | | | | | | | | | | | | 12 | | | | | |
| Side-loaded Port | | | | | | | | | | | | 1 | 1 | | | | | | |
| Side-loaded Starboard | | | | | | | | | | | | 1 | 1 | | | | | | |
| BERTHING | 375 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 7.28 | 287 | 134.4 | | | | | | | | | | | | | |
| TOTALS | 375 | 15.62 | 4.15 | 7.28 | 287 | 134.4 | | | | | | 2 | 2 | 12 | | | | | |

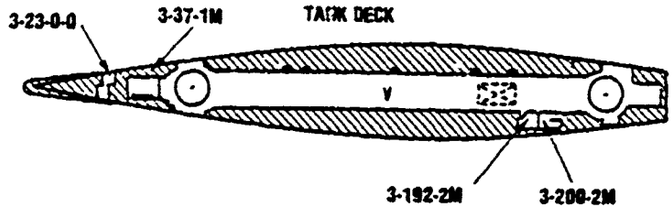
NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 Amphibian square is included in tank deck vehicle square.

NOTE: The estimated weight of this payload is 1,548 long tons.

4-14-81-73

# LST-1179
# LOADING PLAN OPTION II

## MAIN DECK



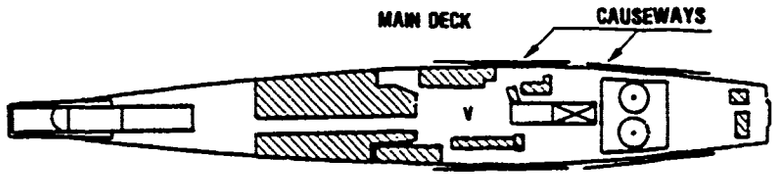

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LJAC | CS | PCS | LVT | LVA | UH-60H | CH-46D | CH-53D | CH-53E |
| MAIN | | 7.17 | | | | | | | | | | | | | | | | | |
| 3-37-1M | | | 1.85 | | | | | | | | | | | | | | | | |
| 3-200-2M | | | 0.66 | | | | | | | | | | | | | | | | |
| 3-192-2M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-23-0-0 | | | 1.07 | | | | | | | | | | | | | | | | |
| TANK | | 9.66 | | | | | | | | | | | | | | | | | |
| Side-loaded Port | | | | | | | | | | | | | | | | | | | |
| Side-loaded Starboard | | | | | | | | | | | | | | | | | | | |
| BERTHING | 375 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 7.28 | 287 | 134.4 | | | | | | | | | | | | | |
| TOTALS | 375 | 16.82 | 4.15 | 7.28 | 287 | 134.4 | | | | | | | | | | | | | |

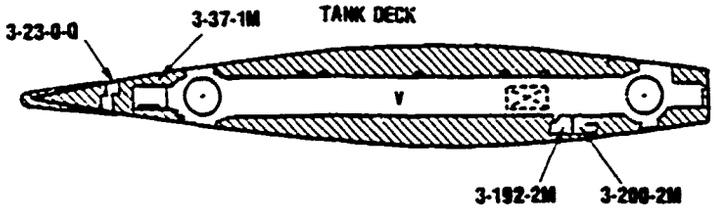
NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.

NOTE: Payload may be weight limited dependent on vehicle density.

4-14-81-74

# LST-1179
# LOADING PLAN OPTION III




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCU-1610 | LCAC | CR | PCS | | LVT | LVA | UH-60W | CH-46D | CH-53D | CH-53E |
| MAIN | | 5.46 | | | | | | | | | | | | | | | | | |
| 3-37-1M | | | 1.86 | | | | | | | | | | | | | | | | |
| 3-200-2M | | | 0.88 | | | | | | | | | | | | | | | | |
| 3-192-2M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-23-0-0 | | | 1.87 | | | | | | | | | | | | | | | | |
| TANK | | 10.16 | | | | | | | | | | | | | | | | | |
| Side-loaded Port | | | | | | | | | | | 1 | 1 | | | | | | | |
| Side-loaded Starboard | | | | | | | | | | | 1 | 1 | | | | | | | |
| BERTHING | 375 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 7.28 | 287 | 134.4 | | | | | | | | | | | | | |
| TOTALS | 375 | 15.62 | 4.15 | 7.28 | 287 | 134.4 | | | | | 2 | 2 | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.

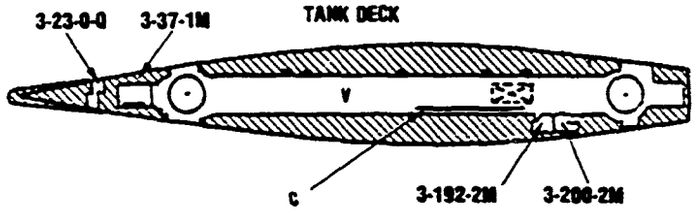
NOTE: Payload may be weight limited dependent on vehicle density

