

US Military Ground Vehicle and Armor Procurement Forecast 2020

“A Balance Between New Platforms and Upgrades
In a Constrained Funding Environment”



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By Vector Strategy, Inc.

26 Pinecrest Plaza, #134
Southern Pines, NC 28387
Phone: 910-420-2208
Fax: 910-401-1597

www.vector-strategy.com
www.twitter.com/vectorstrategy

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1 Forecast Abstract and Objectives

US Military Ground Vehicle and Armor Procurement Forecast is an analysis and forecast of the US military ground vehicle and armor market. Historical and forecasted vehicle and armor procurement rates from fiscal year 2005 to fiscal year 2020 are presented. Combat wheeled and tracked vehicles, including the Stryker, Abrams, Bradley, and Ground Combat Vehicle, as well as all tactical wheeled vehicles, such as the HMMWV, JLTV, FMTV, MTRV, and MRAP/MATV, are addressed in this report. The forecast includes US Army, US Marine Corps, US Air Force, and US Navy ground vehicle and armor requirements to support the deployment of US troops.

US Military Ground Vehicle and Armor Procurement Forecast is essential for business executives responsible for designing, manufacturing, or marketing military ground vehicles or armor for those vehicles. It is also vital for suppliers of vehicle sub-systems and components utilized in the production of armor such as composites, ballistic fabrics, ceramics, metal armor plate, and ballistic transparent glass.

2 About Vector Strategy, Inc.

2.1 Company Background and Other Publications

Vector Strategy, Inc. is based in Southern Pines, North Carolina and provides market intelligence for the military armor industry. We help companies stay informed of technology trends, government procurement, market size and growth, industry players, supply chain issues, and offer other intelligence that business executives need to make decisions and build effective strategic plans.

We publish a set of armor related reports and forecasts throughout the year. In addition, we offer a range of research services that allow us to meet a client's custom needs. Vector Strategy is a member of the National Defense Industrial Association and the Association of the US Army.

Other forecasts and reports published by Vector Strategy, Inc.:

Material Requirements and Supply Chain Analysis of Military Ground Vehicle Armor: This report forecasts the amount (in pounds and dollars) of various materials used in the production of military ground vehicle armor. Materials addressed in the report include steel, aluminum, titanium, transparent armor, ceramic, and composite materials such as resin, high performance glass, aramid, and UHMWPE fibers.

This report also provides company profiles of vehicle armor manufacturers, as well as other industry players such as composite manufacturers, producers of ballistic fibers, fabric manufacturers, and suppliers of ceramic, steel, and other significant materials used in the production of military vehicle armor. Annual sales, products and programs supplied, recent contract awards, and strategic evaluations of all major armor manufacturers and suppliers are provided.

US Military Body Armor Industry: Analysis and Forecast: This groundbreaking report provides a thorough analysis of the US military body armor industry. Forecasted procurement rates of body armor system components for 2000 to 2015 are provided as well as historic, current, and future inventory levels. Material requirements associated with body armor procurement are forecasted, including ballistic fiber and ceramic tile requirements. Technology, political, and military / defense trends affecting the military body armor market are discussed.

The forecast provides full descriptions of major military body armor programs, including history of the armor program, planned and anticipated upgrades, publicly available armor design elements, and a discussion of the industry's supply chain. Company profiles of hard and soft body armor manufacturers and raw material suppliers are included in the report.

2.2 Copyright and Distribution

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Vector Strategy limits our own public release of our report data at industry conferences to high level numbers and overall market trends to protect the investment our clients make in our reports.

2.3 Disclaimer

The data contained in this forecast has been obtained from sources considered to be reliable, and all analysis and comment is provided in good faith. However, no warranty is given or implied as to the accuracy or completeness of this report, and Vector Strategy, Inc. accepts no liability whatsoever for the validity and use of this data, or any consequential loss.

3 Methodology

3.1 Analysis Technique

Vector Strategy believes that the most effective way to develop a forecast of military ground vehicles and related armor is to base that forecast on government procurement rates, rather than on production rates.

Vehicle procurement plans are readily available. The DoD provides a projection of future procurement rates, either in their budget documents or disseminated from their program offices responsible for individual vehicle and armor programs.

