America's Middleweight Force: Enhancing the Versatility of the 82nd Airborne Division for the 21st Century

A Monograph
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This study examines the Army's need for a middleweight force. Such a force must be rapidly deployable, opposed entry capable, lethal, tactically mobile and survivable against well armed 21st Century threats. Versatility is essential for the middleweight force, so that it can create force packages of combat power, (firepower, maneuver, protection, leadership), tailored for the unique conditions of each contingency.

The 82nd Airborne Division, the Army's premier conventional early entry division, possesses many of these capabilities already, but needs greater tactical mobility, firepower and sustainment capability to become a middleweight force. This study explores the versatility of the Division Ready Brigade task force using the Wass de Czege Relative Combat Power Model.

Prepositioning of force enhancement packages, called "DRB sets", around the world is an affordable way to address the shortcomings identified in the versatility analysis. These sets would be transported into an airhead using intratheater airlift, thus significantly upgrading DRB capability without requiring excessive intertheater airlift sorties. A feasibility study of the DRB set proposal in terms of airlift, training, money, and time concludes the monograph.

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I. Introduction

"The Army recognizes three general types of combat forces--armored forces, light forces, and special operations forces (SOF)... Each type of force is unique and possesses varying degrees of deployability, sustainability, lethality, and survivability. A mix of these forces can provide the overwhelming combat power necessary to meet the unique strategic, operational, and tactical requirements of any contingency."[1] FM 100-5

Emerging doctrine and 21st Century threats necessitate that the Army recognize a fourth general type of combat force, the middleweight force. Our National Security Strategy, National Military Strategy, and Joint and Army doctrine all support the need for this capability. This force must be responsive enough to strategically deploy by air within hours of notification. It must be versatile enough to tailor force packages that will defeat a variety of increasingly sophisticated potential threats in any type of terrain. The force must have the capability to conduct forced entry operations in order to seize lodgements anywhere on the globe, yet have sufficient lethality and survivability to succeed with minimum casualties. It must be tactically mobile enough to rapidly expand its lodgement and retain the initiative gained by forced entry. Finally, the force must sustain itself until it completes decisive combat operations or until even more lethal armored forces arrive.

America has employed the 82nd Airborne Division four times in the last ten years to protect vital national interests around the globe. As the Army's premier conventional early entry force, the division already possesses many of the capabilities of a

middleweight force. Nevertheless, additional enhancements are needed to provide the versatility required to continue protecting vital national interests with minimum casualties in the next century. If adopted, the enhancements outlined in the succeeding pages will complete the transformation of the 82nd Airborne Division into a middleweight force. These enhancements include motorizing the infantry battalion scout platoons, motorizing and increasing the firepower of the rifle companies, and enhancing selected combat service support systems.

This study examines the need for a versatile middleweight force and makes a case for building upon the 82nd Airborne Division in order to create that force. Using General Huba Wass de Czege's relative combat power model, the paper will assess the versatility of that division in terms of its firepower, maneuver and protection effects.[2] A feasible way to achieve that increased capability is outlined, namely, prepositioning vehicle sets at U.S. airfields in Europe, the Pacific, and Southwest Asia. Intratheater airlift, vice limited strategic intertheater airlift, could rapidly move these vehicles into any lodgement created by the airborne force. An assessment of the feasibility of prepositioning in terms of airlift, readiness, funding, training and time costs concludes the study.[3]

II. THE NEED FOR A MIDDLEWEIGHT FORCE: HISTORICAL

Former Army Chief of Staff (CSA) General Edward C. Meyer identified the Army's requirement for a middleweight force in his 1980 White Paper, A Framework for Molding the Army of the 1980s into a Disciplined, Well-Trained Fighting Force.[4] General Meyer articulated the need for other force packages to respond to contingencies ranging from counterterrorism to third world armored threats. These force packages included light infantry, middleweight units and heavy forces. For the medium force package, Meyer envisioned rapidly deployable motorized or light armored formations capable of countering initial enemy armored thrusts until heavier forces could arrive. General Meyer initiated this concept with the 9th Infantry Division (ID) (Motorized) and the accompanying High-Technology Test Bed (HTTB). The HTTB died a slow death after General Meyer's retirement in 1983. The development of the light infantry divisions, the failure to field a light armored gun system, declining budgets, competing priorities, and bureaucratic factors all contributed to the demise of the motorized concept. The inactivation of the 9th ID in 1990 eliminated the last vestige of a middleweight division in the U.S. Army.[5]

General Meyer's replacement as the Army Chief of Staff, General John A. Wickham Jr., committed the Army to the development of light infantry divisions (LID) in lieu of light armored or motorized forces. The fielding of LIDs allowed the

creation of two additional divisions without an increase in overall Army personnel strength. General Wickham eventually changed five divisions to the L-series Table of Organization and Equipment (TOE), including the organization of the 82nd Airborne Division.

The L series TOE reduced the combat power of the airborne division to the lowest levels in its history.[6] While this reduced level of combat power was sufficient to defeat enemy light infantry forces in Grenada and Panama, it would have been insufficient to defend friendly lodgements against enemy armored forces. The austere force structure of the LID facilitated its deployment in 500 C141 airlift sorties, but that same austere force structure necessitated Corps-level augmentation for most missions. Unfortunately, the airlift required to move these Corps assets negated the airlift savings gained by the austere LID force structure. While the debate continues concerning the utility of the light divisions, the differential between light and armored force combat power is greater than ever.[7]

THE NEED FOR A MIDDLEWEIGHT FORCE: 21st CENTURY THREATS

Based on the nature of the next century's threats, the need for a rapidly deployable middleweight force is even greater today than in the 1980's. The end of the Cold War and the demise of the Soviet Union have destabilized the world and increased the potential for regional conflict. Regional and ethnic tensions kept in check by the Cold War are resurfacing in the Balkans, the

Confederation of Independent States, Africa, the Korean peninsula and in Southwest Asia. Threat groupings are emerging as regional coalitions or informal alliances with strategic interests contrary to U.S. interests, i.e. Iran, Sudan, and Libya.[8] International bodies such as NATO and the UN are proving less than successful at resolving these regional conflicts.

Human tragedies resulting from these conflicts may lead to U.S. humanitarian assistance in operations other than war (OOTW). Operations that begin as OOTW, such as in Somalia and the Balkans, have the potential to transition rapidly into mid-intensity conflicts.[9]

While the specific threat is not clear, in general the U.S. can expect to face three broad types of foes in future conflicts: High technology, hybrid, and low technology.[10] The majority of our military opponents will be of the hybrid variety. While not uniformly equipped or well trained, these hybrid threats will possess some increasingly lethal and high technology systems.

Country	Size Force	Tanks	IFV	Arty	Aircraft	SSM	NBC
Cuba	180,500	1770	1300	1500+	162	unk	unk
India	1,265,000	3200	1200	4000+	630	yes	NBC
Iran	528,000	700	750	4130	190	yes	NBC
Iraq	382,500	2300	2900	2000	260	yes	NBC
Libya	85,000	2150	1850	1740	454	yes	BC
N. Korea	1,111.000	4100	4200	8100	732	yes	NBC
Serbia	150,000	1000	950	1360	450	yes	C
Sudan	71,500	270	286	180	50	no	no
Syria	404,000	4350	3750	2970	650	yes	BC

IFV-Infantry Fighting Vehicles Arty-Artillery and Multiple Rocket Launchers
SSM-Surface to Surface Missles
NBC-Nuclear, Biological Chemical Capability

Figure One. (Selected Threat Capabilities)[11]

Despite international conventions intended to eliminate weapons of mass destruction, NBC and ballistic missile technologies are being sold by the Chinese and North Koreans to the highest bidder. Proliferation of conventional munitions is rampant.[12] Technology will continue to increase the already substantial lethality of these hybrid forces. The relative destructive power per dollar is increasing and available to those who can pay. Weapons are more user friendly (i.e. shoulder fired surface to air missiles), thus requiring less training for the same level of lethality. U.S. forces should expect to face large quantities of high quality weapons systems with range, accuracy and lethality comparable to our own.[13]

Emerging information technologies may provide an opponent early warning of the U.S. response to a crisis. For example, access to Federal Aviation Administration computers could reveal the movement of large formations of military aircraft departing the United States. Additionally, live coverage by the international media may compromise the deployment of U.S. forces in response to a crisis. Such information would enable enemy forces to concentrate significant combat power at decisive points early in a campaign. These decisive points will include the likely lodgement areas that U.S. early-entry forces will attempt to seize and hold for follow-on armored or Marine forces.

