Expeditionary Warfare Conference
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Joint High Speed Vessel (JHSV) and Mobile Landing Platform (MLP) Program

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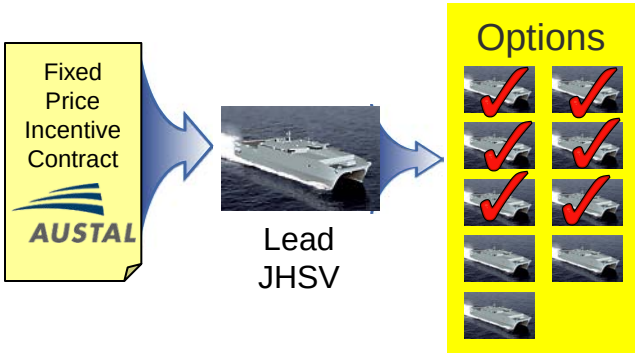
JHSV Overview

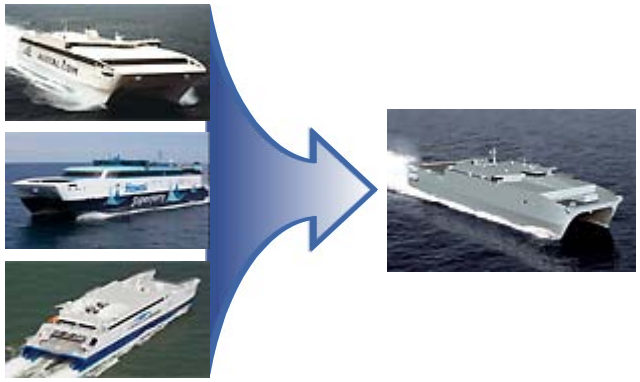
Program Structure:

Post Milestone B. The Navy awarded a fixed price incentive contract on November 13, 2008 to Austal USA in Mobile, Alabama for detail design and construction of the lead JHSV plus 9 JHSV ship construction options. Program is on schedule.



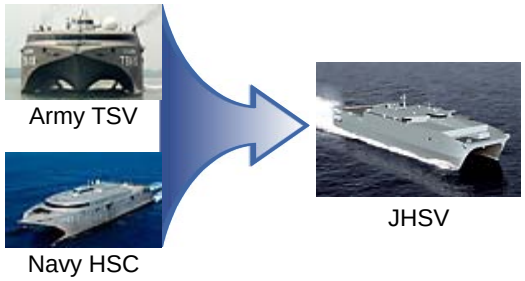
Commercially Based:

Leverages extensive commercial investment in high speed vessels possessing organic cargo handling capability to provide effective, affordable military capability from a non-developmental item.



Joint:

Merges Army Theater Support Vessel (TSV) and Navy High Speed Connector Programs. Leverages Navy's Core Ship Acquisition Competency. Provides cost effective, common logistics support platform for Army, Marine, and Navy warfighters.

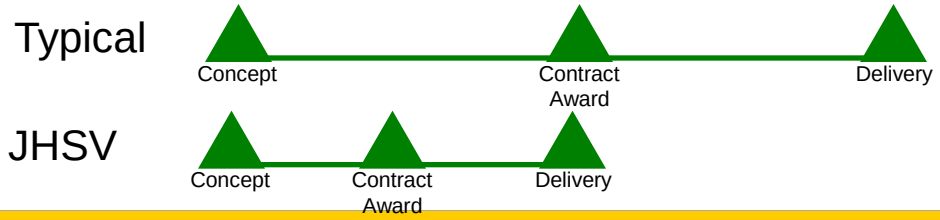


Rapid Transport:

Focused technology to meet warfighting needs. Provides COCOMs a 35 knot intra-theater transport of 600 st of combat ready units over 1200 nautical miles with ability for off-load in austere environment without reliance on shore infrastructure.

