

**BASE VISIT REPORT  
AIR DEFENSE SCHOOL (NET FIRES)  
15 JUNE 2005**

**COMMISSIONERS PRESENT**

None

**COMMISSION STAFF PRESENT**

Mike Avenick

**LIST OF ATTENDEES**

BG Francis Mahon – Deputy Commanding General, US Army Air Defense Center  
COL Roger Mathews – Chief of Staff, US Army Air Defense Center  
Mr John Penington – Deputy Assistant Commandant, US Army Air Defense Center  
LTC Webster D. Powell III – Strategic Planning Office / BRAC Action Officer  
LTC Michael Maloney – Deputy Director, TSM-Lower Tier  
LTC Thomas Snodgrass, Deputy Director, TSM-Upper Tier  
MAJ William J. Barnett – Executive Officer, 6<sup>th</sup> ADA Bde  
Ms Marie Doyle – Strategic Planning Office / BRAC Action Officer  
Mr Clark McChesney – Strategic Planning Office / BRAC Action Officer  
Mr John Hord – Directorate of Combat Developments  
Mr Andy Washko – Deputy Director, DOTD-LD  
Ms Alyce Powell – Warrior Division, DOTD-LD

**ABOUT FORT BLISS:** Fort Bliss' vision is to be a DoD flagship installation comprised of state-of-the-art training areas, ranges and facilities, led by adaptive, innovative and warrior-focused professionals, concentrated on individual and unit readiness, leader development, deployment, security and the well-being of Team Bliss. A values-based organization that ensures trained and ready forces can be projected worldwide from one of the nation's most modern power-projection bases. An installation whose leaders are committed to ensuring the best possible quality of life and services to a diverse population of Soldiers, civilians and family members. A base that is committed to close, mutually beneficial relationships with the City of El Paso and surrounding communities.

With 1.1 million acres, the post is bigger than the state of Rhode Island and can accommodate every weapon system in the Army. Fort Bliss currently conducts institutional training for the Army's Training and Doctrine Command (TRADOC) and supports the collective training and deployment of the 32d Army Air and Missile Defense Command consisting of one Air and Missile Defense Brigade and two Corps Level Air and Missile Defense Brigades that are stationed on the installation. The Fort Bliss and McGregor Range Complex as well as the adjacent White Sands Missile Range (WSMR) provide the ranges and maneuver areas to support both the TRADOC mission of conducting to standard the initial entry training (IET) for Soldiers and officers; basic and advanced level noncommissioned officer (NCO) and officer training courses as well as the critical development and testing of air and missile defense systems of the future in a joint and combined environment. The US Navy presence at WSMR with a dry land based Aegis radar system and the US Air Force presence at Holloman AFB coupled with existing netted joint architecture to Kirtland AFB, Nellis AFB and Fallon NAS (on call only) as a part of the Joint National Training Capability (JNTC), provides a unique joint training environment.

The co-location of the German Air Force Air Defense Center at Fort Bliss as well as Allied Liaison Officers from numerous other nations that own and operate US manufactured air and missile defense weapon systems creates a combined environment that is postured to meet the international acquisition requirements of the Medium Extended Air Defense System (MEADS) program currently in development. (MEADS is an international acquisition program between the U.S., Germany, and Italy.) The multi-national MEADS Memorandum of Agreement (MOA) requires that training of all participating nations be conducted at one location in the US. The Fort Bliss/ McGregor Range / WSMR range complexes are ideally suited to accomplish that mandate because of the unrestricted control of airspace and the nearly unconstrained use of the electromagnetic spectrum. Other Foreign Military Sales related training on the PATRIOT missile system has historically required training at US facilities. Additionally, the range area is sufficient in size to support use by heavy maneuver forces (Brigade Combat Teams) and the currently stationed air and missile defense units.

#### **AIR DEFENSE ARTILLERY MISSIONS:**

**BRANCH:** Army Air and Missile Defense (AMD) forces, fighting interdependently with other elements of the Joint, Interagency and Multinational team at strategic, operational, and tactical levels, will provide AMD and contribute to situational awareness / understanding, airspace management, and operational force protection to deter or defeat enemy aerial threats, protect the force and high value assets, enable freedom to operate, and contribute to victory.

**AIR DEFENSE ARTILLERY SCHOOL:** U.S. Army Air Defense Artillery School will train Army, Joint, and Coalition Air and Missile Defense personnel, and grow leaders with a Joint Expeditionary mindset nested in the warrior ethos capable of dominating, enabling, and exploiting the third dimension battlespace and integrating operational force protection in support of the Joint, Interagency, and Multinational force.