4-14-81-7S

# LST-1179
# LOADING PLAN OPTION IV

## MAIN DECK

## TANK DECK



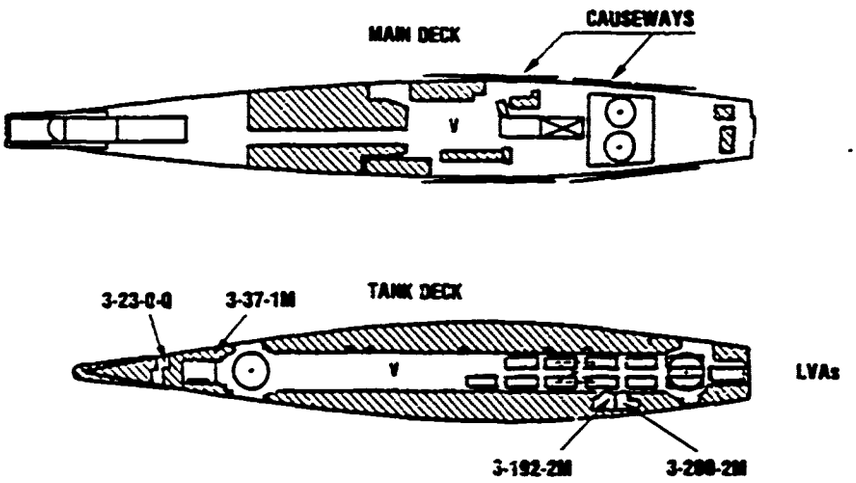

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STOWAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCM-1850 | LCAC | CE | PCS | LVT | LVA | UH-60H | CH-46D | CH-53D | CH-53E |
| MAIN | | 7.17 | | | | | | | | | | | | | | | | | |
| 3-37-1M | | | 1.85 | | | | | | | | | | | | | | | | |
| 3-200-2M | | | 5.00 | | | | | | | | | | | | | | | | |
| 3-192-2M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-23-0-0 | | | 1.97 | | | | | | | | | | | | | | | | |
| TANK | | 7.86 | 24.00 | | | | | | | | | | | | | | | | |
| Side-loaded Port | | | | | | | | | | | | | | | | | | | |
| Side-loaded Starboard | | | | | | | | | | | | | | | | | | | |
| BERTHING | 375 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 7.20 | 207 | 134.4 | | | | | | | | | | | | | |
| TOTALS | 375 | 15.02 | 28.03 | 7.20 | 207 | 134.4 | | | | | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.

NOTE: Payloads may be weight limited dependent on vessels density.

4-14-81-76

## LST-1179
## LOADING PLAN OPTION V




| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | WF-2 | JP-5 | LCM-6 | LCM-8 | LCM-8 | LCM-1010 | LCAC | CS | PCS | LVT | LVR | [illegible] | [illegible] | [illegible] | [illegible] |
| MAIN | | 5.46 | | | | | | | | | | | | | | | | | |
| 3-37-1M | | | 1.05 | | | | | | | | | | | | | | | | |
| 3-200-2M | | | 0.88 | | | | | | | | | | | | | | | | |
| 3-192-2M | | | 1.17 | | | | | | | | | | | | | | | | |
| 3-23-0-Q | | | 1.07 | | | | | | | | | | | | | | | | |
| TANK | | 10.10[4] | | | | | | | | | | | | | 12 | | | | |
| Side-loaded Port | | | | | | | | | | | | 1 | 1 | | | | | | |
| Side-loaded Stormers | | | | | | | | | | | | 1 | 1 | | | | | | |
| BERTHING | 375 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| TANKAGE | | | | 7.20 | 207 | 134.4 | | | | | | | | | | | | | |
| TOTALS | 375 | 15.62 | 4.15 | 7.20 | 207 | 134.4 | | | | | | 2 | 2 | | 12 | | | | |

NOTES: 1 Vehicles are in thousands of square feet.

2 Cargo is in thousands of cubic feet.

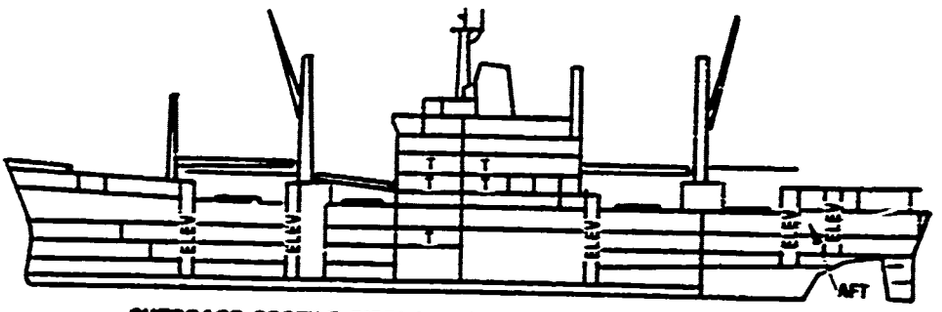
3 Bulk POL is in thousands of gallons.

4 Amphibian square is included in tank deck vehicle square.

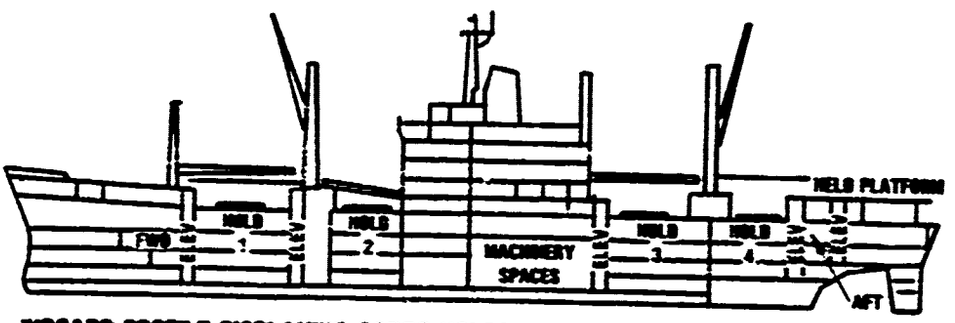
NOTE: Payload may be weight limited dependent on vehicle density.

4-14-81-77

LKA-113




OUTBOARD PROFILE DISPLAYING TROOP ACCOMMODATIONS




INBOARD PROFILE DISPLAYING CARGO HOLDS, HELO PLATFORM AND ELEVATORS

4-14-81-78

## SHIP'S LOADING CHARACTERISTICS

The LKA-113 is designed to load, transport, and land vehicles and cargo with attendant personnel during amphibious operations. The ship is equipped with cranes of 70, 40 and 15 ton capacities to service each hold. LCM-8 and LCM-6 landing craft are organic and are stowed on the main deck. The helicopter platform is serviced by a 12,000 pound elevator capable of handling palletized cargo and 1/4 ton type vehicles. In addition, 5-4,000 pound capacity elevators serve the cargo holds.