Production rates by industry suppliers of vehicles and armor are more difficult to discern and even harder to confirm.

To develop our forecast of military ground vehicles and armor procurement, Vector Strategy analyzes DoD, US Army, US Navy, USMC, and US Air Force base budget and supplemental budget requests; in addition we track congressional actions on defense budgets throughout the year. We also gather military program office communication regarding specific vehicle and armor programs during conferences, in press releases and industry publications, and review congressional testimony regarding vehicle and armor programs. We also monitor contract awards, review contract documents, and adjust our procurement forecast based on contract quantities and costs actually awarded. Finally, we review vehicle and armor build rates of manufacturers to determine current production volumes to validate our estimate of market size and procurement rates.

However, there are some caveats when using DoD procurement rates to drive a forecast of the military ground vehicle and armor market:

- Vehicle or armor procurement approved in any given fiscal year will not necessarily be produced, manufactured, or delivered to the government in that given fiscal year. For example, production lead-times and industry backlogs might dictate that armor contracts awarded with FY10 dollars might not get manufactured and delivered until FY11.
- Large vehicle and armor procurement, such as that experienced in FY07 and FY08, might outpace the industry's armor production capacity and require 1.0 to 1.5 years to build out.
- Contracts for procurement can be awarded anytime during a fiscal year and funds may remain available for obligation for several years after the fiscal year in which the funding was originally approved.
- DoD fiscal years run from October 31 to September 30 of the next year; i.e. the DoD does not use a calendar based fiscal year that ends on December 31.
- Administrative and production lead-times (the time from contract award to vehicle delivery) vary greatly from program to program. For example armor kits might have a lead-time of 6 months, HMMWV armored vehicles a lead-time of 6 to 12 months, and the build of a new or recapitalized tank or combat vehicle a lead-time of 12 to 18 months.

Regardless of these caveats, we are confident that basing our forecast on government procurement rates, rather than industry production rates, yields a more reliable analysis of the US military ground vehicle and armor market.

3.2 Sources of Information

We engage in both primary and secondary research to gather vehicle and armor market intelligence. Our primary research activities include conducting interviews and onsite surveys with vehicle and armor industry participants and military personnel.

We also review a multitude of secondary research sources on a daily basis to stay abreast of published information relative to the vehicle and armor industry. These secondary research sources include:

- DoD, US Army, USMC, US Air Force, and US Navy budget requests and reprogramming requests
- Congressional action on budget requests
- Company press releases and company websites
- Congressional press releases and testimony regarding vehicle and armor programs
- Government contract awards
- Military and government press releases
- Military program office websites
- Military strategy documents and reports
- Industry trade and news publications
- Industry associations and conferences
- Industry analyst reports
- US Trade and Patent Office activity
- Publications and reports from the Congressional Budget Office (CBO), Congressional Research Service (CRS), the White House Office of Management and Budget (OMB), the Government Accountability Office (GAO), the Office of the Secretary of Defense (OSD), the DoD Inspector General (IG), and industry think tanks.
- Online defense news services

3.3 Description of Vehicle Categories

We have segmented military ground vehicles into five different categories for the purpose of our forecast. Those categories are:

- Light tactical and support vehicles
- Medium and heavy tactical vehicles
- Armored Security Vehicles (ASVs), MRAPs, MATVs, and the Mine Protected Vehicle Family (MPVF)
- Combat vehicles
- Marine specific vehicles

Each category contains vehicle platforms from all military branches whose vehicles fit that description. For example, all HMMWVs, whether procured by the US Army, USMC, USAF, or US Navy, are included in the “light tactical vehicle” category. All medium and heavy tactical vehicles used for logistics and line haul, such as the US Army’s FMTV and the USMC’s MTRV, are included in the “medium and heavy tactical vehicle” category.

The “Marine specific vehicle” category does capture only vehicles procured by the USMC. We used the word “Marine” to describe this category not because the vehicles are procured by the USMC, but due to the mission of these vehicles. Based on mission, these vehicles don’t truly fit into the other vehicle categories we defined and we believe it is best to segment them separately. It could be argued that the LAV and MPC are similar to a Stryker, and thus should be categorized together. However, for this version of our forecast, our vehicle categories will remain as defined.