#### **DOD BRAC RECOMMENDATION AFFECTING FORT BLISS, TX**

<b>RECOMMENDATION NAME</b>	<b>DESCRIPTION</b>
Net Fires Center	<ul style="list-style-type: none"> <li>• Realign Fort Bliss, TX, by relocating the Air Defense Artillery Center &amp; School from Ft. Bliss to Ft. Sill.</li> <li>• Consolidate the Air Defense Artillery Center and School with the Field Artillery Center and School to establish a Net Fires Center</li> </ul>

#### **DOD BRAC JUSTIFICATIONS FOR RECOMMENDATIONS**

**NET FIRES CENTER:** The recommendation consolidates Net Fires training and doctrine development at a single location. The moves advance the Maneuver Support Center (MANSCEN) model, currently in place at Ft. Leonard Wood, which consolidated the Military Police, Engineer, and Chemical Centers and Schools. This recommendation improves the MANSCEN concept by consolidating functionally related Branch Centers & Schools, which fosters consistency, standardization, and training proficiency. It also facilitates task force stabilization, by combining operational forces with institutional training. In addition, it consolidates both ADA and Field Artillery skill level I courses at one location, which allows the

Army to reduce the total number of Military Occupational Skills training locations (reducing the TRADOC footprint). Additionally, it enhances military value, supports the Army's force structure plan, and maintains sufficient surge capability to address future unforeseen requirements. It improves training capabilities while eliminating excess capacity at institutional training installations. This provides the same or better level of service at a reduced cost. This recommendation supports Army Transformation by collocating institutional training, Modification Table of organization and Equipment (MTOE) units, Research, Development, Test and Evaluation (RDT&E) organizations and other TDA units in large numbers on single installations to support force stabilization and engage training.

#### **COST CONSIDERATIONS DEVELOPED BY DoD**

<b>NET FIRES CENTER</b>	
One-time Costs	\$247.0M
Net Costs Savings during Implementation	\$93.0M
Annual Recurring Savings	\$42.6M
Return on Investment Year	6
Net Present Value over 20 Years	\$319.1M

#### **MANPOWER IMPLICATIONS:**

**IMPACT:** Based on the Net Fires Center BRAC recommendation the Field Artillery School and Center and the Air Defense School and Center are impacted as shown below.

	Officers	Enlisted	Civilian
Field Artillery School	-39	-209	56
Air Defense School	-36	-223	-112
<b>TOTAL</b>	<b>-75</b>	<b>-432</b>	<b>-56</b>

#### **ENVIRONMENTAL CONSIDERATIONS:**

Development of a Programmatic Agreement will be necessary at Fort Sill to formalize mitigation measures and restrictions and evaluations to determine significance of cultural and historical resources. Tribal/government-to-government consultations may be required. A Noise Analysis and continuous monitoring efforts will likely be required at Fort Sill.

Additional operations at Fort Sill may impact the Black-capped Vireo, possibly leading to restrictions on operations. Significant mitigation measures to limit releases may be required at Fort Sill to reduce impacts to water quality and achieve US EPA Water Quality Standards. This recommendation has no impact on dredging; land use constraints or sensitive resource areas; marine mammals, resources, or sanctuaries; waste management; or wetlands. This recommendation will require spending approximately \$0.4M for environmental compliance costs. These costs were included in the payback calculation. This recommendation does not otherwise impact the costs of environmental restoration, waste management, and environmental compliance activities. The aggregate environmental impact of all recommended BRAC actions affecting the bases in this recommendation has been reviewed. There are no known environmental impediments to implementation of this recommendation.

Of the 1.1 million acres available for training on Fort Bliss, less than 1% are environmentally constrained.

#### **MILITARY ISSUES: NA**

#### **COMMUNITY CONCERNS RAISED:**

The community welcomes the overall BRAC recommendations relating to Fort Bliss, however it expresses concerns about the move of the Air Defense Artillery School to Fort Sill. With Military Value being the primary factor in validating the BRAC recommendations, the community believes that higher military value is garnered by having the Air Defense Artillery School remain at Fort Bliss.

#### **AIR DEFENSE SCHOOL DISCUSSION TOPICS**

**1. NET FIRES CENTER.** The Air Defense Artillery School indicated it is preparing for implementation of the Net Fires Center BRAC recommendation. The ADA School has completed a concept to create the future Net Fires Center and established a phased realignment plan that will implement the recommendation. This plan will combine at Fort Sill the Fort Bliss Air Defense Artillery Center and School with the Fort Sill Field Artillery Center and School. See Tab A.

**2. COST SAVINGS.** COBRA data from the calculations dated 4/21/2005 and provided to the BRAC Commission include data inputs that suggest a savings or reduction between the two schools of 507 military positions and 56 civilian positions (see Manpower Implications Impact Table above). The Air Defense School is concerned with the accuracy of this data. When MANSCEN was created in 1995, the installation overhead was a part of the TRADOC School Table of Distribution and Allowances (TDA). The combination of MP, Chemical and Engineers at Fort Leonard Wood resulted in a reduction in spaces related to that overhead as Fort McClellan was closed. Such overhead is no longer a part of either the FA School or ADA School TDAs. The Air Defense School believes that the "regression tool" used to develop this critical input data results in overstated personnel reductions which in turn significantly overstates the personnel savings that will result from consolidating Net Fires training and doctrine development at a single location under the Maneuver Support Center (MANSCEN) model. Implementing the savings implied in COBRA will result in a Net Fires Center organization that is broken and dysfunctional from the outset.