SHIP'S BOATS:

| | |
|---|---|
| LCPL | 1 |
| LCVP | 2 |
| LCM-6 | 5 |
| LCM-8 | 4 |

BERTHING ACCOMMODATIONS:

| | Officer | CPO/SNCO | Other Enlisted | Surge | Total |
|---|---|---|---|---|---|
| Snip's Crew | 31 | 22 | 340 | --- | 393 |
| Landing Force | 15 | 6 | 205 | 23 | 249 |

CRANES:

| Rig | Lift Capacity | Lift Cycle Time |
|---|---|---|
| Single Boom | 70 S/T | 10 min |
| Single Boom | 40 S/T | 10 min |
| Single Boom | 15 S/T | 5 min |

## LOADING PLAN OPTIONS

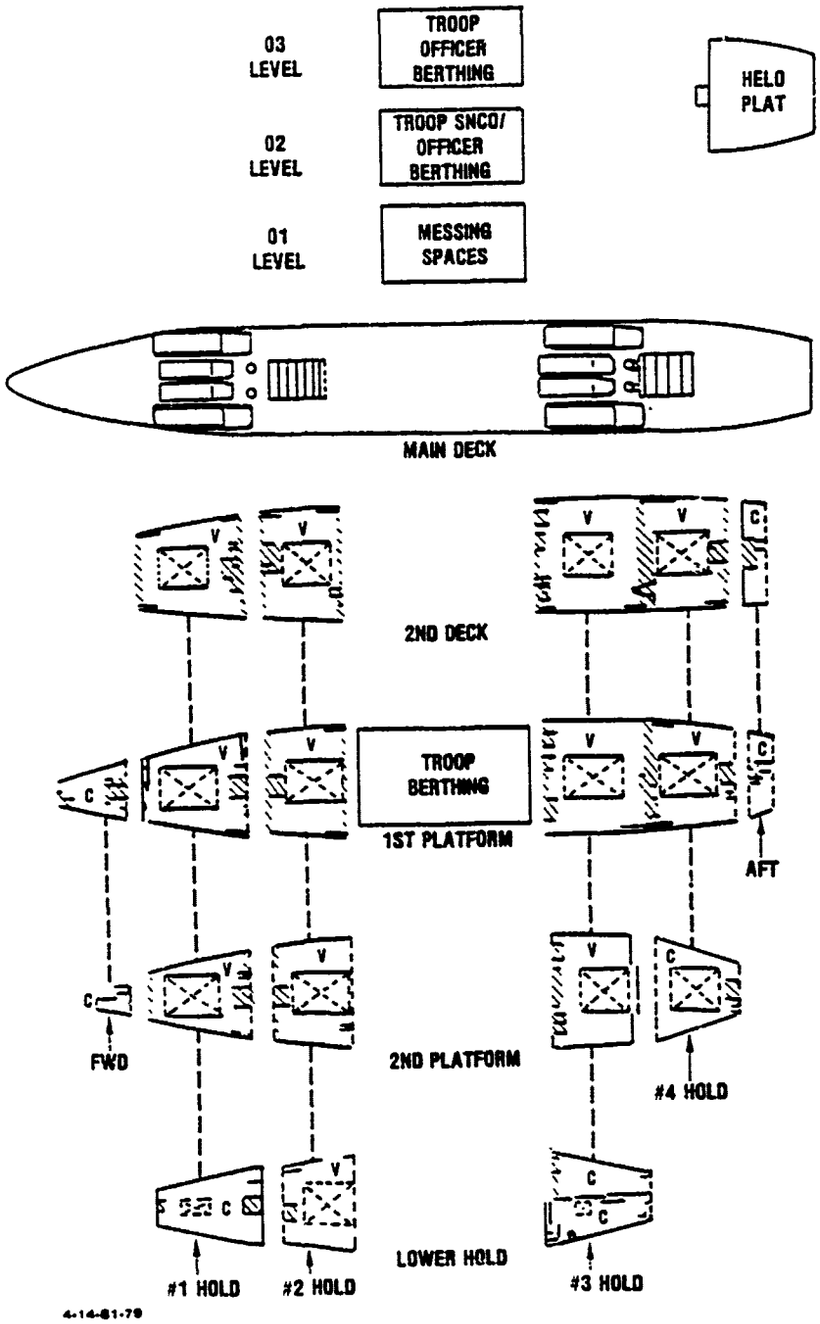
I. Normal Vehicle and Cargo Mix.

II. Heavy Cargo, Light Vehicle Mix (effective operation requires MHE allowance to be on board)

III. Heavy Vehicle, Light Cargo

IV. Heavy Cargo

LKA-113
LOADING PLAN OPTION I



# LKA-113
## LOADING PLAN OPTION I

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| FWD: 1st PLT | | | 7.23 | | | | | | | | | | | | | | | | |
| 2d PLT | | | 1.50 | | | | | | | | | | | | | | | | |
| HOLD 1: 2d DK | | 3.20 | | | | | | | | | | | | | | | | | |
| 1st PLT | | 2.86 | | | | | | | | | | | | | | | | | |
| 2d PLT | | 2.57 | | | | | | | | | | | | | | | | | |
| L.H. | | | 16.37 | | | | | | | | | | | | | | | | |
| HOLD 2: 2d DK | | 3.87 | | | | | | | | | | | | | | | | | |
| 1st PLT | | 3.80 | | | | | | | | | | | | | | | | | |
| 2d PLT | | 2.92 | | | | | | | | | | | | | | | | | |
| L.H. | | 2.22 | | | | | | | | | | | | | | | | | |
| HOLD 3: 2d DK | | 4.29 | | | | | | | | | | | | | | | | | |
| 1st PLT | | 4.16 | | | | | | | | | | | | | | | | | |
| 2d PLT | | 3.22 | | | | | | | | | | | | | | | | | |
| PORT L.H. | | | 16.44 | | | | | | | | | | | | | | | | |
| STBD L.H.[4] | | | 16.30 | | | | | | | | | | | | | | | | |
| HOLD 4: 2d DK | | 3.87 | | | | | | | | | | | | | | | | | |
| 1st PLT | | 2.94 | | | | | | | | | | | | | | | | | |
| 2d PLT | | | 16.40 | | | | | | | | | | | | | | | | |
| AFT: 2d DK | | | 4.90 | | | | | | | | | | | | | | | | |
| 1st PLT | | | 4.22 | | | | | | | | | | | | | | | | |
| BERTHING | 240 | | | | | | | | | | | | | | | | | | |
| MAIN | | | | | | | 6 | 4 | | | | | | | | | | | |
| TANKAGE | | | | | | 54.0 | | | | | | | | | | | | | |
| TOTALS | 240 | 37.53 | 70.00 | | | 54.0 | 6 | 4 | | | | | | | | | | | |

NOTES. [1] Vehicles are in thousands of square feet.

