Marine Corps Seabasing

Requirements and Strategy

NDIA
Expeditionary Warfare Conference

13 September 2012

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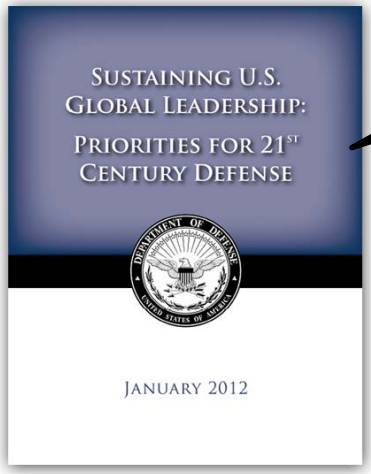
Facts

- ***We are a maritime nation.*** Freedom of movement and freedom of access are key to our national security and economic stability.
- ***The littorals contain the key global engagement points,*** and the Navy-Marine Corps team is uniquely organized, trained, and equipped to assure access and influence in the littorals.
- ***Amphibious warships are more than transports.*** They are versatile, interoperable platforms serving as the cornerstone of America's ability to project power and respond to the range of crises.
- ***Connectors are a critical enabler*** of amphibious capability and require adequate resourcing.
- ***The Marine Corps requirement for amphibious shipping*** is based on war plans containing two MEBs conducting simultaneous forcible entry operations.
- ***MPF is a proven capability*** that provides global coverage, forward presence, and crisis response.
- The introduction of the ***T-AKE, MLP and LMSR*** into the MPF program will create a ***seabasing-enabled capability that provides employment options that span the range of military operations.***

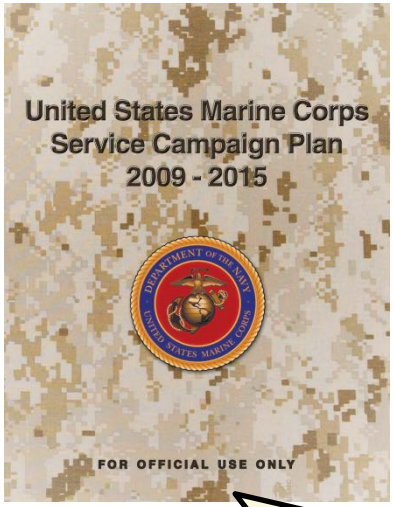
Seabasing In Strategy & Concepts



Seabasing offers Power Projection and Freedom of Movement

Report of the Amphibious Capabilities Working Group
Feb 2012

Seabasing helps achieve Littoral Dominance



Seabasing sustains Persistent Presence and Crisis Response Activities

Joint Operational Access Concept
January 2012

Seabasing enables Cross Domain Synergy

Seabasing supports Defeating Area Denial

Freedom of Action
An Army- Marine Corps Concept
Feb 2012

Rebalancing to the Pacific

Tailor-Made for Seabased Forces

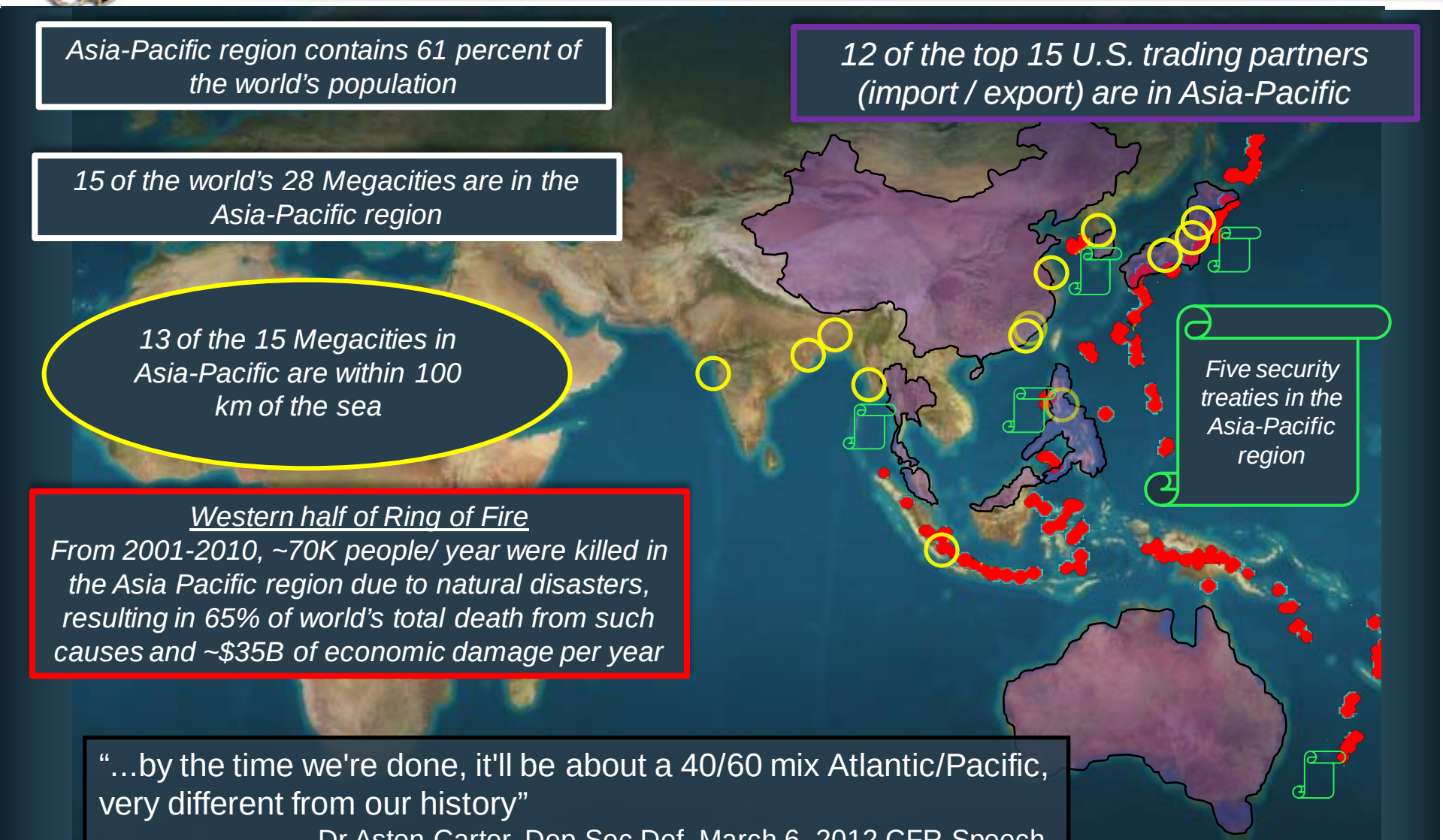
Asia-Pacific region contains 61 percent of the world's population

12 of the top 15 U.S. trading partners (import / export) are in Asia-Pacific

15 of the world's 28 Megacities are in the Asia-Pacific region

13 of the 15 Megacities in Asia-Pacific are within 100 km of the sea

Five security treaties in the Asia-Pacific region



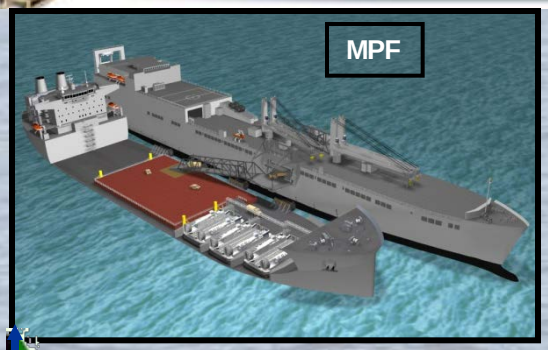
Western half of Ring of Fire

From 2001-2010, ~70K people/ year were killed in the Asia Pacific region due to natural disasters, resulting in 65% of world's total death from such causes and ~$35B of economic damage per year

"…by the time we're done, it'll be about a 40/60 mix Atlantic/Pacific, very different from our history"

-- Dr Aston Carter, Dep Sec Def, March 6, 2012 CFR Speech

Seabasing Spans
The *Full Range of Military Operations*



Most Dangerous

Frequency

Train/Advise/Assist

Relief Operations

Nation Building

Peace Enforcement

Show of Force

Most Likely

NEO

Acts of Terrorism

COIN

Civil War

Limited War

Regional Conflict

Global War

Task organized forces to meet Combatant Commander requirements

Permissive

Semi-Permissive

Non-Permissive/Forcible Entry

Peacetime and Crisis

Low Intensity Conflict

Mid-Intensity Conflict

High Intensity Conflict

137 Amphibious Operations since 1982…Amphib ships are <u>not just for MCO</u>

Today & Tomorrow's Seabasing Capability

LPD-17
Capable of basing over 700 Marines, their equipment and supplies and projecting capabilities ashore with LCACs, conventional landing craft, amphibious connectors and rotary lift craft.