#### **3. CONSIDERATION OF THE GERMAN AIR FORCE AIR DEFENSE CENTER (GAFADCEN).**

The co-location of GAFADCen at Fort Bliss since the 1980s has facilitated coalition development and integration of past, present and future air defense weapons systems. The impact on the current Medium Extended Air Defense System (MEADS) Memorandum of Agreement is unknown. The MEADS Memorandum of Agreement (MOA) requires that training of all participating nations be conducted at one location in the US. (MEADS is an international acquisition program between the U.S., Germany, and Italy.) The Fort Bliss/ McGregor / WSMR range complexes are ideally suited to accomplish that mandate because of the unrestricted control of airspace and the nearly unconstrained use of the electromagnetic spectrum. The GAFADCen currently depends upon the US Air Defense School for advanced maintenance training support on the PATRIOT Air Defense System in addition to conducting their internal training programs. The full impact of the BRAC recommendation on the GAFADCen / ADA School Training MOA and the MEADS MOA is not entirely clear.

**4. FUTURE WEAPONS SYSTEM REQUIREMENTS.** The Air and Missile Defense Campaign Plan is designed to address the capability gaps identified through joint analysis conducted since the start of OIF. The paragraphs below describe AMD systems currently under development and funded in the current Army POM. These systems will either enter test or be fielded in the current POM cycle.

- a. **Cruise Missile Defense.** This evolution of Air and Missile defense includes a Vice Chief of Staff of the Army mandate to field a cruise missile defense NLT FY 10. This effort includes the fielding of Surface-Launched Advanced Medium-Range Air-to-Air Missile (SLAMRAAM) in FY 07 and the Joint Land Attack Cruise Missile Defense Netted Sensor (JLENS) not later than FY 09. The SLAMRAAM is a surface to air missile, with a range in excess of 20 kilometers. JLENS is a pair of airborne sensors, mounted below two tethered aerostats (airships), that are approximately a football field in length, and operate at altitudes of in excess of 12000 feet. Operator training for JLENS will include launching, flying, and recovering the aerostats; as well as employing the on-board radars.
- b. **Tactical / Theater Ballistic Missile Defense.** Air and missile defense is also evolving the current PATRIOT tactical missile defense system into MEADS. (MEADS is an international acquisition program between the U.S., Germany, and Italy. The MEADS MOA requires that training of all participating nations be conducted at one location in the US.) Finally, the Missile Defense Agency (MDA) sponsored Terminal High Altitude Air Defense (THAAD) is expected to transition to the Army's AMD force in FY09. Because of the frequency management concerns and power output the THAAD radar can only be operated north of the Dona Ana Range complex on Fort Bliss.

The timing of BRAC moves related to the formation of the Net Fires Center at Fort Sill also overlaps the extensive testing, training and fielding of these weapons systems. Synchronization of these requirements with BRAC realignments is a necessary component of the BRAC implementation plan that does not appear to have been a factor considered in the BRAC process.

The Fort Bliss / McGregor Range and White Sands Missile Range's unrestricted airspace and limited frequency management concerns fully support the testing, training and operating all of these POM approved weapons systems. By comparison, the ranges available at Ft Sill, OK cannot currently accommodate the STINGER Missile, the least capable and shortest ranged air defense weapon in the Army air defense inventory. The current Program of Instruction for Army MOS 14S (STINGER/AVENGER Crewman) and USMC Low Altitude Air Defense Operator requires a STINGER Missile firing as a capstone event prior to class graduation.

These current and future training requirements will force the Air Defense School to a split operations training configuration with a permanent presence at Fort Bliss or WSMR to conduct the hands on training required in the POIs and support ongoing testing of emerging systems.