Perceptive enemies will also exploit U.S. vulnerabilities learned from late 20th century operations. U.S. Army Rangers seized lodgements in Grenada and Panama by jumping onto airfields

from transport aircraft flying at an altitude of 500 feet. While doing so, they were extremely vulnerable to antiaircraft fire.[14] U.S. airborne forces in Saudi Arabia were vulnerable to Iraqi armored forces while awaiting the arrival of friendly mechanized formations.[15] Political responses to high U.S. casualties changed national policy in Lebanon (1983) and again in Somalia (1993). The seaborne delivery of Army armored forces is time consuming and requires a secure and adequate infrastructure for offloading.[16] Mining of harbors and likely assault beaches is a low cost way to disrupt this seaborne power projection.[17] We cannot assume that our future enemies will be tactically or operationally stupid. They will exploit these and other American vulnerabilities in an attempt to inflict maximum casualties on U.S. forces early in a conflict in order to erode domestic support.

In summary, the nature of the new multipolar world increases the opportunities for U.S. military involvement around the globe. U.S. forces will be called upon to project power against increasingly lethal and well informed opponents. Achieving surprise will be difficult due to worldwide information networks and the international media. Many potential threats now possess weapons of mass destruction and long range delivery means. The same hostile nations can also field significant heavy conventional forces with which to attack lodgements prior to the arrival of U.S. armored forces. We must assume these potential enemies will use these means in attempts to inflict maximum

casualties on U.S. forces early in a campaign in order to influence U.S. public opinion. U.S. early entry forces designed to fight light infantry foes in a low intensity conflict environment are inadequate for the mid-to-high intensity war that these enemies may choose to conduct. To counter these threats, U.S. forces must not only be rapidly strategically deployable, but possess superior tactical mobility and lethality; in essence, a middleweight force. The middleweight force must be able to conduct decisive combat operations against enemy hybrid threats or secure a lodgement in the face of armored counterattacks.

II THE NEED FOR A MIDDLEWEIGHT FORCE: DOCTRINAL

"Doctrine drives Army policies in major areas such as force design, modernization, personnel and logistics. In combat, doctrine guides tactical and operational activities."[18]
-General Gordon R. Sullivan, CSA

The National Security Strategy, the National Military Strategy, Joint doctrine, and Army doctrine have anticipated the next century's conditions and provide direction for dealing with future threats. While our doctrine never uses the term "middleweight force", it describes the need for opposed entry capability, superior tactical mobility, and improved lethality in our early deploying forces.

The National Security Strategy articulates the policy objectives that our military must be capable of supporting. The Clinton Administration's draft National Security Strategy

document states that America will contain or resolve regional conflicts that might escalate or draw in major powers. Specifically, the U.S. will closely track five ongoing regional conflicts in the following areas: the Korean Peninsula, Southwest Asia, Russia and Ukraine, India-Pakistan and the continuing dispute between Israel and the Arab states. We will pursue conflict resolution, in part, by maintaining the capability to fight two major regional conflicts near simultaneously, while involving ourselves with the United Nations in peacekeeping activities.[19]

A key role of the U.S. military in achieving these objectives includes "rapid power projection to deter and defeat regional aggression." While U.S. policymakers will seek satisfactory resolution of conflict without the use of force, any military operation conducted will be characterized by: "(1) a high probability of success; (2) rapid implementation; (3) minimal risk of significant U.S. casualties; and, the ability to disengage on our own terms, at the time of our choosing."[20]

The Department of Defense's (DOD) plan for supporting the National Security Strategy is outlined in the National Military Strategy. Secretary of Defense Les Aspin outlined the administration's vision in his Bottom Up Review briefing on 1 September, 1993. In this briefing, he outlined the force structure and strategy that he believes will enable America's armed forces to fight and win two major regional contingencies near simultaneously. In contrast to the significant forward

presence of the Cold War, the new strategy relies predominately on maritime forward presence and Army force projection from the continental United States. Apart from reduced forces in Europe and Korea, the majority of the Army's ten active divisions and 35 enhanced-readiness reserve component brigades will deploy to regional contingencies from bases in America.

Critical force enhancements proposed by Mr. Aspin include additional prepositioning of Army equipment, additional strategic lift, and improved air-delivered anti-armor precision guided munitions. The National Military Strategy also envisions DOD involvement in lesser regional contingencies, humanitarian relief, peacekeeping, peace enforcement, embassy evacuations and disaster relief missions. The Bottom Up Review and the strategy that it offers call upon the armed forces of the United States to be ready to execute a broad range of missions across the spectrum of conflict anywhere around the globe.[21]

Joint Doctrine amplifies the National Military Strategy by stressing the need for rapidly deployable, forced entry capable, versatile and lethal forces prepared to fight and win decisively with minimum casualties anywhere in the world. Regarding forced entry, Joint Pub 1 states: "The capability of the Armed Forces for forcible entry is an important weapon in the arsenal of the joint force commander. The primary modes for such entry are amphibious, airborne, and air assault operations which provide joint force commanders with great potential to achieve strategic and operational leverage."[22] Versatility is essential because

"the arena of our potential operations is the entire planet with its surrounding aerospace...we must be prepared to defend our national interests in every type of terrain and state of sea and air, from jungles, deserts, and tropical seas to polar ice caps."[23] In defending these interests we must "build up overwhelming combat power...attack enemy centers of gravity as near simultaneously as possible with decisive force ...win quickly and minimize casualties."[24]

General Sullivan, the current Army Chief of Staff, articulates how the Army will fulfill its role in the National Military Strategy, "As a strategic force, the Army is capable of fighting worldwide...The Army's goal is to (achieve decisive victory) quickly with a minimum loss of life and with minimum expenditure of national resources."[25] Army doctrine anticipates 21st Century conditions and provides a focus for how we will successfully deal with regional contingencies from a primarily continental U.S. based (CONUS) posture. The Army's capstone doctrinal manual, FM 100-5 Operations, outlines force projection considerations and establishes versatility as a tenet of successful operations.

Force projection is our ability to rapidly alert, deploy and operate forces anywhere in the world. U.S. force projection may be opposed or unopposed. Virtually any force can accomplish unopposed entry; opposed entry, on the other hand, may be the most hazardous of all combat missions. "Opposed entry operations require a lethal and survivable forcible entry capability with

forces prepared to fight immediately upon entry."[26]

The versatility necessary for successful force projection requires competence in a variety of missions and skills. Units must tailor different combinations of combat power appropriate to the contingency's conditions.[27] The demands for versatility are greater in a force projection army. Operations JUST CAUSE, DESERT SHIELD, DESERT STORM and PROVIDE COMFORT introduced Army forces to dynamic environments that called for quick, successful action across a wide range of operations. Airborne forces were employed in each of these operations because of their rapid deployability and inherent versatility. Our doctrine reflects the reality that versatility is key for a force projection Army. The airborne division has been and most probably will be the lead division employed in any contingency operations. Since the U.S. cannot choose the conditions of those contingencies, it follows that the airborne division must be sufficiently versatile to be lethal and survivable against light, hybrid and armored foes.[28]

America can project force from the continental United States to a regional contingency by air or sea. The inherent advantages of force projection by air are outlined in both Air Force and joint doctrine.[29] Three key advantages are cited by doctrine and are in the areas of geography, time/space and the ability to achieve surprise. Of these, the geographic advantage is crucial because aerial projection can deliver Army forces to any point on the globe very rapidly. The airborne unit's unique forced entry capability allows that force to quickly move from the aircraft to

the ground; far more quickly, in fact than by landing and unloading each aircraft. Once a suitable landing area is secured aircraft can land with additional forces and equipment which cannot be airdropped. Force projection by airdrop allows the joint force commander to rapidly mass the combat power of the airborne force on any suitable drop zone in his area of operations at a time and place of his choosing. This facilitates tactical, if not operational or strategic, surprise for the airborne force and the nation.[30]

The additional time and space advantages of aerospace power projection are in the areas of responsiveness, speed and surprise. Aerospace power projection is more responsive in that it is easier and faster to load planes with a tailored contingency force package than to load a ship or train. It is always faster to fly than to drive or sail over large distances, thus air power projection is inherently faster. Finally, it is easier and faster to unload a plane, either by airdrop or airland on the objective, than it is to unload a ship at the nearest coastline, or a train at the nearest secure railhead, and then move to the scene of the conflict.

The great disadvantage of aerospace power projection is the limited weight that transport aircraft can move, as compared with sealift. This disadvantage is offset to the degree that the Army maximizes the combat power per pound in its air-transportable early entry forces.[31] With that in mind, this paper next examines the combat power and versatility of the 82nd Airborne

Division. As the Army's primary conventional opposed entry force, the 82nd Airborne Division will be the first division committed in the next conflict. As such, that division must possess the versatility to tailor lethal and survivable force packages appropriate for a variety of threats and terrain conditions.

