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The medium tactical vehicle replacement program-an analysis of a multi-service office

Schramm, Kenneth Edward

Monterey, California. Naval Postgraduate School

NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

THE MEDIUM TACTICAL VEHICLE REPLACEMENT PROGRAM-AN ANALYSIS OF A MULTI-SERVICE ARMY AND MARINE CORPS PRODUCT OFFICE

by

Kenneth Edward Schramm

June 2004

Thesis Advisor:	Brad R. Naegle
Second Reader:	Michael W. Boudreau

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The Marine Corps is fielding the MTVR Truck as a replacement for its aging fleet of five-ton cargo trucks. The MTVR is an Acquisition Category II program that was a multi-service Army-Marine Corps program. The purpose of this thesis is to examine the effectiveness of having an Army Product Office execute a Marine Corps Program. The study analyzes the effectiveness of the timing of the program's transition from the Army to the Marine Corps. A detailed literature search, as well as information gathered from attending various IPRs and conducting interviews with program officials and contractors, provided the basis for the in-depth background study presented. Analysis of the data gathered led to a justification for multi-service managed programs, as well as to recommendations on the timing of the MTVR program transition.

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THE MEDIUM TACTICAL VEHICLE REPLACEMENT PROGRAM-AN ANALYSIS OF A MULTI-SERVICE ARMY AND MARINE CORPS PRODUCT OFFICE

Kenneth E. Schramm
Program Analyst, United States Army
B.B.A., University of Michigan, 1977
MBA, University of Detroit, 1986

Submitted in partial fulfillment of the requirements for the degree of

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NAVAL POSTGRADUATE SCHOOL
June 2004

Author: Kenneth E. Schramm

Approved by: Brad R. Naegle
Thesis Advisor

Michael W. Boudreau
Second Reader

Douglas A. Brook, Dean
Graduate School of Business and Public Policy

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ABSTRACT

The Marine Corps is fielding the MTVR Truck as a replacement for its aging fleet of five-ton cargo trucks. The MTVR is an Acquisition Category II program that was a multi-service Army-Marine Corps program. The purpose of this thesis is to examine the effectiveness of having an Army Product Office execute a Marine Corps Program. The study analyzes the effectiveness of the timing of the program's transition from the Army to the Marine Corps. A detailed literature search, as well as information gathered from attending various IPRs and conducting interviews with program officials and contractors, provided the basis for the in-depth background study presented. Analysis of the data gathered led to a justification for multi-service managed programs, as well as to recommendations on the timing of the MTVR program transition.

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LIST OF ACRONYMS

AAO	Approved Acquisition Objective
ACAT	Acquisition Category
ACV	Armored Combat Vehicle
AFV	Armored Fighting Vehicle
AGS	Armored Gun System
AMARC	Army Materiel Acquisition Review Committee
AMC	Army Material Command
AMCCOM	Armament, Munitions, and Chemical Command
AMG	AM General
ANS	American National Standards
ANSI	American National Standards Institute
Ao	Operational Availability
APM	Assistant Program/Project/Product Manager
APG	Aberdeen Proving Grounds
APB	Acquisition Program Baseline
ARC	Aviation Refueling Capability
ARDEC	Armament Research, Development, and Engineering Center
ARG	Armed Reconnaissance Group
ASARC	Army Systems Acquisition Review Council
ASN	Assistant Secretary of the Navy
ASM	Armored Systems Modernization
AT&L	Acquisition, Technology & Logistics
ASN(RDA)	Assistant Secretary of the Navy for Research, Development and Acquisition
ATAC	U.S. Army Tank-Automotive Center
BG	Brigadier General
BPR	Business Process Reengineering
BRAC	Base Realignment and Closure
BSA	Bachelor of Science in Administration
CARC	Chemical Agent Resistant Coating
CE	Concept Exploration
CTIS	Central Tire Inflation System
CLAWS	Complementary Low-Altitude Weapons System
CLS	Contractor Logistics Support
COEA	Cost and Operational Effectiveness Analysis
COI	Critical Operational Issue
COL	Colonel
COMMARCORSYSCOM	Commander, Marine Corps System Command

COTS	Commercial-Off-The-Shelf
CPC	Corrosion Prevention & Control
CPFF	Cost Plus Fixed Fee
CRADA	Cooperative Research and Development Agreement
CS&CSS	Combat Support & Combat Service Support
CSLE	Combat Support and Logistics Equipment
CSLE(MT)	Combat Support and Logistics Equipment (Motor Transport)
CTIS	Central Tire Inflation System
CTQ	Critical to Quality
DA	Department of the Army
DAB	Defense Acquisition Board
DAES	Defense Acquisition Executive Summary
DARCOM	Development and Readiness Command
DCMC	Defense Contract Management Command
DEW	Distant Early Warning
DoD	Department of Defense
DoE	Department of Energy
DoN	Department of the Navy
DoT	Department of Transportation
DPM	Deputy Program/Project/Product Manager
DSA	Deputy for System Acquisition
DSMC	Defense Systems Management College
DT	Developmental Testing
DTP	Detailed Test Plan
ECP	Engineering Change Proposal
EMD	Engineering & Manufacturing Development
EOA	Early Operational Assessment
EPA	Economic Price Adjustment
EPA	Environmental Protection Agency
ESH	Environmental, Safety and Health
ESP	Extended Service Program
EUL	Economic Useful Life
FAT	First Article Test
FCS	Future Combat Systems
FFP	Firm Fixed Price
5TTR	Five-Ton Truck Remanufacture
FMF	Fleet Marine Forces
FMS	Foreign Military Sales
FMTV	Family of Medium Tactical Vehicles
FOC	Full Operational Capability

FOT&E	Follow-On Operational Test & Evaluation
FUE	First Unit Equipped
FUED	First Unit Equipped Date
FY	Fiscal Year
GAO	Government Accounting Office
GCSS	Ground Combat and Support Systems
GSI	Ground Systems Integration
HEMTT	Heavy Expanded Mobility Tactical Truck
HET	Heavy Equipment Transporter
HIMARS	High Mobility Artillery Rocket System
HMMWV	High Mobility Multi-purpose Wheeled Vehicle
HMMWVA2	High Mobility Multipurpose Wheeled Vehicle A2
HTI	Horizontal Technology Integration
HP	Horsepower
HSV	High Speed Vessel
HTV	Heavy Tactical Vehicle
IAV	Interim Armored Vehicle
ICA	Independent Cost Analysis
IETM	Integrated Electronic Technical Manual
IFAV	Interim Fast Attack Vehicle
IFV	Interim Fighting Vehicle
IHD/NSWC	Indian Head Division, Naval Surface Warfare Center
ILS	Integrated Logistics Support
ILSP	Integrated Logistics Support Plan
IMMC	Integrated Material Management Center
IETM	Interactive Electronic Technical Manuals
IOC	Initial Operational Capability
IOT&E	Initial Operational Test & Evaluation
IPA	Integrated Program Assessment
IPR	In-Process Reviews
IPT	Integrated Product Team/ Initial Production Testing
IPS	Integrated Program Summary
ISO	International Standards Organization
ITV	Internally Transportable Vehicle
J&A	Justification and Approval
JCIDS	Joint Capabilities Integration and Development System
JSOR	Joint Services Operating Requirement

LAV	Light Armored Vehicle
LAW	Light Assault Weapon
LCCE	Life Cycle Cost Estimate
LMTV	Light Medium Tactical Vehicle
LRIP	Low-Rate Initial Production
LTC	Lieutenant Colonel
LVS	Logistics Vehicle System
LVSR	Logistics Vehicle System Replacement
MAA	Mission Area Analysis
MAGTF	Marine Air Ground Task Force
MARCORSYSCOM	Marine Corps Systems Command
MBA	Master of Business Administration
MCATTD	Marine Corps' Advanced Technology Transition Demonstrator
MCB	Marine Corps Base
MCCDC	Marine Corps' Combat Development Center
MCLB	Marine Corps Logistics Base
MCOTEA	Marine Corps Test and Evaluation Activity
MCSSS	Marine Corps Service Support School
MDA	Milestone Decision Authority
MEF	Marine Expeditionary Forces
MEFFV	Marine Corps Expeditionary Family of Fighting Vehicles
MENS	Mission Element Need Statement
MEU	Marine Expeditionary Unit
MHET	Medium Heavy Equipment Trailer
MIL	Military
MILMO	Military Motorcycles
MIPR	Military Interdepartmental Purchase Request
MMBOMF	Mean Miles Between Operational Mission Failures
MNS	Mission Needs Statement
MOA	Memorandum of Agreement
MOCOM	Mobility Command
MPH	Miles Per Hour
MR	Material Release
MROC	Marine Corps Requirements Oversight Council
MS	Mile Stone
M&S	Modeling & Simulation
MT	Motor Transport
MTTR	Medium Tactical Truck Remanufacture
MTV	Medium Tactical Vehicle
MTVR	Medium Tactical Vehicle Replacement
MWTC	Mountain Warfare Training Center