LHA-8
Lifts and supports over 1300 Marines and the MAGTF command & control nodes- is main base to fixed (JSF), rotary wing / tilt rotor, and unmanned aircraft systems. Well deck supports simultaneous landing craft operations. Level II medical capability.

LSD
Provides largest capacity to operate landing craft in support of MAGTF operations.

LMSR
Military Sealift Command's (MSC) Large, Medium Speed, Roll-On/ Roll-Off ship (LMSR) program significantly expands the nation's sealift capability as a prime mover of US military equipment. The ships carry vehicles and equipment to support humanitarian missions, as well as combat missions.

Ship to Shore Connector (SSC)
Provides modernized landing craft over-the-beach capability.

Mobile Landing Platform
Leverages float-on/ float-off technology and has raised vehicle platform, sideport ramp, mooring fenders and LCAC lanes. Utility of "Interoperable Pier in the Ocean" spans the Range of Military Operations.

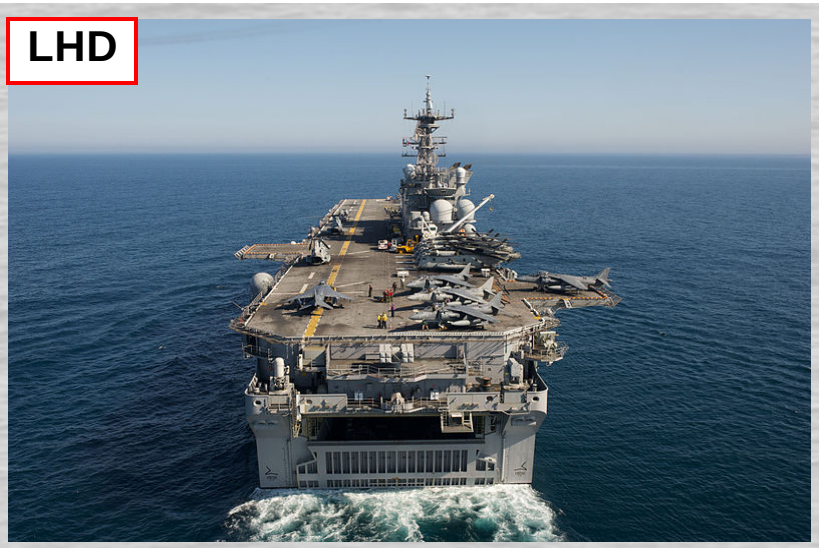
In future crises, forward based and forward deployed amphibious and MPF forces will continue to demonstrate their inherent flexibility and utility by aggregating with surged forces to conduct engagement, crisis response or forcible entry operations.

T-AKE
Offers selective access and off load of unitized supplies for prepositioning MEB and other MAGTFs operating in the sea base or ashore.

Amphibious Warships

LHA-6

LHD



LPD

LSD

LHA 6 USS AMERICA

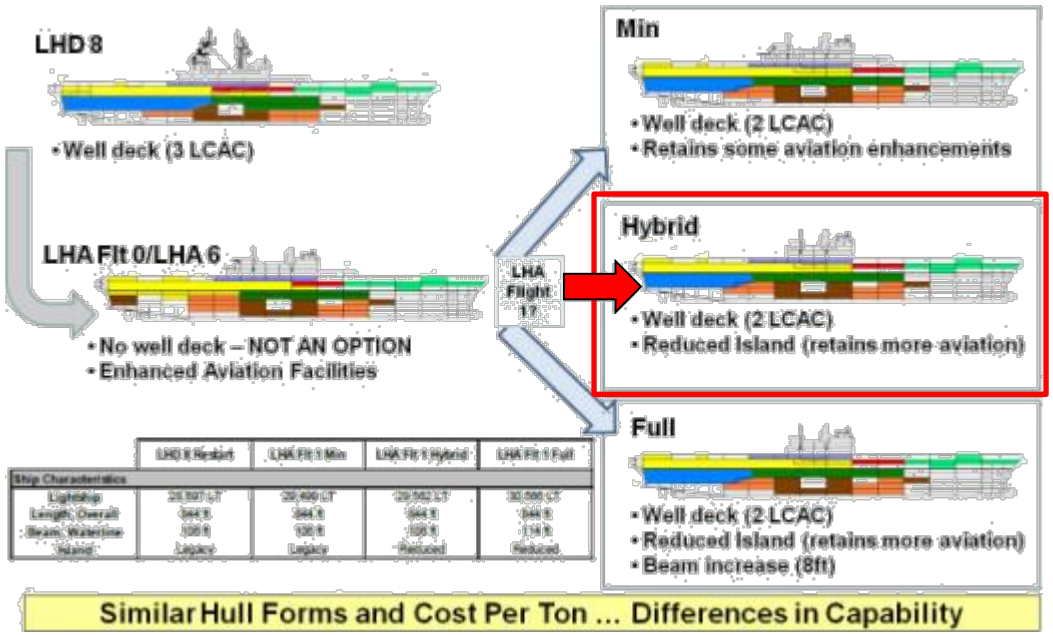
Launched 4 June 2012 Pascagoula, Mississippi

Speed	22.3 kts
Draft (full)	28.72 ft
Crew	1,204 (102 Officer, 78 > E7, 1,024 < E6)
Embarked Landing Force	1,518 (157 Officers, 57 > E7, 1,304 < E6)
Surge	184 Accommodations
Medical Capability	2 OR, 24 Ward, NCRTS
Mass Casualty/ Receiving	699 Overflow
Potable Water	200,000 gal/day
Surface Interface Point	None
Well Deck Capacity	N/A
Flight Deck (Spots, Level, Class)	9 Spots (6 Avail due to Stbd A/C Stow) 90,274 sqft, LVL 1, CL
Elevators	2, One Stbd (37.5 t), One port (37.5 t)
Hangar	25,937 sqft, 2 Seven Frame High Bays (49 ft ea) (3,918 sqft)
Ramp	Pier side Side Port
Vehicle Sq Ft (Net)	10,328 sqft
Cargo Cube (Net)	160,000 sqft
Lifting Capability	Crash Crane (50K lb)
Cargo Fuel	1,300,000 gal
Motor Gasoline	330 gal (embarked drum or bladder)

LHA (R) Flight 1 Decision

LHA-8

- Hull form decision MOA signed Feb 2012
- Well deck re-introduced
- Incorporates a reduced island concept (RIC)
- FY-17 procurement and delivery in FY-22



DEPARTMENT OF DEFENSE
COMMANDANT OF THE MARINE CORPS
CHIEF OF NAVAL OPERATIONS
WASHINGTON DC 20350-2000

5000
Ser N00/ 100104
1 Feb 12

5000
CMC

MEMORANDUM OF AGREEMENT
BETWEEN
COMMANDANT OF THE MARINE CORPS
AND
CHIEF OF NAVAL OPERATIONS

Subj: LANDING HELICOPTOR ASSAULT (LHA) FLIGHT 1 STUDY RESULTS

Ref: (a) DCNO(N8)/CD&I/NAVSEA/PDASN memo 5000 N8 of 1 Jun 11

1. Purpose. Reference (a) documents the Three-Star Board of Directors unanimous consensus and agreement on the LHA Flight 1 Study and recommended that Chief of Naval Operations and Commandant of the Marine Corps make a final Department of the Navy decision.