Table 1 lists every vehicle platform and armor program addressed in our forecast segmented by vehicle category.

Table 1 - Description of Vehicle Categories and Armor Programs Covered in the Forecast

<u>Vehicle Categories</u>	
<u>Light Tactical and Support Vehicles</u> HMMWV New Vehicles - All Variants HMMWV Recap Program Up Armored HMMWV (UAH) Recap Program HMMWV Armor and Frag Kits Joint Light Tactical Vehicle (JLTV)	<u>Combat Vehicles</u> Bradley A2 ODS Recapitalization Program Bradley A3 Recapitalization Program Bradley Reactive Tile Kits (BRAT) and IED Armor Kits Bradley Urban Survival Kits (BUSK) Bradley A3 and M7 BFIST Bradley A3 Block 2 Improvement Program Stryker New Vehicle Procurement Stryker A1 and Modification Program M113 A2 to A3 Conversions M113 Armor Upgrades and Kits HERCULES M88 A2 Abrams Frontal and Turret Armor Abrams ARAT, TUSK, LAGS Abrams M1/M1A1 Upgrade Program Abrams M1A2 System Enhancement Program Abrams M1A3 Upgrade Program Ground Combat Vehicle
<u>Medium and Heavy Tactical and Support Vehicles</u> Light Medium Tactical Vehicles (LMTV) Family of Medium Tactical Vehicles (FMTV) Family of Heavy Tactical Vehicles (FHTV) Medium Tactical Vehicle Replacement (MTVR) Logistics Vehicle System Replacement (LVSR) HEMTT Truck (New) HEMTT-ESP Truck (Recap) PLS Truck (New) PLS Truck (Recap) Heavy Equipment Transporter (HET) M915A5 Line Haul Truck M916A3 Light Equip Transporter (LET) Medium and Heavy Truck Armor Kits	<u>Marine Specific Vehicles</u> Expeditionary Fighting Vehicle (EFV) Assault Amphibious Vehicle (AAV) Upgrades Marine Personnel Carrier (MPC) Light Armored Vehicle (LAV) Upgrades New Light Armored Vehicles (LAVs) Internally Transportable Vehicle (ITV)
<u>ASVs, MRAPs, and Mine Protected Vehicles (MPVs)</u> Armored Security Vehicles (ASV) RG-31 Mine Protected Vehicle Cougar EOD Vehicle Medium Mine Protected Vehicle (MMPV) Mine Protected Clearance Vehicle (MPCV) Buffalo Vehicle Mounted Mine Detector Vehicles (VMMD) Mine Resistant Ambush Protected (MRAP) Vehicles MRAP All Terrain Vehicle (MATV) Armor Kits for ASVs, MPVs, MRAPs, and MATVs MRAP Conversions to Route Clearance Vehicles	

The following vehicle programs are not covered in this forecast:

- Construction equipment, firefighting equipment, and material handling equipment – we included armor kits for these types of vehicles, but did not include an analysis of these vehicle platforms.
- Joint Assault Bridge, Assault Breacher Vehicle, and the USMC Heavy Recovery Vehicle – procurement quantities of these vehicles are limited over the timeframe of our forecast and thus did not warrant inclusion or analysis.
- Vehicle reset activities.
- Foreign Military Sales (FMS): In general we do not include FMS in our forecast. However, in certain and limited circumstances we do include FMS. When an FMS is included, we clearly note this for readers and fully explain the program and why we have included it in our forecast.

3.4 Procurement Segmented Into Four Sources of Funding

From FY07 to FY10, the DoD has made funding requests for the overseas contingency operations in two allotments.

Thus, we segment procurement into four elements of funding:

- DoD requested base budget procurement for FY05 to FY15. This is labeled as “DoD Base” in subsequent figures and tables.
- An “OCO 1” request which addresses procurement associated with the first DoD supplemental or Overseas Contingency Operation (OCO) funding request for a particular fiscal year.
- An “OCO 2” request which addresses procurement associated with the second DoD supplemental or OCO funding request for a particular fiscal year.
- Vector’s forecast of additional funding for procurement above the levels specified in the publicly released DoD base budget or OCO request(s). This is labeled as “Projected Requests” or “Proj Funding” in subsequent figures and tables.