# Air Defense Artillery School

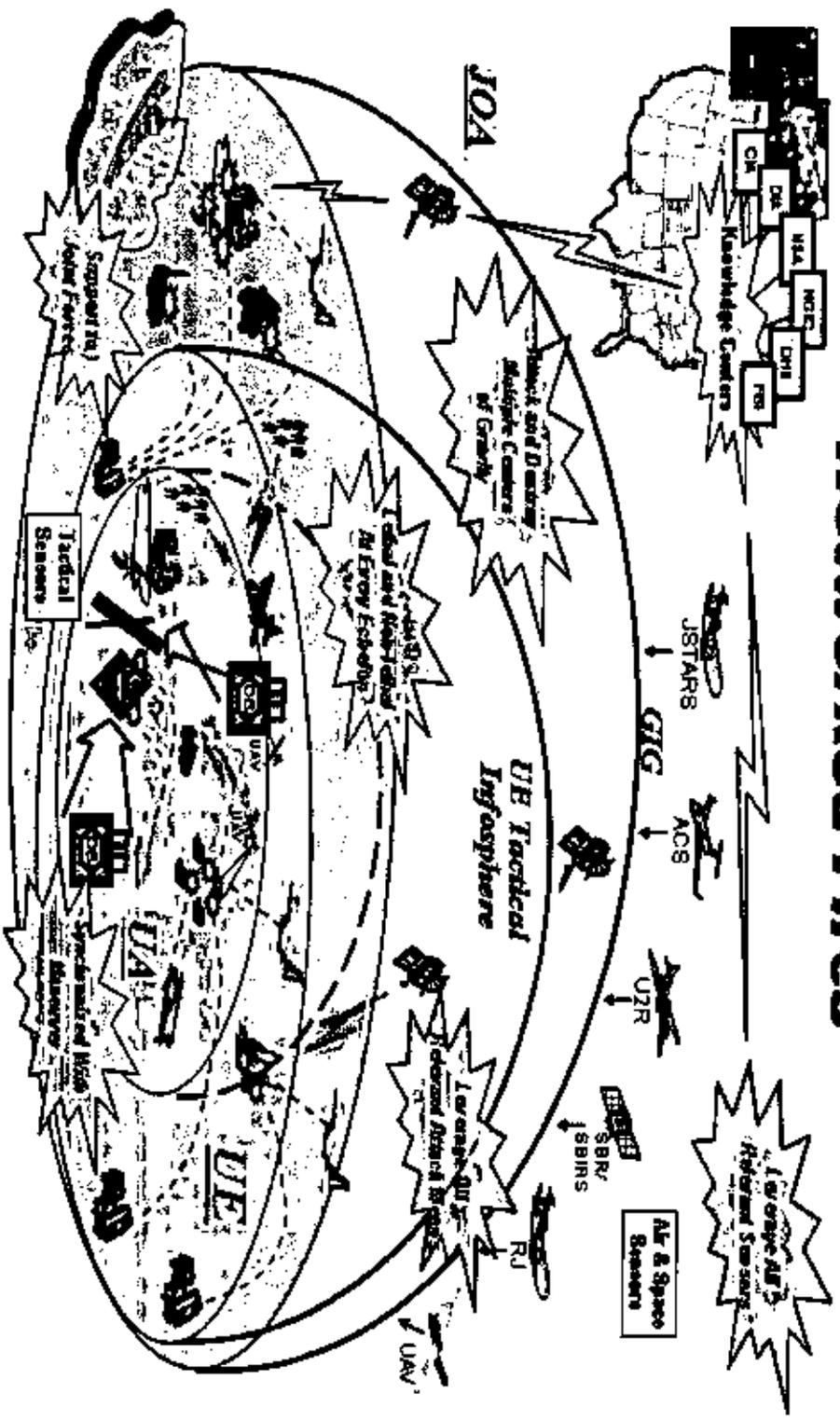
## Net Fires Concept

## BRAC 05 Stated Requirement

- **Recommendation: consolidate the ADA Center and School with the FA Center and School to establish a Net Fires Center**
- **Justification:**
  - **Consolidates Net Fires training and doctrine development at a single location**
  - **Advances the MANSCEM model**
  - **Improves the MANSCEM concept by consolidating functionally related Branch Centers and Schools, which fosters consistency, standardization and training proficiency**
  - **Facilitates task force stabilization by combining operational forces with institutional training**
  - **Consolidates both ADA and FA skill level I courses at one location allowing the Army to reduce the total number of MOS training locations (reducing the TRADOC footprint)**
  - **Enhances military value, supports the Army's force structure plan, and maintains sufficient surge capability to address future unforeseen requirements**
  - **Improves training capabilities while eliminating excess capacity at institutional training installations**
  - **Provides the same or better level of service at a reduced cost**
  - **Supports Army Transformation by collocating institutional training, MTOE units, RDTE organizations and other TDA units in large numbers on single installations to support force stabilization and engage training**

# Net Fires on the Battlefield (FCS O&O)

## Networked Fires



Ground to Ground or Air to Ground Engagements based on a network of surface and air sensors and assignment of targets via the Battle Command System.