Streamlined Acquisition:

Concept to Shipbuilding Contract in 2 ½ years with scheduled ship delivery 36 months after contract award. Both span times represent 50% time savings from a typical development and ship construction approach. Keys to success: (1) Stable requirements; (2) Minimize change; (3) Production Efficiency



JHSV Characteristics

Characteristics

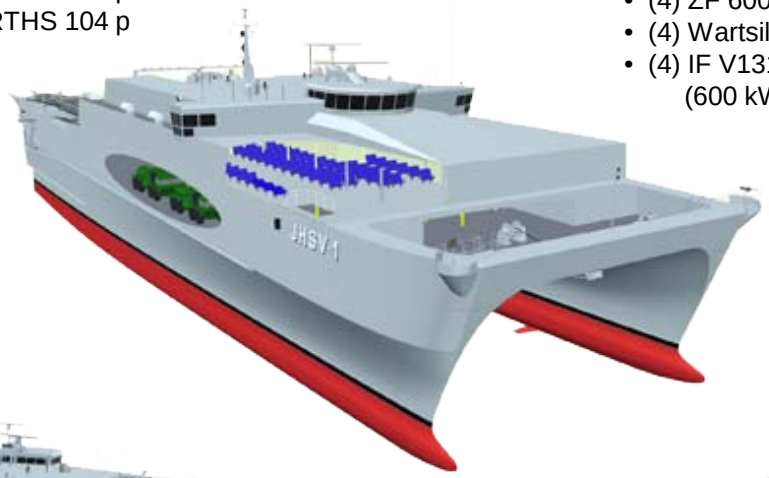
LENGTH	103.0 m (337.9 ft)	ALUMINUM CONSTRUCTION	
BEAM	28.5 m (93.5 ft)	CREW	42 p
DRAFT(F)	3.91 m (13 ft)	TROOP SEATS	312 p
FULL LOAD	2400 mt (2362 Lt)	TROOP BERTHS	104 p

Machinery

- (4) MTU 20V8000 M71L Diesel Engines (9.1 MW each, 36.4 MW total)
- (4) ZF 60000NR2H Reduction Gears
- (4) Wartsila WLD 1400 SR Waterjets
- (4) IF V1312C2ME-HPCR Diesel Generators (600 kW each, 2.4 MW total)