In May 2009, the DoD included their first request for FY10 OCO funding when they submitted their base budget request for FY10. This initial request is generally referred to as the FY10 OCO request. It was appropriated by Congress and signed into law by the President in December 2009 along with the base budget for FY10.

In February 2010, when the DoD submitted their FY11 base and OCO request, they also submitted a second OCO request for FY10. This second FY10 OCO request is directed at supporting the US troop buildup in Afghanistan. The DoD and the media commonly refer to this second OCO request for FY10 as the “FY10 Supplemental” or “FY10 OCO Supplemental” request. We simply label this as “OCO 2” in our figures and tables. This second FY10 OCO request was approved by Congress and signed into law by the President during the last week of July 2010.

This is no base budget available for FY15 to FY20. We have developed a forecast for total procurement for each of those years. Our “Projected Request” could come in the form of a base budget, an OCO request, or a combination of both types of funding.

3.5 Definition of the Procurement Dollar and Cost Risks

When forecasting vehicle and armor procurement, we eliminated engineering support, fielding support, installation, engineering changes, project management support, testing, quality assurance, and documentation costs from both vehicle unit costs and our estimated armor procurement.

Our goal is to forecast dollars spent on the vehicle and the physical armor and armor hardware for that vehicle. Thus we have eliminated these support contract line items and non-product or non-armor cost elements from our forecast.

These support items, on average, represent 25% of an armor or vehicle program’s total contract funding. In most cases, these items are presented separately in individual cost elements within a budget justification sheet; and it is a relatively simple task to subtract their costs from armor or vehicle unit costs.

We have not addressed cost risk in our forecast. We define cost risk as the risk that the DoD has underestimated the cost to purchase future vehicle and future armor. We used armor and vehicle costs provided by the DoD in their projections for FY11 to FY15 base budget procurement. Although we do note some escalation of costs within the DoD’s figures, we feel there is additional risk that vehicle and armor costs will be higher than projected in the future. We also based vehicle and armor costs for future programs such

as Ground Combat Vehicle (GCV) and JLTV on data available from program offices today and believe there is a risk that actual costs for those programs will be larger than we have assumed.

Finally, note that we use the terms “spending”, “funding”, and “procurement” interchangeably throughout our report. In all cases, we are referring to the dollar value approved by Congress or requested by the DoD for procurement of vehicles and armor in a given fiscal year. Those dollars may be sourced from DoD base budget or supplemental budgets.

3.6 Cost of Armor Kits and Value of Integral Armor on New Vehicles

To develop our forecast of military ground vehicle and armor procurement, we needed to determine the cost of vehicle armor kits and the dollar value of armor integral to a newly procured vehicle or procured in conjunction with that new vehicle. Likewise, for any recapitalization or vehicle upgrade program, we needed to understand if that program included armor improvements or enhancements and the dollar value of that armor.

DoD budget justification books contain useful information on armor build rates, unit costs, vehicle armor improvement plans, armor descriptions, lead times, and contractors. In addition, we gather armor costs, armor descriptions, and armor upgrade plans from program offices, conferences, contract documents, and other publicly available sources.

In some cases, we can find unit costs for specific armor kits and armor upgrades. In other cases, we estimate the dollar value of a vehicle’s armor content using cost knowledge from other similar vehicles and other information gathered relative to each specific armor system. Another benchmark we use is the armor value as a percent of vehicle unit cost. Detailed information regarding armor kit procurement cost and the value of integral armor on a vehicle, as well as annual procurement rates through FY20, are presented in the appendices.

4 Discussion of the September 2010 Forecast

We utilize this report section to discuss the impact that significant budget actions, military reports and documents, and other events have made on assumptions used to develop this forecast. We also describe major changes in our forecast coverage and methodology.

It is important to read this section so one can understand the context in which this forecast was developed. In general we tend to be mildly conservative. We default to US Army and USMC published information regarding a particular program when that information is available; and we are fiscally realistic. For example, if the US Army has never spent more than \$1.5 billion in a base budget for their light tactical vehicle program, we are not going to develop a forecast that spends double that in FY15, for example.