NAC	National Automotive Center
NAE	Navy Acquisition Executive
NATC	Nevada Automotive Test Center
NEPA	National Environment Protection Agency
NDI	Non-Developmental Item
NLT	Not Later Then
NSIAD	National Security and International Affairs Division
NSWC	Naval Surface Warfare Center
OA	Operational Assessment
OCO	Office, Chief of Ordnance
OCO-D	Office, Chief of Ordnance-Detroit
ODS	Operator Driving Simulator
OE	Operational Effectiveness
OEM	Original Equipment Manufacture
OMF	Operational Mission Failure
ORD	Operational Requirements Document
OTAC	Ordnance Tank-Automotive Center
OS	Operational Suitability
O&S	Operations and Support
OSD	Office of the Secretary of Defense
OT	Operation Test
OTC	Oshkosh Truck Corporation
OTPO	Operational Test Project Officer
PCO	Procurement Contracting Officer
PDRR	Program Definition & Risk Reduction
PEO	Program Executive Office
PEO-GCSS	Program Executive Office-Ground Combat and Support Systems
PET	Producibility Evaluation Task
PLE	Product Line Executive
PLS	Palletized Load System
PM	Program/Project/Product Manager
PMC	Partial Mission Capable
PM-MTVR	Product Manager-Medium Tactical Vehicle Replacement
PMO	Program Management Office
POM	Program Objective Memorandum
PQT	Production Qualification Testing
PVT	Production Verification Testing
PY	Production Year
QDR	Quality Deficiency Report

RAM	Reliability, Availability, Maintainability
RDT&E	Research, Development, Test, & Evaluation
RFP	Request for Proposal
R&D	Research & Development
RD&A	Research, Development and Acquisition
RMS	Root Mean Square
R-TOC	Reduction of Total Ownership Cost
SAC	Strategic Air Command
SECDEF	Secretary of Defense
SLEP	Service Life Extension Program
S&S	Stewart & Stevenson
S&T	Science & Technology
SOU	Special Operating Units
SMAR	Smart Intelligent Systems Intelligent Vehicle
SSEB	Source Selection Evaluation Board
STAR	System Threat Assessment Report
SYSCOM	System Command
T-AC	Tank-Automotive Center
TACOM	Tank-automotive and Armament Command
TARDEC	Tank-Automotive Research, Development and Engineering Center
TARADCOM	Tank-Automotive Research and Development Command
TARCOM	Tank-Automotive Materiel Readiness Command
TDP	Technical Data Package
T&E	Test and Evaluation
TC	Type Classification
TEMP	Test and Evaluation Master Plan
TOC	Total Ownership Cost
TSAC	TACOM Security Assistance Center
TSV	Theater Support Vessel
TWV	Tactical Wheeled Vehicle
US	United States
USMC	United States Marine Corps
USD(AT&L)	Under Secretary of Defense (Acquisition, Technology & Logistics)
WBS	Work Breakdown Structure
WECOM	Weapons Command
WNS	Wave Number Spectrum

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EXECUTIVE SUMMARY

In the early 1990s, the Army and the Marine Corps identified a need to modernize their medium tactical wheeled fleets. At the direction of Congress, the Marine Corp's Medium Tactical Vehicle Replacement (MTVR) Program was combined with the Army's Five-Ton Truck Remanufacture Program in 1996 as a single Acquisition Category (ACAT) II Program. However, due to budget constraints, the Army program was terminated in 1998.

As a result of this termination, the Army was left with a Product Office overseeing a Marine Corps truck program. Army program management of Marine Corps tactical wheeled vehicles has been accomplished for many years. In most cases, the systems managed were joint programs or Marine Corps procurement of existing Army systems such as the High Mobility Multi-purpose Wheeled Vehicle (HMMWV). The Logistics Vehicle System (LVS) and the Light Armored Vehicle (LAV) programs are exceptions, and like the MTVR, are Marine Corps unique systems with significant Army involvement in the systems management.

The Army's participation in providing the Marine Corps with a project office for the MTVR Program benefited the USMC by providing a professional and experienced base of acquisition professionals to lead and manage the program. The Army professionals were provided valuable experience on a cutting-edge technology project with experienced industry partners.

This experience demonstrated that a joint or multi-service project team can be effective in developing a single-service product. Both services gained valuable knowledge and experience that can be used today and in future program and project offices. Such working arrangements benefit DoD in several ways. Project office overheads can be minimized, and knowledge and experience gained from one project in one service can be shared with other services.

Research of the MTVR Program revealed that the Marine Corps was extremely satisfied with the Army's performance in leading and managing this program. However, the long-range Marine Corps strategy was to have its various acquisition programs centrally located at Quantico, Virginia. The study of the Marine Corps' MTVR transition plan examined several possible alternatives to determine the optimal time to transition the program from the U.S. Army to the Marine Corps at Quantico.

Based on these studies, it was determined that the least disruptive alternative would have been to leave the current MTVR organization and structure in place within the Army's Program Executive Office-Ground Combat and Support Systems (PEO-GCSS) at Warren, Michigan. Despite this conclusion from the Marine Corps' own report, the Marine Corps leadership decided to relocate the program to Quantico after the Milestone III decision on the program. This choice met the Marine Corps Commanders' requirement to move the program office to Quantico and establish a center of acquisition excellence.

The overall MTVR program goal was to obtain a cost-effective, state-of-the-art vehicle to replace the Marine Corps' medium tactical truck. This was accomplished by a unique Product Office administered during its life by both the Army and the Marine Corps.

I. INTRODUCTION

A. PURPOSE

The purpose of this research is to analyze the United States Marine Corps' (USMC) Medium Tactical Vehicle Replacement (MTVR) Program. This thesis examines the unique situation in which the Army provided the program management expertise through Milestone III to execute this Marine Corps-unique program.

B. BACKGROUND

This thesis addresses an Acquisition Category II (ACAT II) program that was originally a joint Army-Marine Corps program. In 1996, Congress directed the Army and the Marine Corps to "harmonize" their efforts for the remanufacture aspect of each service's medium tactical vehicle modernization program. Due to severe budget cuts in the 1990s, the Army chose to terminate its portion in 1998. However, the Marine Corps continued to have a requirement for this truck. The Marines had the necessary funding, but not the Product Office manpower to staff and effectively manage the program.

In the early 1990s, both the Army and the Marine Corps identified a need to modernize their medium tactical wheeled fleets. The goal of the program for the Marine Corps was to field a cost-effective, state-of-the-art system to replace its existing fleet of M809 and M939/A1 series of medium tactical trucks. The July 1991 Mission Area Analysis (MAA) for Close Combat identified deficiencies in the Marine Corps' existing medium-truck fleet's mobility and load carrying capacity. Additional operational experience in Southwest Asia reinforced evidence that the existing fleet had significant deficiencies in traveling off-road when fully loaded or when towing the M198 Howitzer.

The Marine Corps' current medium-truck fleet consists of M939 series trucks procured in the early 80s. Although the Corps procured new trucks, the basic truck design has remained largely unchanged since the mid-1950s, with

little or no significant improvement in reliability and fuel efficiency. The current medium-truck fleet lacks true cross-country mobility and is essentially road bound.

When operating off-road, the M939 series truck's straight axle suspension and limited power train restrict it from achieving sufficient speed/mobility to support highly mobile combat units. As the M198 Howitzer prime mover, it limits the weapon system to firing positions only accessible by existing road networks. Also, its limited payload means that the available cargo bed space cannot be used when carrying high-density loads such as ammunition and bulk liquids.

These deficiencies along with others, in conjunction with their entire M939 tactical truck fleet reaching the end of its Economic Useful Life (EUL) in FY 2002, prompted the Marine Corps to publish the Mission Need Statement (MNS) number MOB 211.4.2.A dated 30 March 1992. This MNS clearly defines the needs of a new platform to replace the existing M939 fleet. [Ref. 1]

The Army, on the other hand, originally had planned to remanufacture a portion of its aging fleet of M809 and M939/A1 vehicles to augment the procurement of the new five-ton version of the Family of Medium Tactical Vehicles (FMTV). The remanufacture effort was to address many of the same MAA-identified deficiencies and provide Army operational and performance requirements similar (but not equal to) the new FMTV. At the direction of Congress, the Marine Corps' Medium Tactical Vehicle Replacement (MTVR) Program was combined with the U.S. Army Five-Ton Truck Remanufacture (5TTR) Program in 1996 as a single Acquisition Category II (ACAT) Program. However, due to budget constraints, the Army program was prematurely terminated in May 1998. This thesis analyzes the MTVR Program and how a joint or multi-service program operates from a variety of different perspectives and players. The thesis also addresses transition of the program from the Army to the Marine Corps.

C. RESEARCH QUESTIONS

1. Primary Research Question

The primary research question is: What impact did Army management of the MTVR Program have on the Marine Corps future acquisition methodology?

2. Supplemental Research Questions

The supplemental research questions are:

- Was the transition of the MTVR program from the Army to the Marine Corps adequately studied and planned?
- How did the decision to transition the MTVR program from the U.S. Army to the Marine Corps impact the program?
- What impact will the establishment of the Marine Corps new acquisition center at Quantico have on future joint or multi-service acquisitions?

D. SCOPE

This thesis provides a detailed background and historical perspective of the development of the PM-MTVR Product Office and examines, from a product-management perspective, the events that led to a joint Army-Marine Corps program. It analyzes the perceived program effectiveness from the viewpoint of both the Army and the Marine Corps and addresses how the program is viewed the Prime Contractor. The thesis also evaluates the transition of the MTVR Product Office from the Army to the Marine Corps at Quantico and its impact on the program. An in-depth search and analysis of available articles and printed materials regarding the MTVR was conducted.