# ADA on the Battlefield

*"Foremost among these is the need for DoD to provide the overarching concepts and architectures for AMD and to establish a coherent system of systems approach for conceiving, developing, and deploying air and missile defenses." WELCH PANEL RESULTS*

SIAP/SIGP/Future Force Joint Networks

## Current Capability

- System Centric Operations
- Terrain Restricted Surveillance / Engagements (Penetrators)
- Limited Interoperability
- Weapon System Unique Interfaces

## Future Capability

- See First
- Understand First
- Act First
- Finish Decisively
- Network Centric Operations
- Mobile, Modular, Mission Tailored AMD Task Forces
- Integrated Fire Control for CMD
- Joint Systems Interoperability

DCN 2977



Inherently Joint and Coalition through a networking of sensors, command and control and integrated surface to air engagements. Providing protection to the force from the strategic to tactical levels

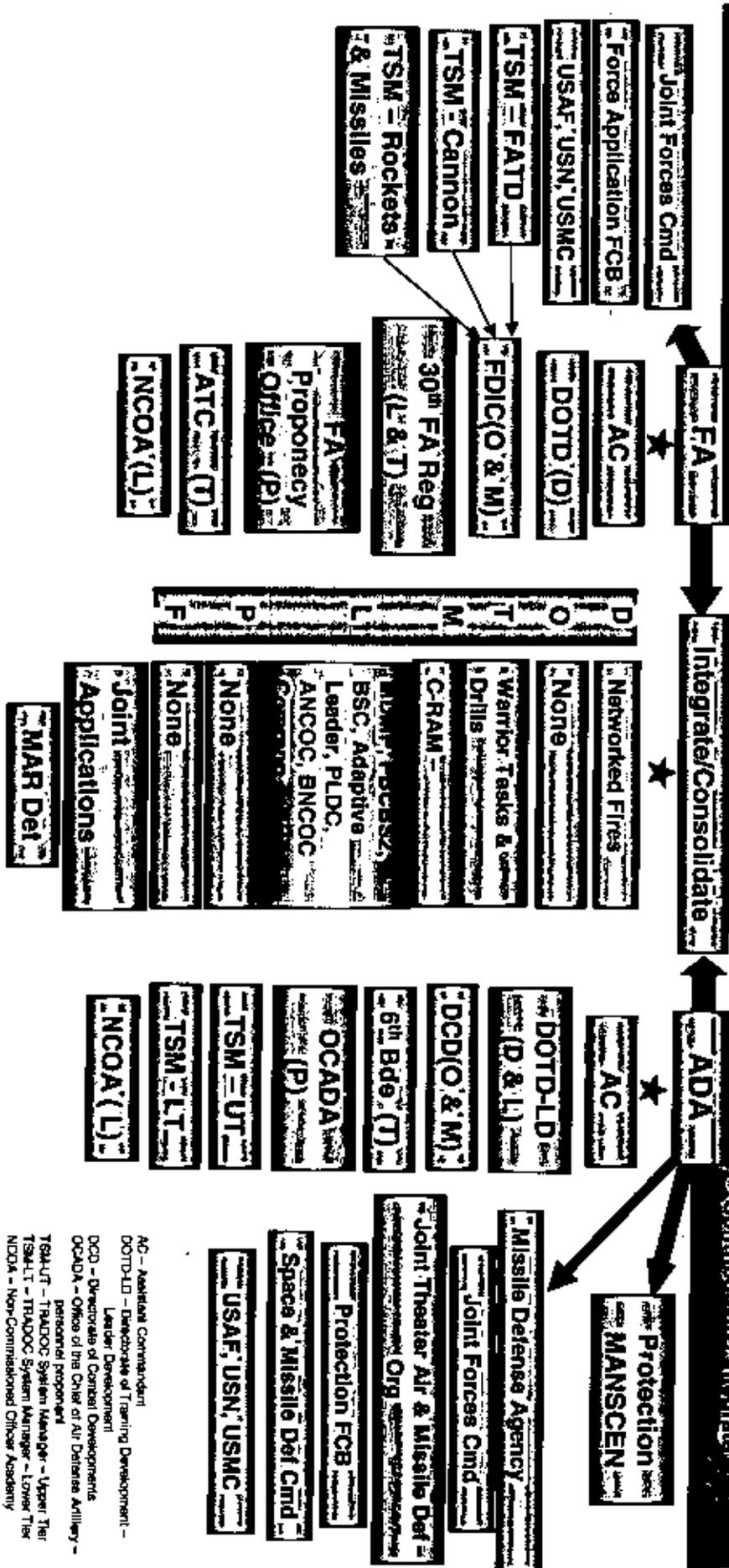


# Net Fires Center Concept – ADA School

Consolidate Functions for Synergy and  
Maintain two Separate Branches

**Net Fires Center**  
 • enemy forces  
 • Counter Strike – preemptive destruction of enemy's total strike capabilities  
 • Shaping – set conditions for