III. THE 82nd AIRBORNE DIVISION'S DIVISION READY BRIGADE (DRB)

The 82nd Airborne Division has been in the force projection business for fifty years. Decades of experience in these operations have institutionalized versatility and agility within the division.[32] An important part of the division's versatility is inherent in its Standard Operating Procedures (SOPs). These SOPs, developed in training and proven in combat, facilitate planning and execution when time is scarce. Another critical element of the Division's versatility resides in its soldiers and leaders. Rigorous training programs including Emergency Deployment Readiness Exercises (EDREs), Combat Training Center (CTC) rotations, airborne operations, and live fire exercises under all conditions, develops physically tough, mentally agile, innovative paratroopers capable of mission accomplishment anywhere in the world.

Another important element of the airborne division's versatility derives from its force packaging concept. Force packages are tailored task forces, made up of units with their

personnel, vehicles and weapons systems configured for the unique conditions of a given operation. The 82nd Airborne Division's Readiness SOP (RSOP) outlines eight generic force packages and twenty-two incremental force packages for planning purposes. The exact configuration of a task force dispatched to a crisis area will always depend on the mission, enemy situation, terrain in the objective area, friendly troops available, joint support available and time considerations, or " METT-T" in military parlance.[33]

The 82nd Airborne Division normally task organizes available forces into its brigade-sized task forces built around the infantry brigades of the Division. These force packages, averaging 3000 to 5000 men, are called Division Ready Brigades, or "DRBs" for short. The division's RSOP outlines "light", "medium", and "heavy" force packages. All DRBs include portions of the following: a division-level assault command post, a brigade headquarters company, three airborne infantry battalions, an artillery battalion, a light armored company, an engineer company, an air defense battery, a military intelligence support element, a military police platoon, a chemical platoon, a forward support battalion, civil affairs and psychological operations detachments. The medium and heavy DRBs include aviation brigade assets and additional elements from the units listed above. The differences between the light, medium and heavy packages are found in the numbers of men, weapons systems and other equipment taken from each of the subordinate units.[34]

By 1997, the heavy DRB will include the following weapons systems: five AH58D Kiowa Warrior helicopters, 54 JAVELIN medium anti-tank systems, 62 TOW-IIB heavy anti-tank systems, 14 M8 Armored Gun Systems, 18 M119 105mm Howitzers, twelve Improved 81mm mortars, 18 60mm mortars, and over 3000 M16A2s/M203s/M249.[35] The heavy DRB will also have 274 wheeled vehicles, six UH60 Blackhawk helicopters, and the Division Long Range Surveillance Detachment (LRSD).[36] The heavy DRB will possess the greatest combat power of all of the DRBs and would probably be the force package chosen to oppose a capable hybrid threat. For a closer look at a typical heavy DRB, see Appendix A.

IV. IS THE HEAVY DRB A MIDDLEWEIGHT FORCE?

The Wass de Czege Relative Combat Power Model

Army doctrine links versatility and combat power. FM 100-5 states, "Leaders integrate maneuver, firepower, and protection capabilities in a variety of combinations appropriate to the situation."[37] Thus, we can measure a unit's versatility in terms of its ability to create force packages of combat power appropriate for the conditions of the contingency.

In General Huba Wass de Czege's seminal work, Understanding and Developing Combat Power, he describes the Relative Combat Power Model as a tool for examining the relative combat power of adversaries. Relative combat power, according to Wass de Czege, is much more than simple force ratios. Although numbers are

important, the outcome of battles, campaigns and engagements is largely determined by the manner in which one's potential strength is brought to bear against the enemy. This includes numerous tangible and intangible factors which are discussed below.[38] (Also see Appendix B)

Firepower provides destructive force; it is essential in defeating the enemy's ability and will to fight. Maneuver and firepower are complementary dynamics. Their joint use makes the destruction of larger enemy forces feasible and enhances the protection of a friendly force. The Relative Combat Power Model defines the firepower effect as a function of five factors: volume of fire, lethality of munitions, accuracy of fires, target acquisition and flexibility of employment. This analysis will focus on volume of fire and flexibility of employment, as these will vary with the composition of the force package selected for a given contingency. A unit possesses versatility to the degree that it can tailor its firepower effects to the METT-T conditions it will encounter.[39]

Maneuver effects at the tactical level are produced by a combination of unit mobility, effective tactical analysis, effective resource management, and effective command, control and communications. This analysis of the airborne force will focus on unit mobility, as the other three factors are relatively constant regardless of the METT-T conditions of a contingency. Wass de Czege breaks unit mobility into five categories: physical fitness and health of soldiers, teamwork and esprit,

equipment capabilities, maintenance capabilities and unit mobility skills.[40]

Protection conserves the fighting potential of a force so that commanders can apply it at the decisive place and time. A lack of protection that leads to unacceptably high casualties may result in policy failure despite mission success. The relative combat power model describes three factors which contribute to the protection effect: concealment, exposure limitation and damage limitation. The mobility and firepower force package selected for a contingency will significantly impact on a commander's ability to protect his force, thus versatility in firepower and mobility will determine versatility in protection.[41]

Leadership is the most essential dynamic of combat power. Leaders will defeat the enemy's combat power by interfering with his ability to maneuver, apply firepower or protect his force. Battle should not be a fight between two equal foes. When tactics are successful, leaders gain a combat power advantage over the enemy and are able to defeat him quickly with minimal losses to their own troops.[42] The leadership effect is determined by technical proficiency, understanding unit capabilities, analytical skills, communicative skills, understanding battlefield effects and the intangibles of dedication, commitment, and moral force. Selection, motivation, training and experience will impact on all of these functions. The leadership effect should remain constant regardless of the

force package selected; however, there will be leader training implications which this study will examine.

Versatility Analysis of the Heavy DRB

This next portion of the monograph will examine the versatility of the heavy DRB force package. In an attempt to analyze the intangible quality of versatility as objectively as possible, this study will use the Wass de Czege Relative Combat Power Model to analyze the combat power of the heavy DRB relative to the combat power and terrain conditions of three different, but plausible, 21st Century threats. This analysis will determine if the heavy DRB possesses sufficient versatility to seize and defend a lodgement with minimal casualties against those threats in their unique terrain conditions.

The three hybrid threats chosen are all mentioned in our National Security Strategy as areas of interest for the United States.[43] Iraq, with its armor-heavy force and open terrain, has remained a threat to Southwest Asian regional stability despite its defeat during DESERT STORM. Serbia, with its partially mechanized force in extremely restrictive terrain, is a regional aggressor and may become the target of a NATO peace enforcement operation.[44] Cuba, with its partially mechanized force in mixed terrain, is a well armed and hostile threat within our own hemisphere. While not uniformly trained or equipped, all three threats possess over 1000 tanks, over 1500 artillery systems and considerable amounts of infantry, with which they could attack

any early entry force. Additional capabilities of these threats are depicted in Figure One of the previous chapter.

The varying terrain conditions of these three areas are important to the versatility analysis. The airborne division, with its worldwide focus, must be capable of operating in any type of terrain as well as against any type of threat. Iraq represents a worst-case scenario because the largely foot-mobile paratroopers must face a highly mobile and lethal threat in open, uninhabited desert terrain. While the restrictive terrain of the Balkans with its mountains, forests, numerous built-up areas and limited infrastructure favors the employment of dismounted infantry, the terrain stresses the DRB's combat service support systems. The individual soldier's load becomes a critical factor in unit combat power in mountainous terrain. Finally, most of Cuba's terrain is relatively flat, but with significant cultivation and mixed vegetation. While Cuba has some mountainous terrain, the DRB would likely be committed in the flatter, more populated areas.

Relative Combat Power Model analysis of heavy DRB firepower.

General Wass de Czege's criteria were used to analyze the heavy DRB's firepower relative to the three threats in their unique terrain conditions. Since some subjective judgements must be made on the various evaluation criteria, any identified shortcomings are explained in detail following the summary in Figure Two.

Evaluation Criteria	Cuba	Serbia	Iraq
1. Volume of Fire:			
Number of delivery means	+	+	+
Ammunition resupply capability	-	-	-
Target Acquisition: Above DRB level	+	+	+
Internal to DRB	+	-	-
2. Flexibility of Employment:			
Weapons ranges: AT/AGS/AH58D	+	+	+
Rifle Companies	+	+	-
Indirect Fire	+	-	-
Weapon system mobility	+	-	-
Combined Arms employment	+	+	-

Legend: + meets or exceeds mission requirements
- does not meet mission requirements

Figure Two: Firepower Analysis of Heavy DRB

The heavy DRB shortcomings apparent from the firepower analysis are in the areas of ammunition resupply, target acquisition, weapons ranges within the rifle companies, weapons system mobility in the rifle companies, and combined arms operations in open terrain.