E. METHODOLOGY

This study is based, in part, on an extensive search of available literature originating from within DoD and the industry in general. In addition, information was gathered via several structured field interviews at Army and contractor locations over a three-year period, as well as via phone interviews with Marine Corps Product Office management. A detailed Program Questionnaire was provided to current and former personnel who worked in the MTVR Product Office. The questionnaire addressed several categories and included 27

questions involving the MTVR Program. The author attended several In-Process Reviews (IPRs) and cost-reduction meetings at the prime contractor location to gain the contractor perspective and participated in transition meetings between the Army and the Marine Corps. These field interviews and studies were supplemented by additional interviews of Army and Marine Corps key personnel who oversee the MTVR program. Finally, the study was based on analyses of the various program briefings, proposals, interviews, questionnaire results, and transition plans and studies that have been created to date and makes recommendations based on the analyses.

F. ORGANIZATION

The study is organized as follows:

- Chapter I: Introduction—This chapter addresses the scope of the thesis, identifies the methodology used, presents the research questions, and lays out benefits of the thesis.
- Chapter II: MTVR Program Background—This chapter provides a history of Marine Corps Tactical Wheeled Vehicle Programs managed by the Army. It also provides background on the MTVR Program.
- Chapter III: MTVR Program Management—This chapter provides the Marine Corps', the Army's, and Oshkosh Truck's perspective on the MTVR Program. The data were obtained from research, multiple interviews over a three-year period, and a detailed program questionnaire. The chapter also analyzes the decisions and perceptions stemming from the transition of the MTVR Program from the Army to the Marine Corps.
- Chapter IV: Summary, Conclusions and Recommendations —The data presented and analyzed in Chapters II and III were evaluated to provide answers to the primary and secondary thesis questions. Recommendations are made for additional research.

G. BENEFITS OF RESEARCH

This study addresses the unique relationship between the U.S. Army and the U.S. Marine Corps, where a dedicated Army Product Management Office managed a Marine Corps sole-service program. A detailed historical profile of the program traces the evolution of the program from a joint Army/Marine Corps effort on similar remanufactured systems, to the Army management of a Marine

Corps-unique Non-Developmental Item (NDI) system. The analysis is based on input from the major parties directly involved in and affected by this joint services managed program. Included are an examination of the benefits and challenges of a joint services program, as well as an analysis of the formal studies and recommendations that led to the decision to transition the program from the Army product office to a newly established Marine Corps product manager. Recommendations resulting from these analyses will assist other USMC and Army program offices in the coordination of joint and combined programs.

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II. BACKGROUND

A. HISTORY OF U.S. ARMY PROGRAM MANAGEMENT OF U.S. MARINE CORPS TACTICAL WHEELED VEHICLES

Army program management of Marine Corps tactical wheeled vehicles has been accomplished for many years. In most cases, the systems managed were joint programs or Marine Corps procurement of existing Army systems such as the High Mobility Multi-purpose Wheeled Vehicle (HMMWV). The Logistics Vehicle System (LVS) and the Light Armored Vehicle (LAV) programs, however, are exceptions and, like the MTVR, are Marine Corps unique systems with significant Army involvement in the systems' management.

1. Logistics Vehicle System (LVS)

In the mid-1970s, the USMC began exploratory development for logistics vehicles that would transport weapons, communications equipment, and general cargo during the 1985-1990 timeframe. Among the dominant requirements were that the vehicles be transported in container ship cells, that they be compatible with American National Standards Institute/International Standards Organization (ANSI/ISO) shelters and containers, and that they be able to satisfy the increased cross-country mobility needs of combat service support elements of the Fleet Marine Force (FMF). [Ref. 2]

In December 1978, an announcement in the *Commerce Business Daily* solicited heavy automotive and construction equipment industries to provide data regarding commercially available or modified vehicular equipment that could satisfy the USMC requirements. Twenty-one companies responded, and several candidate vehicles were identified. Based on careful evaluation, a Source Selection Evaluation Board approved the procurement from Oshkosh Truck Corporation (OTC) (see Appendix B).

The LVS, known as the "Dragon Wagon" to leathernecks of the Marine Corps Service Support School, replaced the M123 ten-ton tractor, the M543 wrecker, the M52 five-ton tractor, and the M127 12-ton stake bed trailer. The

vehicle is not amphibious, but it can ford rivers, lakes, and streams with a depth of up to five feet. It features a Detroit Diesel V-8, 445 hp engine and an Allison four-speed automatic transmission. It has a top speed of 65 mph. [Ref. 2]

The USMC's LVS is comprised of two separate chassis modules that are coupled through an articulation joint to form an integral, all-wheel drive, 8x8 vehicle. The system includes the following four 4x4 rear modules, each of which is connected to a MK48 4x4 Heavy Prime Mover Power Unit: MK14 Powered Container/Shelter Unit; MK115 Powered Wrecker/Recovery Unit; MK16 Powered Fifth Wheel Unit; and MK17 Powered Drop Side Cargo Unit.

In September 1983, OTC was awarded a sole-source multiyear contract for 1,433 systems. Vehicle Initial Production Testing (IPT) commenced in May 1984 and was completed in March 1985. Production deliveries commenced in August 1985.

The LVS development program ran concurrent to the U.S. Army's Heavy Expanded Mobility Tactical Truck (HEMTT) development effort. In brief, the HEMTT is a Non-Developmental Item produced by Oshkosh Truck Corporation that shares 80 percent of its components with the LVS. Thus, the sole source justification, as prepared by a joint Headquarters, USMC/TACOM working group, allows the Army and the Marine Corps to take maximum advantage of the component commonality.

The LVS is a Marine Corps unique system that is managed by the Project Manager for Heavy Tactical Vehicles, an Army Materiel Command (AMC) PM under the Tank-automotive and Armaments Command (TACOM). While the LVS is unique to the Marines, it is a derivative of the Army's HEMTT and is procured under the heavy truck family of contracts, which significantly reduces overhead costs and results in a lower unit cost for the Marine Corps. The Army expertise in managing and supporting tactical wheeled vehicles has resulted in a distinct acquisition advantage for the Marine Corps. [Ref. 2]

2. Light Armored Vehicle (LAV)

The LAV program was initiated in June 1981 as a jointly-managed Marine Corps/Army program, collocated at the Army's Tank-automotive and Armaments Command (TACOM) (see Appendix A). In 1983, the U.S. Army decided to terminate its portion, leaving the LAV an all-Marine Corps Program. A number of Army LAV vehicles were produced; however, they were never fielded and eventually were sold to the Marine Corps. The LAV Mission Element Need Statement (MENS) dated 8 May 1981 indicates the Marine Corps' view of Army management:

> [Because of] the Army's experience in acquiring armored vehicles, the history of cooperation which has marked earlier programs in which the Army acquired equipment for the USMC, the Army is designated as the contracting agency with overall acquisition responsibility for the USMC LAV Program. Every effort will be made by both services to expedite delivery of this urgently required system. [Ref. 3]

The Marines have been very satisfied with this program and the Army's active participation in it. [Ref. 2]

Mr. Robert Walters, Deputy Program Manager (DPM) for the LAV program, was interviewed on 22 November 2000. The LAV is a Marine Corps program executed by the Army at TACOM, but unlike the PM-MTVR Program, the PM-LAV office has a Marine Corps Colonel in charge, along with five additional Marine Corps Officers assigned to the program. In answer to a question regarding executing a Marine Corps program, Walters stated, "We are all Marines. Period! And proud of it!" However, his reporting chain of command is through the Army Materiel Command (AMC), Deputy for Systems Acquisition (DSA). With regard to the Marine Corps' plan to consolidate many of its acquisition programs at a newly established acquisition center at Hospital Point, Quantico, VA (see Appendix D) might affect the PM-LAV, Walters stated that he was aware of the new acquisition center, but that there were no plans to relocate the PM-LAV Office there, or to any other location, other than TACOM, at that

time. In his opinion, it would be unwise to relocate the office because, he believes, 99% of the office staff, if offered a position elsewhere, would not relocate. This would be a major detriment to the continuity of the program and significant program expertise would be lost. A second reason for remaining at TACOM is that PM-LAV has some very large Foreign Military Sales (FMS), principally to Saudi Arabia (1117 vehicles), along with possible sales to Taiwan and others. Brazil, Spain, Chile, and Poland also have made serious inquiries. FMS is coordinated through the Security Assistance Center located at TACOM. A move from TACOM could negatively impact the program and possibly jeopardize these and future FMS sales. [Ref. 4]

B. ARMY'S FMTV- IMPACT ON THE MTVR

1. FMTV Program Background

The Marine Corps and the Army traditionally harmonize their truck programs, looking for a common vehicle that could be produced for both services. In the earlier stages of military truck development (1970-1980), trucks in different services had only two or three factors in common, such as their suspensions, engines, and transmissions. The new vehicle was striving for 80% commonality, such as with the 2 ½ -ton truck, in all variants produced.

The FMTV was developed as a joint program and, as such, was developed from a Joint Services Operating Requirement (JSOR). The Marines later changed their requirement to a heavy-weight-class vehicle.

There are several basic engineering differences between the FMTV and the MTVR including MTVR's independent suspension system, developed by the British. This is to accommodate the MTVR's requirement that the truck be used 70% for off-road use and 30% on-road.

The current manufacturer of the FMTV, Stewart & Stevenson Inc., did submit a bid for the Marine Corps MTVR truck program, but was not selected. The Marines have expressed a requirement for one current variation of the FMTV

vehicle, High Mobility Artillery Rocket System (HIMARS), a multiple launch rocket system mounted on the FMTV. However, this will not be required until 2005. [Ref. 5]

2. Corrosion Standards

The ability of the DoD to respond rapidly to national security and foreign commitments can be adversely affected by corrosion. Corrosion of military equipment and facilities has been a significant problem for many years. Indeed, it can be a leading cause of catastrophic equipment failure. The corrosion-related problems are becoming more prominent, as the acquisition of new equipment is decreasing, and the services must rely upon aging systems. The data provided by the military services indicate that corrosion is potentially the number one cost driver in life-cycle costs. The total annual direct cost of corrosion incurred by the military services for both systems and infrastructure was estimated at $20 billion. Corrosion prevention is less expensive than equipment replacement. [Ref. 6]

The FMTV Operational Requirements Document (ORD) included a corrosion specification calling for a ten-year requirement. Corrosion protection is not a coating, but, rather, a comprehensive system consisting of three major components: 1) design; 2) metal selection; and 3) processing. A second line of defense would be coatings.