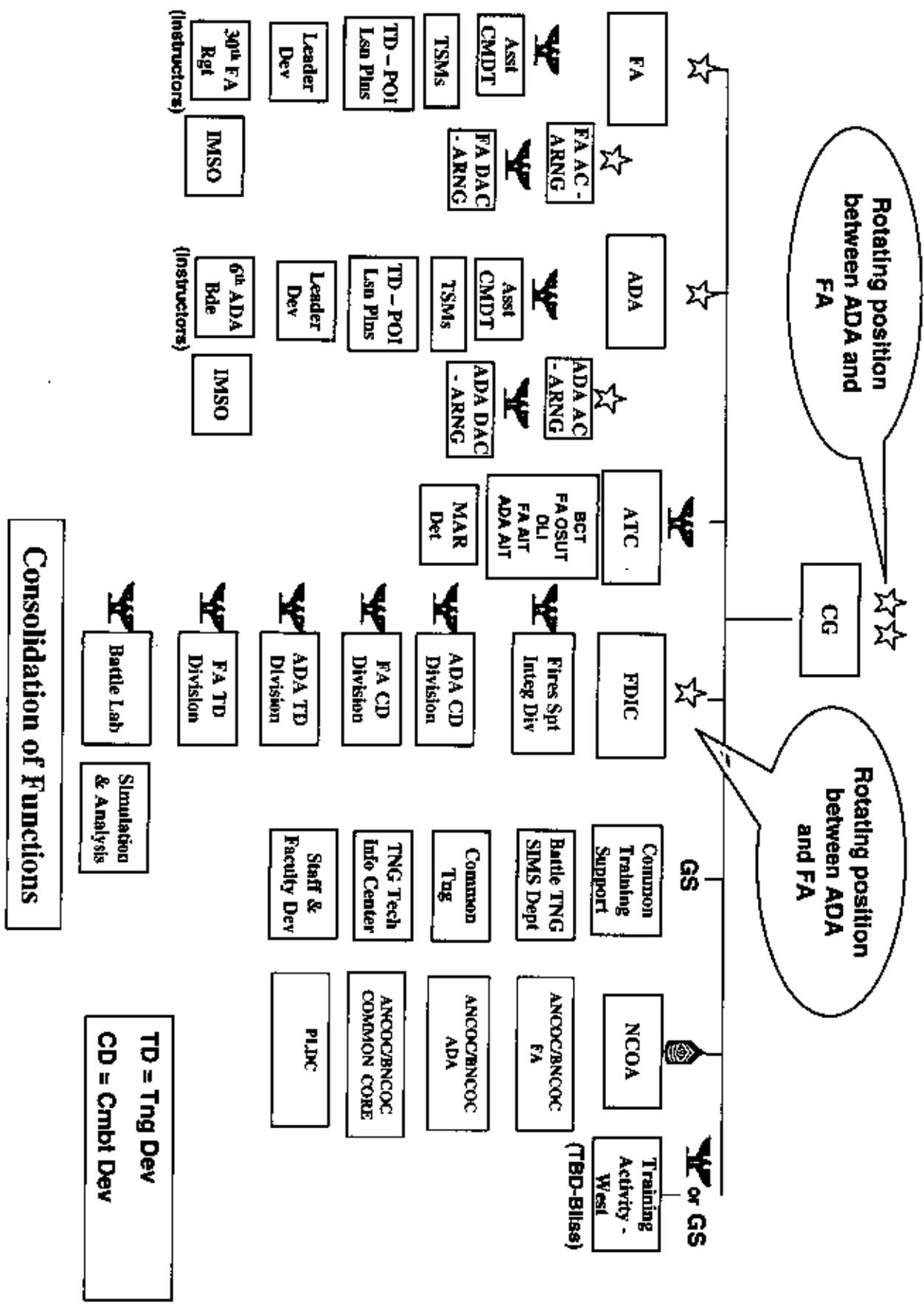
**Net Fires Center**  
 • (Active Defense/Passive Defense) and Attack operations  
 • Contribute to 3rd Dimensional Awareness/Understanding  
 • Contribute to Airspace Management  
 • Contribute to Integrate



AC - Assistant Commander  
 DOTD-LD - Directorate of Training Development -  
 Leader Development  
 DCD - Directorate of Central Developments  
 OCADA - Office of the Chief of Air Defense Artillery -  
 personnel support  
 TSM-UT - TRADOC System Manager - Upper Tier  
 TSM-ELT - TRADOC System Manager - Lower Tier  
 NIDA - Non-Commissioned Officer Academy

Distinct aspects of the two branches and diverging doctrinal paths (Fires and Protection) presents unique challenges with integration/consolidation of functions