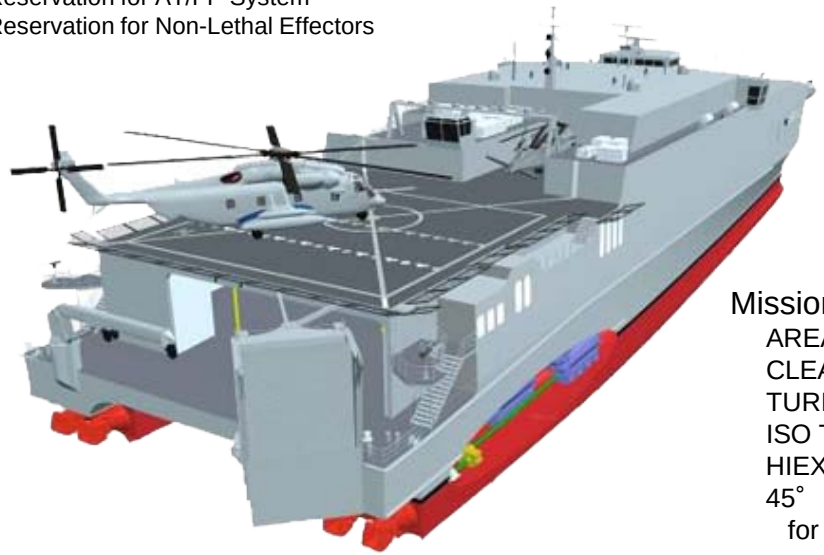
Aviation Facilities

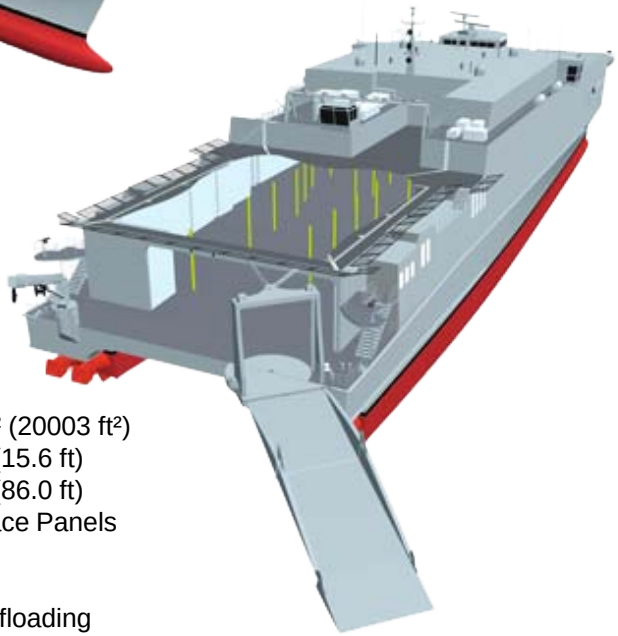
- NAVAIR Level 1 Class 2 Certified Flight Deck for one helicopter
- Centerline parking area for one helicopter
- NAVAIR Level 1 Class 4 Type 2 Certified VERTREP
- Helicopter Control Station



Armament

- (4) .50 Caliber Machine Guns
- Reservation for AT/FP System
- Reservation for Non-Lethal Effectors





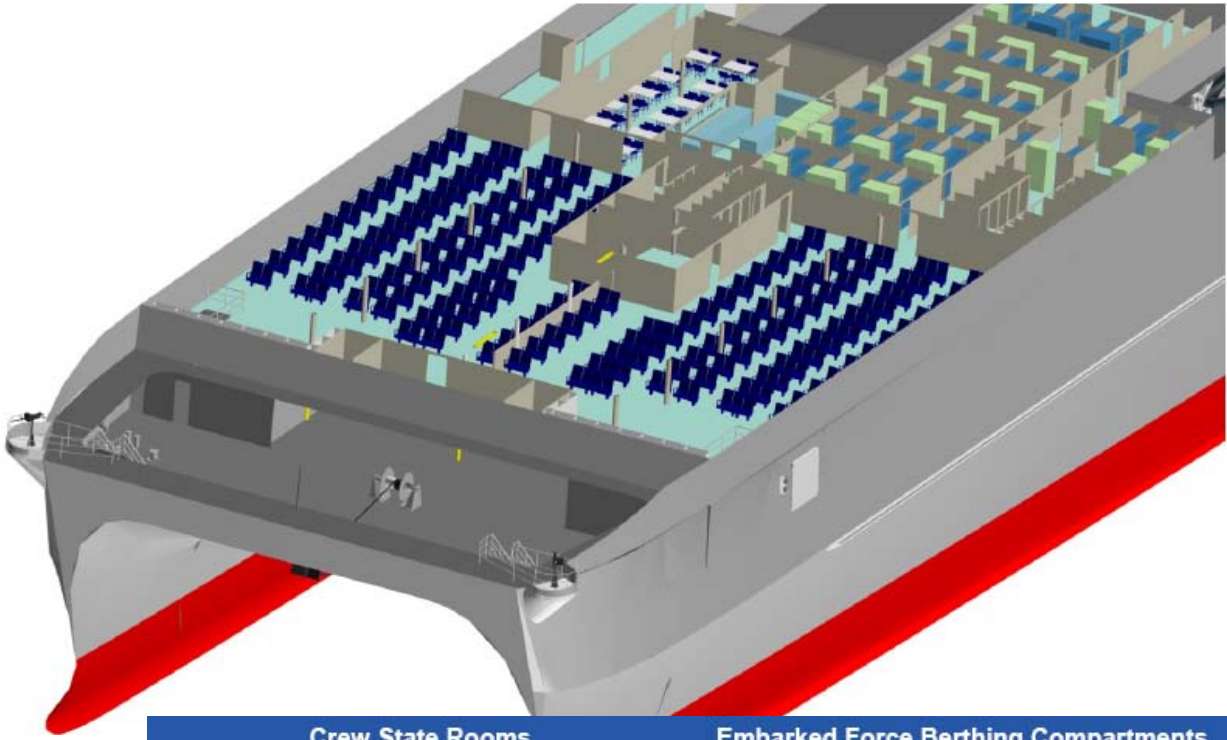
Mission Bay

AREA (with Tie Downs)	1858 m² (20003 ft²)
CLEAR HEIGHT	4.75 m (15.6 ft)
TURNING DIAMETER	26.2 m (86.0 ft)
ISO TEU STATIONS	6 Interface Panels

