

USAWC STRATEGY RESEARCH PROJECT

AFLOAT FORWARD OPERATING BASES FOR JOINT SPECIAL OPERATIONS FORCES

by

Colonel William R. Frunzi
United States Army

Colonel Charles W. Higbee
Project Advisor

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U.S. Army War College
CARLISLE BARRACKS, PENNSYLVANIA 17013

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ABSTRACT

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The Afloat Forward Operating Base (AFOB) Concept: A Paradigm Shift in Force Planning. As the Secretary of Defense Donald Rumsfeld articulated in the recent Quadrennial Defense Review (QDR), there has to be a paradigm shift in Force Planning that strengthens joint force operations, and concomitantly, causes the military apparatus to transform the joint team into a design that will answer the call of the challenges of the 21st Century threats. The National Security Strategy states the fact that Power Projection is and will remain an indispensable means of achieving and sustaining our position of Global Power dominance.

The concept of Sea Basing being pursued by the Navy-Marine Corps Team, and the joint experimentation with the High Speed Vessel by the Army and Navy, are but two additional examples that testify to the focus on employment of national military element of power from the largest maneuver area in the world—the seas.

For maximum effectiveness, Joint Special Operations Task Forces (JSOTF) need a dedicated Naval vessel to serve as a rapidly deployable, self-contained forward operating base which allows freedom of action, surprise, flexibility, and interoperability, while not being constrained by absence of host nation support, overflight/basing rights, and ever-increasing access denial strategies. Our ability to quickly and deliberately enforce the National Security Strategy through the use of force when deterrence fails is the forte of the Aircraft Carrier. The carrier-JSOTF team therefore remains an indispensable instrument of national power.

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PREFACE

I would like to thank Captain (Select) Rick Scudder, USN, and LtCol Dexter “Dee” Handy, USAF, for their time and efforts in the development of this paper. As a Navy Aviator, Rick Scudder and I enjoyed the same “work-ups” and experiences of Admiral Miller’s Adaptive Joint Force Packaging Concept in 1993-1994. Eventually he and I got to execute the concept aboard the USS AMERICA (CV-66) during OPERATION UPHOLD DEMOCRACY off the coast of Haiti in 1994. Dee Handy’s recent experience aboard the USS MOUNT WHITNEY as part of a Joint Task Force J-6, embraces current joint communications experience. Their subject matter expertise and personal experiences afloat contributed to this paper and enhanced its accuracy.

I would also like to thank the Soldiers, Sailors, Airmen, and Marines of joint special operations. It has been an honor to serve alongside you. Your drive and resolve to keep this country free continues to inspire me. Your determination and eagerness to make your teammates better is the finest example of leadership. Thank you for all that you do.

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AFLOAT FORWARD OPERATING BASES FOR JOINT SPECIAL OPERATIONS FORCES

As recent world events have suggested, tomorrow's conflicts will not be symmetrical in nature. Such direct attacks against U.S. interests affect our nation's vital interests. Examples of such devastating attacks are remarkably plentiful: the attempted and eventual destruction of the World Trade Center Buildings in 1993 and 2001 respectively; the bombings of U.S. military barracks in Beirut and Saudi Arabia in 1983 and 1996; the unconventional attack on the USS COLE in 1998; and the simultaneous attacks on two U.S. Embassies in Africa in 1998. These events suggest that transnational adversaries will continue using unconventional methods, which in turn will require military transformation to sustain the vital interests of the United States.

These transformational efforts will require interagency and allied cooperation, and the employment of Joint Special Operations Task Forces (JSOTF) to rapidly respond to acts of violence and threats to our national security. When these activities are not synchronized, the achievement of military transformational goals and special operations become complicated.



FIGURE 1 OPERATION UPHOLD DEMOCRACY JSOTF 188.1

Reflections on Forward Presence and aircraft carriers: *...Because of their limited footprint, strategic agility, calculated ambiguity of intent, and major strategic and operational deterrent capability, naval forces are invaluable...the carrier battle group, in particular, has been an unmistakable sign of U.S. commitment and resolve in the Central Region.*⁴

General Binford Peay, U.S. Army, Commander in Chief, U.S. Central Command

As our military continues to undergo transformation to meet 21st century challenges, we must develop capabilities, tactics, and procedures that accomplish the missions with or without the assistance of other nations assets. The recent employment of Special Operations Forces (SOF) in Afghanistan has demonstrated our country's ability to take advantage of our technological superiority and integrate those forces with unconventional techniques, tactics, and procedures overwhelming a low-tech, but crafty adversary.

The use of SOF in future U.S. crisis response actions will continue to rise as demonstrated by the increasing operational tempo of the United States Special Operations Command components both active and reserve. These SOF forces are deployed across the globe as exemplified by current operations in PACOM, CENTCOM, SOUTHCOM, and EUCOM. Unfortunately the logistics and mobility associated with getting the necessary forces, equipment and support to the joint operating area (JOA) in time to affect outcomes favorable to the U.S. is often hindered by overflight, transit and basing rights. A current example of being "held hostage" to diplomatic posturing and coercive diplomacy is Turkey's disapproval of the reception, staging, onward movement and integration of 62,000 US forces through Turkish sea and air ports.

Rapid global mobility is a necessary element, but is often constrained by limited availability of immediate transportation assets, including on demand strategic airlift. In some instances, even with the availability of airlift, country overflight rights and aerial refueling assets may not be arranged in time to respond to a crisis—again exemplified by Turkey, France, and until recently, Saudi Arabia's lack of support toward the current Iraq disarmament. In addition to mobility requirements, essential Command, Control, Communications, Computers and Intelligence, Surveillance, and Reconnaissance (C⁴ISR) assets may not be available due to allocation in other higher priority mission areas. If we are to get maximum effectiveness from our SOF in tomorrow's unconventional conflicts, we must look for ways to project and sustain these forces and their equipment to any potential hotspot quickly and unfettered.

There is a need for a dedicated power projection platform to serve as a base from which to rapidly deploy a JSOTF. This platform must be a self-sustaining forward operating base.