2. Agreement. Accordingly, the recommended LHA Flight 1 option (Hybrid design with two Landing Craft Air Cushion (LCAC) well deck and reduced island) is approved.

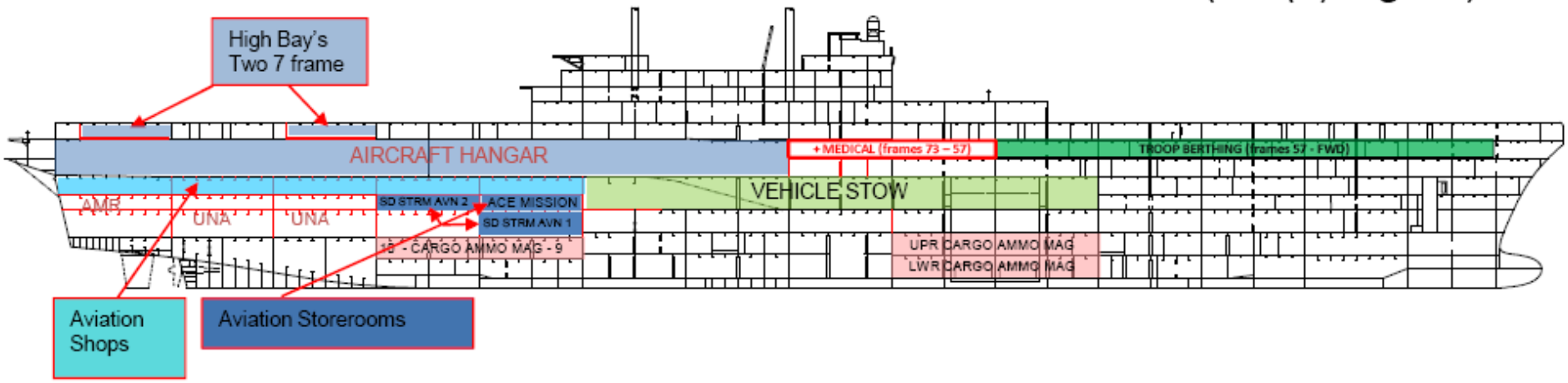
3. Effective Date. The LHA Flight 0 Capabilities Development Document will be updated for a Gate 3 review in 2012.

JONATHAN W. GREENERT
Admiral, U.S. Navy

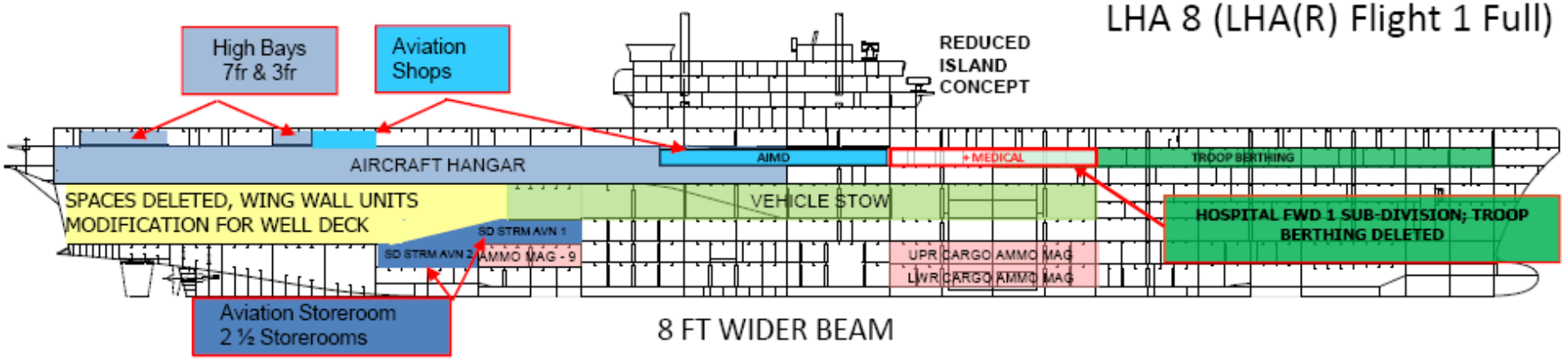
JAMES F. AMOS
General, U.S. Marine Corps

LHA-6 to LHA-8 Concept Evolution

LHA 6 (LHA(R) Flight 0)



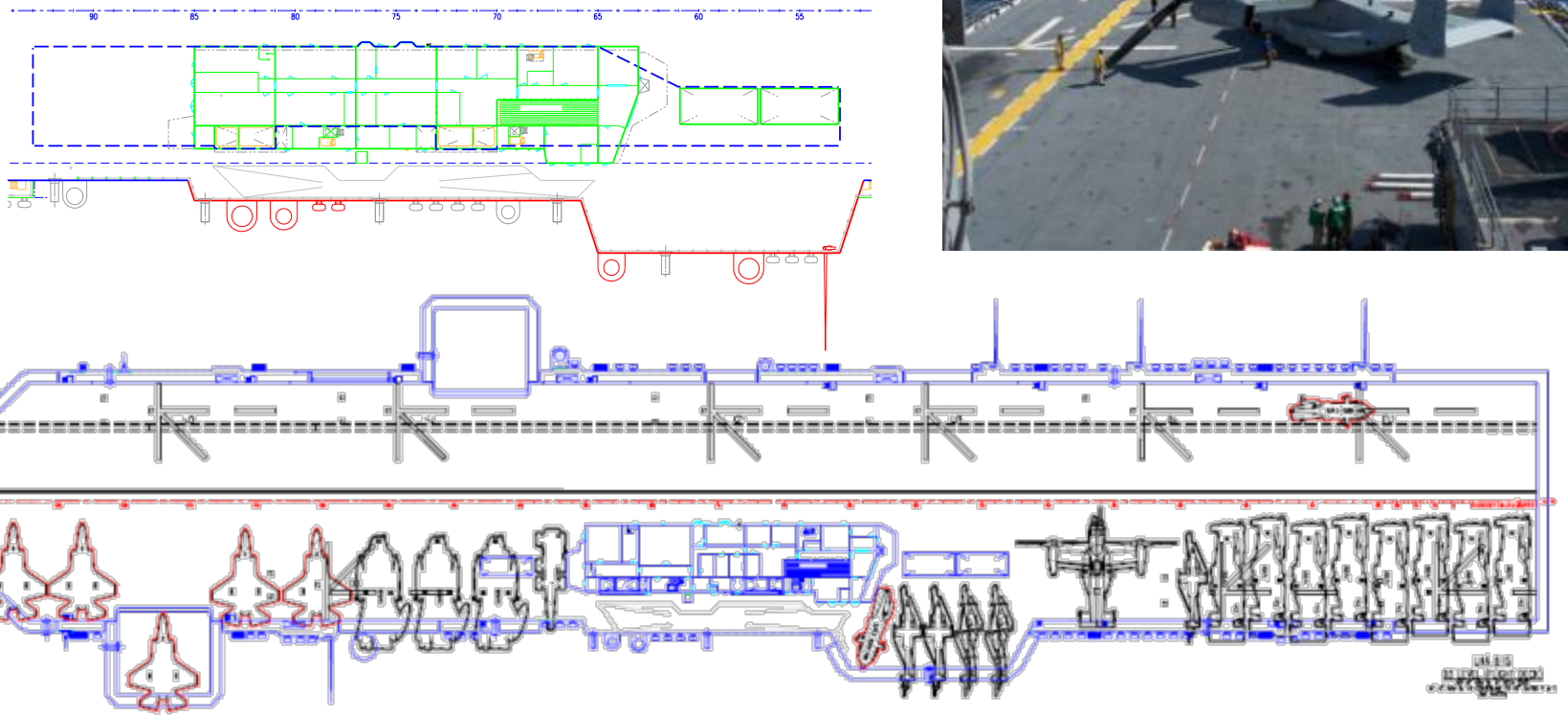
LHA 8 (LHA(R) Flight 1 Full)