HIEX Foam Firefighting System

45° slewing articulated quarter ramp for rapid and efficient loading and offloading

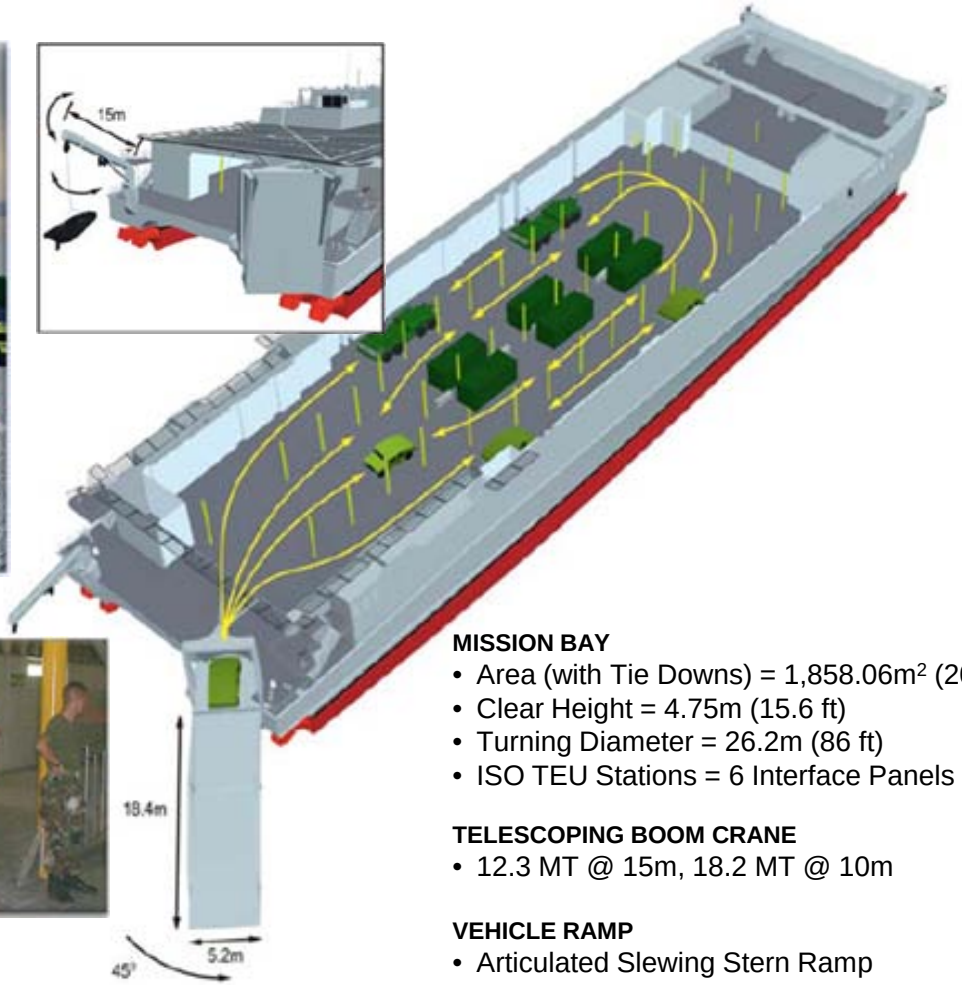
JHSV Troop Accommodations



ACCOMMODATIONS

- Crew = 42 p
  - 2 x Single SR
  - 6 x Double SR
  - 7 x Quad SR
- Troop Seats = 312 p
- Troop Berths = 104 p
- Galley & Messing = 48 p