Responding to attacks or identified threats is time sensitive and calls for a capability not constrained by the absence of host nation support and ever-increasing access denial strategies for land basing.

Thesis For maximum effectiveness, JSOTFs need a dedicated Naval vessel to serve as a rapidly deployable, self-contained forward operating base which allows freedom of action, surprise, flexibility, and interoperability, while not being constrained by absence of host nation support, overflight/basing rights, and ever-increasing access denial strategies.

When asked “What are your thoughts on naval operations in the war in Afghanistan?” Admiral Vern Clark, Chief of Naval Operations replied: “We’ve had two aircraft carriers there most of the time but [at times had] as many as four. I feel so good about that. Somebody said, ‘Does this validate the requirements for carriers?’ What a question! I’m not wedded to any of our platforms forever, but I am absolutely convinced you can’t win without dominating the battle space. You can’t do that unless you own the air, and you can’t own the air when they won’t let your airplanes in their country.”² Admiral Clark’s point continues to ring true—it is all about access.

THE AFLOAT FORWARD OPERATING BASE (AFOB) CONCEPT: PARADIGM SHIFT IN FORCE PLANNING.

As the Secretary of Defense Donald Rumsfeld articulated in the recent Quadrennial Defense Review (QDR), there needs to be a paradigm shift in Force Planning that strengthens joint force operations, and concomitantly, causes the military apparatus to transform the joint team into a design that will answer the call of the challenges of the 21st Century threats.

SOF remains inherently a joint force and routinely works in a transforming environment. History is replete with examples of joint special operations within the last 35 years, from Viet Nam to Afghanistan, fixed- and rotary-wing aircraft have teamed up to support Navy SEAL, Army Special Forces and Rangers, and Air Force Special Tactics personnel (Combat Control Teams, Para-Rescue Teams, and Special Weather Teams). Those efforts have in turn supported the ground, air and maritime component commanders. These SOF teams have routinely operated from conventional force platforms and documented and evaluated their internal operating procedures. Based on this assessment, now is the time to develop formal doctrine for support of the JSOTF, and subsequently make a determination to procure dedicated AFOBs for JSOTFs.

The QDR states “SOF will need the ability to conduct covert deep insertions over great distances and will need enhanced C⁴ISR capabilities to remain in contact with their commanders and to ensure access to real-time intelligence in a number of forms.”³

An AFOB capability exists today through the use of aircraft carriers (CVs). Unfortunately, the open-ended “lease” of a CV for JSOTF use impacts the Navy’s Carrier Battle Group (CVBG) coverage, and specifically their ability to project air power by displacing the Carrier Air Wing ashore. Providing a maritime platform designed specifically for JSOTFs will meet the prescribed Secretary of Defense guidance of projecting and sustaining U.S forces in distant anti-access and area denial environments.

The future vision is a JSOTF operating from a large vessel completely capable of supporting all requirements for long-duration operations, while providing a base with inherent Anti-Terrorism/Force Protection (AT/FP) capabilities; unhindered by land-based weather effects (if the vessel is being affected by bad weather -- move the vessel). By operating from an AFOB, the chances of being targeted and affected by chemical and/or biological attack are reduced (if not precluded). Referring to the mobility of maritime platforms, VADM T. J. Keating, former Deputy Chief of Naval Operations for Plans, Policy, and Operations stated that “Large-deck carriers are far less vulnerable to missile attack than bases on land, and the mere existence of missiles does not mean a hostile force can successfully target an aircraft carrier. The inherent mobility of ships and a carrier’s speed make detection and targeting extraordinarily difficult.”⁴ Additionally, modern Naval vessels (especially CVs) will have C⁴ISR capabilities that share the same common operating picture of other forces, thus providing continuity across the battle space to leverage all warfighting means to achieve operational success.

The AFOB concept also provides a partial solution to reducing the workload of already over-tasked and under-resourced strategic airlift. Operating JSOTFs from an AFOB will reduce the need for strategic airlift deployment, sustainment, and redeployment sorties that compete with other units and reduce the ground Base Operations Support (BOS) footprint required to support, house, and protect a Forward Operating Base (FOB) or Intermediate Staging Base (ISB) ashore. Land-based JSOTFs are airfield-centric; they require an airfield that is capable of handling the large complement of aircraft necessary to support SOF missions. Standard requirements for land-based JSOTFs have included ramp parking for fixed- and rotary-wing aircraft, hangar space for maintenance, fuel storage and distribution, crash/fire rescue, ground transportation, ground base defense force and/or security forces dedicated to AT/FP, air traffic control, ammunition and weapons storage, and BOS (to include dining facility, medical/dental, living areas, showers, latrines, etc). Thus, using an Afloat Forward Operating Base for a JSOTF

can significantly reduce the theater commander's airlift, ground footprint, and support infrastructure requirements.

The QDR directs Standing Joint Task Forces "will have mechanisms for a responsive integrated logistics system that provide warfighters easy access to necessary support without burdensome lift and infrastructure requirements."⁵ An AFOB, which arrives in theater with its own self-contained logistics infrastructure is replenished using the Underway Replenishment (UNREP) method (currently being used by CVBGs) augmented by air sorties to/from a proximal airhead. The AFOB concept also allows for projection of assets ashore to establish and sustain a land-based FOB, using rotary-wing assets to sling load essential equipment thus lifting the FOB site (if within range) or to an airstrip for transload to intra-theater airlift.