Multiple companies submitted initial proposals for the FMTV contract, the leading ones being Stewart & Stevenson, Tactical Truck (consortium of BMY and General Motors) and Teledyne. The proposal from Stewart & Stevenson could not meet the contract specification. Although the proposal from Tactical Truck could, it would cost more per unit truck. Its corrosion resistance plan included a galvanized truck, better coatings, better configuration, better composites, and superior architecture. [Ref. 7]

The Marine Corps MTVR Truck incorporated a 22-year corrosion standard. This was based on the Marine Corps' operational requirements, which, unlike the Army's FMTV, included fording requirements. The MTVR is required

to be operationally capable, without damage, of fording hard-bottomed crossings of fresh or salt water at not less than 1.52m (60 in.) including wave height, without requiring adjustments or the addition of special equipment. All vehicles had to operate continuously on land after fording operations, without damage to the vehicle. With the Central Tire Inflation System (CTIS) at an emergency setting, vehicles were to ford hard-bottomed, fresh or salt-water crossings, remaining immersed for a period of 30 minutes. [Ref. 6]

The 22-year standard was based on economics. It also led to the next generation of tests, conducted in the late 1990s, as opposed to the FMTV's tests, which were conducted in the early to mid-1990s. The initial MTVR corrosion resistance tests were conducted at the Milford Proving Grounds by General Motors. Additional tests were conducted at Aberdeen Proving Ground (APG), where the test standards were upgraded from the previous standard of ten years to the newly accepted standard of 22 years. The Marine Corps corrosion standard was so stringent that the contractor for the FMTV, Stewart & Stevenson, could not meet the standard during the Request for Proposal (RFP) contract phase. [Ref. 7]

C. MEDIUM TACTICAL REPLACEMENT VEHICLE (MTVR) PROGRAM

1. Program Goals

The goal of the program for the USMC was to field a cost-effective, state-of-the-art system to replace its existing fleet of M809 and M939/A1 series of medium tactical trucks. The July 1991 Mission Area Analysis (MAA) for Close Combat identified deficiencies in the Marine Corps' current medium-truck fleet mobility and load-carrying capacity. These deficiencies could not be adequately addressed by any minor modification, change in tactics or organizational change; therefore, a materiel solution was sought.

The MAA also revealed operational differences between Marine Corps wheeled vehicle mission requirements and those of the Army, despite the fact that both have used nearly identical wheeled systems for decades. For example, a typical mobility profile for an Army wheeled system specifies a 70/30 (70% on-

road, 30% off-road) profile, while the Marine MAA identified the reverse profile: 30/70. Clearly, the Army's new five-ton family of Medium Tactical Vehicles could not satisfy the deficiencies described in the MAA. [Ref. 8]

2. MTVR Operational and System Description

The Marine Corps is tasked to deploy Marine Air-Ground Task Forces (MAGTF) throughout the world to conduct expeditionary operations across a wide operational continuum. In order to accomplish any assigned mission, the MAGTF requires a ground transport vehicle that is mobile, reliable, and flexible. The medium tactical vehicle is the most numerous of the ground logistical lift vehicles and performs a wide range of transportation missions within the Marine Corps. [Ref. 8]

The MTVR supports Mission Area 43, Transportation. The requirement for the MTVR is outlined in Mission Need Statement (MNS) Number MOB 211.4.2A, approved by the Assistant Commandant of the Marine Corps and issued by the Commanding General, Marine Corps Combat Development Command on 30 March 1992. The MNS describes the need for an MTVR with technical high mobility, capable of carrying a heavier payload than the current vehicle with no increase in strategic-lift footprint relative to the M939A1. [Ref. 8]

The expeditionary nature of the Marine Corps provides a constraint on the numbers and sizes of all systems for combat, combat support, and combat service support. Consequently, conscious efforts have been made to minimize the mix and types of vehicles within the Marine Motor Transport Fleet. The medium truck is the true "workhorse" of the Marine Corps and is called upon to perform a wide range of missions and carry a wide range of loads. It fills the gap between the High Mobility Multipurpose Wheeled Vehicle (HMMWV), which comprises the light-vehicle fleet, and the Logistics Vehicle System (LSV), which comprises the heavy-vehicle fleet. [Ref. 9]

The MTVR will serve as the Marine Corps' only medium tactical vehicle. The medium truck is the prime logistical bulk load vehicle and the primary system

used to move supplies, equipment, personnel and ammunition to forward units. Increasing the cross-country capability in terms of payload, speed, and ability to negotiate rough terrain is essential in meeting the Marine Corps' needs across all spectrums of conflict.

The MTVR replaces the existing fleet of aging M809 and M939 series of five-ton trucks. The MTVR is a new truck with enhanced capabilities and greater mobility than the existing fleet and is designed to meet Marine Corps worldwide missions, including along the littorals, regions typically lacking in infrastructure. The Marine Corps' medium-truck fleet serves as a primary delivery system for the entire range of forward-deployed units. The prime mover for towed artillery, the MTVR also functions as the principal means of transporting bulk fuel, water, ammunition, break-bulk cargo, equipment, and personnel. The MTVR also reinforces the wholesale delivery, heavy-haul mission of the Logistics Vehicle System (LVS). With a weight of 28,000 lbs., the MTVR's footprint is otherwise identical to the M939. However, with a 70% off-road mission profile, the MTVR offers a significant increase in hauling capacity (7.1 tons off-road and 15 tons on-road) and mobility (30 mph cross-country). The MTVR can closely keep pace with the M1A1 tank, Light Armored Vehicle, and Amphibious Assault Vehicle to support emerging maneuver and precision logistics concepts. [Ref. 9]

The original Approved Acquisition Objective (AAO) was 7,360 vehicles (Standard Cargo: 5,740; Extra Long Wheel Base Cargo: 750; Dump: 522; Wrecker: 348;) with funding for only 6,854 appropriated. The AAO was adjusted 22 August 2001 by the Marine Corps Requirements Oversight Council (MROC) from the original 7,360 to 6,393 vehicles (Standard Cargo: 4881; Extra Long Wheel Base: 727; Dump: 477; Wrecker: 308). Funds appropriated for the MTVR were also adjusted at the same time, bringing the total trucks funded from the original 6,854 to the new AAO level of 6,393. [Refs. 10, 11]

Competing contractors, Oshkosh Truck Corporation (OTC) and AM General (AMG), received competitive Engineering & Manufacturing Development (EMD) contracts in November 1996 to produce five prototypes each for competitive testing. A third competitor, Stewart & Stevenson, failed to receive an award. [Ref. 10]

During EMD testing in July 1998, the Naval Center for Cost Analysis found that the MTVR operational requirements, some of which included 22-year corrosion protection and increased payloads on-and-off road at higher speeds, had rendered many of the components of the existing five-ton truck fleet obsolete. Some of the components found to be obsolete included the suspension system, engine, transmission, frame, cab, and cargo bed. The Assistant Secretary of the Navy for Research, Development and Acquisition (ASN (RDA)) then redirected the program from a remanufacturing effort to a new procurement since procurement of new vehicles, as opposed to the remanufacturing of the existing five-ton components, was determined to be the only sustainable alternative. [Ref. 10]

3. Marine Corps Advanced Technology Demonstration and Acquisition Streamlining

To meet the MAA identified requirements, the Marine Corps MTVR would require technological innovations not currently available on U.S.-manufactured trucks. The Marines wanted to demonstrate these new technologies before committing to a full program, so they initiated the Marine Corps Advance Technology Transition Demonstrator (MCATTD). The technology demonstration evaluation showed that the MCATTD concept was sufficiently mature to proceed directly to the EMD phase and avoid the cost and time of a separate Program Definition and Risk Reduction (PDRR) phase. This was accomplished through the integration of proven components and the unique teaming of industry. The privately owned and financed Nevada Automotive Test Center (NATC) was contracted as the technology demonstrator integrator, utilizing many other component manufacturers' expertise in the effort. [Ref. 10]

NATC was required to design, engineer, and fabricate the Marine Corps' Advanced Technology Transition Demonstrator (MCATTD) in conjunction with the Amphibious Warfare Technology Directorate as a proof-of-concept vehicle. In the first phase, a standard M923A1 cargo truck was fitted with an independent suspension system and a central tire inflation system. The existing power train was not altered. After shakedown testing to establish engineering integrity, a series of controlled tests were conducted to compare the MCATTD with a standard M923A1 five-ton truck. These tests defined the impact of an independent suspension in terms of shock and vibration, ride quality, and load carrying capacity. Concurrent with these tests, a study of Marine Corps Combat Development Center (MCCDC) operational areas was conducted to establish performance parameters. Full engineering evaluation (Phase 0, Test and Evaluation) of the MCATTD started in April 1992. An Early Operational Assessment (EOA) was also conducted following the technical testing. The MTVR Program entered the (EMD) Phase after receiving Milestone I/II approval from the Assistant Secretary of the Navy for Research, Development and Acquisition (ASN (RDA)) in October 1995. [Ref. 10]

Government/industry teaming greatly added to the streamlining of the MTVR acquisition, and other streamlining initiatives flowed from the teaming. The use of performance-based specifications, incorporating unambiguous engineering terms easily understood by the heavy-truck industry, was a direct result of the teaming efforts. This alleviated many issues that would normally surface later in the acquisition process.