JHSV Mission Bay



WestPac Express Operational Experience

MISSION BAY
- Area (with Tie Downs) = 1,858.06m^2 (20,000ft^2)
- Clear Height = 4.75m (15.6 ft)
- Turning Diameter = 26.2m (86 ft)
- ISO TEU Stations = 6 Interface Panels

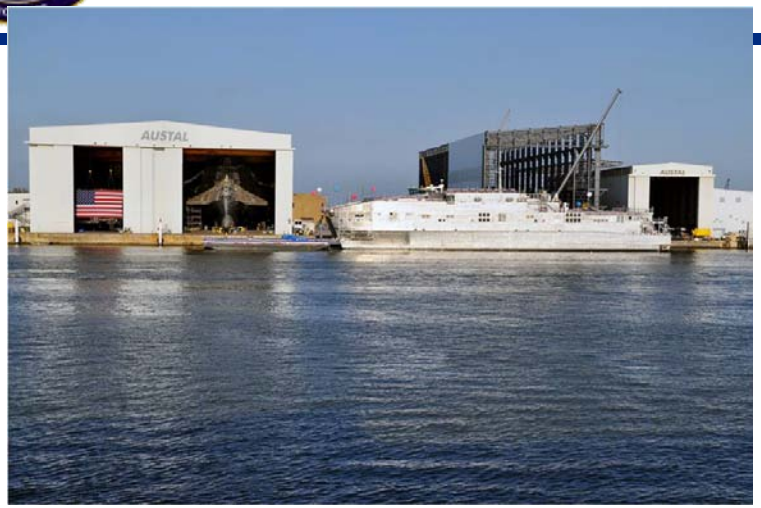
TELESCOPING BOOM CRANE
- 12.3 MT @ 15m, 18.2 MT @ 10m

VEHICLE RAMP
- Articulated Slewing Stern Ramp
- Straight Aft to 45˚ Starboard

Aviation Capability and Support

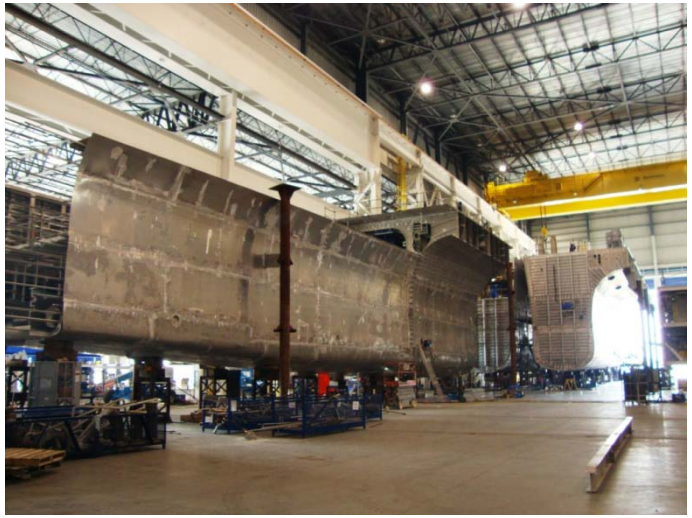
- Land, Launch and refuel in up to Sea State 3, Day/Night all weather CH-53, H-60 & H-46 aircraft.
- Level 1 Class 2 (limited services)
- Class 4 Type 2 VERTREP, H-60, H-46, H-47, H-53, V-22
- Helo wash-down facilities available

JHSV Production Progress



JHSV 1 (Spearhead) at pier for Christening

JHSV 1 (Spearhead) Test and Activation



JHSV Under Construction

JHSV Program Way Ahead

- **JHSV 2 Keel Laying (1st Qtr FY 2012)**
- **JHSV 1 Builder's Trials/Acceptance Trials (Winter 2011)**
- **JHSV 1 Delivery (2nd Qtr FY 2012)**
- **JHSV 3 Keel Laying (2nd Qtr FY 2012)**
- **JHSV 1 Post Delivery Test & Trials (2nd – 3rd Qtr FY 2012)**

MLP Overview

Program Structure:

Navy awarded National Steel and Shipbuilding Company (NASSCO) a contract on February 13, 2009, for Systems Design (SD) Part 1, with an option for SD 2. Advance Design awarded August 13, 2010. Detail Design & Construction contract for MLP 1 and 2 was awarded May 27, 2011, and a contract option for Long Lead Time Material for MLP 3 was awarded June 30, 2011.