LHA-8

Increased Flight Deck Area

- **Design expectations:**
  - **•Add ~ three aircraft parking spots in starboard bone**
  - **• No locked spots on flight deck, or**
  - **• Provide space for MV-22 in maintenance mode without blocking port operating spots**



Surface Connectors

Ship to Shore Connector (SSC)

Landing Craft Utility (LCU)

Roll on/Roll off Discharge Facility (RRDF)

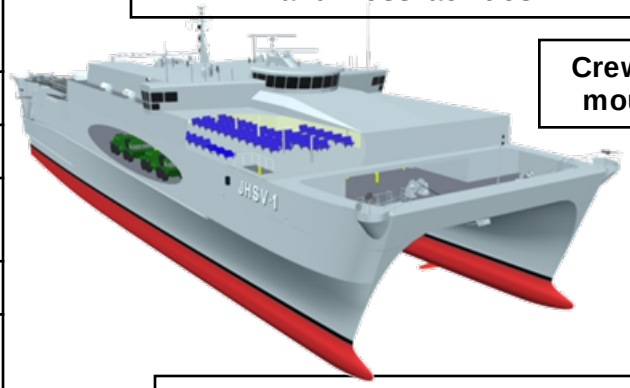
Improved Navy Lighterage System (INLS)

Joint High Speed Vessel

WPE/JHSV/HSV Comparison			
	WestPac Express	JHSV	HSV
Overall Length	101m	103m	107m
Draft	4.3m	3.83m	3.7m
Cruise/Max Speed	36kts/38kts	35kts/43kts	40kts/42kts
Passengers	900	312	866
Vehicle/Cargo Capacity	33,000sqft 165 HMMWVS	20,000-22,000sqft 100–110 HMMWVS	31,000sqft 152 HMMWVS
Deadweight	790t	700t	800t
Range	1250nm	1200nm	1200nm

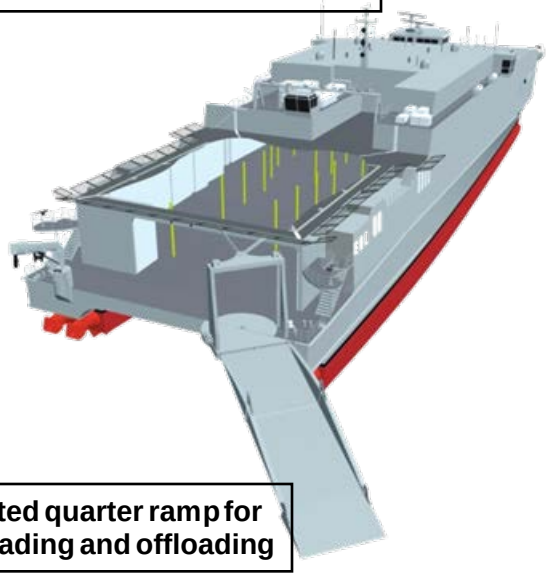
- *JHSV is not a combatant, operates in a permissive environment*
  - *MSC standard for ATFP capabilities*

Extensive yet flexible crew and troop accommodations with lounge, medical and mess facilities



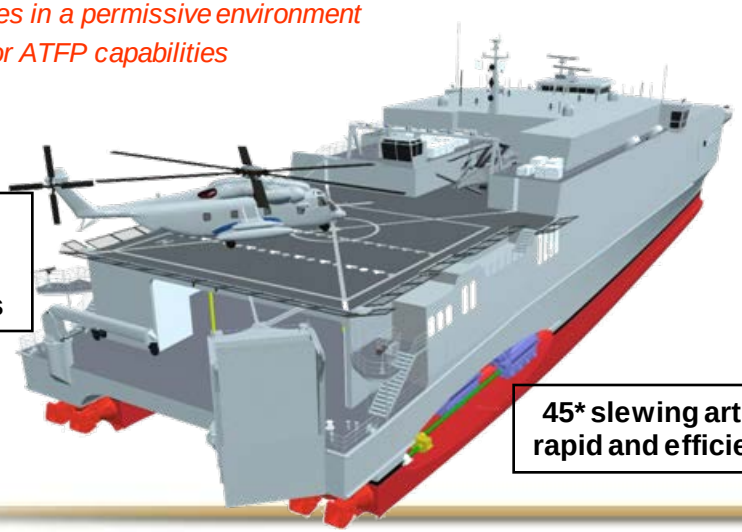
Crew-served weapon mounts fore and aft

Large mission bay for range of military hardware, vehicles and boats



Level I, Class 2 for H53/H60 helo operations

Level I, Class 4 VERTREP operations



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

Maritime Prepositioning Ships

T- AKE

LMSR

MLP

T- AK

MPF Enhancement Strategy

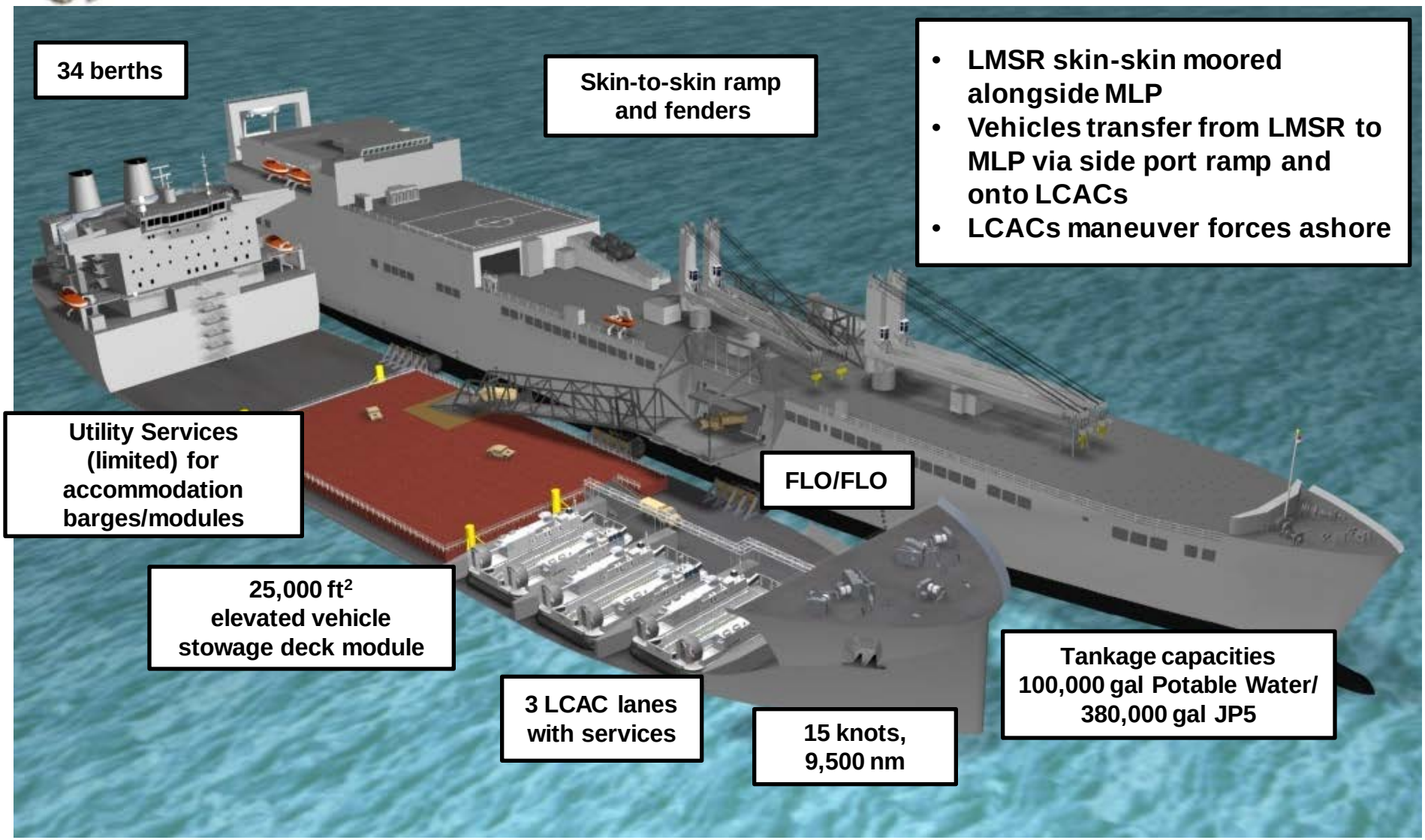
- **Roll-on roll-off cargo ships, coupled with mobile landing platforms, provide key enabling capabilities to fully leverage existing MPS capabilities**
  - **Selective offload**
    - **Increased ship stowage capacity allows for reconfigured loads across MPSRON for selective offload**
  - **In-stream offload of Large, Medium Speed RO/RO (LMSR) with Mobile Landing Platform (MLP)**
  - **Increased connector lift capacity with MLP**
  - **Increased ship-to-shore throughput**