For example, the term "cross-country" is inherently ambiguous and would likely be interpreted differently by the user, tester, or industry. To eliminate this ambiguity, road and terrain roughness was defined mathematically as a function of the engineering terms Root Mean Square (RMS) and Wave Number Spectrum (WNS). RMS and WNS for various types of terrain were included in the performance specification to give engineers a precise definition of the term "cross-country." [Ref. 12]

Through the application and tailoring of specifications and standards, the MTVR phase I RFP contained only eight required military specifications and standards. Of these, four were directly related to military transportability requirements, and the remaining four addressed military unique safety and survivability issues. The tailoring of military specifications in the MTVR RFP meant that the specification expressed program requirements in terms of mission performance and operational effectiveness, versus the rigid detailed requirements that traditionally characterized military specifications. [Ref. 12]

4. Industry Involvement/IPTs

All of these reform measures were facilitated through early industry involvement in this program. Prior to the drafting of the MTVR specification, an open invitation was issued for several "industry days" hosted by the Nevada Automotive Test Center. On these days, contractors could view the MCATTDS to obtain and impart information regarding the proposed program. Notices were published in the *Commerce Business Daily*. Shortly after industry days, a draft MTVR System Specification was distributed to industry for comment, followed by the release of a full draft RFP. More than 900 questions and comments were received from industry, many of which were incorporated into the Phase I MTVR performance specification. [Ref. 13]

Another acquisition reform measure implemented by the MTVR program was the early establishment of Integrated Product Teams (IPTs) to help manage the program. Several additional IPTs were created as the program evolved. The mission of the IPT is to facilitate the close coordination of the various elements of the MTVR acquisition team and to ensure that integration of all activities from development through fielding are managed to meet the cost and performance objectives.

Since much of the R&D work was done through the building and testing of MCATTDS, the program was able to compress the EMD phase of the acquisition. Contractor logistics costs were limited during Developmental Testing (DT) in order to avoid paying both EMD contractors for this effort. Confidence in the

reliability and maintainability of the commercial components used in the system made this decision possible. By not procuring logistics support from both contractors, the PM-MTVR was able to reduce both cost and time during the EMD phase. Long-term Contractor Logistics Support would be procured from the winning contractor during Phase II of this program. [Ref. 13]

There was extensive use of modeling and simulation in the Phase I contract award, which saved both time and money. In addition, the Government entered into an agreement with both EMD contractors whereby they had access to the TACOM super computer to conduct simulations to help in their design efforts. They planned to carry this effort forward into the production phase.

Prior to the release of the Draft EMD Request for Proposal (RFP) to industry, Marine PM-Combat Support and Logistics Equipment (CSLE) requested two bottom-up reviews of the program from outside agencies. These reviews served to validate the program's approach in terms of acquisition strategy, the method of contracting, funding, and streamlining efforts. The Assistant Secretary of the Navy for Research, Development and Acquisition (ASN (RDA)) Acquisition Reform Office, RFP Support Team conducted the first of these reviews. [Ref. 13]

This team reviewed the draft RFP during March 1996 and then, in April, debriefed the Product Manager of its findings. The team did a complete review of the specifications and standards contained in the RFP, and they also provided the PM with suggestions and samples of contract clauses to further streamline the effort. The team found the draft RFP in concert with "acquisition reform and streamlining concepts." They also stated that the MTVR draft RFP was one of the better ones they had reviewed.

The Defense Systems Management College (DSMC) instructors conducted the second review. The DSMC "Red Team" was the resident expert on the latest DoD 5000 series policy, and its instructors were all acquisition professionals from the areas of test and evaluation, contracting, finance, program

management, logistics, and systems engineering. The PM provided acquisition documentation to the team in December for review and was debriefed in April on the findings.

Strengths and weaknesses in program management, logistics, test and evaluation, and contracting were highlighted and discussed, with solutions recommended where appropriate. The team found that the program was sound and that it adhered to the basic principles of acquisition streamlining. However, the DSMC Red team did find that the MTVR Program had significant schedule risk. [Ref. 13]

5. USMC Selection of Army Program Management

The MAA-generated requirements for the Marines' medium truck meant that, for the first time in decades, the Marines were not going to procure the same truck as the Army. The MTVR management office at Marine Corps Systems Command (MARCORSYSCOM) was too small and lacked the supporting structure to manage an ACAT II program effectively. The Marine Corps was aware that the Army had successfully remanufactured medium tactical trucks and were exploring a remanufacture effort of the existing Army five-ton fleet to augment the procurement of new FMTVs. At the time, there was a possibility of reutilizing components from the USMC five-ton fleet as part of the MTVR effort, so the Marines decided to pursue a remanufacture effort for the MTVR and selected the existing Extended Service Program (ESP) Product Manager Office to manage the MTVR. PM-ESP staffing would be augmented by USMC personnel from MARCORSYSCOM, and the Marines eventually established a USMC Major position within PM-ESP. [Ref. 14]

6. USMC/Army Combined Medium Tactical Truck Remanufacture (MTTR) EMD Prototype Testing and Contract Strategies

Both of the EMD contractors were proven military truck manufacturers with the technical expertise to design, integrate, and produce the systems and components required for the MTVR and were able to meet surge and

mobilization requirements. The intent of selecting experienced contractors was to maximize the use of commercially available components, with an emphasis on those components already within the DoD system. [Ref. 10]

During the prototype competition of the EMD phase, two contractors, AM General Corporation of South Bend, Indiana (AMG) and Oshkosh Truck Corporation of Oshkosh, Wisconsin, (OTC) were selected for award of a Cost-Plus-Fixed-Fee (CPFF) contract using full and open competitive procedures. The contracts were awarded in November 1996.

Each contractor was required to design, produce, and deliver five Marine Corps- and five Army-configured vehicles, and to support Government conducted testing. Both contractors built five prototype trucks using components of the basic model M939 trucks, combined with new technology insertion. Both contractors successfully completed prototype testing of these vehicles in about half the allotted time, with a reliability rate three times the prototype requirement. The two contractors were invited to submit production contract proposals. [Ref. 10]

Based on those proposals and the results of the phase I testing, the U.S. Army awarded the production contract to Oshkosh Truck Corporation on 12 February 1999 for the USMC portion of the MTTR program only. The contract was Firm-Fixed-Price (FFP) with Economic Price Adjustments (EPA). The USMC acquisition objective was 7,360 vehicles, but funds were programmed for approximately 6,854 vehicles. The production contract featured a procurement option for an additional 1,694 systems to funded requirements of 5,666 systems to allow procurement of up to the total USMC requirement of 7,360 vehicles, were the additional funding to become available. An additional option for the 808 vehicles was included in the original contract for potential requirements from other customers. [Ref. 10]

This five-year contract with Oshkosh Truck Corporation expired in FY04, with final production of the MTVR Truck planned for June 2005 and final fielding

of the last of the 6,393 MTVR Trucks expected in September 2005. A new follow-on five-year contract was expected to be signed in June 2004. This contract will service the Navy's Seabees purchase of MTVR Trucks. These trucks will include the Standard Cargo, Wreckers, Dump Truck, and a variant unique to the Seabees, a Chassis Truck (Cargo Truck with a platform rather than a bed). The Seabees have a requirement of 1641 MTVR Trucks. The current contract will procure 537 trucks with funds appropriated in FY04-09 for an additional 710 of the required remaining 1104 MTVR Trucks. [Ref. 11]

7. LRIP and Production Testing

The Detailed Test Plan (DTP) identified specific requirements for the Initial Operational Test and Evaluation (IOT&E) for the Medium Tactical Vehicle Replacement Program. The IOT&E was conducted by the Marine Corps Test and Evaluation Activity (MCOTEA) to collect data and observations concerning the performance of the Low Rate Initial Production cargo variant MTVRs against selected Operational Requirements Document (ORD) criteria. The test results were used by the ASN(RDA) as the Milestone Decision Authority (MDA) in the 12 April 2001 Milestone III decision to authorize full-rate production and fielding. [Ref. 15]

In addition to an Early Operational Assessment (EOA) of the original MTVR technical demonstration in April 1995, an Operational Assessment (OA) of candidate EMD prototypes from OTC and the AMG was conducted as part of the development testing from January to April 1998. Fleet Marine Forces (FMF) Marines operated and maintained the EMD vehicles for the final 8,000 miles of a planned 12,000-mile development endurance test. Twenty-nine criteria were evaluated using data extracted from the developmental test or from separate discrete test events using Marine operators.