"The capabilities-based model entails adapting existing military capabilities to new circumstances, while experimenting with the development of new military capabilities. In short, it requires the transformation of U.S. forces, capabilities, and institutions to extend America's asymmetric advantages well into the future."⁶

The AFOB would also have some utility for the Standing Joint Task Forces that the Unified Commanders are being tasked to establish. Regardless of the task force embarked, the AFOB concept is a proven, viable, and formidable capability. U.S. forces can project power wherever needed and on the schedule and circumstances chosen. In a recent report from the Naval Strike Forum, the committee concluded that "Naval strike platforms are inherently flexible, in that they are capable of executing the full range of military missions, from forward presence and peacekeeping through full-scale conventional and nuclear war...their ability to move freely throughout the world's oceans and within range of the vast majority of the world's population and cultural centers of gravity without the approval of other nations or multinational bodies highlights their inherent autonomy."⁷

The need for a timely and decisive military response to aggression must not be constrained by delays in coordinating over-flight authorizations, basing and/or transiting support, shortfalls in strategic lift, and host nation support. Some countries may not be able or may not want to support U.S. forces in their territory either because of domestic political/diplomatic reasons or coercion from "bad actor" countries that support terrorist aggression. By basing the AFOB in international waters, the Political/Military (POL-MIL) workload on the Country Teams is reduced and provides more time to work other issues essential to meeting U.S. national interests.

GENESIS OF THE JSOTF AFOB: PAST EXPERIENCES

As the QDR states, “SOF will need the ability to conduct covert deep insertions over great distances and will need enhanced C⁴ISR capabilities to remain in contact with their commanders and to ensure access to real-time intelligence in a number of forms. These capabilities will enable SOF to access additional communication, intelligence, and firepower assets in support of their missions deep in hostile environments and to aid in the reduction of friendly losses and casualties. These capabilities will also enhance the strategic and operational agility of Special Operations Forces.”⁸

The ability of this country to achieve the desired end state of projecting combat power into denied-access territory and defeating the enemy on terms favorable to the U.S. remains available today. JSOTFs operating aboard an AFOB have been, and continue to be a viable and proven SOF employment method. If one considers Colonel Jimmy Doolittle’s raid on Tokyo as a special operation (launching his B-25s off the deck of a Navy carrier), this country has been relying on AFOBs to project military forces into access-denied, hostile territories for over 60 years. Crisis responses and combat actions involving AFOBs include:⁹

DATES	LOCATION-OPERATIONS	U.S. FORCES
1987	Persian Gulf “Tanker War”	SOF aboard leased barges
January 1991	Somalia NEO Operation EASTERN EXIT	USS GUAM, USS TRENTON, NSW SEALs/ Force Recon
Nov 93 –Aug 94	Haiti/UN Blockade Ops Operation SUPPORT DEMOCRACY	SAGs/ARGs, NSW SEALs
September 1994	Haiti Intervention Operation UPHOLD DEMOCRACY	USS AMERICA (CV 66) JSOTF 188.1 USS D. D. EISENHOWER (CVN 69) US Army 10 th Mtn Div (-)
June 1995	Rescue of “Basher 52” Captain Scott O’Grady, USAF	USS KEARSARGE/ MEU(SOC) USS T. ROOSEVELT (CVN 71)

Oct-Dec 2001

Operation ENDURING FREEDOM
Global War on Terrorism

USS KITTY HAWK
(CV 63)

Additionally, SOF routinely train (a minimum of twice per year) using AFOBs including CVs and multipurpose amphibious ships.

JSOTFs are in fact being employed throughout the operational continuum (including Civil Affairs, Psychological Operations, Joint and Combined Exchange Training (JCET) evolutions, small clandestine and/or covert Special Reconnaissance missions, and Direct Action missions) in support of a Combatant Commander's Campaign Plans. Therefore, it is more important than ever that JSOTFs be provided a base which can accommodate the full spectrum of missions, equipment, and support functions.

LESSONS LEARNED

Barge Bases During 1987 Persian Gulf "Tanker War": During Operation EARNEST WILL, the Iranian maritime forces which had destroyed, damaged, or harassed re-flagged oil tankers were effectively neutralized by a joint team of Army Task Force 160 helicopters and Navy fast patrol craft based aboard two large oil construction barges astride the sea lanes of the northern Persian Gulf. These two platforms, leased for the Department of Defense (DoD) by Brown and Root, were initially dismissed by the Navy establishment as a slapdash and hasty response to the requirement for sea control. The barges were in fact jury rigged to provide storage for fuel and ammunition, possessed rudimentary command and control suites, and had limited self-defense capabilities. Although construed as "sitting ducks" for any concerted tactical air attack by the Iranians, they were in fact difficult to discern amongst the many oil platforms and islets of the Gulf. To further stymie counterattack, the barges were towed to random locations every few days.¹⁰ Despite the shortcomings of the barge bases, the tremendous advantages of operating SOF from maritime platforms were realized: "Nothing in Tehran's [available] arsenal could sink the barges. The mobile bases offered the best, least expensive means to support the patrol craft and helicopters required to control the sea lanes."¹¹ Proponents also saw this radical and creative approach as a means of circumventing Saudi and Kuwaiti refusal to provide basing for any offensive operations against Iran.¹² The barge concept has several limitations including not being self deployable and sustainable platforms, not capable of holding a 2500 man JSOTF, and becomes susceptible to targeting once this stationary target is located.

The Roosevelt Experiment: "This [Deck] Ain't Big Enough for the Both of Us" As a logical extension of the "Forward...From the Sea" strategy (and in recognition of a rapidly shrinking fleet), ADM Paul David Miller, CINC of the U.S. Atlantic Command (now the Joint Forces Command), wanted to demonstrate that the CVBG possessed combat flexibility beyond the mere launch and recovery of fixed-wing aircraft.¹³ From 1992 to 1994, he conducted a series of experiments known as Adaptive Joint Force Packaging (AJFP). The most well-known of these was an attempt to merge the functions of a CVBG and a Marine Amphibious Ready Group by combining a Special Marine Air/Ground Task Force (SPMAGTF) and an abridged Carrier Air Wing (CVW)¹⁴ aboard the USS THEODORE ROOSEVELT (CVN-71) for a 6-month Mediterranean deployment. AJFP was eminently "do-able," but received negative reviews from Commander, Sixth Fleet, who concluded that the SPMAGTF "was not an acceptable substitute for a Marine Expeditionary Unit (MEU)" and that "the need to re-constitute the full CVW for combat operations would require the SPMAGTF to crossdeck or offload."¹⁵ In addition, CINC, U.S. Pacific Command concurred that a full MEU and CVW were required to meet his theater's minimum expeditionary warfighting requirements.¹⁶

Although a SPMAGTF is not SOF, the fact remains that the presence of the CVW on board CVN-71 diminished its effectiveness (and vice-versa). Contemplating the use of a CV as a base for complex, multi-environment (air/sea/undersea) large-scale Special Operations, it becomes apparent that the entire CVW must be disembarked. From an air operations perspective, fixed-wing cyclic flight operations cannot be conducted simultaneously and are wholly incompatible with large-scale helicopter operations. The fact that the JSOTF helicopters being used did not have rotor brakes and blade fold kits consumed precious time on the flight deck. The results of the SPMAGTF proved that for the CV to properly support the large array of JSOTF rotary-wing aircraft, Navy jets must be left behind.