4.1 Addition of a Vehicle Forecast and Extension of Forecast to 2020

This report release includes a complete forecast of vehicle procurement as well as our usual presentation of an armor procurement forecast. Although we have always used a forecast of the number of vehicles procured annually as a basis for our armor forecast, in the past we did not summarize total vehicle procurement in terms of dollars.

We previously provided only a summary of the number of total vehicles. But to develop a valid armor forecast for FY16 to FY20, we needed to truly understand the procurement dollars projected for total vehicle spending and optimize that total vehicle spend to reflect the US Army's and USMC's stated strategies for future vehicle programs. Then, based on that projection of vehicle procurement in terms of both dollars and number of vehicles, we in turn developed an armor procurement forecast that adequately took into consideration the US Army's and USMC's ability to spend money at the vehicle program level.

Thus, we have extended our forecast horizon to FY20 in this release. Previous forecasts only projected vehicle and armor procurement through FY15; which is the latest year through which current DoD budgets project base budget procurement. Our FY12 to FY15 forecast is comprised of base budget funding outlined in the DoD budget, plus our projection of additional funding that may materialize in either the base budget or an OCO budget request.

There is no base budget projection available from the DoD for FY16 to FY20. Hence, we have forecasted all funding for these fiscal years, both base and any potential OCO funding requests. We only present one annual funding figure for FY16 to FY20; we do not discriminate between base budget funding and OCO funding in those years.

We built our forecast for FY16 to FY20 from publicly available information on the US Army's future vehicle modernization and new vehicle program plans. The JLTV, GCV, Up Armored HMMWV Recapitalization, and Stryker Modernization are important programs that will be gathering steam during the FY16 to FY20 timeframe.

4.2 FY10 DoD Budget Reprogramming Actions of Significance

There continues to be a significant amount of reprogramming of previously appropriated funding in FY10. We believe the level of reprogramming has been more robust this year than in past years. There could be various explanations for this trend. Funding is more "precious" and a scarce (or more scarce) resource is likely to be better managed and applied to critical programs. The US Army's priorities or program objectives have changed since their FY10 budget was submitted to the White House and Congress in February 2009. The US Army may not be meeting program development goals, specifically relative to Research, Development, Testing, and Evaluation (RDT&E) funding. And finally, theater operational needs, and technology developments to address those needs, have changed.

Regardless of the rationale for the reprogramming requests, we continue to track these actions as submitted by the DoD and the service branches; and we track Congressional response. A reprogramming request does not need full Congressional approval, but any one of four Congressional committees can deny a reprogramming request. Those committees are the House and Senate Armed Service Committees (HASC and SASC) and the House and Senate Appropriations Committees (HAC and SAC).

We have incorporated all reprogramming requests denied or approved by Congressional committees through August, 2010 into our forecast. The significant reprogramming requests are discussed in Table 2.

One can see that Congress tactical vehicles. But Cong Family (MPVF) procurement, Congress is not allowing the nor procurement funding. Pe perhaps both. Finally, the US Army and Ge Stryker Double V Hull progra defined in the FY10 Supplem



Table 2 - Summary of Significant FY10 DoD Budget Reprogramming Requests

<u>Summary of Significant FY10 DoD Budget Reprogramming Requests</u>		
<u>Funding Type and Program</u>	<u>US Army Request</u>	<u>Congressional Action</u>
RDT&E	Increase by \$13 million to explore best	Denied by SAC, which we found
HM		has S Army
Pro		
HM		
Pro		
FM		
Pro		
FH		
Pro		
MS		

Summary of Significant FY10 DoD Budget Reprogramming Requests		
<u>Funding Type and Program</u>	<u>US Army Request</u>	<u>Congressional Action</u>
RD Bra		mittee ete e funds as
Pro Bra		mittee erate or graded M2s
RD M1		
Pro MP		
Pro Str		

4.3 Passage of the FY10 Supplemental OCO Funding Request

At the end of July 2010, both branches of the Congress passed the FY10 Supplemental OCO Funding Request and it was signed into law. This represented the second supplemental funding request for overseas contingency operations for FY10. Most of the contention and debate over this bill had nothing to do with OCO funding, but more to do with special interests and non DoD funding requests added to the bill.