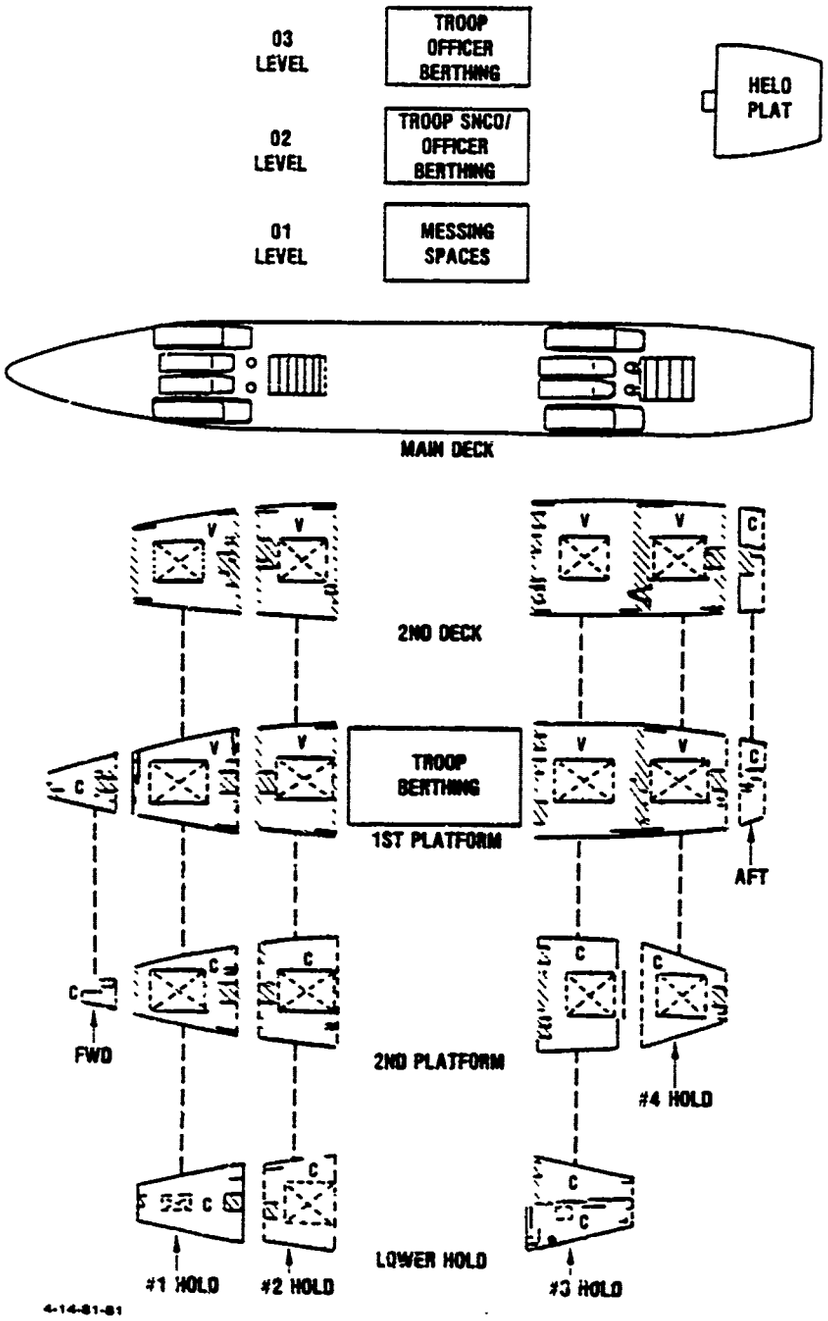
[2] Cargo is in thousands of cubic feet.

[3] Bulk POL is in thousands of gallons.

[4] The cargo areas of boats are not available for payloads.