All phases of IOT&E used FMF operators and mechanics to operate and maintain the systems and collect data needed to analyze measures of performance, effectiveness and suitability. Testing followed realistic operational scenarios to the maximum extent possible. Evaluation areas included mission

performance, survivability, cooperative systems, reliability, availability, maintainability, transportability, deployability, personnel selection and training, concept of employment, organizational impacts, supportability, human factors, and safety. [Ref. 15]

The MCOTEA Test Directorate consisted of a Test Directorate with FMF Marines drawn from Marine Expeditionary Forces (MEF). The IOT&E was conducted in four phases, each including a series of operational missions and specific test events. Phases included cold weather operations at Ft. Greely, AK; sustained operations at Twentynine Palms, CA; amphibious operations at Camp Pendleton, CA; mountainous terrain operations at Mountain Warfare Training Center (MWTC), NV; and extreme slope and mud operations at the Nevada Automotive Test Center, NV. Phases I and II required only two vehicles. The IOT&E tested as much of the Marine Corps operational spectrum as possible, given time, location, and climatic conditions. Marines operated nine MTVRs over a wide range of different environments to evaluate its “safe to operate and maintain” capability and the performance criteria established in the ORD. The IOT&E was designed around eight MTVRs, but nine different vehicles were actually used over the test period. Marines operated the MTVR in a wide range of different environments to ensure it was “safe to operate and maintain” and met the performance criteria established in the ORD. The test consisted of a series of operational missions that included various discrete performance evaluations (e.g., 60% slope operations) with all the mission miles used for a Reliability, Availability, Maintainability (RAM) assessment. A minimum of 43,000 miles was required to estimate RAM parameters adequately. The 43,000 miles were distributed across the mission profile and were aggregated across all the IOT&E vehicles. [Ref. 15]

Operational missions included “real world” operational requirements in support of Marine Corps units and notional missions over prescribed courses of

various distances. Certain other events, such as firing from the weapons mount, operation on five of six wheels, and self-recovery winch operations were discrete performance events.

The IOT&E was designed to evaluate Reliability, Availability, and Maintainability (RAM) and to test performance while operating in extremes of terrain and weather. A total of 51,151 RAM miles—35,376 off-road and 15,775 on-road—were accumulated during the IOT&E. [Ref. 15]

The MTVR Operational Effectiveness (OE) was evaluated with specific performance tests, by participating in actual operational missions through day and night operations in snow, grassland, salt water, desert, mountainous and mud conditions, and by interfacing with other tactical systems. Operational Suitability (OS) was determined by the RAM results, deployability as a Marine-Air Ground Task Force (MAGTF) asset, logistics supportability, and Marine-machine interface. The test results concluded that, while the MTVR was operationally effective, it was not operationally suitable and required a Follow-on Operational Test and Evaluation (FOT&E).

The MTVR met all performance standards for effectiveness. It proved to be a powerful, highly mobile vehicle that safely transported and delivered typical medium tactical vehicle loads. It performed all required missions on gravel roads, mud, snow, desert, mountains, grasslands, and paved highways with little or no difficulty. The MTVR exceeded the ORD range requirements and was compatible with existing Marine Corps medium trailers and towed artillery. [Ref. 15]

The performance of the MTVR in an operational environment was a significant improvement over the current medium tactical vehicles. The design and construction of the MTVR's weapons mount proved to be an excellent and stable design with the exception of the gunner’s platform. The MTVR easily towed the current fleet of medium trailers (M105A2, M149A2, and M353) and the

current M198 Howitzer. However, the trailers and the howitzer cannot match the MTVR's superior off-road mobility, and the MTVR must be slowed to preserve the howitzer and trailers in an off-road environment. [Ref. 15]

The MTVR failed to meet the standards for Operational Suitability. This was based on its failure to meet the Critical Operational Issue (COI) for reliability. Mean Miles Between Operational Mission Failures (MMBOMF) was 1,189, which failed to meet the ORD threshold of 2000 MMBOMF. Additional concerns affecting the MTVR's Operational Suitability included an Achieved Availability (Aa) of 83%, significantly less than the ORD requirement of 89%. In addition to the OMFs, the IOT&E MTVR experienced 685 non-OMFs requiring maintenance action and contributing to the lower Aa.

In a peacetime environment, day-to-day safety concerns, local and Federal codes, and organization/unit Standard Operating Procedures can preclude using a vehicle with many of these failures, even though it would still be classified as "mission capable" and would continue to operate in wartime. While any single failure may be insignificant, the total number was a concern. It is of particular concern that 58% of the failures (393 of 683) were failures concentrated in the body/cab/hood (266) and electrical system (127). [Ref. 15]

Before the MTVR was deemed Operationally Suitable, and in anticipation of an FOT&E, it was recommended that four MTVRs, with all engineering changes and corrections incorporated, be tested in a typical Marine Corps operational environment in order to verify the reliability and effectiveness of engineering changes and corrections. An FOT&E is required to address three primary deficiencies: reliability as measured by OMFs; availability as measured by the high incidence of Non-OMFs; and the inability of the Integrated Electronic Technical Manual to adequately support required maintenance actions. [Ref. 10]

D. MTVR PROGRAM MANAGEMENT AND SUPPORT

1. Army Product Management Office

a. PM Tactical Wheeled Vehicle Remanufacture Programs

The MTVR program was originally conceived as a joint Army-Marine Corps Medium Tactical Truck Remanufacture (MTTR) program. The program's goal for the Marines was to field a cost-effective, state-of-the-art system to replace its existing fleet of medium tactical trucks. The Army had a parallel program goal to augment the procurement of new medium vehicles for the lower priority Army Reserve and National Guard Units. The Army's portion of this program consisted of its planned five-ton 5TTR, a remanufacture program for its aging (20+ years) five-ton truck. The MTTR program, along with the Congressionally directed Extended Service Program, were to augment the FMTV acquisition until such time that all units could be filled with FMTVs. The primary goal was to extend the service life of these trucks and substantially reduce O&S costs. The goal of this program was not to make old trucks into vehicles meeting all requirements of the FMTV. [Ref. 16]

Under congressional direction, the Army initiated its 2 ½ -ton Extended Service Program (ESP). Congress set two program objectives: produce a vehicle with 80 percent of the service life of a new vehicle and at 50 percent of the cost. The Army initiated the ESP to augment the FMTV Program as an interim solution until FMTV could generate enough vehicles to fill all requirements. Initially, FMTV was only to be fielded to Force Package I units and not be available to all lower-priority units. The ESP was intended to provide these units with a capable and maintainable vehicle that would reduce operational costs until enough FMTVs were available to fill the requirements. [Ref. 16]

b. Reassigned to PM Family of Medium Tactical Vehicles (FMTV)

The Army's Extended Service Program was a separate Product Office under the Program Executive Office for Tactical Wheeled Vehicles. It was

later disbanded as a product office and re-assigned to Program Manager for Light Tactical Vehicles (LTV). The MTTR acquisition plan received approval in February 1996 and assigned to PM-FMTV. The FMTV program was the Army's premier medium-truck program and was considered a DoD competitor to the USMC, which was very concerned with having its new MTVR program subordinate to this FMTV Project Office. [Ref. 17]

c. Reassigned as Direct Reporting Product Manager to PEO Ground Combat and Support Systems (GCSS)

The Army eventually reassigned the MTTR and the 2-½-ton ESP Program from PM-FMTV to the U.S. Army's Ground Combat and Support Systems (GCSS) Program Executive Office (PEO) in January 1998, but only a few months ahead of the Army's decision to cancel its 5TTR program. This left just the 2-½-ton ESP program, which itself was canceled after FY98, with final production occurring in April 1999. Thus, only the Marine Corps's MTVR program was left in this Product Office. [Ref. 17]

The MTVR Product Office was jointly managed per a June 1998 Memorandum of Agreement (MOA) between the Commander, Marine Corps System Command (COMMARCORSYSCOM) and the U.S. Army Program Executive Officer for Ground Combat and Support Systems (PEO-GCSS). The PM-MTVR office was staffed by one Army Lieutenant Colonel, one civilian Deputy Project Manager, one Assistant PM (APM) Army Major, 16 civilian Army employees and a contractor, as well as two USMC personnel, an Assistant PM (APM) Major and a civilian program analyst. All acquisition, contractual, testing, and test evaluation actions were under the PM-MTVR. All logistics and logistics planning actions were under PM-CSLE. Matrix support for the MTVR Program was provided to PM-MTVR by members of the Army's Tank-automotive and Armament Command (TACOM). [Ref. 18]

As the lead service, acting under the guidance of the Assistant Secretary of the Navy for Research, Development, and Acquisition (ASN(RDA)), who was the Milestone Decision Authority (MDA), the U.S. Marine Corps,

represented by COMMARCORSYSCOM, had the authority to direct the program under the policies and procedures set forth in Department of Defense (DoD) and the Department of the Navy (DoN) acquisition regulations.

PM-MTVR was the Product Manager for the MTVR Program and reported to PEO-GCSS on all matters concerning the execution of this program. The U.S. Army, represented by PEO-GCSS, executed the program per the decisions and direction of COMMARCORSYSCOM and ASN (RDA). PEO-GCSS committed organic organizational resources and solicited appropriate support to execute contractual and program management activities. All formal communications to potential contractors were directed through PEO-GCSS. [Ref. 18]

The Marine Corps was a full participating member of the MTVR Program Management team consisting of the PEO-GCSS, MARCORSYSCOM, PM-MTVR (including USMC personnel located in the PM) and the PM-CSLE. The Marine Corps was fully represented as a voting member on all committees, management teams, integrated product teams, source selection teams, and test working groups. [Ref. 19]

COMMARCORSYSCOM was responsible for funding all reimbursable work performed by PEO-GCSS, any surge contract support, and TACOM matrix support elements in support of the MTVR Contract. They were also responsible for providing all funding for the execution of the Research and Development contract and the production contract. They also provided funding required for expenses associated with the execution of the fielding plan. [Ref. 19]

d. Reassigned to PM Ground Support Integration

PM-MTVR was reassigned from a separate Product Management Office when it was combined with PM Ground Systems Integration (GSI) under PEO-GCSS in October 1998. PM GSI was the PM that offered Horizontal Technology Integration (HTI) across a wide platform of various PEO vehicles and systems that included the MIAI Abrams Tank and the Bradley Fighting Vehicle.