T-AKE

LMSR

MLP

Mobile Landing Platform (MLP)



USNS Montford Point (MLP 1)

Power Point: August 2009 -- Under Contract: May 2011
Keel Laying: January 2012 -- Projected Launch: November 2012

MPF T-AKE: Selective Offload *Plus* Operational Reach

MPF Squadron Composition
FY13

MPSRON 2 DIEGO GARCIA

STOCKHAM

SISLER

SEAY

LEWIS & CLARK

BUTTON

LOPEZ

MONTFORD POINT

MPSRON 3 GUAM / SAIPAN

DAHL

PILILAAU

SACAGAWEA

LUMMUS

WILLIAMS

BOBO

GLENN

Experimentation and Demonstration Opportunities

Dates	Exercise	OCE	Location
Oct 12	Coconut Grove	PACOM	Maldives
Feb 13	Dawn Blitz	PACOM	CA
Feb 13	Native Fury	CENTCOM	TBD
Feb 13	Freedom Banner	PACOM	Philippines
Feb 13	MPF Ex	SOUTHCOM	Gitmo
Apr 13	Bold Alligator	FFC/MFC	VA
Apr 13	Immediate Response	EUCOM	Croatia
May 13	Africa Lion	AFRICOM	Morocco
Jun 13	Seabreeze	EUCOM	CA
Jul 13	Dawn Blitz	PACOM	TBD
Aug 13	Pacific Horizon	PACOM	CA
Feb 14	RIMPAC	PACOM	TBD

Amphibious Ship C2 Requirements

Tier 1N

Tier 2

Tier 3

DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
3300 RUSSELL ROAD
QUANTICO, VA 22134-5001

IN REPLY REFER TO:
3090
C 06
01 FEB 2011

From: Deputy Commandant for Combat Development and Integration
To: Deputy Chief of Naval Operations (Integration of Capabilities and Resources)

Subj: 2010 AFLOAT MARINE AIR GROUND TASK FORCE (MAGTF) COMMAND AND CONTROL, COMMUNICATIONS, AND COMPUTERS (C4) REQUIRED CAPABILITIES (AMC4RC) AND KNOWN SHORTFALLS LETTER

Ref: (a) 2008 AMC4RC Letter dtd 03 Dec 2008
(b) 2010 MAGTF Capabilities List (MCL)
(c) OPNAVINST 3501.XX Series - Required Operational Capabilities (ROC) and Projected Operational Environment (POE) series documents for "L" class amphibious ships.

Encl: (1) Afloat MAGTF C4 Required Capabilities List
(2) Network and Telephony Matrix
(3) Afloat MAGTF C4 Capability Gaps List

1. The purpose of this document is to promulgate Marine Corps afloat C4 required capabilities and shortfalls as they relate to amphibious ships, maritime prepositioning ships, and joint high speed vessels.

2. This document supersedes reference (a) as the baseline for required afloat MAGTF C4 capabilities and associated gaps. It does not include requirements for the Navy Support Element. This letter contains four enclosures.

a. Enclosure (1) "Afloat MAGTF C4 Required Capabilities List" articulates C4 capabilities required to support Marine Corps war-fighting functions and is derived from reference (b) and reference (c).

b. Enclosure (2) "Network and Telephony Matrix" lists network and telephone requirements by type (secure, non secure, etc.) by vessel class and space.

c. Enclosure (3) "Afloat MAGTF C4 Capability Gaps List" is intended to direct near term efforts of the resource sponsors associated with a given capability.

Subj: 2010 AFLOAT MARINE AIR GROUND TASK FORCE (MAGTF) COMMAND AND CONTROL, COMMUNICATIONS, AND COMPUTERS (C4) REQUIRED CAPABILITIES (AMC4RC) LETTER

3. Mitigating the challenges of command and control of naval forces is crucial to the success of our nation and our Naval Service. We stand ready to work with you and your staff in meeting the technological and fiscal challenges in implementing these enduring requirements.

GEORGE J. FLYNN

Copy to:
CMC (AVN, C4, I, P&R, I&L, PP&O)
CNO (N2/6, N3, N4, N5, N7)
PEO SHIPS
DASN SHIPS
CMDR NETWARCOM
CMDR MARCORSYSCOM
CMDR NAVSEASYSCOM
CMDR SPAWARSYSCOM
CMDR NAVAIRSYSCOM
COMFLTFORCMD
COMLANTFLT
COMPACFLT
COMMARFORCOM
COMMARFORLANT
COMMARFORPAC
COMMARFORRES

- **Delivered Annually**
- **4 Enclosures**
  - **Required Afloat Capabilities**
  - **Network and Telephony Matrix**
  - **MAGTF Afloat Baseline**
  - **Gaps List**