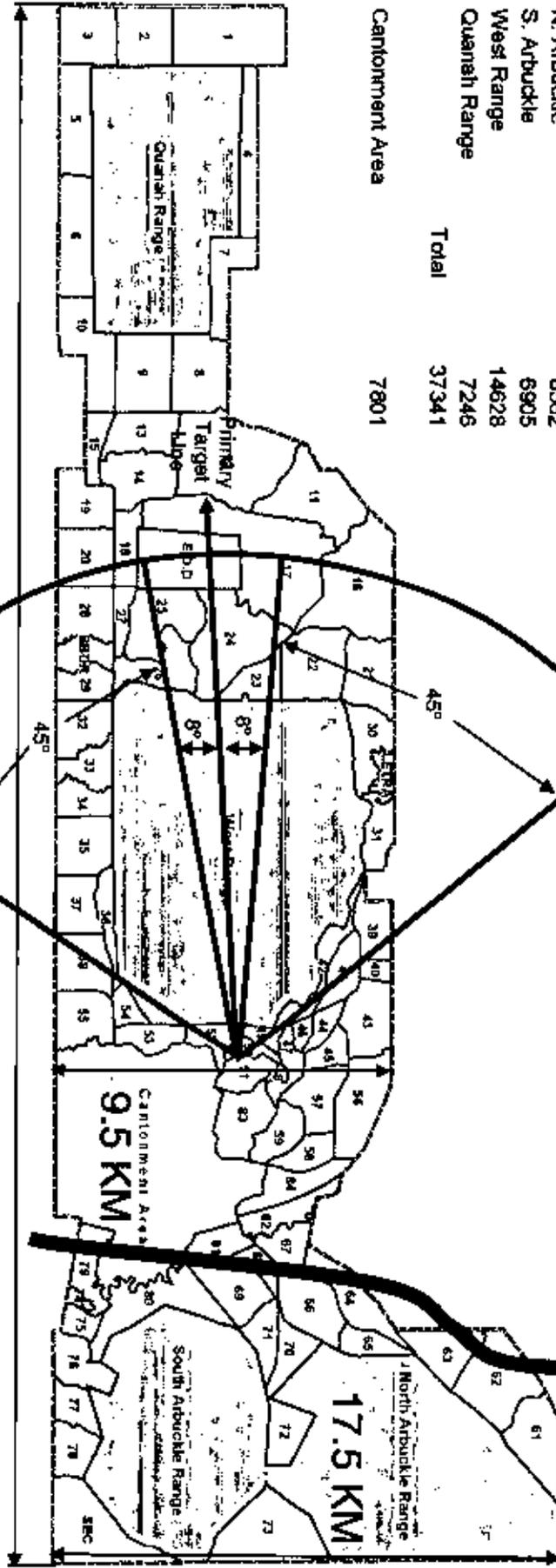
# Net Fires Center Concept - ADA School (FDIC)



# AMD Range Requirements for STINGER

**STINGER Safety Fan with 16° degree sector of Fire – Fan is 45° on either side of the sector of fire. – Distance is ballistic range of missile 11.9 – 14KM (14KM illustrated)**

Installation Boundary	Acres	93589
<b>Training Area Totals</b>		
East Range	11638	
West Range	29210	
Quannah Range	7601	
<b>Total</b>	<b>48449</b>	
<b>Impact Areas</b>		
N. Arbuckle	8662	
S. Arbuckle	6905	
West Range	14628	
Quannah Range	7246	
<b>Total</b>	<b>37341</b>	
Cantonment Area	7801	



43.5 KM

**Legend:**

- Installation Boundary (dashed line)
- Training Areas (white box)
- Impact Area (black box)
- Cantonment Area (hatched box)

**Scale and Orientation:**

- Scale: 0 to 4 KM and 0 to 4 MI
- Compass rose showing North (N), South (S), East (E), and West (W)