The two PM offices were combined because PM GSI had a large reduction in its programs and funding and, as a result, had excess experienced personnel that could assist PM MTVR as it was ramping up in its workload requirements. PM GSI offered valuable acquisition, contractual, test and evaluation, and program support to the PM MTVR Program.

When the U.S. Army terminated PM GSI on 30 September 2000, PM-MTVR re-emerged as a separate PM under PEO GCSS and would remain so until the program was officially transitioned to the Marine Corps in June 2001. [Ref. 17]

e. PM-MTVR Awards and Recognition

On 22 May 2000, at the Pentagon, Undersecretary of Defense for Acquisition, Technology and Logistics Jacques S. Gansler presented the PM-MTVR Team with the David Packard Excellence in Acquisition Award. The Packard Award recognizes organizations, groups and teams that have demonstrated superior accomplishments that contribute significantly to best defense acquisition processes. [Ref. 20] PEO-GCSS nominated PM MTVR for the Packard Award; the nomination was subjected to a rigorous competitive process, through the Department of the Army and then the Office of the Secretary of Defense. MTVR was selected based on the following criteria:

- Reducing life-cycle costs: the MTVR Team avoided military-unique developments and acquisition costs by leveraging a non-developmental item strategy and using commercial components.
- Providing best value for the Government: the MTVR vehicle represents a low-risk integration effort of high-end commercial truck components.
- Integrating defense with commercial base practices: the team infused the latest cost-effective commercial corrosion prevention and control technology into the MTVR to meet the USMC requirement of a vehicle lasting 22 years without mid-life rebuild due to corrosion.

- Promoting continuous improvement of the acquisition process: the team halved source selection time by integrating industry into the RFP development process. It conducted developmental testing and operational assessments concurrently to cut follow-on operational testing and evaluation.
- Accomplishing specific goals associated with acquisition reform initiatives: PM MTVR reduced source selection time for the phase II contract by including contractors in specification development. [Ref. 20]

The PM-MTVR Program was also awarded the Reduction of Total Ownership Cost (R-TOC) Award. Dr. Jacques Gansler, USD (AT&L), presented the award to the MTVR Program in November 2000. The award certificate read:

> As a special Pilot Program under the Reducing Total Ownership Cost (R-TOC) initiative, the Medium Tactical Vehicle Replacement Program has distinguished itself as a leader in the Department of Defense drive to maintain and improve system readiness while reducing total system ownership costs. The MTVR team has shown dedication and creativity in identifying new approaches to improve system readiness, maintainability, and supportability; reduce logistics cycle time; and implement competitive product support strategies. [Ref. 17]

2. TACOM Matrix Support Organizations

a. Acquisition Center

Acquisition support for the MTVR Office was directly supported by the TACOM Acquisition Center. The PM MTVR Office had one full-time procurement analyst assigned to the program. Additional contracting support was provided by the TACOM Acquisition Center on an as-needed, reimbursable basis. The acquisition center at TACOM was large and diversified, with a staff in excess of 500 acquisition professionals. They had many years of experience in the acquisition of vehicles, both for the Army and for the other DoD services. This included acquisition support for the Marine Corps Logistics Support Vessel and Light Armored Vehicle Programs. TACOM's Acquisition Center offered the Marines the required support for the acquisition of their tracked and wheeled vehicles. [Ref. 2]

b. The Integrated Material Management Center (IMMC)

IMMC provided integrated management maintenance, material management, readiness, manpower and personnel integration, logistics supportability analysis, and Foreign Military Sales support. The Tactical Product Line Executive (PLE) Office provided logistical, supply, and maintenance engineering support to the tactical fleet, such as the MTVR and its users worldwide. [Ref. 2]

c. Safety Office

The Safety Office at TACOM was the command's principal agent on work force, property, and worldwide TACOM-managed material safety. The office's goal was to provide the safest possible material to TACOM customers. MTVR did have agreements in place with the safety office to provide as-needed services on a reimbursable basis. [Ref. 2]

The MTVR Safety IPT consisted of the MTVR Safety Manager, the TACOM Safety Officer, representatives from the MARCORSYSCOM Safety Office and OTC. Objectives included ensuring safety considerations were consistent with MTVR mission requirements. Historical safety data were provided in the development of specifications and test plans for the MTVR. Consideration was also given to system design, production, and fielding to safety, ease of disposal and demilitarization of any hazardous materials. [Ref. 21]

d. TACOM Security Assistance Center (TSAC)

Security covered both classified and unclassified facilities, system hardware and software, as well as documentation, which required protection and special handling procedures. Unclassified technical software or hardware would be subject to restriction in terms of distribution based upon such reasons as "Foreign Information," "Proprietary Equipment or Data," or "Test and Evaluation." The office that had provided these services to PM-MTVR was located at TACOM.

These services were provided on an as-required basis for intelligence-related matters and inquiries and paid for on a reimbursable basis by the Marine Corps. [Ref. 2]

TSAC was TACOM's link to the Defense Security Cooperation Agency (DSCA). This agency promotes security cooperation programs as a means to strengthen defense relationships. DCSA directs Foreign Military Sales (FMS) and supports Direct Commercial Sales as the two main vehicles for the sale of defense articles and services to foreign governments and international organizations. [Ref. 2]

3. USMC Acquisition Organizations

a. MARCORSYSCOM

Located at Quantico, VA, MARCORSYSCOM serves as the Marine Corps acquisition command to satisfy user requirements for the Corps. This command is a Headquarters, Marine Corps agency and is at the same reporting level as the Marine Corps Combat Development Command. Headquarters, Marine Corps reports directly to the Assistant Secretary of the Navy for Research, Development and Acquisition. It consists of multiple support organizations, including the Ground Transportation and Engineer Systems, Combat Equipment and Support Systems, Armor and Fire Support Systems, Infantry Weapon Systems, Marine-Air Ground Task Force (MAGTF), Battlespace Management and Air Defense Systems and Information Systems & Infrastructure. [Ref. 22]

Ground Transportation and Engineering Systems, Product Group 15, consists of PM Engineers, PM Motor Transport, PM Power, and PM Transportability. PM Motor Transport is broken down among the three fleets of light, medium, and heavy trucks. The Marine Corps Light Fleet includes vehicles for payloads up to two tons and consists of HMMWVs, Motorcycles, Interim Fast Attack Vehicle (IFAV), and the Internally Transportable Vehicle (ITV). The Medium Fleet consists of vehicles intended for off-road payloads up to seven tons and 15 tons for hard-surface roads and includes the MTVR and five-ton

truck fleets. The Heavy Fleet vehicles are intended for payloads of up to 12 tons off-road and up to 22 tons on hard-surface roads and include the Logistics Vehicle System and its eventual replacement, the LVS-R. [Refs. 15, 22]

b. USMC Acquisition Center-Quantico, VA

This is the center of the Marine Corps acquisition programs. It is located within Marine Corps Base (MCB) Quantico at Hospital Point, a four-building complex. It opened in October 2000 and is home to the various PMs that constitute MARCORSYSCOM. A central goal of the Marine Corps was to create a "center of acquisition excellence" at Quantico where a variety of Marine Corps acquisition programs would be centered, now including the MTVR Program. By establishing core personnel positions at Quantico for this effort, the Marines took the lead in providing an acquisition center for their unique program needs.

This was demonstrated with the transition of the MTVR Program from the Army to the Marine Corps. It is also being demonstrated with the Marine Corps newest acquisition program, the Logistics Vehicle System Replacement (LVSR). The LVSR is a heavy tactical transport vehicle for bulk liquids, ammunition, ISO containers up to 20 feet in length, tactical bridges, and bulk cargo. This planned future vehicle will also perform wrecker and recovery duties and tow semi-trailers carrying heavy-oversized equipment. [Ref. 22]

4. Future Cooperative Acquisition Efforts

Future cooperative U.S. Army and Marine Corps acquisition efforts include the Army's Future Combat Systems (FCS) and the next-generation Marine Corps Expeditionary Family of Fighting Vehicles (MEFFV). This will replace the existing tank and armored troop carriers. [Ref. 23]

The FCS is a system of systems that will include high-technology command, control and sensor systems; unmanned aerial vehicles; and futuristic long range guns and missile launchers that might be incorporated into a Marine-specific vehicle, yet to be determined. The Army envisions a variety of vehicles

as part of the FCS program, including an infantry carrier vehicle, reconnaissance vehicle, medical vehicle, mortar vehicle and missile-launching vehicle, among others. [Ref. 23]

This effort is significant because it means that the Corps will cooperate and gain knowledge from the Future Combat System, one of the most ambitious vehicle replacement programs in Army history. As Col. Len Blaisol, head of material requirements for Marine Corps Combat Development Command, Quantico, VA, stated:

> This is a major undertaking for us, no doubt about it. It's going to see us applying a lot of resources to this challenge. It's the Marine Corps' way—it's everybody's way—to try and leverage off of the activity that other people have done. We knew the Army was developing FCS, and we knew that . . . would create a lot of opportunities for us to observe what they were doing and to use the technologies that they had developed.