In another revolutionary application of the carrier's unique attributes of speed and size, Admiral Miller tasked the USS AMERICA (CV-66) (sans CVW) to serve as an AFOB for an entire JSOTF during Operation UPHOLD DEMOCRACY. Deemed a considerable success, a multitude of minor interoperability issues were noted. Hot refuel operations on the flight deck while loading rockets and mini-gun ammunition, use of night vision goggles (NVG)s versus deck-lighting, and the loading of SOF personnel with blades turning were a few of the issues to be worked through. When taken as an aggregate, these issues hindered the JSOTF's effectiveness and necessitated work-arounds. Another misperception of the Haiti operation in particular was that the CV required minimal protection (the Haitian armed forces posed no threat¹⁷), whereas future operations may face a significant threat from a more sophisticated and

better-equipped enemy. For an AFOB concept to be viable, these lessons clearly point out the need for a vessel “custom tailored” to every unique facet of JSOTF missions.

CONCEPT DEVELOPMENT

DEFINING JSOTF REQUIREMENTS

For today’s rapid response to asymmetric operations, the JSOTF is the primary candidate for this future weapons system. For an AFOB to support the JSOTF, it should be “tailor-able” to the various missions at hand, and accommodate up to 2,500 personnel over and above the ship’s crew. Twenty-five hundred personnel remains a proven size force that provides flexibility, sustainability and precision across the spectrum of SOF missions. The vessel should be capable of sustained cruising speeds greater than 30 knots. For rapid mobility of forces and logistics to the crisis area the platform must operate on-station no less than six months at a time before ship repair operations become necessary. A minimum of two platforms (one Atlantic/Western Hemisphere; one Pacific/Eastern Hemisphere) are needed, although procuring (optimally) three platforms would achieve two AFOBs available for deployment at all times while the third is “in the yards” for maintenance, crew training, and supplies/stores replenishment.

Sea, Air, and Land Mobility

To foster freedom of action, surprise, flexibility, and interoperability, the AFOB needs to accommodate the following aircraft mix:

- MV-22 Tilt-Rotor aircraft
- MH-60G/K/L Blackhawks
- MH-47D/E Chinooks
- MH-6 and AH-6 “Littlebirds”
- MH-53J Pave Lows
- Existing U.S. Navy & Marine Corps helicopters (for support functions only)
- Surveillance & Reconnaissance Unmanned Aerial Vehicles (UAVs)

The flight deck lighting must be compatible for all night vision devices, and air traffic control facilities must be provided including support for precision and non-precision instrument approaches.

Apart from aircraft, the AFOB should provide stowage, maintenance, and staging points for light armor and tactical transport vehicles. The AFOB must accommodate loading, maintaining, stowing, launch, and recovery of Mark V/High Speed Assault Craft, Rigid Hull Inflatable Boats, Combat Rubber Raiding Craft, and small submersibles (SEAL Delivery

Vehicles, for instance). Because the Naval Special Warfare (SPECWAR) forces routinely train to employ forces from parachute, helicopter, boat, or by swimming to a target, the AFOB must provide equipment for watercraft launch and recovery operations such as a minimum of two articulated cranes. This is necessary to facilitate the employment of maritime special operations.

C4ISR Capabilities

JSOTFs are highly dependent on robust C4ISR assets. The AFOB must possess the infrastructure to support an advanced C⁴ISR suite, highlighted by the following capabilities/equipment:

- High Bandwidth access (OC-192 Transmission Rates (10GB per second))
- High Grade Secure Voice Conference, Data, and Secure Video Teleconferencing Capability
- Military, National, and Commercial Communications Systems Access
- Ruggedized Automated Data Equipment
- Survivable (EMP Hardened) Communications Network
- Global Mobile Telephone Equipment
- Tactical Ground Satellite Terminal
- Common Operational Picture
- Personnel Tracking/Locator Systems

Operations Planning, Training and Mission Rehearsal Capabilities

Multiple large, secure suites for integrated mission planning and intelligence analysis will be required. Such a facility will allow SOF to maintain skills, practice techniques, and rehearse missions for the anticipated operation while enroute to the crisis area. The AFOB must have underwater and indoor training rehearsal facilities, complete with firing ranges, limited explosive breaching areas, and space in which to construct scenario-specific mock-ups.

Logistics Capabilities

In order for the AFOB to fully sustain JSOTF personnel, equipment and maintenance capabilities it must have:

- 24-hour maintenance facilities for aircraft, electronics, parachutes (Static Line and HALO/HAHO), Aviation Life Support Equipment (ALSE), vehicles and weapons
- Magazines for weapons, explosives and ammunition storage
- Spacious berthing facilities with adequate storage for individual equipment

- Launch platforms and/or cranes for boats and submersible watercraft (SEAL Delivery Vehicles, for example)
- Ability to conduct UNREP with any other U.S. or NATO ship

Storage and Materials Handling Capabilities.

For rapid movement of weapons and explosives, multiple ordnance elevators will be required, running from the deepest magazine to the flight deck. Magazines must be compatible and certified for all types of weapons, ammunition and explosives employed by a JSOTF.