Integrating the MAGTF into the Sea Base


Increased Square


Increased Height


Increased Weight


Increased Quantity


Navy / MAGTF Ship Integration

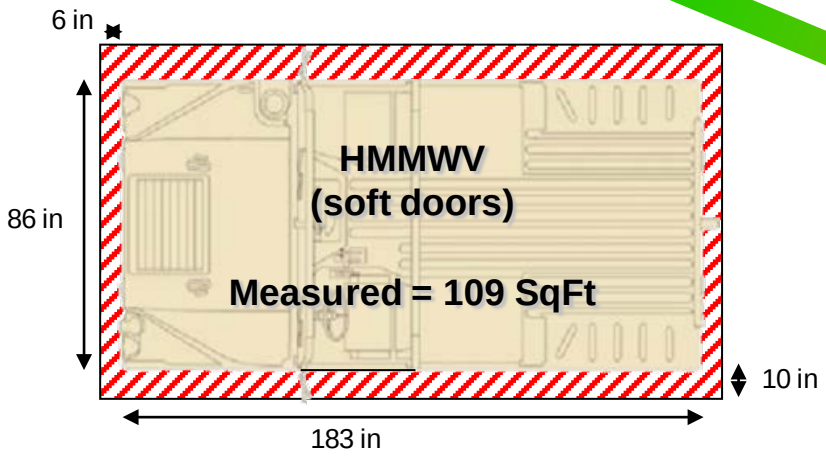
Increased Cube

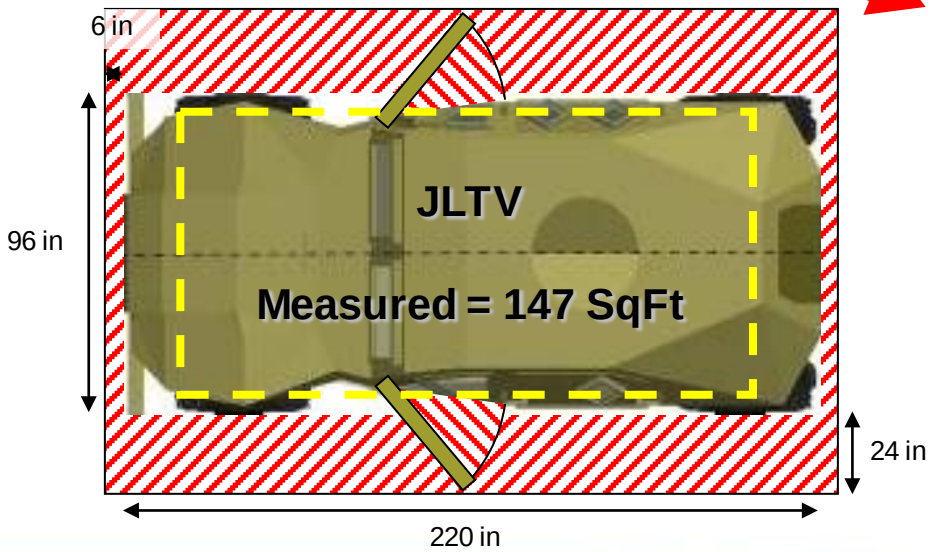
HMMWV To JLTV

70%

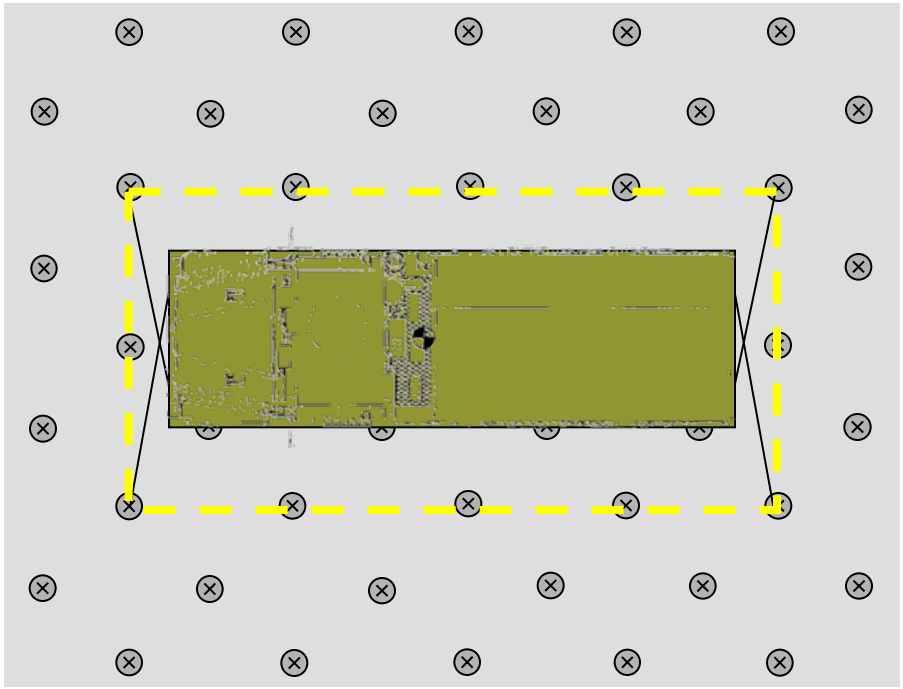
BROKEN STOWAGE FACTOR

63%

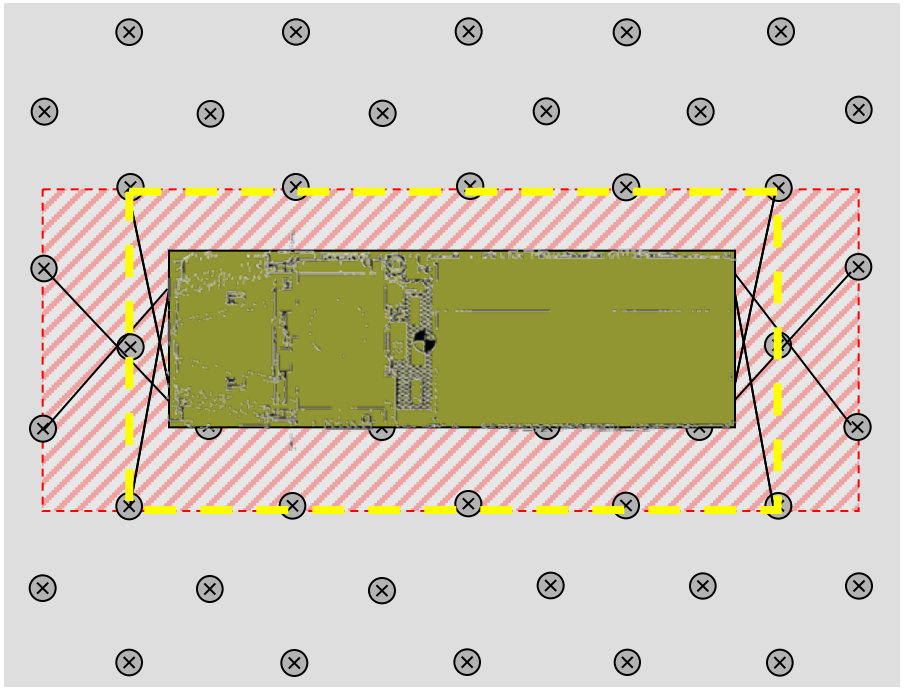




Additional Lashings



MTVR at 39,000 lbs
(unarmored cab with mobile load)
Requires 4 tie-down points



MTVR at 48,000 lbs
(armored cab with mobile load)
Requires 8 tie-down points

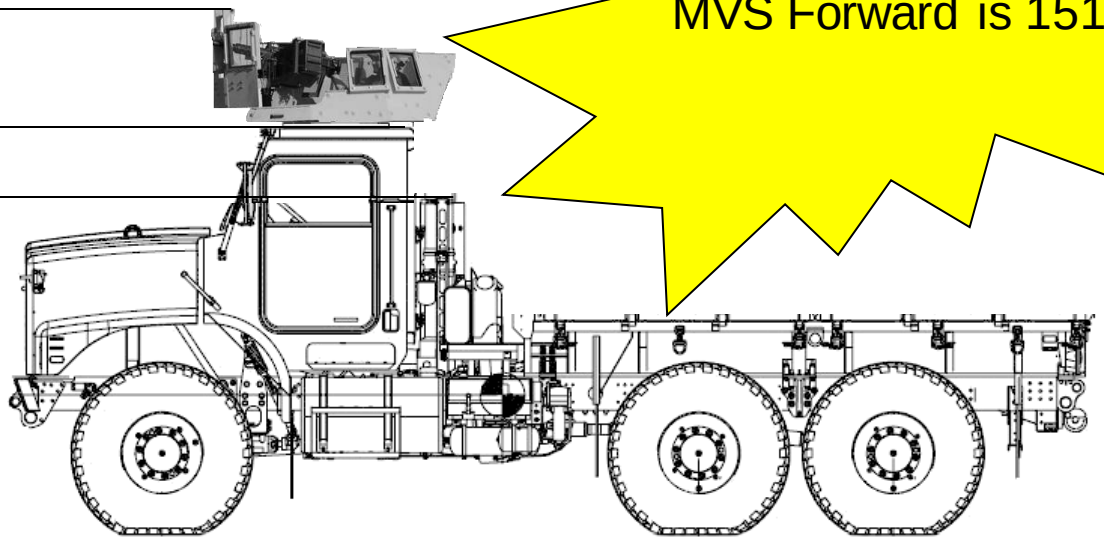
MTVR Stowage in LPD 17
Main Vehicle Stow

Maximum stowage in MVS Forward is 151”

164”

127”

101”

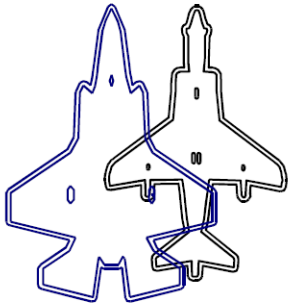


Future vs Legacy Comparison Aircraft Overlay

Marine Fighter Attack

F-35B

Length / Width / Height
52.26' / 35' / 14.14'



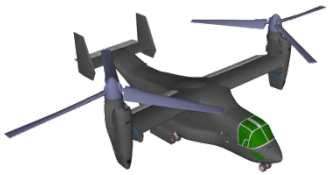
AV-8B

Length / Width / Height
47.44' / 30.33' / 11.65'