Overall, the US Army requested \$xxx billion additional funding for FY10 OCO; Congress approved \$xxxx billion. Congress approved slightly lower funding for Operation and Maintenance (O&M) and the Joint Improvised Explosive Device Defeat Fund, and slightly more for MRAP and procurement.

Programs of interest to our readers and their respective funding levels in the FY10 Supplemental OCO:

- xxxxxxxxxxxxxxxxxxxx
- xxxxxxxxxxxxxxxxxxxx
- xxxxxxxxxxxxxxxxxxxx
- xxxxxxxxxxxxxxxxxxxx

- xxxxxxxxxxxxxxxxxxxxxxxx
- xxxxxxxxxxxxxxx

Thus, excluding xxxxxx, there was not much procurement of ground vehicles and related armor within the FY10 Supplemental OCO Funding Request.

4.4 Significance of the US Army’s Tactical Wheeled Vehicle Acquisition Strategy

In mid August 2010, the US Army’s Tactical Wheeled Vehicle (TWV) Acquisition Strategy report was released to the public. This report, which we will refer to subsequently as the “strategy document”, was prepared by the US Army in June 2010 in response to a Congressional request in the 2010 Defense Appropriations Bill.

The strategy document presents quantitative data regarding the US Army’s current and future TWV fleet inventories and their objectives for transforming those fleets. We have analyzed the strategy document extensively and present the following list of significant findings from our analysis. In addition, we have incorporated the US Army’s strategy document into our current vehicle and armor forecast.

In summary, we did find new insights within the US Army’s TWV Acquisition Strategy document, although it was ambiguous at times and contradicted both itself and US Army communications released earlier in FY10 (such as the FY11 budget request and program office presentations throughout the year). That said, we did incorporate the US Army’s objectives from their strategy document into our current forecast and noted concerns and areas of uncertainty as warranted.

4.4.1 Overall Comments

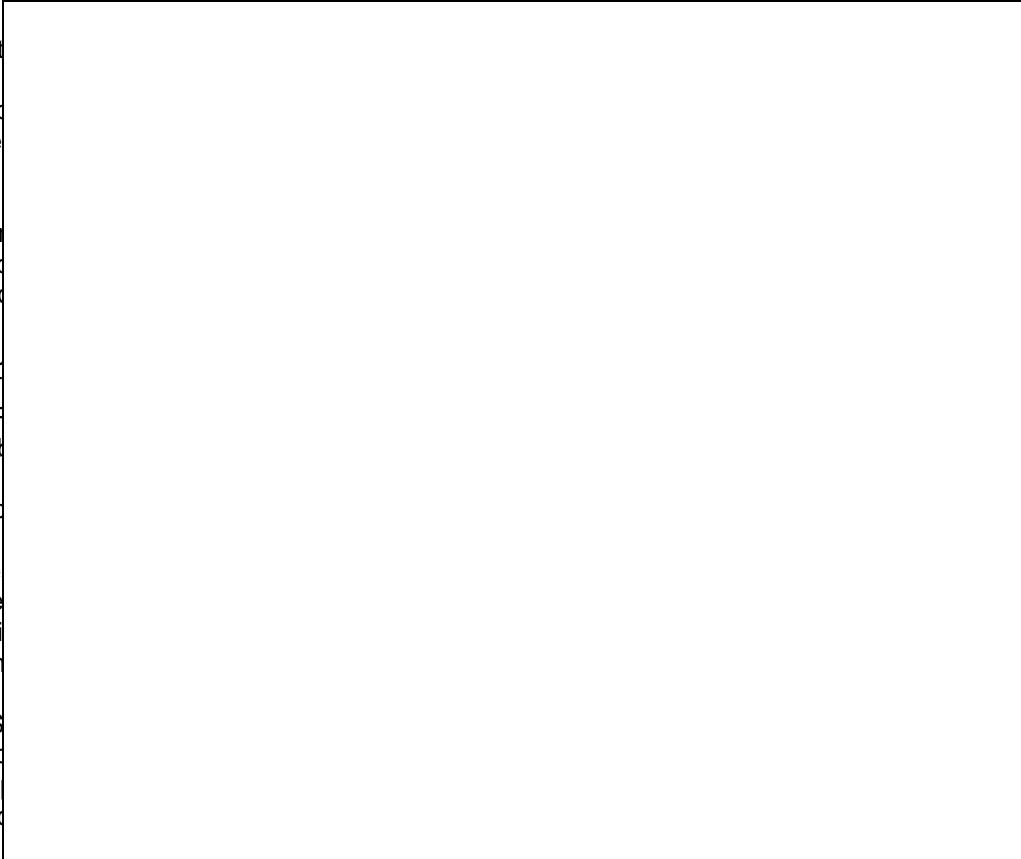
The US Army plans on decrease will be within t