For any existing vessel which would be converted to an AFOB, any no-longer-needed spaces will be converted to equipment and supplies/materiel storage, and training/planning spaces. The main cargo holds must accommodate equipment sets configured to create and support an entire 2500-man JSOTF ashore, a 15- day basic load of rations, ammunition, medical supplies, repair parts (including command directed major assemblies such as engines, rotor blades, transmissions), bulk and packaged POL, and essential batteries for communications gear. Equipment for the FOB ashore kit includes containerized (in ISU-90 or QUADCON containers) temper tents, environmental control units, cots, folding tables/chairs, light sets, power generation/distribution sets, water purification and storage systems, dining facility, and medical treatment and refrigeration for perishable rations, medical supplies/blood, and mortuary affairs.

Currently, certain high-speed assault craft still use MOGAS, and it has been all but phased out on Naval vessels due to its extreme flammability. Joint Shipboard Helicopter Interoperability Program (JSHIP)-approved storage for a significant quantity of Motor Gasoline (MOGAS) must be provided. Until an acceptable diesel variant engine (or other non-MOGAS power plant) is developed, naval logisticians and design engineers must accommodate the use of MOGAS.

Additional Enhancements of Existing Vessels to Meet AFOB Requirements

Using the CV as the basis for this analysis, several factors must be addressed in order to render a CV as the optimal platform:

SPACE USAGE

No catapult/arresting gear for fixed-wing aircraft is required. Removing this equipment makes room for essential spaces for component planning, communications, rehearsal/small arms ranges, supplies and equipment storage, additional medical suites including triage reception sites, Intensive Care/Critical Care surgery suites, X-ray/Computed Radiography

capabilities, and burn treatment rooms. The high-capacity, state of the art medical suite available in LHD class multipurpose amphibious ships is the model to emulate.

CREW/MANNING

Substantial reductions in the CV's crew can be realized with the elimination of the CVW and associated CVW support personnel predominantly in the Air Department. Not having the CVW aboard also maximizes the available berthing/work spaces for JSOTF personnel.

AIRCRAFT MAINTENANCE

With the Special Operations Aviation embarked the CV's Aviation Intermediate Maintenance Department (AIMD) must be upgraded including the infrastructure and capabilities to support up to intermediate level maintenance on rotary-wing aircraft including the MV/CV-22 Tilt-Rotor, HH/MH-60G/K/L Blackhawks, MH-47D/E Chinooks, MH-6 and AH-6 "Littlebirds", MH-53J Pave Lows, Predator UAVs, and existing U.S. Navy and Marine Corps fleet helicopters. Limited depot maintenance capabilities are also necessary, such as engine teardown/rebuild and microelectronics repair. The existing capabilities for vehicle maintenance on board CVs (diesel tow tractors, forklifts, mobile cranes) should be adequate for JSOTF vehicles.

CONCEPT ANALYSIS

Threat Assessment: A large vessel such as an AFOB is construed as either survivable or a sitting duck, depending on its proximity to the enemy and his chosen strategy for access denial. The following are agreed-upon assumptions from a compendium of defense futurists concerning enemy combat capabilities in 2025:

- Proliferation of Theater Ballistic Missiles (TBMs), Information Technology (IT), precision strike/targeting, ubiquitous sensors, spoofing, robotics and biological/chemical munitions
- Logistics assets highly vulnerable in or out of theater
- In- and near-theater ports and airfields possibly unusable
- Beam weapons increasingly prevalent

With potential adversaries possessing these capabilities, the following will not be survivable:

- Runways [and therefore air bases]
- Surface Ships
- Manned (combat/logistic) aircraft

- Manned (combat/logistic) ground vehicles¹⁸

ADVANTAGES OF MARITIME BASING:

- **Worldwide Deployability:** Ships can transit anywhere on the world's oceans. Staging the AFOB in international waters and the freedom to transit international straits negates the problems and delays of seeking overflight and ashore basing rights from other nations.
- **"Tailor-ability":** A large vessel (CV or LHD) can accommodate differing mixes of aircraft, vehicles, watercraft and equipment packages depending on the magnitude, complexity and duration of the mission at hand. Any space on board not needed for equipment will be available for additional stowage of supplies, spare parts, and stable foodstuffs.
- **Force Protection:** The inherent mobility of ships and "flatness" of the open ocean makes enemy threat detection and suppression an easier task compared to basing ashore in a fixed location, where a sizable security force would be required to establish a defensive perimeter.
- **Rapid Response:** Although not as fast as aircraft, vessels can transport the entire JSOTF to the fight in an equivalent time it would take to airlift in all personnel and equipment, especially when the time to arrange staging and basing rights is taken into account.
- **Self-contained Countermeasures to Access Denial:** Modern naval vessels are of robust structural strength and feature controlled internal atmospheres and external wash-down systems. Shipboard systems such as the SLQ-32 electronic countermeasures suite and the Close-In Weapon System offer protection from anti-ship missiles.
- **Operational Surprise:** The probability of launching a mission without the enemy being tipped off by "tail watchers" is much easier from over the horizon at sea. This was dramatically demonstrated during Operation DESERT FOX, where the initial strikes were conducted solely from the USS ENTERPRISE (CVN-65), which caught the Iraqis completely off-guard.
- **Self-Contained Logistics:** AFOBs would deploy with large, highly tailored shiploads of supplies, spare parts and organic repair capabilities. Ships also have the capability to store large quantities of fuel, food and potable water (which can be manufactured onboard).