✓SD1
✓SD2
✓AD

DD&C
✓MLP 1
✓MLP 2
❑MLP 3

✓Awarded

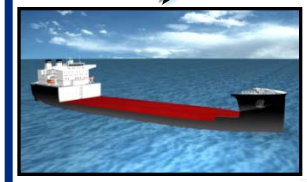
Delivers Joint Warfighter Equipment

Each MLP provides:

- 3 LCAC berths, Skin-to-Skin ramp & fenders
- 25,000 sq. ft. Raised Vehicle Deck

Commercially Based

Designed/constructed to commercial ship standards. Navy standards and certifications applied to mission-related ship functions. Operated by a 34-person Military Sealift Command crew.



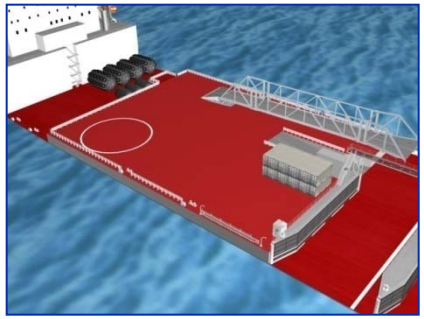
MLP at Delivery

Sea Base Surface Interface Hub

Enables personnel and equipment transfer from MPF(F) LMSR and JHSV to shore via LCACs in Sea State 3 conditions.

Core Capability Set

Government designed. Constructed under separate contract.



Mobile Landing Platform (MLP 1)

ACCOMMODATIONS

	Lic/ Off	CPO/ SNCO	Unlic/ OEP	Total
MSC	15	-	19	34
Spares	0	-	0	0
Standing Detach.	0	0	0	0
NSE	0	0	0	0
Troops	0	0	0	0
Total	15	0	19	34

Habitability: Based on BP Tanker standards, MSC crew in single staterooms with t exception of one two-person staterooı

MACHINERY SYSTEMS

Commercial Diesel-Electric Propulsion
- Integrated Electric Plant
- 4 x 6.1 eMW Medium Speed Diesel Generators
- 6.6 kV Electric Propulsion System
- 2 x 10.0 MW at 85 rpm Synchronous, Variable Speed, Reversible Propulsion Motors
- 1,000 ekW Emergency Diesel Generator
- 2 x 7.45 m diameter propellers
- 1 x 2,000 ekW Azimuthing Bow Thruster (DPS-0)

AUXILIARY SYSTEMS

All-Electric Auxiliaries

Ballast System:	4,000 m^3/hr, up to ~20m draft
A/C Plants	2x85 ton
Stores Cranes:	2 x 5 mt capacity
Mission Crane:	1 x 10 mt capacity

COMMAND & CONTROL

Legacy BP Tanker Navigation and Communication
- Integrated Navigation Bridge System
- SOLAS Communications for Sea Area III
- 2 x Differential GPS
- 3 cm (X-band) & 10 cm (S-band) radars

INTERFACE STATIONS SERVICES

Seawater cooling	AFFF	JP-5
Seawater firefighting	Electric power	Oily waste
Telephone	Distilled water	Food waste
General announcing	Potable water	DFM
General alarms	LP air	
NIPRNET	Sewage discharge	
SIPRNET	Grey water discharge	

CARGO CAPABILITIES

Mission Deck:	154.7 x 50m
Mission Deck Area:	7,735 m^2
Lift Capacity:	23,000 mt @ 9m submergence with fixed ballast
Deck Load Capacity:	20 mt/m^2
JP-5 Stowage:	380,000 gal
Potable Water Stowage:	100,000 gal
Potable Water Generation:	25,000 gal/day
MOGAS:	None