4 16 81 50

LKA-113
LOADING PLAN OPTION II



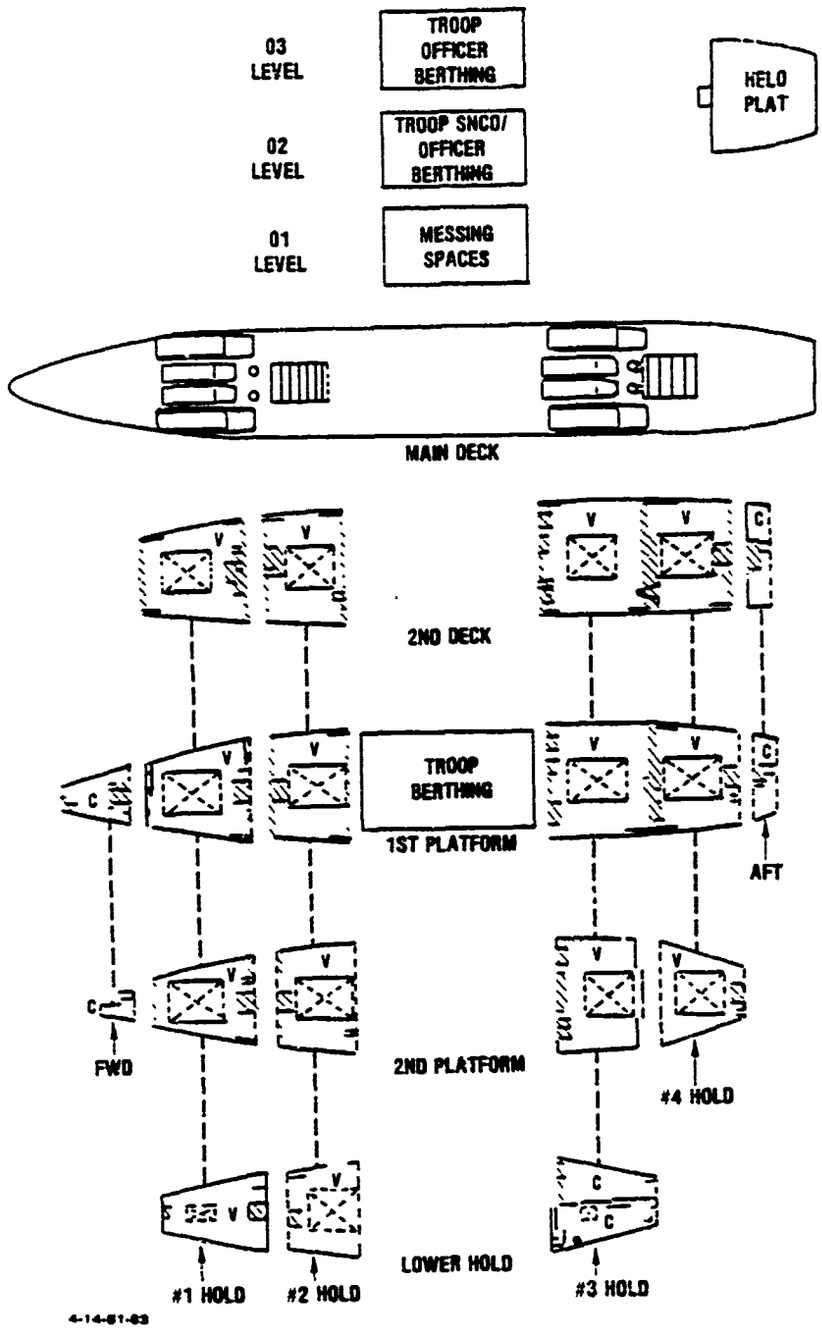
# LKA-113
# LOADING PLAN OPTION II

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF-2 | JP-5 | LCM-8 | LCM-8 | LCM-8 | LCU-1610 | LCAC | CS | PCS | LVT | LVA | UH-1D/H | CH-46D | CH-53D | CH-53E |
| FWD: 1st PLT | | | 7.23 | | | | | | | | | | | | | | | | |
| 2d PLT | | | 1.98 | | | | | | | | | | | | | | | | |
| HOLD 1: 2d DK | | 3.30 | | | | | | | | | | | | | | | | | |
| 1st PLT | | 2.88 | | | | | | | | | | | | | | | | | |
| 2d PLT | | | 23.30 | | | | | | | | | | | | | | | | |
| L.H. | | | 16.37 | | | | | | | | | | | | | | | | |
| HOLD 2: 2d DK | | 3.87 | | | | | | | | | | | | | | | | | |
| 1st PLT | | 3.80 | | | | | | | | | | | | | | | | | |
| 2d PLT | | | 20.92 | | | | | | | | | | | | | | | | |
| L.H. | | | 16.70 | | | | | | | | | | | | | | | | |
| HOLD 3: 2d DK | | 4.23 | | | | | | | | | | | | | | | | | |
| 1st PLT | | 4.16 | | | | | | | | | | | | | | | | | |
| 2d PLT | | | 22.80 | | | | | | | | | | | | | | | | |
| PORT L.H. | | | 18.44 | | | | | | | | | | | | | | | | |
| STBD L.H.[4] | | | 18.20 | | | | | | | | | | | | | | | | |
| HOLD 4: 2d DK | | 3.87 | | | | | | | | | | | | | | | | | |
| 1st PLT | | | 27.13 | | | | | | | | | | | | | | | | |
| 2d PLT | | | 16.40 | | | | | | | | | | | | | | | | |
| AFT: 2d DK | | | 4.80 | | | | | | | | | | | | | | | | |
| 1st PLT | | | 4.22 | | | | | | | | | | | | | | | | |
| BERTHING | 240 | | | | | | | | | | | | | | | | | | |
| MAIN | | | | | | | 5 | 4 | | | | | | | | | | | |
| TANKAGE | | | | | | 54.8 | | | | | | | | | | | | | |
| TOTALS | 240 | 23.76 | 165.83 | | | 54.8 | 5 | 4 | | | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats are not available for payloads.