DISADVANTAGES OF MARITIME BASING:

- Ships are extremely expensive to manufacture, modify, maintain and sustain.
- Ships can only go where the water is, and not every objective is within reach of the littoral seas.
- Manning: Exclusive of the JSOTF personnel embarked, large vessels at sea are extremely manpower-intensive. For every support function the JSOTF requires, sailors and/or civilian mariners are required to provide it.
- Ship Protection and the Need for Escorts: Most enemies possess some kind of maritime strike capability against the AFOB from air, surface or subsurface assets. The “high value” nature of large naval vessels (especially CVs) mandates surface and subsurface escort ships to ensure a flexible, versatile, and layered defense against the enemy to guarantee air and sea supremacy.
- Intensive Access Denial: As enemy sensors, targeting, and weapons improve, there are certain constrained seas of the world in which naval operations are prohibitive unless the vessels can fend off or be rendered impervious to the effects of enemy weapon systems. Crude, cheap, and ubiquitous weapons such as naval mines pose a serious threat to ships, and require a substantial amount of time to locate and neutralize.
- Re-supply: Like any other expeditionary force, re-supply is required after a period of high-intensity operations, with lines of communication back to theater stocks in theater or CONUS.

The future looks pretty bleak for every type of platform and C⁴ISR system currently fielded or in development (except perhaps submarines). Prevailing in combat, the AFOB and other platforms will either present similar threats to the enemy, develop effective countermeasures, or be forced into abdicating the battle space. The risks to the AFOB must now be weighed against the benefits, especially in view of the unsavory alternative. A JSOTF in a fixed airfield-centric location possibly in hostile territory, has consequently greater exposure to **all** enemy threats. In this context, maritime basing is superior.

COMPARING CANDIDATE PLATFORMS FOR A JSOTF AFOB WITH THE VALUE OF MARITIME BASING DEMONSTRATED:

Option 1: Purchase and modify an existing large commercial vessel (for example a tanker, cargo ship or ocean liner). A ship such as this is relatively cheap to procure, but expensive to modify in order to meet specifications and provide aviation, boat and submersible support

capabilities. These platforms do not possess any self-protection capability and lack a robust military-type naval architecture to withstand damage. It is also rare to find one with sufficient power and endurance for sustained high-speed transits.

Option 2: Modify large-deck multipurpose amphibious ships (LHA or LHD). Although these classes of ships have been proven ideal for heliborne expeditionary operations, there is not enough flight deck area or excess berthing to support the sizeable aviation and personnel requirements of an entire JSOTF. They possess a limited amount of internal storage volume because of the well decks (although well decks are a boon for special boat and submersible operations). A key feature of the LHA or LHD is their huge medical suites with triage areas and multiple operating rooms which must be replicated in any AFOB.

Option 3: Continue to employ existing aircraft carrier(s). As stated earlier, CVs were used as AFOBs for Operations UPHOLD DEMOCRACY and ENDURING FREEDOM, but only because there was no higher priority NCA tasking for the ships to be fought with their Air Wings embarked. While serving as AFOBs, a significant portion of these vessels assigned crewmen were not needed, and remained idle in CONUS. A carrier will not always be available to support JSOTF deployments when requested. Losing ten percent of our nation's existing CV-based air power is operationally costly and may be needed for missions equal in priority to the JSOTF depending on the OPLAN implemented.

Option 4: Adopt the use of High Speed Vessels (HSV) being tested by the Army and Marine Corps. These vessels would be employed as a Task Group similar to an Amphibious Ready Group (ARG) that supports a Marine Expeditionary Unit Special Operations Capable (MEUSOC). The HSVs achieve 45+ knots, long range at endurance speeds attaining >4000 nautical miles.



FIGURE 2 HIGH SPEED VESSEL (HSV) X-1 BASELINE
CONFIGURATION

The standard baseline configuration of the HSV requires a crew of 20. It has a flight deck permitting simultaneous launch and recovery of two MH-60 Blackhawks. It has a shallow draft of 12-14 feet and is roll on/ roll off capable, expediting the loading and discharge of equipment. Launch and recovery of small boats and Amphibious Assault Vehicles (AAVs) are conducted through the "Moon Pool" in the Well Deck. This vessel however is too small to support a JSOTF for extended periods of time. Modular berthing containers compete for space with tactical gear and equipment used by JSOTFs. The HSV can not remain offshore indefinitely and cannot sustain the JSOTF for embarked or ashore for extended periods of time (six months is the planning time) and does not have sufficient hangar space for all helicopters. There is no space aboard this vessel to conduct planning, rehearsals and small team training. There may be a future use for this vessel, but not as an AFOB.

Option 5: Design and build an entirely new class of ship tailored exactly to JSOTF requirements. Although probably the most attractive choice for the United States Special Operations Command, this entails extraordinary overhead costs and intensive Congressional oversight of a new shipbuilding program. A decade or more may pass before a suitable design is approved, tested, and constructed. Since only a few vessels are required, the cost per copy would be extremely high.

RECOMMENDATION: THE HYBRID APPROACH

The solution which meets most of the stated requirements with the least amount of compromise and at moderate cost is to obtain three (two minimum) existing conventionally-powered CVs and "custom" outfit and refit them for service as JSOTF AFOBs. The two sources of these CVs are the re-activation of de-commissioned ships in preservation (ex-SARATOGA, ex-FORRESTAL, ex-INDEPENDENCE) or those currently in service but earmarked for de-commissioning upon replacement by new construction CVNs (USS CONSTELLATION and USS KITTY HAWK).

Advantages of this Strategy:

These ships meet the requirements for flight deck area, aviation support, and provide adequate usable internal volume for equipment and cargo. No new ship's construction plan (and its attendant overhead costs) is necessary. The ships are already capable of weapons and ammo storage, and can achieve and sustain speeds of 30-plus knots. Adequate room for berthing, messing, training, mission rehearsal, and maintenance already exist. In addition, there is room enough to store all the equipment needed to establish a base ashore when necessary. As the JSOTF brings aboard their specialized C⁴ISR equipment, all the ship needs to provide is

the “open architecture” infrastructure to get the signals to and from the ether. CVs do have to carry their own fuel oil for propulsion (and thus require periodic replenishment), but do not require the specialized nuclear engineering-trained sailors of their CVN counterparts. The overall frequency for replenishment of propulsion and jet fuel is much less than a tactical CV with a CVW aboard, since the ship is not required to steam at high speed to conduct helicopter flight operations, and helicopters consume a small fraction of fuel per flight hour as compared to jets. Not having to steam at high speed during flight operations reduces wear and tear on the engineering plant.