In addition, they plan to Strategy (LTPS) to me armor B-kits to evolve necessary to ensure th System (JCIDS) requir Documents (CDDs) and time, perhaps twelve mo

Note for readers: The U Protection Strategy (LT requirements. The LTF protection on a vehicle t

The LTPS objectives fo available divided by th medium tactical vehicle goal for light tactical ve that today the on-hand i kits, and non LTAS com

Where prudent, the US competition for new pro Army wants to use com cited the recent FMTV o competition.



The US Army wants to “buy less, more often” and utilize a contract and production capability that can be adjusted and modified to meet emerging requirements, allow maximum flexibility, and provide focal points for technology insertion.

The strategy document discusses the use of simulation training as “crucial” to support the Army Force Generation (ARFORGEN) equipping strategy. This comes as no surprise as the US Army’s latest strategy is not to fully equip all brigade combat teams throughout the ARFORGEN cycle with a complete fleet of vehicles. This does reduce required vehicle inventory, but necessitates simulation driver training during the reset phase of the ARFORGEN model.

4.4.2 HMMWV Fleet Status and Acquisition Strategy

The US Army is “currently lacking in substance and

The document states that one third are M1097s and HMMWV will be modernized

By FY17 the Army intends to recapitalize

By FY25, the Army

Our two key goals are to reduce the fleet by FY17 and to when we recapitalize

that the US Army is “currently lacking in

are UAHs, and the model for the fleet, and

by FY17, and get through

between FY11 and FY17 the reference point, in their citations of

4.4.3 FMV

The US Army is fully divesting legacy vehicle trucks by the M35 series slowly; their stockpiled more

Based on the determination of FY20 procurement levels of anti-air CA in February

The strategy document states that contracts agreed to can obligate production and have to be a

fully divest M35 series stockpiled more

, we have and FY16 to s. These Monterey

requirements FY14. They if another contract will

A FMTV recap the US Army of the cost of a n that resulted in has not yet bee may lie betwe warranted.

lysis by her than in FY14 contract ifitability ould be

4.4.4 HEMT

The US Army actually presen used the lowe significantly hig

ocument ure, we ,325 is

In addition, by vehicles as we the current inve Strategy, there calculate the e of HEMTT va Memorandum FY11 budget re HEMTT A4s th

of new alysis of quisition fficult to vventory bjective d in the ore new

The strategy requirements s information we intelligence.

es and previous market

4.4.5 M915

The strategy d strategy docum dump truck). I their total requi

. The e M917 85% of

Including FY10 reprogramming 1,864 M915 A5 that the progr objectives as d from FY11 to F

ue to a kimately ase was eet their annually

The US Army's shared in the s does mention procurement a mean that M9 predicting in o initiated and t documents rele but that mentio

quantities ocument p Truck is could we are n is not budget or FY12,

4.4.6 MRAP and MATV Fleet Status and Acquisition Strategy

The strategy of the US Army is to incorporate sustainment and specific mission requirements.

Although not originally requested by the Ordnance Corps, the recapitalization of the fleet is being addressed through the acquisition of new vehicles.



ment. The facilities, plus maintenance, training, and support, along with their associated costs, are being addressed through the acquisition of new vehicles.

objectives by which were addressed. Explosive Ordnance Disposal (EOD) addresses the threat of Improvised Explosive Devices (IEDs) and other explosive threats.