4-14-81-02

LKA-113
LOADING PLAN OPTION III



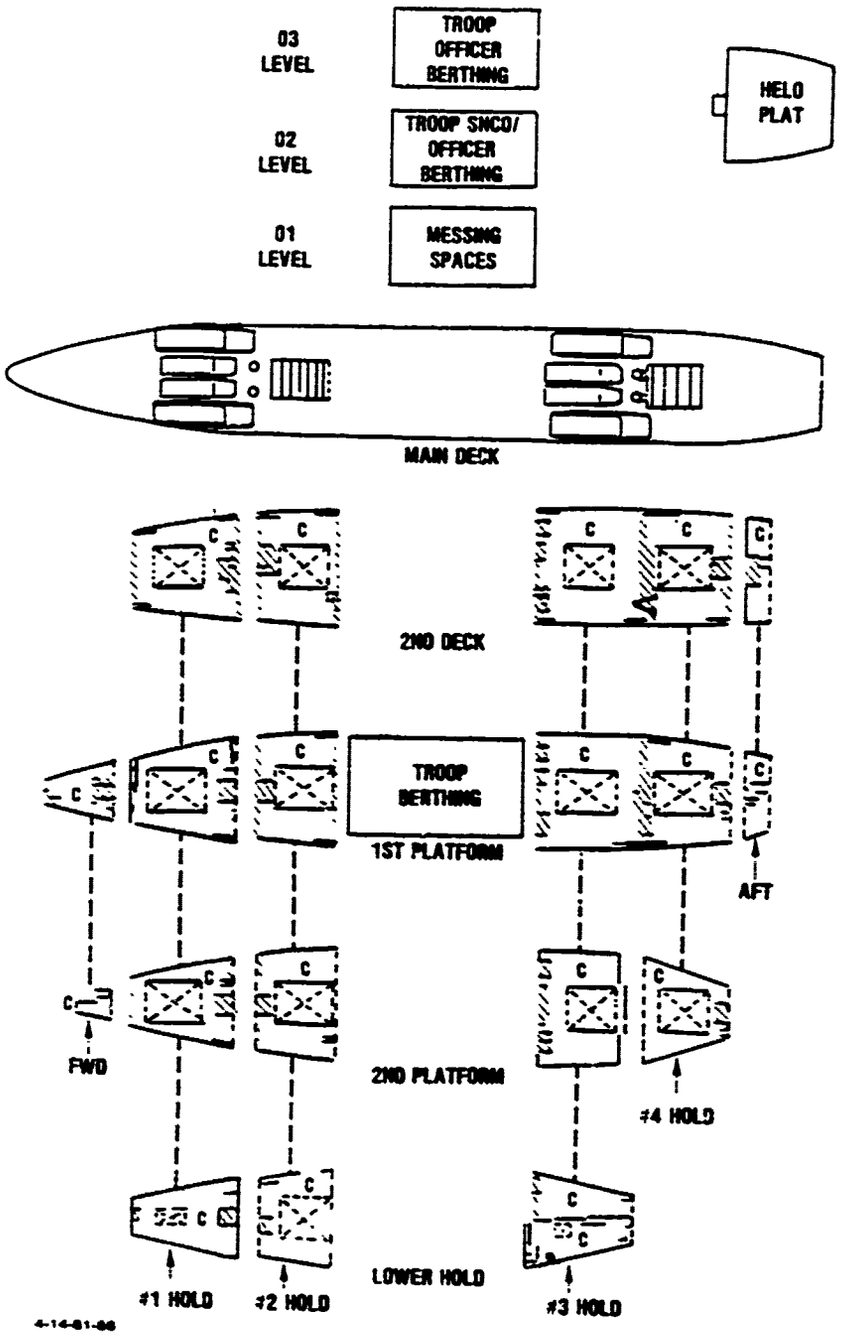
# LKA-113
# LOADING PLAN OPTION III

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STOWAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF 2 | JP 5 | LCM 6 | LCM 8 | LCM 8 | LCU 1610 | LCAC | CS | PCS | LVT | LVA | UH 1D/H | CH 46D | CH 53D | CH 53E |
| FWD: 1st PLT | | | 7.23 | | | | | | | | | | | | | | | | |
| 2d PLT | | | 1.96 | | | | | | | | | | | | | | | | |
| HOLD 1: 2d DK | | 3.20 | | | | | | | | | | | | | | | | | |
| 1st PLT | | 2.00 | | | | | | | | | | | | | | | | | |
| 2d PLT | | 2.57 | | | | | | | | | | | | | | | | | |
| L.H. | | 2.12 | | | | | | | | | | | | | | | | | |
| HOLD 2: 2d DK | | 3.07 | | | | | | | | | | | | | | | | | |
| 1st PLT | | 3.00 | | | | | | | | | | | | | | | | | |
| 2d PLT | | 2.92 | | | | | | | | | | | | | | | | | |
| L.H. | | 2.77 | | | | | | | | | | | | | | | | | |
| HOLD 3: 2d DK | | 4.23 | | | | | | | | | | | | | | | | | |
| 1st PLT | | 4.19 | | | | | | | | | | | | | | | | | |
| 2d PLT | | 3.22 | | | | | | | | | | | | | | | | | |
| PORT L.H. | | | 10.44 | | | | | | | | | | | | | | | | |
| STBD L.H.[4] | | | 10.20 | | | | | | | | | | | | | | | | |
| HOLD 4: 2d DK | | 3.07 | | | | | | | | | | | | | | | | | |
| 1st PLT | | 2.94 | | | | | | | | | | | | | | | | | |
| 2d PLT | | 2.36 | | | | | | | | | | | | | | | | | |
| AFT: 2d DK | | | 4.90 | | | | | | | | | | | | | | | | |
| 1st PLT | | | 4.22 | | | | | | | | | | | | | | | | |
| BERTHING | 240 | | | | | | | | | | | | | | | | | | |
| MAIN | | | | | | | 6 | 4 | | | | | | | | | | | |
| TANKAGE | | | | | | 94.0 | | | | | | | | | | | | | |
| TOTALS | 240 | 42.10 | 38.94 | | | 94.0 | 6 | 4 | | | | | | | | | | | |

NOTES: [1] Vehicles are in thousands of square feet.
[2] Cargo is in thousands of cubic feet.
[3] Bulk POL is in thousands of gallons.
[4] The cargo areas of boats are not available for payloads.

6140100

LKA-113
LOADING PLAN OPTION IV



# LKA-113
# LOADING PLAN OPTION IV

| DECK | TROOPS | VEHICLES[1] | CARGO[2] | BULK POL[3] | | | LANDING CRAFT | | | | | | | AMPHIBIANS | | HELICOPTER STORAGE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MOGAS | DF 2 | JP 5 | LCM 8 | LCM 6 | LCM 8 | LCU 1610 | LCAC | CB | PCS | LVT | LVA | UH 60/H | CH 46D | CH 53D | CH 53E |
| FWD: Int PLT | | | 7 23 | | | | | | | | | | | | | | | | |
| 3d PLT | | | 1 80 | | | | | | | | | | | | | | | | |
| HOLD 1: 3d DK | | | 28 80 | | | | | | | | | | | | | | | | |
| Int PLT | | | 28 28 | | | | | | | | | | | | | | | | |
| 3d PLT | | | 22 80 | | | | | | | | | | | | | | | | |
| L.H. | | | 16 37 | | | | | | | | | | | | | | | | |
| HOLD 2: 3d DK | | | 27 61 | | | | | | | | | | | | | | | | |
| Int PLT | | | 28 40 | | | | | | | | | | | | | | | | |
| 3d PLT | | | 28 80 | | | | | | | | | | | | | | | | |
| L.H. | | | 16 70 | | | | | | | | | | | | | | | | |
| HOLD 3: 3d DK | | | 31 84 | | | | | | | | | | | | | | | | |
| Int PLT | | | 28 28 | | | | | | | | | | | | | | | | |
| 3d PLT | | | 22 80 | | | | | | | | | | | | | | | | |
| PORT L.H. | | | 16 44 | | | | | | | | | | | | | | | | |
| STBD L.H.[4] | | | 16 28 | | | | | | | | | | | | | | | | |
| HOLD 4: 3d DK | | | 22 63 | | | | | | | | | | | | | | | | |
| Int PLT | | | 27 13 | | | | | | | | | | | | | | | | |
| 3d PLT | | | 16 40 | | | | | | | | | | | | | | | | |
| AFT: 3d DK | | | 4 80 | | | | | | | | | | | | | | | | |
| Int PLT | | | 4 27 | | | | | | | | | | | | | | | | |
| SEATING | 240 | | | | | | | | | | | | | | | | | | |
| MAIN | | | | | | | 5 | 4 | | | | | | | | | | | |
| TANKAGE | | | | | | 94 9 | | | | | | | | | | | | | |
| TOTALS | 240 | | 266 80 | | | 94.9 | 5 | 4 | | | | | | | | | | | |

NOTES: 1 Vehicles are in thousands of square feet.
2 Cargo is in thousands of cubic feet.
3 Bulk POL is in thousands of gallons.
4 The cargo areas of boats are not available for payloads.