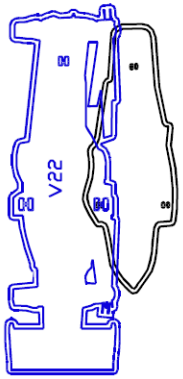
Spot Factors
F-35B: Flight Deck (2.96); Hangar Deck (2.69)
AV-8B: Flight Deck (2.57); Hangar Deck (1.94)

Marine Medium Helicopter

MV-22B



Length / Width / Height (Folded)
63' / 18.4' / 18.2'



CH-46E

Length / Width / Height (Folded)
45.58' / 14.75' / 16.67'

Spot Factors
MV-22B: Flt Deck (1.75); Hangar Deck – Folded (2.92), Maint Spread (5.00)
CH-46E: Flight Deck (1.32); Hangar Deck (1.30)

Heavy Lift Helicopter

CH-53K

Length / Width / Height (Folded)
60.76' / 28.42' / 18.5'

CH-53E

Length / Width / Height (Folded)
60.5' / 28.42' / 18.58'

Spot Factors
CH-53K: Flight Deck (2.41); Hangar Deck (3.18)
CH-53E: Flight Deck (2.41); Hangar Deck (3.50)

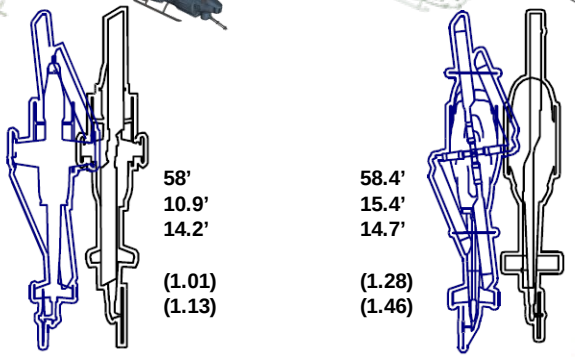
Marine Light Attack / Utility

AH-1Z

AH-1W

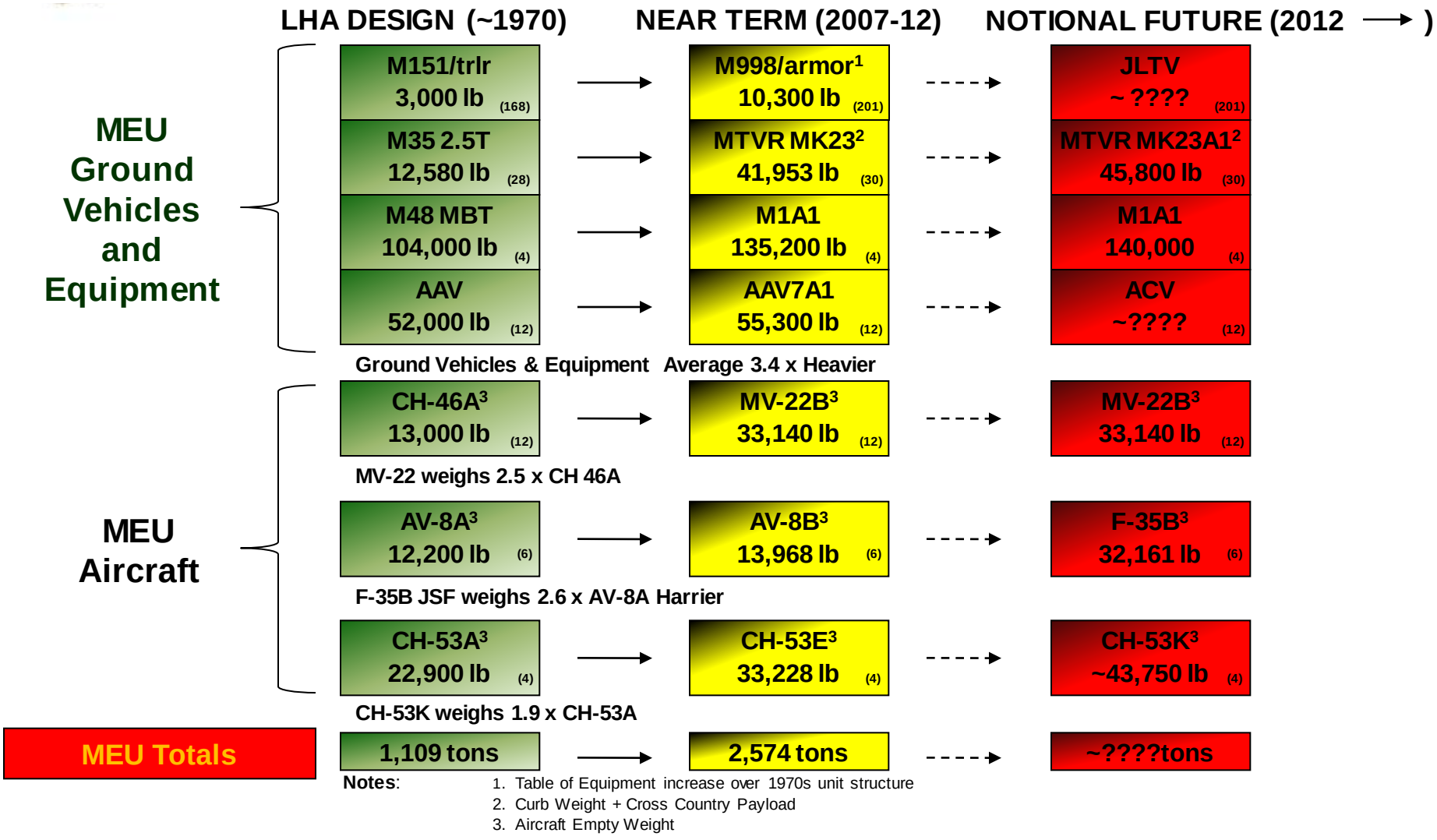
UH-1Y

UH-1N



(Folded)	AH-1Z	AH-1W	UH-1Y	UH-1N
Length:	58.3'	58'	58.4'	57.33'
Width:	15.1'	10.9'	15.4'	9.1'
Height:	14.4'	14.2'	14.7'	12.9'
Spot Factors				
Flight Deck:	(1.29)	(1.01)	(1.28)	(0.89)
Hangar:	(1.59)	(1.13)	(1.46)	(1.17)

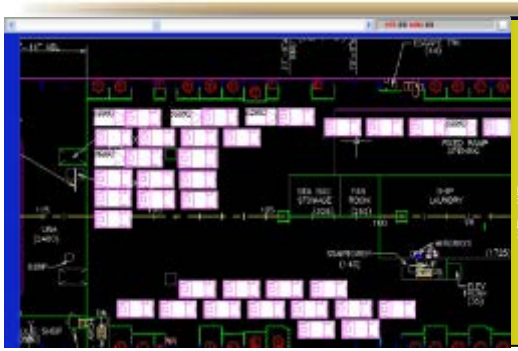
Holistic View
MAGTF Requirements

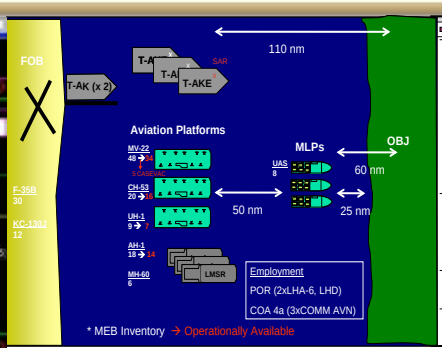


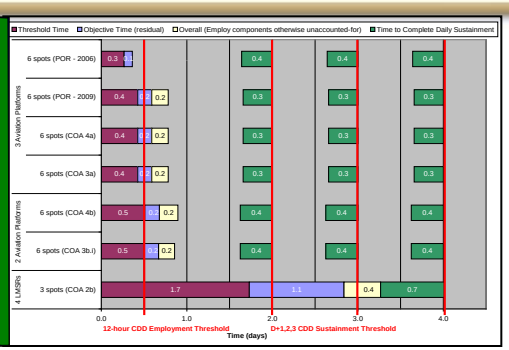
Notes:
1. Table of Equipment increase over 1970s unit structure
2. Curb Weight + Cross Country Payload
3. Aircraft Empty Weight

Increased Weights/Density Impact Deck Strength, Ship Stability…..