# AMD Range Requirements for JLENS

Installation Boundary  
Acres  
93589

**Training Area Totals**

East Range 11638  
West Range 29210  
Quanah Range 7601  
Total 48449

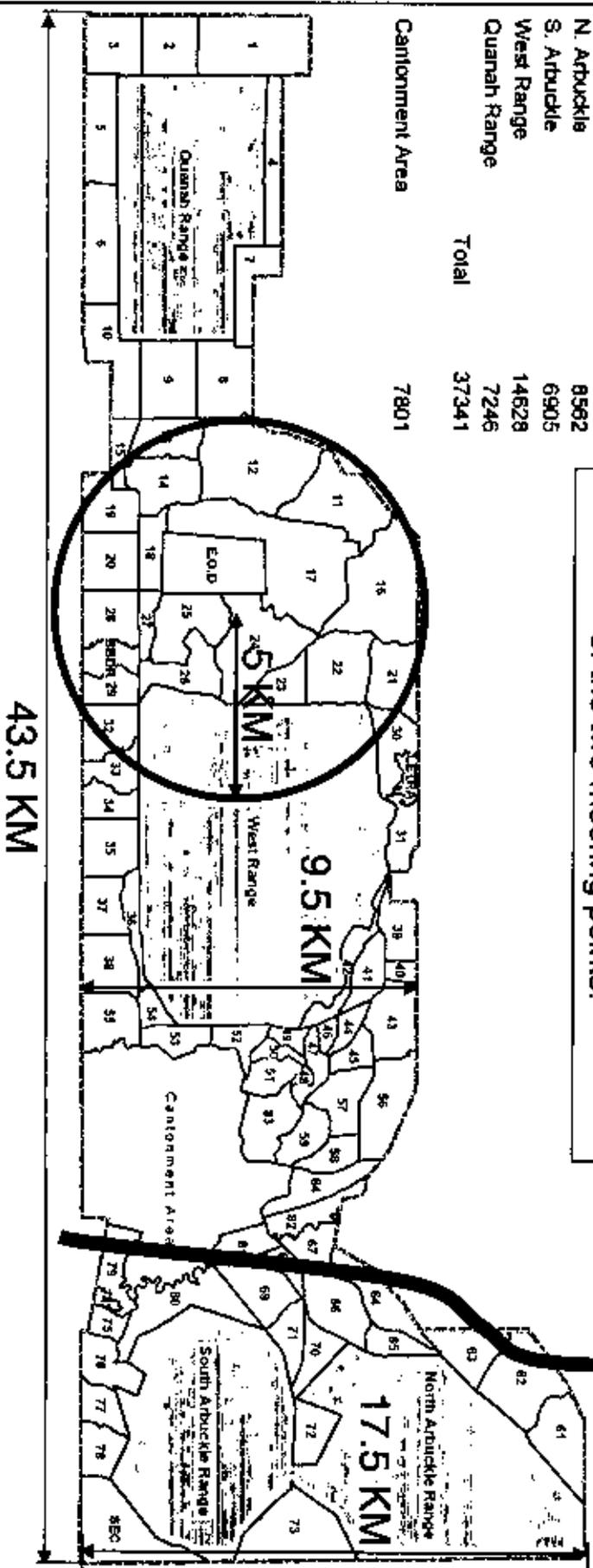
**Impact Areas**

N. Arbuckle 8562  
S. Arbuckle 6905  
West Range 14628  
Quanah Range 7246  
Total 37341

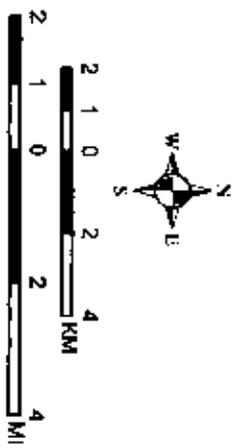
Cantonment Area 7801

JLENS Safety Fan - 10KM Circle from center  
of the two mooring points.

Interstate 44



43.5 KM



## **Training Requirements That Are Unlikely to be Met at Ft Sill**

- Current and future training requirements for Air and Missile Defense cannot be met at Ft Sill:
  - Range size prevents SLAMRAAM firing and JLENS operations
  - Potential frequency management issues
- Net Fires Center may require a yet to be determined training base presence at Bliss/WSMR
  - Retain conduct of training requiring range, airspace and frequency that exceeds Ft Sill capability at Ft Bliss/WSMR
  - Move to FT Sill
    - School Commandant, TSMs, and Proponecy Office
    - Combat, Doctrine, and Training Development
    - Training (except for requirements demanding large airspace / unconstrained use of the frequency spectrum)
  - Establish a small coordination cell at Bliss to act as interface between Sill and Bliss for Net Fires

# BACKUPS

# Historical Perspective

## Splitting the Branches

**Rationale for splitting the branches**  
**(The Artillery Branch Study, Apr 67):**

- "Two distinct military professions exist – with separate doctrine and techniques."
- "Weapons used now and in the future will...continue the trend of diversion."
- "Schools undistracted by cross training requirements, can best meet the growing challenge of preparing officers for future assignments."
- "Cross training and cross assignment of officers should be discontinued."

**Support maintaining separate branches**  
**Today:**

- Two distinct mission areas – with separate doctrine and techniques.
- Highly technical / complex weapons with divergent orientations: Two Distinct Operational Chains of Command
- Technical & tactical demands of AMD systems and operations mandate separate training & Functional Specialties

**"Integration, after a score of years, has not been, nor is capable of being successful."  
(Quote from 67 Study)**

# BRAC Criteria

Military Value
<p><b>1. Current and future mission capabilities and impact on operational readiness of the total force of the DoD, including the impact on joint warfighting, training, and readiness</b></p>
<p><b>2. Availability and condition of land, facilities, and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations</b></p>
<p><b>3. Ability to accommodate contingency, mobilization, surge, and future total force requirements at both existing and potential receiving locations to support operations and training</b></p>
<p><b>4. Cost of operations and the manpower implications</b></p>
<p style="text-align: center;"><b>Other Considerations</b></p>
<p><b>5. Extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs</b></p>
<p><b>6. Economic impact on existing communities in the vicinity of military installations</b></p>
<p><b>7. Ability of the infrastructure of both the existing and potential receiving communities to support forces, missions, and personnel</b></p>
<p><b>8. Environmental impact, including the impact of costs related to potential environmental restoration, waste management, and environmental compliance activities</b></p>