LIFESAVING

USCG Certified (Cargo & Misc. Vessels)

Lifeboats:	2 x 46 person (one ea. P/S))
Rescue Boat:	1 x 7m RHIB
Liferafts:	2 x 25-person (two ea. P/S aft)
	1 x 10-person (one ea.. P/S fwd)

DIMENSIONS

Length, LBP:	233.2 m
Length, Overall:	239.3 m
Beam, DWL:	50.0 m
Full Load Departure Draft	9.0 m
Load Line Draft:	12.0 m
Depth, Mission Deck:	15.5 m
Depth, Upper Deck:	28.0 m

STABILITY

IAW IMO (SOLAS) and 46 CFR

HULL STRUCTURE

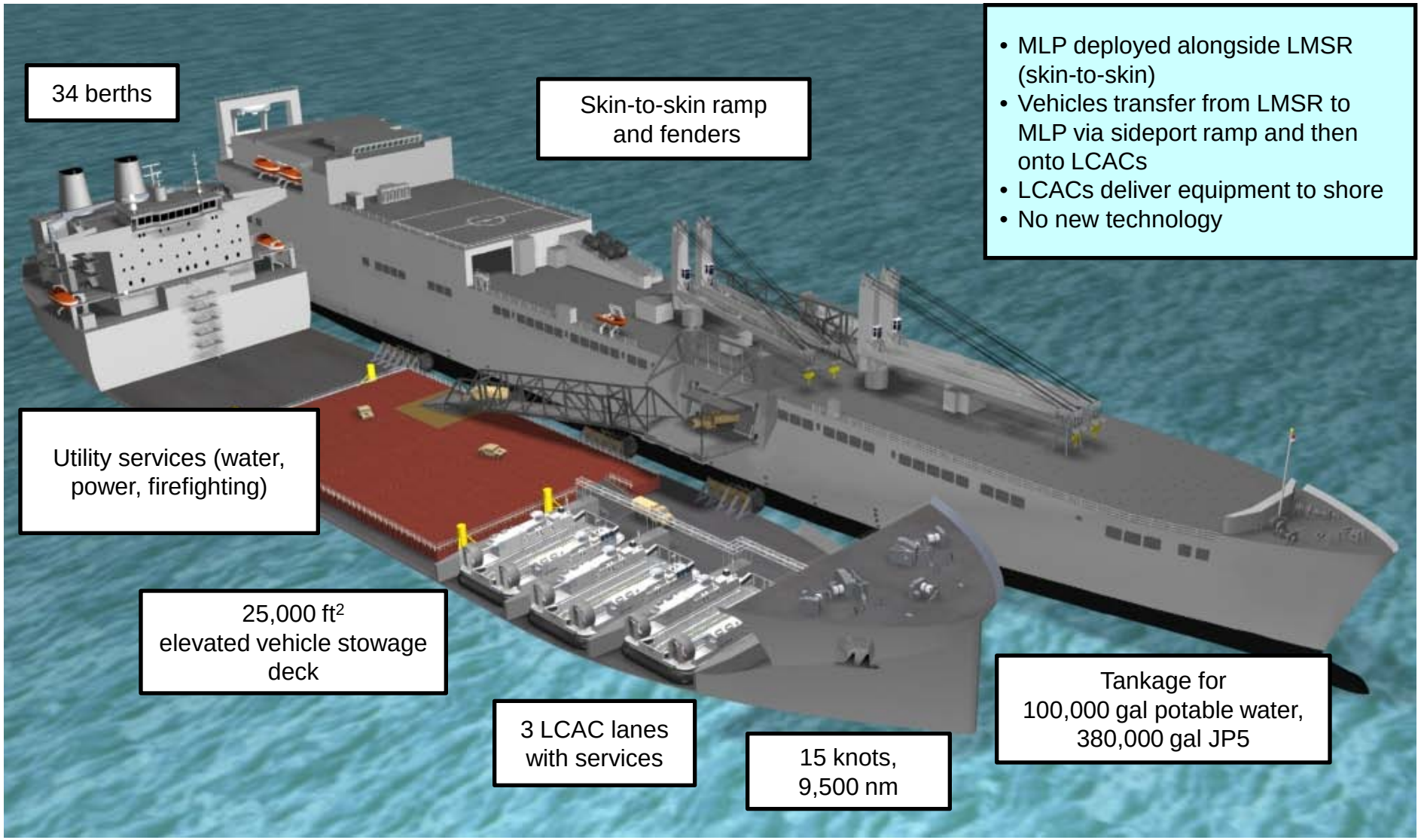
Commercial, ABS Steel Vessel Rules

MEDICAL

24 m^2 (255 ft^2) (Isolation only). BP tanker legacy facility

Information as of 10/19/2011

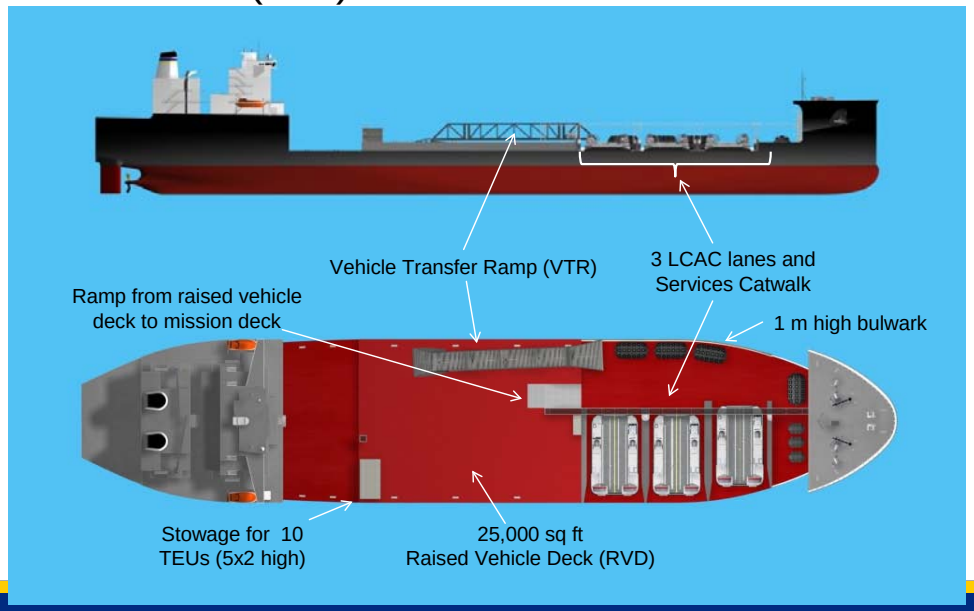
MLP Capabilities



- MLP deployed alongside LMSR (skin-to-skin)
- Vehicles transfer from LMSR to MLP via sideport ramp and then onto LCACs
- LCACs deliver equipment to shore
- No new technology

Core Capability Set Acquisition Plan

- Government-led contract design effort to refine and translate the requirements into the design and specifications for the core capability set before competing the contract, which allows more user input
- A separate competitive contract for DD&C and integration of the core capability for MLP 1 with options for MLP 2 and MLP 3 will be issued
- Core Capability Set includes: Elevated vehicle stowage deck, 3 LCAC lanes, LCAC services catwalk, Skin to Skin fenders, and support structures to receive LMSR side port ramp and fender to bear upon.
- Interfaces between the ship and core capability package are managed via an existing Interface Control Document (ICD)



MLP Production Progress

MLP Blocks under construction at NASSCO

MLP Program Way Ahead

- Core Capability Set RFP Release (1st QTR FY 12)
- MLP 1 Keel Laying (1st QTR FY 12)
- Award Core Capability Set (3rd Qtr FY 12)
- MLP 2 Start of Construction (3rd Qtr FY 12)
- MLP 1 Undock (1st Qtr FY 13)