A clear shortcoming in all three scenarios is the DRB's ammunition resupply capability. The DRB is supposed to be able to sustain itself for 72 hours in a mid-intensity environment.[45] However, there is insufficient space on either the heavy drop platforms or in the rucksacks of the paratroopers to parachute in the DRB's entire basic load of ammunition.[46] The rifle companies have no organic vehicles with which to transport additional Javelin rounds (49 lbs per system), M21 Anti-Tank mines (21 lbs) or mortar rounds (3 lbs) other than those that the paratroopers jump in with and carry on their backs. Airland sorties and resupply drops bring in additional ammunition, but transportation assets for recovery and delivery to the units are limited.[47]

While local transportation assets may be available, this is never a certainty prior to arrival on the objective. What versatility exists in terms of ammunition supply capability is exercised at the departure airfield, where commanders decide on assault ammunition loads based on METT-T factors. Risk assessment is a necessary tool in balancing ammunition loads against soldier overloading.[48] The bottom line is that the DRB has limited versatility in its ammunition supply capability.

Figure Two also shows that the DRB has limited organic reconnaissance assets. The battalion scout platoons are dismounted and equipped with backpack radios, and thus have limited range and ability to reposition. In Serbia and in Cuba, the mountainous terrain will limit both the range of these radios and the distances that the heavily laden scouts will be able to travel. In Southwest Asia, the footmobile scouts have limited utility against a mobile threat in open terrain.

The DRB will primarily rely on division, corps and Echelons Above Corps (EAC) systems for early warning. Assuming the transmission of this intelligence from source to weapons system flows smoothly, the versatility of target acquisition is good. While these systems should keep the brigade well supplied with information, the DRB commander's ability to redirect these systems to respond to his specific requirements is not necessarily assured, because he does not have operational control over the intelligence assets.

The rifle companies lack sufficient versatility in terms of

weapons ranges against hybrid forces. While the 2,000 meter range of the unit's six JAVELINs is an improvement over today's DRAGON Anti-Tank missile, the large majority of the companies' direct fire systems are effective only out to 600 meters against point targets. The rifle company weapons mix is designed for fighting another light infantry force, not for fighting a 21st century hybrid threat. Figure three graphically illustrates the gap that exists in rifle company weapons ranges.

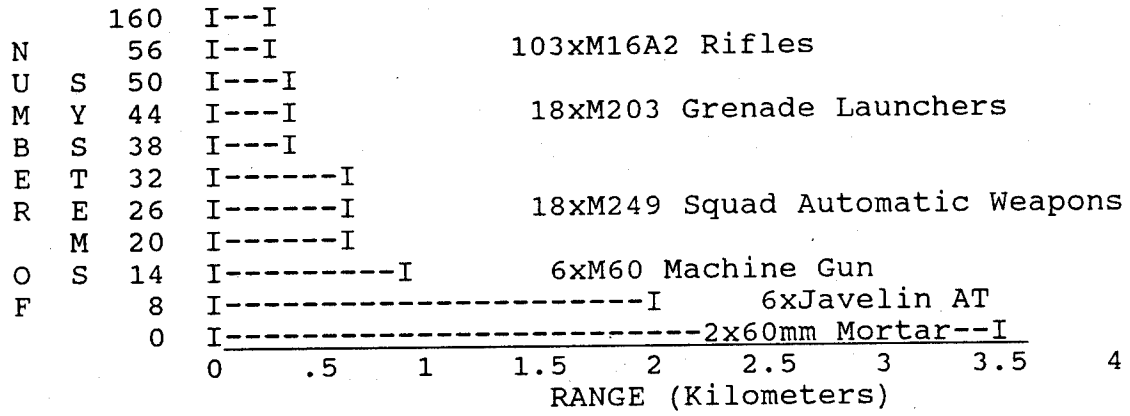

Figure Three: Rifle Company Weapons Ranges [49]

The DRB's indirect fire system has less versatility than the direct fire systems. This is especially apparent in terms of counterbattery fires and the ability to suppress targets beyond the lodgement's Reconnaissance and Surveillance Line (RSL), which is doctrinally 7 to 16 kilometers from the center of the lodgement.[50] The M119 105mm Howitzer has a maximum effective range of 11,400 meters using standard munitions.[51] All of the postulated threats possess systems with greater ranges. This shortcoming cannot be entirely offset by friendly airpower as

adverse weather may degrade airpower effectiveness. Corps assets can augment the DRB with heavier firepower, but only at an inordinate cost in airlift.

Weapons system mobility is relative to terrain; but with a worldwide mission, the DRB cannot choose the terrain on which it will fight. Flexibility and survivability are enhanced when a weapons system can shoot, move, and shoot again. The attack helicopters, light armor, artillery and vehicle mounted heavy anti-tank missiles (TOWs) are highly mobile. The rifle companies, in contrast, move as fast as the individual infantryman can negotiate the terrain. In restrictive terrain, this may suffice, but if the DRB is deployed in more open terrain, this lack of mobility is a serious liability. US Army doctrine stresses combined arms operations at all levels.[52] While the DRB includes a versatile mix of combined arms assets, the weapons systems mobility differences degrade the effectiveness of the combined arms team in less restrictive terrain. While five of the DRB's fourteen maneuver companies are vehicle equipped and quite mobile, the other nine companies move on foot.[53] Thus, the mounted companies are either employed at the rate of march of the rifle companies, which forfeits their mobility advantage; or they move at higher speeds, but without infantry support.

Relative Combat Power analysis of Maneuver Effects.

Maneuver, for the airborne force, is usually exercised at

both the strategic and tactical levels. The DRB uses maneuver to gain a positional advantage in relation to the enemy. Strategic maneuver and forced entry gain the initiative for the DRB through surprise and shock effect. Any competent enemy will attempt to regain the initiative by immediately counterattacking to destroy the airborne force or at least to sever its air lines of communication. The airborne force must generate superior combat power relative to the threat force in this crucial phase of operations. The airborne commander may exercise great flexibility in choosing the time for his assault; however, the location of the airborne assault is influenced by the need to secure an airfield. The tactical mobility of the airborne force determines how far they may land from the airfield they intend to seize.[54]

Tactical mobility is a function of many factors including the following: physical fitness and health of individuals, unit equipment and unit mobility skills. These factors are summarized in Figure Four.

Evaluation Criteria	Cuba	Serbia	Iraq
Physical Fitness	+	-	+
Unit Equipment	-	-	-
Unit Mobility Skills	+	+	-

Figure Four: Analysis of DRB tactical maneuver

The physical capabilities of the paratroopers of the 82nd Airborne Division have been instrumental to the division's success for fifty years. While today's paratroopers are fitter than their predecessors, the demands placed upon them are

greater. By the time the DRB drops onto its objective, all of the leaders and most of the troopers will have been awake for 24 to 36 hours.[55] They are probably in a different time zone and probably in very different climactic conditions. Once on the ground, the paratroopers must carry a heavy load everywhere they go on the battlefield. The physical demands of combat in the mountainous terrain and harsh weather conditions of the Balkans will quickly exceed the capabilities of the DRB's dismounted infantrymen unless their loads are reduced.[56] The flatter terrain of Cuba and Iraq mean that physical degradation will occur more slowly, but soldier overloading could eventually degrade infantry effectiveness under these conditions as well.

There are no vehicles in the nine rifle companies or three scout platoons of the DRB. Organic DRB transportation assets consists of ten M35 2 1/2 ton trucks in each battalion and six UH60 BLACKHAWKS systems which arrive only when the airhead can accept airland sorties.[57] The task force can redirect limited transportation assets from other support or combat functions to move troops; but this is done at a cost to DRB sustainment. Another serious consequence of the lack of vehicles in the rifle companies is the impact on the combat service support of the unit. The backs and legs of the DRB's infantrymen have become a part of the CSS system. The energy used carrying equipment and supplies that belong in the CSS system is energy taken from the fighting strength of the individual paratrooper. This lack of transportation inevitably increases the load of the individual

soldier. Overloading prematurely fatigues the trooper and increases his susceptibility to the effects of fear.[58] The lack of vehicles in the rifle companies and scout platoons is the greatest single detractor from the versatility of the DRB.

The lack of tactical mobility in the scout platoons limits the speed with which they can deploy, reposition or redeploy. It limits their sustainment, their time on station, their ability to conduct traditional reconnaissance missions (route or area recon) and the range of their communications. The net effect is to limit the potential effectiveness of this critical asset.