Disadvantages of This Strategy:

Detractors and opponents of the CV AFOB concept tend to fixate on the same three major areas as CVs in general: high procurement cost, high manpower requirements, and the increasing vulnerability of large ships. Each of these arguments is addressed in the context of CV AFOBs.

Countering the Programmers and Analysts: The money spent on such a program is not buying ships, it is buying operational capabilities. Despite the absence of construction costs, returning the CVs to service and/or outfitting them to meet defined JSOTF requirements will be substantial. The major cost factors would be de-preservation/re-activation of “mothballed” vessels, life extension overhauls of the propulsion plants, and re-fitting/outfitting of combat systems to support the JSOTF. A rough estimate of these costs is approximately one billion dollars per ship (50 million for de-preservation, 600 million for life extension overhaul, and 350 million for conversion and outfitting).¹⁹ For any CV still in commission, the 50 million dollar cost of de-preservation is not required. Compared to the cost of a single B-2 bomber (two billion) or an *Arleigh Burke* class guided missile destroyer (one billion), a CV AFOB is a bargain in terms of operational capability and versatility: not only is the CV AFOB a self-deploying, self-contained fighting force, it will also have the added capability to deploy SOF power ashore. In the absence of CV AFOBs, consider the procurement and life cycle costs of equivalent dedicated strategic air lift assets needed to transport and sustain a JSOTF, and how those costs are essentially “sunk” if there is no air base into which the aircraft are permitted to land. The cost of CV AFOBs, compared to other high-technology programs, is relatively modest when acknowledging their proven ability to get SOF combat power to the fight unfettered by political constraints and denial of host nation support. In addition, a CV AFOB affords the JSOTF the ability to conduct integrated land, sea, air and undersea operations all at the same time; land basing does not.

The American people have already paid a high price to construct our conventionally powered CVs, and every additional year of useful life squeezed out of these hulls represents an additional dividend on their investment. The jobs created by the overhaul and conversion process will bolster our sagging ship repair industries and help sustain our critical shipyard infrastructure, providing a boost to local economies.

"Where Are We Going to Find Enough Sailors?": In consideration of the chronic manpower shortages throughout the fleet, the Navy establishment itself is a source of resistance to standing up two or three CV AFOBs, unless Congress authorizes a plus-up in Navy end strength. Again referring to the alternative of dedicated strategic airlift, an equivalent plus-up in Air Force and joint TRANSCOM manpower is required to maintain, operate, load/unload, service, and schedule those aircraft. Although manpower requirements are significantly lower than a tactical air CV (due primarily to the removal of the catapults and arresting gear), the conventional steam power plants still require a large crew unless investments are made in engineering plant automation. Contracting support functions such as food preparation and laundry will further reduce Navy-specific manpower requirements. These functions are contracted out on an as-needed basis for underway periods (a concept which is being explored for all large Naval ships). The exciting prospect of deploying in support of an elite force such as a JSOTF remains attractive to many current and prospective sailors, which boosts retention and recruitment rates respectively.

Countering the Nay Sayers Who Claim the CV is a Sitting Duck: In consideration of the ever-increasing threats to all vessels, there are many critics who will say continued presence of CVs on the high seas (even in support of special operations) is contrary to transformation. These same critics like to equate CVs to other high-value terrorist targets: "Carriers represent too big a target. Loss of an aircraft carrier would be a major political blow to the United States, and a tragic event in its own right."²⁰ These CV nay-sayers adhere to two myths, that the ship is highly vulnerable to attack (primarily from missiles), and that the escorts' sole reason for being is to protect the CV.

In response to myth one, postulated improvements in enemy anti-ship missiles and WMD are irrelevant unless these weapons can be accompanied with a sensor suite capable of extremely accurate, real-time targeting data. Taking on faith that our enemies will develop these more advanced and accurate sensors, and that we are unable to develop effective countermeasures, the myth becomes meritorious, but only if we do nothing. "The mere existence of missiles does not mean a hostile force can successfully target an aircraft carrier...the inherent mobility of ships and a carrier's speed make detection and targeting

extraordinarily difficult."²¹ Even if a missile managed to penetrate the layered, escort-supported defenses of a CV AFOB, the ship's sheer size and highly evolved damage control systems rapidly mitigate the effects of a hit. All existing CVs feature Electro-Magnetic Pulse (EMP) hardening and positive pressure internal ventilation, which was incorporated in anticipation of a Soviet attack with WMDs. Recent enhancements of these survivability attributes (as delineated in the operational requirements for the new CVN-77 and future CVN-X class) can be incorporated during the revival/refit and conversion process of the CV AFOB.

Since CV AFOBs are not entirely capable of self-protection, escorts are in fact required in hostile environments for protection from the previously stated missile, aircraft, mine, and submarine threats. In response to myth two, escorts exist to destroy the enemy, not merely protect the CV. Just as Secret Service Agents do not exist to merely "take the bullet for the President," CV escorts are equipped and armed to go on the offensive, not wait passively for enemy attack. The proliferation of TBMs has spurred development of an Aegis-based Theater Missile Defense capability for battle groups at sea. Nearly all surface ships and submarines which might be assigned to escort an AFOB will also have the precision strike capability of cruise missiles, which blunt key enemy defenses in advance of a JSOTF operation. Escorts operating in tandem with a CV AFOB and its embarked JSOTF constitute a formidable force to inspire fear and dread in potential enemies worldwide. Even more efficient employment of escorts could be achieved whenever the CV AFOB is operating in the vicinity of a Navy CVBG, wherein the escorts provide a defensive shield for both vessels at the same time.