Navy-MAGTF Ship Integration Center

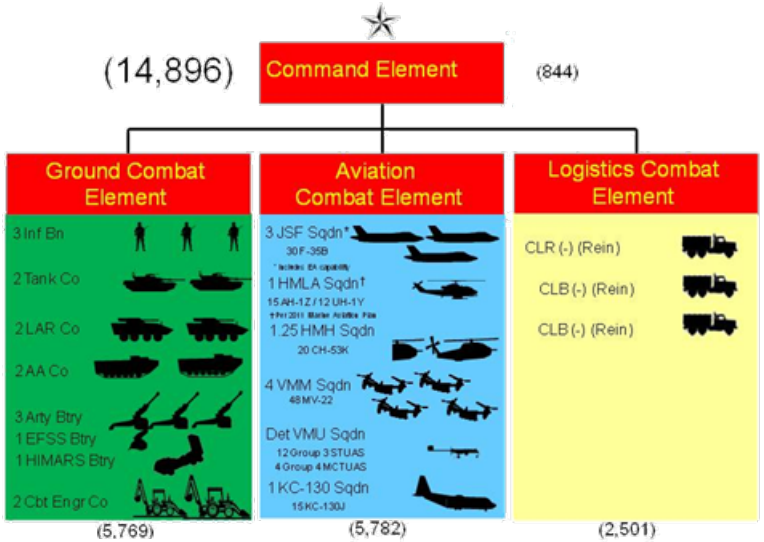




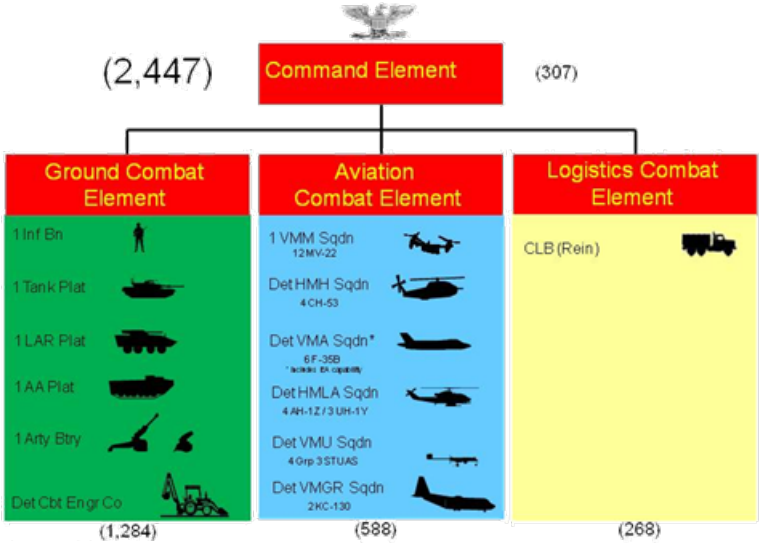


Baseline MAGTFs

Baseline MEB Organization*



Baseline MEU Organization*



Baseline MEB

AE Lift Requirement*

*** Navy Support Element Not Included**

	Pers	Vehicles[1] (SqFt)	Cargo[2] (CuFt)	Aircraft[3] (MH-60 Eq)	JP-5[4] (Gal)	Weight[5] (ST)
CE	677	16,535	51,391		79,191	2,464
GCE	5,630	263,413	502,557		1,056,522	35,199
ACE	2,982	21,496	288,087	402.29	5,505,709	13,824
LCE	1,549	135,038	64,198		284,032	13,114
Total	**10,838**	**436,482**	**906,232**	**402.29**	**6,925,454**	**64,600**

Baseline MEU Lift Requirement*

	Pers[1]	Vehicles[2] (SqFt)	Cargo[3] (CuFt)	Aircraft[4] (MH-60 Eq)	JP-5[5] (Gal)	Weight[6] (ST)
CE	307	7,896	22,978		21,710	657
GCE	1,284	42,549	137,491		191,853	5,649
ACE	588	5,671	54,905	90.78	1,032,483	1,399
LCE	268	24,028	8,446		47,894	2,094
Total	**2,447**	**80,144**	**223,819**	**90.78**	**1,293,939**	**9,799**

Amphibious warship inventory requirements are built on 2.0 MEB AE OPLAN requirement

Dense Pack Access Retrieval & Transit (DPART)

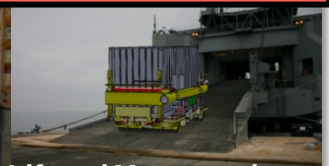
Background

- SID-led FY13 JCTD proposal with NSWC–CD and UASACE-ERDC assist; and USPACOM & USTRANSCOM Co-Sponsors
- Proposing a 30 Month JCTD
- Innovates SSARS technologies (C-LMS, SPIDR and ORLAMS)
- Produces prototypes: Wheeled C-LMS; Amphibious Naval Transport (ANT) – Large Wheeled Vehicle (LWV); ANT-Aviation (ANT-AVN), Common Remote Controller

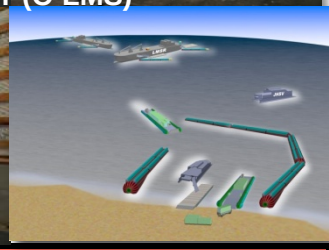
Innovates SSARS

Builds on lifting & omni-directional maneuvering technology developed under SSARS program

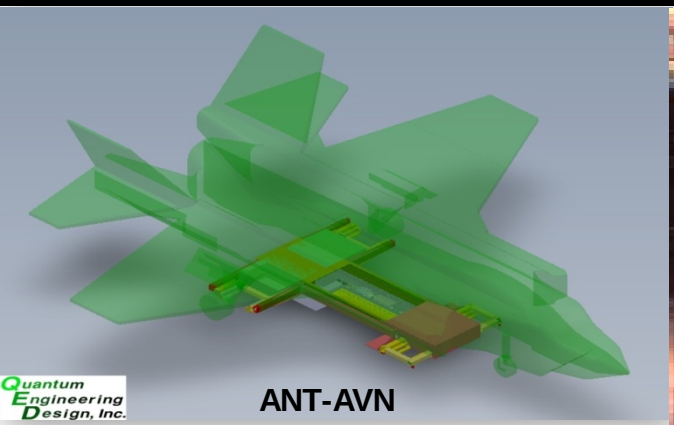
Container Solution



Wheeled Container Lift and Maneuvering System (C-LMS)



Large Wheeled Vehicle & Aviation Solutions



ANT-AVN

• The ANT AVN and LWV variants innovate technologies taken from the SPIDR and ORLAMS technology demonstrations to allow for omni-directional movement of aircraft and large vehicles aboard ships.

Future

- Written endorsements from seven organizations, incl. BIC, MARFORPAC, MARCORPSYSCOM, RS-JPO, MSC, USA-CoT, and USA-LIA
- Potential teaming with TARDEC on battery and autonomous sensor technologies
- Project decision timing:
  - 22 May 2012 – Candidate Nomination Bd (unanimous approval)
  - 20 Jul 2012 - COCOM/Service Rankings Due
  - 8 Aug 2012 – Candidate Decision Board
  - 1 Oct 2012 – Start JCTD
- Candidate for FY-12 early start (OSD Funds)

Seabasing Continuing Education

- Senior Leader Engagement
  - Seabasing Brief to Commander and Key Staff
- Seabasing Education Forum
  - Mobile Team sharing Seabasing Academics
- Seabasing Symposium
  - Annual programmatic update
- Feedback From the Field
  - MEU Observations
  - Lessons Learned
  - Requirements Discovery

Seabasing: *Assured Capability for Expeditionary Warfare*

Amphibious Fleet

Connectors

Maritime Prepositioning Force

MAGTF

Task organized forces to meet CCDR mission requirements

Combat Logistics Force Ships

Coalition Force & Sister Service Ships

Carrier Strike Group & Expeditionary Strike Group

… mission drives organization

Sea-based Container Handling

Initial Operating Capability!

Seabasing Integration Division
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ROW WELL…AND LIVE!

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