The lack of tactical mobility makes the enemy's job easier. Given that the rifle companies must walk to their objectives, and that the DRB's objective is usually an airfield, the drop zone options become easier to predict. The enemy can then concentrate his air defense assets around those likely drop zones. Conversely, if the DRB possessed more tactical mobility, the enemy commander's planning task would become more difficult and his air defense positioning less effective.[59]

The lack of transportation slows the speed with which the friendly brigade can expand the lodgement and exploit the surprise gained by the airborne assault. Transportation shortages limit the number and type of mine obstacles that can be emplaced. It also limits the number of Javelin rounds, mortar rounds and AT4s with which the rifle companies will overwatch those obstacles. The lack of tactical mobility increases the risk assumed by the DRB commander and decreases his margin for

error on his initial dispositions. Flexibility is reduced because of the limited number of mobile assets with which he can respond to the unexpected. The DRB cannot offset from the objective and still reach it in time to retain the critical element of surprise which will help to minimize casualties. In short, the lack of tactical mobility is the greatest single detractor from DRB versatility.

Relative Combat Power Model Analysis of Protection Effect.

The protection effect is a function of concealment, exposure limitation and damage limitation. The analysis of the DRB in each of these areas is outlined in Figure Five.

Evaluation Criteria	Cuba	Serbia	Iraq
Concealment	+	+	+
Exposure Limitation			
During Airdrop	-	-	-
On Ground	+	+	-
Damage Limitation	-	-	-

Figure Five: Protection Analysis

An important part of concealment is the ability of the friendly unit to deny the enemy the ability to conduct reconnaissance i.e. the counter-recconnaissance capability of the unit. The DRB has some capability with its vehicle mounted anti-tank companies to conduct this effort; however, this reduces the anti-tank capability of the DRB elsewhere.

The DRB protection analysis reveals shortcomings in exposure and damage limitation. The DRB risks high losses to enemy air

defense by parachuting directly onto airfields. Simulations of parachute assaults to seize airfields consistently predict losses of two to three aircraft to shoulder-fired SAMs even after extensive suppression of enemy air defense (SEAD) has eliminated all fixed ADA sites.[60] The lack of DRB tactical mobility limits the commander's ability to protect his force by jumping elsewhere and moving overland to seize the airfield.

Damage limitation is a function of numerous factors. The DRBs capability to dig survivability positions is limited. Infantry companies must use entrenching tools. One Small Emplacement Excavator (SEE), the ideal vehicle for building survivability positions, is included in the heavy DRB, but is currently dedicated to airfield repair missions. Nevertheless, additional SEEs can be added to the heavy DRB as required, but at a concomitant cost in airlift.[61]

Training and Doctrine Command studies reveal that the greatest threat to friendly early entry forces in the next conflict will be indirect fire.[62] The lack of tactical mobility in the rifle companies makes it difficult for these forces to avoid enemy fires once detected. The limited survivability assets in the DRB reduces the commander's versatility for force protection. Medical evacuation assets at DRB level are adequate, but the rifle companies must transport their casualties out on foot because of their lack of vehicles.

In summary, the preceding analysis demonstrates that while the heavy DRB is a capable force, it does have some shortcomings.

These shortcomings are: one,insufficient lethality and range in rifle company firepower; two, inadequate tactical mobility in the scout platoons; three, inadequate tactical mobility in the rifle companies; four, inadequate rifle company combat service support (CSS) capability.

V. RECOMMENDATIONS: ENHANCING THE VERSATILITY OF THE DRB

Three recommended force enhancements will do much to rectify the four shortcomings outlined above. These enhancements will provide the versatility needed to tailor force packages sufficiently lethal, mobile and survivable to win with minimum casualties against likely 21st century threats anywhere around the globe. These additional capabilities will also complete the transformation of the 82nd Airborne Division into a middleweight force.

The three recommendations are:

1. Motorize the battalion reconnaissance platoons with eight High Mobility Multipurpose Wheeled Vehicles (HMMWV). Provide two HMMWVs to each of the three scout squads and two to the platoon headquarters.

2. Motorize and upgrade the firepower of the rifle companies. Provide 20 HMMWVs, equipped with ten MK-19 Grenade Machine Guns (GMG), ten M2 .50 caliber Heavy Machine Guns (HMG) and 12 additional JAVELIN anti-tank weapons systems.

3. Motorize the rifle company's CSS with six HMMWVs. Provide one HMMWV to each rifle platoon and the mortar section.

The remaining two HMMWVs support the company supply section.

These recommendations offer modest, low cost, readily available enhancements to address the four shortcomings identified in the combat power analysis of the DRB. The recommended equipment is already in the Army inventory. The overall effect of these recommendations is to provide the DRB, or the entire division, with the capability to upgrade tactical mobility, firepower and protection as required by the conditions of the contingency. A similar capability during DESERT STORM would have allowed the division to fight as a motorized force during the ground offensive. Appendix C provides an itemized listing of recommended capability packages.

The firepower enhancements in the rifle companies will double the number of antitank systems within the DRB and triple the overall number of vehicle killing systems. The firepower of the rifle companies would be significantly enhanced, since they could engage enemy vehicles beyond 1800 meters with 36 direct fire systems, as opposed to the current total of six systems. These firepower enhancements are illustrated in Figure Six.

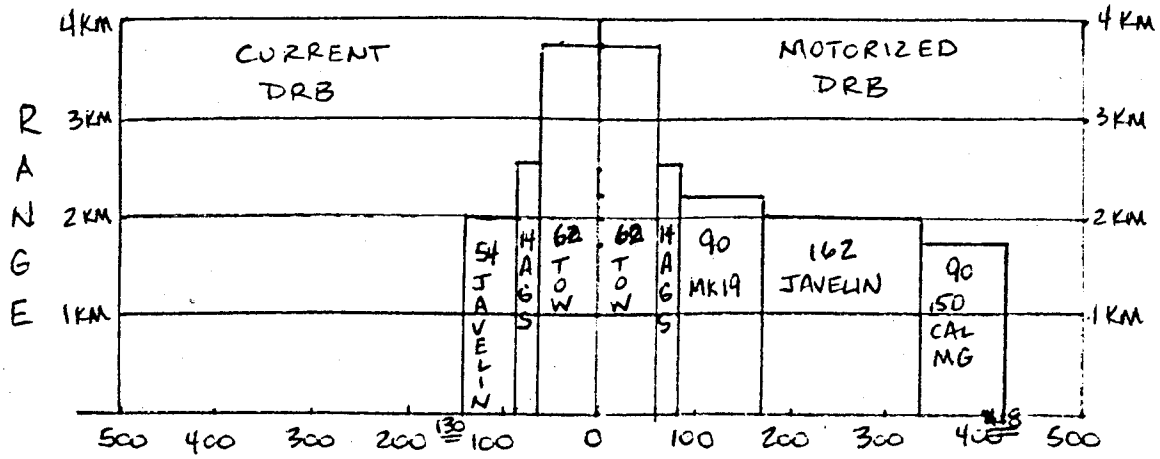

FIGURE SIX: NUMBER OF DRB DIRECT FIRE SYSTEMS THAT CAN KILL THREAT TANKS/VEHICLES

Rapid tactical maneuver would be possible with all thirteen companies of the force as opposed to only four vehicle mounted companies in the current DRB configuration. The additional vehicles would allow the rifle company to move, dismount and fight as light infantry with a substantial base of fire support from its vehicle mounted systems. Similar equipment and tactics were used quite successfully by French and Chadian troops against armored Libyan forces as recently as 1986.[63] Additional mobility would also enhance force protection by enabling troops to move in order to avoid enemy indirect fires.

Enhanced tactical mobility in the reconnaissance platoons would provide the DRB with greater range, survivability and responsiveness from this important asset. The highly mobile

scouts would improve the security, and therefore the protection effect across the DRB.

Motorizing the sustainment elements within the rifle companies would lighten the individual soldier's load by providing an additional nine tons of cargo lift capability to the company. This would increase unit rates of march and allow for transportation of additional equipment and munitions.

The building block for these motorization proposals is the High Mobility Multipurpose Wheeled Vehicle (HMMWV). This versatile vehicle comes in numerous configurations and can be upgraded with additional ballistic protection using bolt-on armor packages. The 82nd Airborne Division is already equipped with over 1000 HMMWVs and has the mechanical expertise, spare parts, fuel and lubricants required to support this system.[64] The automatic transmission equipped HMMWV requires minimal driver training and is capable of handling the roughest terrain.

VI. FEASIBLY IMPLEMENTING THE RECOMMENDATIONS

How can these proposals be feasibly implemented within existing resource constraints? This section will discuss airlift, training, readiness, financial and time costs and offer affordable solutions for implementation.

AIRLIFT

Intertheater airlift assets available to project Army forces from the United States are limited. The United States Air Force

uses three types of military aircraft to move Army forces. The C5B hauls outsize cargo and large payloads; but requires long runways and is not suitable for opposed entry missions. The C130H can land on short unimproved runways, but lacks an aerial refuel capability and is primarily an intratheater airlift asset. The C141B is the Air Force's intertheater workhorse because of its aerial refuel capability and large payload. It is suitable for low level flight and airdrop of both personnel and equipment.