SUMMARY AND CONCLUSIONS

The year is 2025. Envision an AFOB that enjoys freedom of access, state-of-the-art C⁴ISR, capable of launching and recovering UAVs and Unmanned Combat Air Vehicles (UCAVs) (fixed- and rotary-wing), Unmanned Undersea Vehicles (UUVs), high-speed assault craft for SEAL forces, and capable of ensuring force protection using organic mine countermeasures. This ship can support and sustain a 2500-person JSOTF embarked; can store and transfer a complete FOB Package (HARVEST FALCON/FORCE PROVIDER type systems) ashore with 30 days of supplies; can transport, support, launch and recover rotary-wing and VSTOL aircraft; can employ cruise missiles for deep precision strike from its deck; and can operate as an integral component of a Unified Command.

Yes, many of these concepts are still in various stages of development, but the transformation process should continue to exploit existing capabilities and advantages in the near term, while creating the 21st Century U.S. military. The real question is whether the service

components are willing to break the parochial paradigm and set aside the long-standing rivalry over roles and missions, and whose platform (rather than the optimum platform) to use. Transformation must take place in the minds and wills of the service component leadership first. If it does not, any actions taken will fall short of the mark. The precedent for CV AFOB has been set, has been employed numerous times with consistent success, and will be a crucial course of action to ensure the effectiveness of Joint Special Operations in the future. It will be expensive—two to three billion dollars up front, plus a hundred million in annual operating costs per ship is a lot of money—but it is an achievable and affordable concept in terms of operational effectiveness and utility. The alternative of a JSOTF “saddled up” but with no viable basing options due to access denial threats or political considerations is unacceptable. The cost to our national security and prestige is incalculable if we were denied the ability to strike the enemy at the time and place of our choosing.



FIGURE 3 USS CONSTELLATION (CV 64) CONDUCTING UNDERWAY REPLENISHMENT SIMULTANEOUSLY WITH AN AEGIS DESTROYER ESCORT.

According to Secretary Rumsfeld, "the loss of life and damage to our economy from the attack of September 11, 2001 should give us a new perspective on the question of what this country can afford for its defense. It would be reckless to press our luck with false economies or gamble with our children's future. This nation can afford to spend what is needed to deter the adversaries of tomorrow and to underpin our prosperity. Those costs do not begin to compare with the cost in human lives and resources if we fail to do so."²²

The CV AFOB is a prudent investment for America's security, and is a prudent combination of existing resources. We have preserved our de-commissioned CVs for the reason that they might be needed again some day, and that day is now. Like Phoenix rising from the ashes, yesterday's CVs can become tomorrow's AFOBs, ensuring America (as personified in the JSOTF) can take the fight to the enemy anywhere, any time and any place.

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ENDNOTES

¹ Captain Robert F. Johnson, U.S.Navy (Retired), "Carriers Are Forward Presence," Naval Aviation News, January-February 1997, Page 30.

² Admiral Vern Clark, Chief of Naval Operations, The Retired Officer Magazine, July 2002, Page 57.

³ Donald H. Rumsfeld, Quadrennial Defense Review Report (Washington, D.C.: The Pentagon, 30 September, 2001), 44.

⁴ VADM Timothy J. Keating, Deputy CNO, Letters to the Editor: "Aircraft Carriers Are Not An Easy Target for Missile Attack," St. Louis Post-Dispatch, 28 April, 2001, sec. Editorial, p. 32.

⁵ Donald H. Rumsfeld, Quadrennial Defense Review Report (Washington, D.C.: The Pentagon, 30 September, 2001), 34.

⁶ *Ibid.*, Page IV.

⁷ Lexington Institute. Naval Strike Forum: The Next Wave, 2010-2050. (New York: Zig Studios, 1999), Chapter 6.

⁸ Donald H. Rumsfeld, Quadrennial Defense Review Report (Washington, D.C.: The Pentagon, 30 September, 2001), 44-45.

⁹ U.S. Navy. "Vision....Presence...Power: A Program Guide to the U.S. Navy." 1999 Edition; available from <<http://chinfo.navy.mil/napalib/policy/vision/vis99/v99-ch1a.html>> (Appendix A)>. Internet. Accessed 9 May 2002.

¹⁰ *Ibid.*, p. 17.

¹¹ *Ibid.*, p. 18.

¹² David B. Crist, "Joint Special Operations in Support of EARNEST WILL." Joint Force Quarterly, (Autumn/Winter 2002): 16.

¹³ ADM Paul D. Miller, "Doing the Job With a Smaller Fleet," U.S. Naval Institute Proceedings (April 1992), 56.

¹⁴ The SPMAGTF was composed of a Ground Combat Element equivalent to a reinforced rifle company, and an Air Combat Element composed of eight CH-53D and four UH-1N helicopters. To make room for the helicopters, 50 percent of the CVW's F-14s and all of the S-3Bs remained behind in CONUS.

¹⁵ David Perin, "Several Perspectives on the USS THEODORE ROOSEVELT Deployment - The First Experiment in Adaptive Joint Force Packaging," Center for Naval Analyses (1994), 103.

¹⁶ Ibid., 51, 104.

¹⁷ E. D. McGrady and Robert E. Sullivan, "Operation UPHOLD DEMOCRACY: Observations on Joint Assault Forces Operated From a CV (CRM 96-3)" Center for Naval Analyses (1996).

¹⁸ Dennis M. Bushnell, "Future Strategic Issues/Future Warfare (Circa 2025): Capabilities of the "Enemy After Next," NASA Langley Research Center Briefing to the CNO Strategic Studies Group, (April 2001).

¹⁹ Frunzi, William, Scudder, Richard, and Handy, Dexter, A Ship of Their Own: Afloat Forward Operating Bases for Joint Special Operations Task Forces. Joint Critical Analysis (Joint Forces Staff College, Norfolk, VA., 05 May, 2002) 17.

²⁰ John Birkler, "Aircraft Carriers and the Carrier Industrial Base (MR-948)" RAND Corporation (1999): 19.

²¹ VADM Timothy J. Keating, "Aircraft Carriers Are Not An Easy Target for Missile Attack," St. Louis Post-Dispatch, 28 April 2001, sec. Editorial, p. 32.

²² Donald H. Rumsfeld, Quadrennial Defense Review Report (Washington, D.C.: The Pentagon, 30 September, 2001), VI.

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