6140185

# ADDENDUM A

## AMPHIBIOUS SHIP CLASS AVERAGE FINGERPRINT

## ADDENDUM A

## AMPHIBIOUS SHIP CLASS AVERAGE FINGERPRINT

1. The Ship Loading Characteristics Phamphlet reports space availability for numbers of troops, square feet for vehicles, cubic feet for cargo, gallons of POL, and spaces for specific types of landing craft and aircraft. The bulk fuel (POL) capacity for the LST-1179 class, as reported by the individual ship SLCP is superseded by COMNAVSEASYSCMD letter SER 3391 of 13 Aug 1980. For vehicles and cargo, a broken stow factor is applied to convert square feet and cubic feet of stowage space to square and cubic feet of vehicles and cargo. The broken stow factor allows for the inevitable space that must exist between vehicles and units of cargo.

2. In certain cases individual SLCPs indicate substantially different capacities among ships of a class. Some of these differences are the results of actual differences in ship characteristics while others are the result of differences in reporting.

3. The SLCP is prepared by ship's personnel for use by embarkation planners. It identifies and describes spaces in the ship that are available for specific landing force elements including troops, vehicles, cargo, helicopters, boats and POL. Preparation of the SLCP requires measurement of the individual spaces, some judgment by ship's personnel on what area within these spaces is usable for payload, and documentation in SLCP format. The potential for error in measurement and documentation and for differences in judgment is substantial.

4. Individual SLCPs indicate substantial differences with classes in capacities for troops, vehicles, cargo and bulk POL. Detailed examination of SLCPs shows that some actual differences in ship characteristics do exist. Some are differences in initial construction and others are the result of ship alterations. However, a number of these differences are the result of differences in reporting ship loading characterists information. Allowances for stowing ship's material handling equipment, access to fire plugs and damage control equipment, fire lanes, helo operations, side loading causeways, stowage of ship amd embarked staff vehicles and for other such purposes are handled differently and result in different statements of capacity where no real differences exist. Adjustments to SLCP figures have been made in this Addendum where different statements of capacity could be attributed to differences in reporting. Table 1, Amphibious Ship Class Average Fingerprints, reflects the range of differences in fingerprint capacities by indicating the high, low, and average capacity by class of ship and fingerprint category. Fingerprint capacities of the lead ship of the class are included as a bench mark for comparing reported differences within a class.

# AMPHIBIOUS SHIP CLASS AVERAGE FINGERPRINT

| SHIP CLASS | NO. SHIPS | TROOPS[1] ASSAULT | VEH.[1] K SQ FT | CARGO K CU FT | HELOS CH-46 EQ | BOATS M-8 EQ | POL KGAL |
|---|---|---|---|---|---|---|---|
| LPH-2 | 7 | | | | | | |
| LEAD SHIP | | 1728 | 3.73 | 46.50 | 27 | – | 268.00 |
| AVERAGE | | 1743 | 3.87 | 39.79 | 27 | – | 315.57 |
| HIGH | | 1833 | 4.00 | 48.50 | 27 | – | 379.40 |
| LOW | | 1628 | 3.18 | 34.87 | 27 | – | 268.00 |
| LHA-1 | 5[2] | | | | | | |
| LEAD SHIP | | 1903 | 27.67 | 108.81 | 38 | 29.4 | 408.00 |
| AVERAGE | | 1903 | 27.67 | 108.81 | 38 | 19.4 | 408.00 |
| HIGH | | 1903 | 27.67 | 108.81 | 38 | 19.4 | 408.00 |
| LOW | | 1903 | 27.67 | 108.81 | 38 | 19.4 | 408.00 |
| LPD-1 | 2 | | | | | | |
| LEAD SHIP | | 928 | 10.70 | 17.97 | | 8.0 | 240.00 |
| AVERAGE | | 930 | 11.13 | 19.14 | 2 | 8.0 | 243.03 |
| HIGH | | 932 | 11.56 | 20.31 | 2 | 8.0 | 246.05 |
| LOW | | 928 | 10.70 | 17.97 | 2 | 8.0 | 240.00 |
| LPD-4 | 12 | | | | | | |
| LEAD SHIP | | 913 | 13.90 | 43.48 | 2 | 8.0 | 246.88 |
| AVERAGE | | 852 | 13.56 | 39.11 | 2 | 8.0 | 304.08 |
| HIGH | | 958 | 14.83 | 43.88 | 2 | 8.0 | 372.63 |
| LOW | | 728 | 11.70 | 34.99 | 2 | 8.0 | 220.00 |
| LSD-28 | 8 | | | | | | |
| LEAD SHIP | | 324 | 14.84 | 2.12 | – | 10.7 | 50.40 |
| AVERAGE | | 316 | 15.28 | 2.93 | – | 10.7 | 48.25 |
| HIGH | | 334 | 18.25 | 3.86 | – | 10.7 | 51.17 |
| LOW | | 283 | 14.41 | 1.66 | – | 10.7 | 32.00 |
| LSD-36 | 5 | | | | | | |
| LEAD SHIP | | 337 | 15.30 | 1.99 | – | 14.4 | 32.88 |
| AVERAGE | | 337 | 15.45 | 1.38 | – | 14.4 | 33.63 |
| HIGH | | 337 | 17.25 | 1.99 | – | 14.4 | 34.53 |
| LOW | | 337 | 14.55 | 0.85 | – | 14.4 | 32.80 |
| LSD-41 | 0[3] | 504 | 15.81 | 4.71 | – | 19.2 | –[4] |
| LKA-113 | 5 | | | | | | |
| LEAD SHIP | | 249 | 37.63 | 70.75 | – | 13.0 | 54.90 |
| AVERAGE | | 231 | 38.14 | 68.51 | – | 13.0 | 43.22 |
| HIGH | | 249 | 38.68 | 72.17 | – | 13.0 | 55.82 |
| LOW | | 228 | 37.63 | 64.15 | – | 13.0 | 4.80 |
| LST-1179 | 20 | | | | | | |
| LEAD SHIP | | 375 | 15.82 | 4.15 | – | – | 348.80 |
| AVERAGE | | 382 | 15.79 | 3.27 | – | – | 348.38 |
| HIGH | | 398 | 16.84 | 4.22 | – | – | 355.70 |
| LOW | | 353 | 14.84 | 2.19 | – | – | 345.40 |