C141s were to stay in operation well into the next century, but the demands of DESERT SHIELD and DESERT STORM aged them prematurely. Of the current fleet of 249 C141 aircraft, only 50 are currently rated for unrestricted flight. Of the 199 remaining aircraft, 22% are grounded, 58% cannot conduct aerial refueling and 70% have restricted Allowable Cargo Loads (ACL). The entire fleet requires a complete overhaul in order to return the aircraft to pre-DESERT STORM performance levels.[65] Lacking such an overhaul, the C141 fleet will remain severely constrained.

The C17 aircraft may replace the C141B as the principal intertheater airlifter. The C17 combines the best qualities of the C5B, C130H and C141B with its capabilities for aerial refuel, large payloads, outsized cargo and short runway landings. But even if this capable aircraft becomes operational, the total number in the inventory may be as low as 50. The implication for opposed entry force projection by air is that intertheater airlift will remain a very limited commodity.

In contrast to the bleak status of intertheater airlift, the intratheater fleet of C130s remains robust. There are over 450 operational C130 aircraft in the Air Force inventory. While many of these are in the Air Reserve and Air National Guard, these very capable units may be called to duty with two weeks notice. In the active duty units, 10 C130s are always positioned in European Command's (EUCOM) Area of Operations and another 30 in Pacific Command's (PACOM) region. When empty, the C130E or H model can travel 3685 nautical miles without refueling. In wartime, C130s can transport up to 13.8 tons of cargo over a distance of 2,000 miles. They can land on virtually any 2700 foot long airstrip.[67] Moving the existing heavy DRB will stress current intertheater airlift assets. It requires 103 C141 sorties to move the DRB from the United States to Southwest Asia with enroute aerial refuels.[68] If moved by C141, the DRB would use the majority of available C141s for a period of four days. Remaining intertheater lift will deploy additional Air Force and Army assets into the theater in support of the campaign plan. The lack of intertheater airlift would delay the deployment of the proposed motorized package, or force the Division Commander to choose between deploying an additional DRB vice motorizing the DRB already in the airhead.

The answer to this dilemma is to preposition motorized DRB sets of equipment in the U.S. Pacific Command (PACOM), the U.S. European Command (EUCOM), and the U.S. Central Command (CENTCOM); and deploy the sets into the airhead with <u>intratheater</u>, or C130,

airlift. Prepositioning takes advantage of the Air Force's significant intratheater airlift capability and accelerates the build up overwhelming combat power against any foe in the critical early days of a contingency.

PREPOSITIONING

A proposed "DRB set" of prepositioned equipment would consist of three scout platoon sets, nine rifle company sets, and selected CSS vehicles based on local availability of Petroleum, Oil and Lubricants (POL) products. This totals 204 HMMWVs, thirty 2 1/2 ton trucks with trailers, and a POL section equipped with collapsible fuel storage bladders. Moving this package would require approximately 135 C130 sorties (or 62 C141 sorties).

Ideally, ten DRB sets could be purchased and prepositioned at U.S. Army or Air Force installations around the world as follows: two sets each in PACOM, EUCOM, CENTCOM and at Fort Bragg; 2/3 of a set each at the National Training Center (NTC), the Joint Readiness Training Center (JRTC) and the Combined Maneuver Training Center (CMTC). The training sets would be for use during any airborne, air assault or light unit training rotation. Of the two sets at Fort Bragg, one should be maintained for deployment either to contingencies in SOUTHCOM or for movement to another theater as required. The other Fort Bragg set would be maintained in a vehicle pool from which units could draw the vehicles for sustainment training on motorized skills.

Proper positioning of the PACOM, EUCOM and CENTCOM sets is essential for their successful utilization. Base selection must consider the host nation's willingness to support American force projection from their country. The distances from the prepositioning site to the objective must take into account C130 refueling enroute to or upon return from the lodgement. Potential site locations include Korea, Okinawa, Saudi Arabia, Egypt, Germany, Sicily and Diego Garcia.

TRAINING CONSIDERATIONS

Versatility requires proficiency at a range tasks in various conditions, yet training time remains constrained. The proposed addition of the motorized capability adds no new collective tasks to the DRB Mission Essential Task List (METL). It does add new leader and individual tasks and new conditions for certain METL tasks. These leader and individual tasks could be sustained on a semi-annual basis utilizing the expertise of the TOW company personnel to train these tasks throughout the battalions of the DRB. Many of these tasks are common skills already reinforced through other annual training events.[69]

FUNDING

The Army purchased over 6,000 HMMWVs in 1993 and will purchase over 5,800 in 1994 even as the service downsizes. There may already be 2,040 excess HMMWVs in the Army inventory to create these 10 prepositioned sets without purchasing any additional vehicles. If HMMWVs must be purchased, the vehicle sets will cost approximately $75 million. This does not include

the contract for maintenance of the vehicles at their respective sites, or the cost of additional radios, weapons systems, night vision devices and other equipment.[70]

While this may seem expensive, consider that the Department of Defense is spending $2 billion to build twelve new maritime prepositioning ships for the Army. An additional $1 billion in contracts have been awarded to convert five roll-on/roll-off ships to fast sealift specifications; and $35 billion is being spent on the C17 program.[71]

TIME

This proposal can be implemented now. No new weapons systems are involved, and all of the required equipment may be available at no additional cost due to the ongoing downsizing. In contrast, the first of the new maritime prepositioning ships will not be available until 1995. This is the same year that the first eighteen C17s will be delivered. It will take an additional five to seven years to acquire the remainder of our strategic airlift and sealift enhancements.[72]

VII CONCLUSION.

The implementation of the proposal set forth in this paper would affordably enhance the Army's force projection capability well into the next century. Given that the 82nd Airborne Division has deployed four times in the last ten years to defend vital national interests abroad, it appears reasonable to assume that the division will deploy again in the near future. It is

just as probable that the Airborne Division will face increasingly lethal threats bent on maximizing American casualties early in a contingency. Given our stated national objective of quick, decisive victory with minimum casualties, can the Army afford not to enhance the versatility of its lead division in the next conflict?

The prepositioned DRB sets could also be used by any light force in the Army, thus enhancing the versatility of three other light divisions for the same cost. If America has to fight two major regional contingencies near simultaneously, it may be necessary to employ a light division for a longer period of time and against a more capable threat than the austere LID division base can handle. If the normal Corps-level augmentation that a LID could expect is committed to the other contingency, where will the Army get the additional capability to upgrade these units? The force enhancement of a DRB set would significantly enhance the firepower, mobility and protection of these other light forces. The purchase of ten sets of prepositioned equipment provides one set for every airborne or light infantry brigade projected to remain in the ten division Army. In effect, this proposal offers an affordable means to upgrade our Airborne Division to a middleweight force as well as provide additional versatility to all of America's light forces.

APPENDIX A: The Heavy DRB

UNIT	PERSONNEL		MAJOR EQUIPMENT	
	Airdrop	Airland	Airdrop	Airland
Division Assault Command Post	60	18	2xHMMWV	6xHMMWV
Aviation Brigade				
Command and Control	2	29		5XHMMWV
Air Cavalry	0	108		3xOH58
				3xAH58D
Ground Cavalry	0	22		2xTOW
				4xHMMWV
LRST	15	5		2xHMMWV
ATTACK Bn		84		5xAH58D
ASSAULT Bn		42		6xUH60
				10xVehicles
Division Ready Brigade One				
Brigade Headquarters	36	57	8xHMMWV	16xHMMWV
3xInfantry Battalions each consisting of:				
HHC	137	34	17xHMMWV	11xHMMWV
				10xM35 Trk
(Scout Platoon with sniper squad consists of 25 personnel in HHC. No organic vehicles)				
3xRifle Companies	136	2	9xJavelin AT	
			6xM60 MG	
			2x60mm Mortars	
			18xM249 SAW MG	
			18xM203 Gren Lnchr	
	(No organic vehicles in Rifle Company)			
Anti-tank Company	89		60xTOW AT	
			32xHMMWV	
Artillery Battalion	231	33	18x105mm Howitzer	
			29xHMMWV	12xHMMWV
Armor Company	67	12	14xM8 AGS	4xVeh
			3xHMMWV	
Air Defense Battery	51	64	26xHMMWV	
Engineer Company	43	99	8xHMMWV	
			Light Airfield Repair Package	
Signal Platoon	15	10	6xHMMWV	
Military Intelligence	20	16	1xHMMWV	4xHMMWV
Military Police Company(-)	76	3	9xHMMWV	3xHMMWV
Chemical Platoon	2	30	1xHMMWV	11xVehs
DISCOM	100	159	12xHMMWV	74xVehs
Civil Affairs Team		14		2xHMMWV
Psychological Operations Team	4			

Information from 82nd Airborne Division Readiness Standing Operating Procedure (RSOP), Chapter 16: Generic Force Packages, Annex E (DRB Heavy-Itemized Equipment List)

APPENDIX B: The WASS de CZEGE Combat Power Model

Combat Power is a function of:

1. FIREPOWER EFFECT (which is a function of)
   a. Volume of fire
   b. Lethality of Munitions
   c. Accuracy of fires
   d. Target Acquisition
   e. Flexibility of Employment

2. MANEUVER EFFECT
   a. Unit mobility
   b. Tactical analysis
   c. Management of resources
   d. Command, control and communications

3. PROTECTION EFFECT
   a. Concealment
   b. Exposure limitation
   c. Damage limitation

4. LEADERSHIP EFFECT
   a. Technical proficiency
   b. Undersatnding of unit capabilities
   c. Analytical skills
   d. Communication skills
   e. Dedication, commitment, and moral force
   f. Understanding of battlefield effects

Information from General Huba Wass de Czege's "Understanding Combat Power" in School of Advanced Military Studies AMSP Course 2, Tactical Dynamics, Book 1, (Ft. Leavenworth, KS: 10 Feb 1984), 17-19.

APPENDIX C: PROPOSED DRB SET

A DRB set would consist of three scout platoon sets, nine rifle company sets and a combat service support set.

A. The Scout Platoon Set would consist of the following:
8xM1025/M1026 High Mobility Multipurpose Wheeled Vehicle (HMMWV) Scout Vehicle
4xMK-19 Automatic Grenade Launchers (AGL)
4xM2 .50 caliber Heavy Machine Guns
8xTVS-5 Night Vision Sights for MK-19 and M2
8xAN/PVS 7 Night Vision Goggles (NVGs) for drivers
8xGlobal Postioning Systems (GPS)

B. The Rifle Company Set would consist of the following:

1xCompany Headquarters Set:
2xM1025 HMMWV Armament Carriers
4xTVS-5 Night Vision Sights
2xM1038 HMMWV Cargo Carrier with winch
2xM101 Trailers
4xM2 .50 caliber HMG
4xAN/PVS 7 NVGs for drivers
2xGPS

Three Rifle Platoons each receive:
2xM1026 HMMWV Armament Carrier with winch
3xM998 HMMWV Troop Carrier
3xM101 Trailer
2xM2 .50 caliber HMG
3xMK-19 AGL
4xJavelin anti-tank missile system
5xTVS 5 Night Vision Sight for MK-19 and M2
5xAN/PVS 7 for drivers
2xGPS

Mortar section receives:
1xM1038 HMMWV Troop Carrier with winch
1xM101 Trailer
1xMK-19 AGL
1xTVS 5 Night Vision Sight
1xAN/PVS 7
1xGPS

Rifle Company total in set:

HMMWVs, all types:	20	Javelin AT missile system:	12
MK-19 AGL:	10	TVS 5s:	20
M2 .50 caliber HMG:	10	AN/PVS 7:	20
GPS:	9	M101 Trailers:	12

C. Combat Service Support Set:
10x 2 and 1/2 ton Truck
5xM105 Trailers for Class V, IX
5xM105 Trailer with fuel tank unit
2x 10,000 gallon Collapsable fuel storage bladders
Appropriate pumps and hoses for fuel handling.
Class III, V, IX and batteries for all systems in the DRB set

Note: If the DRB Commander decides to only motorize the CSS of the rifle companies, then the units draws only 6 HMMWVS per company from prepositioned stocks.

ENDNOTES

1. US Army Field Manual 100-5, Operations, (June 1993), 2-2.

2. Huba Wass de Czege, "Understanding and Developing Combat Power" in AMSP Course 2 Tactical Dynamics Book 1, (Ft Leavenworth, KS: US Army Command and General Staff College, 1984) 5-21.

3. While this prepositioned equipment will require funding beyond the current Army budget, a window of opportunity exists to make the case for these enhancements. During his Bottom-Up Review Briefing in September of 1993, Secretary of Defense Les Aspin asserted that the Army's reduced force structure of ten divisions could fight and win two major regional contingencies (MRC) through the use of critical force enhancements. His highest priority force enhancement was the prepositioning of Army equipment. Congress froze the Army drawdown at 550,000 personnel because key lawmakers disagreed that a ten division army, even with DOD's proposed force enhancements, was sufficient to win two MRCs. Additionally, the 3 October 1993 engagement in Somalia has heightened decisionmaker awareness as to the criticality of sufficient firepower, mobility and protection for our forces. In this atmosphere, the Army senior leadership might convince DOD and Congressional decisionmakers to fund the enhancement of the nation's lead division in the next conflict.

4 GEN Edward C. Meyer, "White Paper 1980: A Framework for Molding the Army of the 1980s into a Disciplined, Well-Trained Fighting Force", (Washington, D.C.: Headquarters, Department of the Army, 25 February 1980)

5 Michael J. Mazarr, Light Forces and the Future of U.S. Military Strategy, (Washington, D.C.: Brassey's (US), INC) pgs. 6-42.

6. MAJ John F.W. Caldwell, Forced Entry: Does the Current Airborne Division Still Retain This Capability Under the Light Infantry Tables of Organization and Equipment?, (Ft. Leavenworth, KS: SAMS Student Monograph, 9 January 1987), pgs. 34-39. The Airborne Division L-series TOE possesses more anti-tank firepower than the Light Division L-series TOE.

7. Ibid. pgs. 43-63.

8. "Threats to U.S. Security" in Working Papers for FM 100-5 Operations (Final Draft, 4 Feb 92)", (Ft. Leavenworth, KS: U.S. Army Command and General

Staff College), p.8.

9. The U.S. involvement in Somalia is representative of the evolution of humanitarian missions into mid-intensity conflict resulting in numerous American casualties and over 10,000 Somali casualties in a four month period.

10. The concept of hybrid threats is developed in "Threats to U.S. Security", cited above. "High Tech" forces possess modern, lethal weaponry and are well trained in its use. Hybrid forces possess some modern systems, but are not uniformly equipped or trained. Examples of hybrid forces include Iraq, Serbia and Cuba. "Low Tech" forces are increasingly rare because of weapons proliferation. These are forces which possess neither modern systems, nor are well trained. Examples of low technology threats include Grenada in 1983 and Panama in 1989.

11. Francois Heisbourg, The Military Balance, (London: International Institute for Strategic Studies 1991-1992, Autumn 1991)

12. Murray Weidenbaum, Small Wars, Big Defense: Paying for the Military After the Cold War, (Oxford: Oxford University Press, 1992), 14-16.

13. "Threats to U.S. Security", 14.

14. Aircraft from which U.S. Army Rangers parachuted during both operations received intensive ground fire. In Grenada, the anti-aircraft weapons, Soviet ZU 23-2s, were poorly sited and could not depress their barrels sufficiently to engage the aircraft at 500 feet. In Panama, antiaircraft weapons were active at Rio Hato, hit the aircraft from which the Rangers jumped, but failed to shoot down any planes.

15. Craig B. Whelden, "Light Cavalry: Strategic Force for the Future", Military Review, April 1993, 13.

16. Sea deployment using fast shipping still required approximately 23 days from a cold start to arrival in Saudi Arabia of the 24th Infantry Division (M) during DESERT SHIELD. The shallow harbor depths in Mogadishu, Somalia and Mombassa, Kenya during were inadequate for Afloat Prepositioning ships. Fast Sealift ships require two weeks to transit from ports on the east coast if the United States to the Persian Gulf.

17. Two US Navy vessels suffered severe mine damage during DESERT STORM. The Navy has only seven Avenger-class minesweepers in naval inventory, although 14 more are under production. The Navy's other 21 Aggressive-class minesweepers are being retired in FY.94.

18. Honorable John W. Shannon and General Gordon R. Sullivan, "Strategic Force-Decisive Victory: A Statement on the Posture of the United States Army", (Washington D.C.: March 1993), 76.

19. "National Security Strategy of the United States of (Draft)" (Washington D.C.: September 9, 1993), 2.

20. Ibid., 41.

21. Transcript and Briefing Slides of the Bottom Up Review Briefing: 1 September 1993 in the Pentagon, Washington, D.C.

22. Joint Pub 1, Joint Warfare of the Armed Forces, (Washington D.C.: 1991), 56.

23. Ibid., 2.

24. Joint Pub 5-00.1, Doctrine for Joint Campaign Planning (Initial Draft), (Washington, D.C.: June 1992), I-5.

25. Shannon and Sullivan, 20.

26. FM 100-5, Operations, (Washington, D.C.: June 1993), 3-1.

27. Ibid., 2-9.

28. The 82nd Airborne Division deployed four times from 1983 to 1990 in defense of vital national interests: URGENT FURY in Grenada 1983, GOLDEN PHEASANT to Honduras in 1985, JUST CAUSE to Panama in 1989, and DESERT SHIELD to Saudi Arabia in 1990. In each case the 82nd was the first division deployed.