[1] Troop and vehicle numbers represent total ship capacity without adjustment for tactical integrity. Task unit tactical integrity will result in losses of approximately 7% troop and 10% vehicle capacity.

[2] No data available on LHAs 2 thru 5. Assumed data same as LHA-1.

[3] LSD-41 data have been compiled from design plans and are subject to change during design and/or construction phases.

[4] Data on fuel capacity not presently available. See footnote 3.

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# ADDENDUM B

## PRINCIPAL CHARACTERISTICS OF SELECTED MILITARY LIGHTERAGE AND AMPHIBIANS

# ADDENDUM B

## PRINCIPAL CHARACTERISTICS OF SELECTED MILITARY LIGHTERAGE AND AMPHIBIANS

| CHARACTERISTICS | | LCM-6 | LCM-8 | LCM-9 | LCU-1610 | P/L BARGE | LCAC[1] | LVT | LVA[2] |
|---|---|---|---|---|---|---|---|---|---|
| LENGTH OVERALL, ft | | 58 | 74 | 128 | 135 | 95 | 88 | 28 | 33 |
| BEAM, ft | | 14 | 21 | 22 | 29 | 22 | 47 | 10.75 | 11 |
| DRAFT LOADED, ft | | 4.8 | 5.9 | –[3] | 6.5 | 2.8 | – | 5.73 | – |
| SPEED, kt | | 9 | 9 | 25-48 | 11 | 3-4 | 35-50 | 9-36[4] | – |
| CARGO AREA | LENGTH, ft | 37 | 46 | 108 | 124 | 90 | 67 | – | – |
| | WIDTH, ft | 11 | 15 | 11-15 | 16 | 22 | 27 | – | – |
| | DEPTH, ft | 6 | 4 | 4 | 4 | – | – | | – |
| CARGO tons[5] | | 34 | 65 | 120 | 180 | 80-95 | 60-75 | 5 | – |
| VEHICLE CAPACITY, sq ft[6] | | 385 | 586 | – | 1400 | 1466 | 1367 | – | – |
| TROOPS | | – | – | – | – | – | – | 25 | – |

[1] Production LCACs are not presently in the inventory. All figures given for the LCAC are estimated.
[2] The LVA is not currently being pursued as a potential future amphibian vehicle acquisition.
[3] Loaded draft for the LCM-9 has not been determined. Draft will depend on total craft weight.
[4] This speed represents the LVT cruising speed on land.
[5] Cargo tons are expressed in short tons.
[6] A broken stowage factor of 0.75 was applied to the landing craft stowage capacity.

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# ADDENDUM C

# LIST OF ABBREVIATIONS

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| Term | Abbreviation |
|---|---|
| Aft | A |
| Aviation Fuel | JP-5 |
| Boat & Aircraft Crane | B&A Crane |
| Broken Stow | B/S |
| Cargo | C |
| Chief Petty Officer | CPO |
| Causeway Barge (unpowered) | CS |
| Cubic Feet | $Ft^3$ (cu ft) |
| Deck | Dk (DK) |
| Diesel Fuel #2 | DF-2 |
| Elevator | ELE |
| Forward | FWD (Fwd) |
| Gascline | MOGAS |
| Heavy Helicopter | CH-53D/E |
| Helicopter | Helo |
| Landing Craft Air Cushion | LCAC |
| Landing Craft Mechanized | LCM-6,-8,-9 |
| Landing Craft Personnel Large | LCPL |
| Landing Craft Utility | LCU-1610 |
| Landing Craft Vehicle & Personnel | LCVP |
| Landing Cargo Assault (ship) | LKA |
| Landing Helicopter Assault | LHA |
| Landing Platform Dock | LPD |
| Landing Platform Helicopter | LPH |

| | |
|---|---|
| Landing Ship Dock. . . . . | LSD |
| Landing Ship Tank. . . . . | LST |
| Landing Vehicle Assault. . . . . | LVA |
| Landing Vehicle Tract. . . . . | LVT |
| Light Helicopter . . . . . | UH-1D/H |
| Lower . . . . . | Low |
| Lower Hold . . . . . | L.H. |
| Material Handling Equipment. . . . . | MHE |
| Medium Helicopter . . . . . | CH-46D |
| Mezzanine Deck . . . . . | Mezz |
| Non-Ready for Issue . . . . . | non-RFI (aviation parts/ equipment) |
| Platform . . . . . | PLT (Plt) |
| Powered Causeway Barge . . . . . | PCS |
| Pyrotechnics . . . . . | Pyro |
| Ready for Issue . . . . . | RFI (aviation parts/equipment) |
| Short Tons . . . . . | S/T (S/tons) (2,000 lbs) |
| Staff Non-Commissioned Officer . . . . . | SNCO |
| Starboard . . . . . | STBD (Stbd) |
| Stowage. . . . . | Stg |
| Square Feet. . . . . | $Ft^2$ (sq ft) |
| Tank Deck . . . . . | Tk Dk |
| Troop(s) . . . . . | T |
| Upper. . . . . | Up |
| Vehicle(s) . . . . . | V |
| Vehicle(s) . . . . . | VEH(Veh) |