29. AFM 1-1, Volume II, Basic Aerospace Doctrine of the United States Air Force, (Washington, D.C.: U.S. Government Printing Office, 1992), Chapter 2. and Chairman of the Joint Chiefs of Staff Report on the Roles, Missions, and Functions of the Armed Forces of the United States, (Washington,D.C.: U.S.

Government Printing Office, 1992), II-6.

30. FM 100-5, 7-1.

31. The Army is focusing on the development of rapidly deployable, yet highly lethal systems for its early entry forces through the Training and Doctrine Command's Early Entry Battle Lab at Norfolk, Virginia. A recently completed study entitled Early Entry Analysis: Division Ready Brigade (DRB) examined emerging technologies and their performance against three generic threats. The study found the most lethal and survivable combinations of systems possible within selected resource constraints. Most of these systems are still under development and are presently not available to the force. The study did not address tactical mobility or sustainment of friendly forces.

32. Following World War Two, the 82nd Airborne Division became the nation's strategic reserve. During the Korean War, the 82nd remained in the United States as a reserve. In the 1960s, the Division deployed to the Dominican Republic on short notice as part of Operation POWER PACK. The 3rd Brigade of the 82nd deployed to the Republic of Vietnam on short notice in response to the 1968 TET Offensive. The 82nd Airborne Division was alerted in 1973 in response to Soviet actions at the time of the Arab-Israeli Yom Kippur War. As discussed earlier, the Division deployed four times from 1983 to 1990.

33. The term METT-T is an acronym for a mission analysis methodology used in the development of plans.

34. Commanders will usually modify the generic force packages based on the factors of METT-T and on available airlift.

35. The JAVELIN anti-tank missile system will be fielded in 1994. The Armored Gun System is scheduled to be fielded in 1997 to the 3rd Bn 73rd Armor Regiment, which supports the 82nd Airborne Division. The AH58D KIOWA WARRIOR has replaced the the AH64 APACHE in the 82nd Attack Battalion.

36. The DRB deploys in two echelons, airdrop and airland. The airdrop or Alpha echelon conducts a parachute assault onto the objective, usually an airfield, and secures the area to receive airland aircraft. The Bravo or airland echelon arrives by airland aircraft as soon as possible after the assault. Most of the DRB's vehicles and all of its helicopters are in the Bravo echelon. See Appendix B.

37. FM 100-5, 2-9.

38. Huba Wass de Czege's "Understanding Combat Power" in School of Advanced Military Studies AMSP Course 2, Tactical Dynamics, Book 1, (Ft. Leavenworth, KS: 10 Feb 1984), 5-16.

39. Ibid., 13.

40. Ibid., 12.

41. Ibid., 13.

42. FM 100-5, 2-10.

43. National Security Strategy of the United States (Draft), 2, 5, 24.

44. A Division and Corps Tactical Operations Exercise conducted at the School of Advanced Military Studies from 18 to 29 October 1993 is used as the basis for subjective assessments concerning the 82nd Airborne Division in the Balkans. During the exercise, Serbian forces attacked the 82nd Airborne Division' which was in a defense in northern Macedonia.

45. 82nd Airborne Division RSOP, 16-1.

46. Author's experience as an S3 Air for 18 months at battalion and brigade level in the 82nd Airborne Division in 1984 and 1985.

47. The 18th Airborne Corps maintains various resupply packages of ammunition and other classes of supply pre-configured for airdrop into an airhead.

48. Commanders in the 82nd have focused on avoiding soldier overloading for many years. Following Operation URGENT FURY in 1983 and again after the Division transitioned from the H-series to the L-series TOE, commanders have reemphasized risk assessment in determining the individual soldier's load. On 12 May 1986, General John W. Foss, Commanding General,established a 70 pound weight standard for the troopers of the Division in a policy memorandum entitled "Maximum Combat Load".

49. Ranges for all of the DRB's weapons systems are below.

System	Range
-M16A2	350m

-M203		350m area
		200m point
-M249 SAW		800m area
		600m point
-AT4 84mm AT Rocket		300m max effective
-Javelin AT systems		2000m
-TOW-IIB (ITAS)		3750+m
-60mm Mortars		3500m
-81mm Mortars		5750m
-M119 105mm Howitzers:	RAP	14,500m
	Other	11,400m
-M8 Armored Gun System		2500m
-AH58D Kiowa Warrior:	Hellfire	7000+m
	2.75in Rkts	5500m
	.50 cal MG	1000m
	Stinger	4000m

50. FM 90-26, Airborne Operations, (Ft. Benning, GA.: December, 1990), pg. 3-9 outlines establishment of airhead line out to 10 kilometers from the airfield, pg. 3-7 discusses the need to establish a reconnaissance and surveilance line (RSL) another four to six kilometers beyond the airhead line.

51. Rocket Assisted Projectiles have a range of 14,500 meters; however, the vast majority of the munitions taken into the airhead will have the standard range of 10,400 meters.

52. FM 100-5, 2-3.

53. See Appendix A: The Heavy DRB for a breakdown of the companies within the DRB.

54. Discussions with LTC Michael J. Kazmierski, who was a company commander, battalion and brigade operations officer in the 82nd Airborne Division. LTC Kazmierski authored United States Army Power Projection in the 21st Century: The Conventional Airborne Forces Must Be Modernized To Meet The

Army's Strategic Force Requirements And The Nation's Future Threats. In 1990, this exceptional study established the requirement for modernization of American airborne forces commensurate with their increasingly critical role in the protection of national interests around the globe.

55. Units are alerted and progress through an 18 hour sequence for deployment during which noone sleeps. After boarding the aircraft, some soldiers may have the opportunity to rest, but most are involved with continuing mission preparation.

56. Observation based on previously mentioned division tactical operations exercise using a Balkans scenario.

57. Based on the critical need for intertheater airlift early in a contingency, these trucks will probably arrive later in the airflow. When used for moving troops, the trucks are not available for their primary purpose of delivering all classes of supply to the entire battalion.

58. S.L.A. Marshall, The Soldier's Load and the Mobility of a Nation, (Quantico, VA.: The Marine Corps Association, 1950), 41. Marshall's seminal work is based on numerous WW II and Korean interviews and establishes the downward spiral of fatigue and fear. An overloaded soldier is a fatigued soldier, and a fatigued soldier is more susceptible to the effects of fear. Fear, in turn, saps more strength and increases fatigue until the soldier becomes temporarily incapable of action.

59. Kazmierski, 105.

60. James R. Lunsford, Keeping the Airborne Division a Viable Force, (Ft. Leavenworth, KS: MMAS Thesis, October, 1993) MAJ Lunsford details the studies on airborne force survivability and lethality conducted by the Airborne Airlift Action Office of the U.S. Army's Combined Arms Command. These studies predicted a 6% attrition rate when airborne forces jumped onto airfields only defended by shoulder-fired Surface to Air Missiles (SAM). If even one anti-aircraft gun survived the pre-assault fires, the attrition rate for airdrop aircraft increased to 50%.

61. Conversation with MAJ Mark Yenter, Operations Officer for the 307th Engineer Battalion (Airborne) of the 82nd Airborne Division. Currently no SEEs are listed in any of the generic DRB force packages, even though there are 27 SEEs in the Division. The engineer battalion routinely provides up to nine SEEs to each infantry brigade with their supporting engineer company.

62. Early Entry Analysis: Division Ready Brigade (DRB), iii.

63. G.B. Crouse, "Libya's Desert Defeat", Soldier of Fortune, February 1989,

52.

64. 82nd Airborne Division RSOP, 16-H-24.

65. Interview with MAJ Dan Leonhard, USAF Section, U.S. Army Command and General Staff College. Information on C141 status as of November 1993.

66. David J. Lynch, "The C-17 is Up", Air Force Magazine, December 1991, 46.

67. Air Force Pamphlet 76-2, Airlift Planning Factors, 29 May 1987.

68. Early Entry Analysis: DRB, 57. Airlift data differs between the TRADOC study and the 82nd Airborne Division RSOP. The TRADOC data is used here.

69. Annual Expert Infantryman's Badge training requires individual infantrymen to demonstrate proficiency on most infantry weapons systems regardless of their present duty position. Thus, a pool of infantrymen skilled on the MK-19 Automatic Grenade Launcher and the M2 .50 cal Machine Gun will exist within each unit. Semiannual gunnery and individual skills training can reinforce these skills for assigned gunners.

70. Association of the United States Army, Army Budget Fiscal Year 1994: An Analysis, (Arlington, VA.: June 1993), 47.

71. Lynch, 46.

72. US Transportation Command Information Briefing to School of Advanced Military Studies on 29 November, 1993.

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