One of the major differences between the two programs is their respective schedules. The Army plans to begin fielding the FCS in 2008, while the Marine Corps MEFFV is not expected to join the fleet until 2024. The concept of operations is different also between that of the Army and Marine Corps. [Ref. 23]

Unlike the Army, the Marines do not have to design a ground force to fight an extended continental ground war. A Marine Expeditionary Unit (MEU) made up of about 2,000 Marines usually stays in the theatre for 90 days or less before it runs out of supplies. The Marines are not equipped for a long, sustained operation. Marine vehicles are likely to have different weight and size requirements than the Army's because the Marines have to fit an entire MEU in the three ships that typically deploy with an amphibious ready group. The FCS would never fit on a three-ship Armed Reconnaissance Group (ARG).

The dissimilarities notwithstanding, both the Army and the Marine Corps will be building combat vehicles of sorts, so there is plenty of new technology that can be shared. An example of common components that might serve as a model for FCS was pioneered in the Joint Strike Fighter program. Although each

service required a different mission, 75 to 80 percent of the design is the same. By sharing common components, all stakeholders realized significant savings. [Ref. 23]

Another joint services acquisition effort currently underway is the High Speed Vessel (HSV)-1, a joint effort of the U.S. Army, U.S. Navy, and the Marine Corps. The name of the vessel itself—"Joint Venture"—reflects its intended joint support. The HSV-1 is an experimental, high-speed vessel capable of speeds of 36 knots (operational) and 48 knots (lightship). The Australian-built, 313-foot, wave-piercing catamaran has been fitted with a helicopter pad and other military-specific modifications. A two-part hydraulically-operated ramp allows rapid loading and unloading of vehicles and troops from the stern or side of the vessel. [Ref. 24]

The HSV-1 is intended to offer higher load capacity than an airplane, but at a much faster speed than the Army's current types of large, ocean-going landing craft. These vessels will eventually replace the U.S. Army's current fleet of General Frank S. Besson, Jr.-class Logistics Support Vessels. [Ref. 25]

The project's partners are exploring the operational implications and warfare opportunities of procuring a modified version of this commercially-available marine technology. Lessons learned to date from this joint service acquisition effort have proven invaluable towards defining future Theatre Support Vessel requirements. The HSV-1 is currently under U.S. Army purview. [Ref. 24]

E. CHAPTER SUMMARY

Chapter II provided a detailed history of joint and multi-service Army and Marine Corps Tactical Wheeled Programs and highlighted two that the Army manages for the Marine Corps. Included as well was a detailed historical review of the Marine Corps MTVR Program, along with a system description. The chapter further discussed how the MTVR Program Office was supported by both

the Army at Warren and the Marine Corps at Quantico and their various matrix organizations. Lastly, Chapter II introduced possible future joint DoD programs and highlighted two of these.

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III. ARMY/MARINE CORPS MULTI-SERVICE TWV ACQUISITION MANAGEMENT

This chapter will examine MTVR Transition from Army Acquisition to Marine Corps, from various perspectives: first, from Marine Corps planning documents; second from the vantage point of Marine Corps liaison personnel; third, from the viewpoints of former Army Product Managers; fourth, from the view of the Oshkosh Truck Corporation, the contractor; and finally, from questionnaires that provide the perspective of various stakeholder personnel in Army, Marine Corps, and contractor positions.

A. MTVR TRANSITION FROM ARMY TO USMC: THE PLAN

1. Rationale

The MTVR transition supported the overall Marine Corps objective of consolidating USMC acquisitions under MARCORSYSCOM program management. As the Army had withdrawn from the harmonized program, the Army PM-MTVR was left managing a Marine Corps unique system, complicating the acquisition by placing Army management and contracting between the Marines and the MTVR contractor.

2. Goals and Challenges

The overall goals of the transition were: to maintain the current schedule; to achieve quality; to achieve continuity; and to gain engineering expertise and experience with production. Several factors posed significant challenges to the planned transition, including: loss of cost and pricing expertise; loss of Science & Technology (S&T) access; loss of experienced matrix support; discontinuity in the “Commanders’ Intent”; various impacts on the contractor; and potential future program impacts in the event that the USMC team could not get up-to-speed quickly;

3. Schedule

Brigadier General Feigley, Commander MARCORSYSCOM, initiated a study effort that would eventually lead the expansion of MARCORSYSCOM into a center for acquisition excellence that would include current and future truck programs. On 23 March 1999, BG Feigley directed the Director, Combat and Support and Logistics Systems to conduct a study to relocate all technical and management efforts from PM-MTVR, PEO-GCSS to APM CSLE-MT, Quantico, VA. CSLE was tasked to establish alternatives using a collaborative process to analyze, weight, and rank order each alternative. The collaboration was conducted on 27 May 1999, and seven options were evaluated. [Ref. 26] (see Appendix D)

The options to be compared were as follows:

- Move the current PM-MTVR Program Office immediately to Quantico, VA.
- Move to Quantico, VA after Milestone III.
- Leave the program office in place at the current TACOM location.
- Move the PM-MTVR Office under the current PM-Family of Medium Tactical Vehicles (FMTV) also located at TACOM.
- Move PM-MTVR Office under the current PM-Light Armored Vehicle (LAV) also located at TACOM.
- Move PM-MTVR Office under the current PM-Heavy Tactical Vehicle (HTV) also located at TACOM.
- Co-locate with Oshkosh Truck Corporation at Oshkosh, WI.

The Marine Corps evaluated these seven options in accordance with their prerogatives as stated in the Memorandum of Agreement (MOA) dated March 1998 between the Commander, Marine Corps System Command and the Program Executive Officer, Ground Combat and Support Systems. The Marine Corps had the authority to direct the program under the policies and procedures set forth in DoD and Department of the Navy acquisition regulations. The Marine Corps was the lead agency per the terms of this MOA. Relocation options did include several that were not entirely within the control of the Marine Corps, such

as transitioning the office to OTC or placing it within existing TACOM PM Offices such as the FMTV. The respective parties would have had to negotiate these relocations.

The seven options were ranked as follows:

- Leave the current PM-MTVR Office as it presently stands.
- Move PM-MTVR under the current PM-FMTV Office.
- Move PM-MTVR to Quantico after Milestone III.
- Move PM-MTVR under PM-HTV.
- Move PM-MTVR under PM-LAV.
- Co-locate with Oshkosh Truck Corporation.
- Move PM-MTVR to Quantico immediately.

On 12 July 1999, BG Feigley received a decision paper that recommended the option to move the PM function to Quantico after Milestone III. This alternative met most of the criteria, including BG Feigley's intent to consolidate acquisition management at MARCORSYSCOM. The final decision was to accept the recommendation to relocate the MTVR office to MARCORSYSCOM in Quantico just after Milestone III. Due to a schedule slip to complete further operational testing, the Milestone III Decision was delayed from December 2000 to April 2001 and the official transition for the Program Office was set for 30 June 2001. The Marine Corps planned to be fully staffed and ready to assume the execution of the program by that date. [Ref. 26]

The decision to move the MTVR program management to Quantico was not a reflection of Marine Corps dissatisfaction with Army management. The Marines were extremely satisfied with the Army's performance. However, the long-range Marine Corps strategy was to centrally locate various USMC acquisition programs in Quantico The alternative chosen by the Marine Corps was deemed the only acceptable alternative to meet BG Feigley's intent of consolidating acquisition management at MARCORSYSCOM.

There were a multitude of issues regarding the upcoming plan to transition the MTVR Program from the Army at TACOM to the USMC at Quantico. Among these were:

- Congressional interest in the de-consolidation of systems in DoD acquisition.
- Hiring and training a new Program Office.
- Loss of co-located, wheeled vehicle experts in the PEO-GCSS and TACOM.
- Loss of historical perspective of program issues in each of the functional areas transferred.
- Close out of multiple financial and supply systems.
- Program costs to hire PMO office personnel to replace those co-located at TACOM.

In addition, Oshkosh Truck expressed concerns, including: 1) uncertainty due to the transition that would increase their financial risk; 2) disputes that might arise that would increase program costs; 3) complexities and lack of precedent for transferring the existing Oshkosh Truck Corporation contracts with TACOM to a Marine Corps contracting activity. [Ref. 26]

Several factors had an impact on the planned transition. Far and away the biggest and most important factor was the MTVR's program schedule. In terms of the program's schedule, various factors and milestones were considered. These included Milestone III preparation on First Article test, trailer, and variant effort impacts and award of the CSLE Service Support contract and its eventual transition.

Manpower factors included the manpower pool available at Quantico and the learning curve required for the transition of the program. Additional factors included MARCORSYSCOM organizational flexibility to manage the automotive/truck commodity.

An additional factor included costs issues that would create Program Objective Memorandum (POM) impacts. Cost factors included the cost of a possible schedule delay due to the transition, as well as additional contract costs.

The transition of the MTVR Product Office from the U.S. Army to the Marine Corps required the transfer of the Army's MTVR contracts with Oshkosh Truck Corporation to the Marines. These costs had to be estimated and figured into the total costs of the transition. Additional cost considerations included the cost of sharing and leveraging required support personnel at Quantico for the MTVR Program, as well as possible relocation costs for any personnel relocating geographically with the program. [Ref. 26]

Contract factors included the impact and the legal issues of changing procurement contracting officer responsibilities and functions from the U.S. Army to the Marine Corps. Possibly new contracts might be needed and certainly new procuring contracting officers must be assigned. Another factor to be considered was the impact on the prime contractor, Oshkosh Truck Corporation. The U.S. Army had a proven track record in various truck acquisition programs extending over a long period of time. What type of relationship would develop with the Marine Corps? What about possible impacts on the numerous sub-contractors involved with the program?

Strategic decision factors included the future working relationship between the Marine Corps and TACOM in particular. The TACOM community was considered the expert, the "Cadillac" in terms of its extensive knowledge and experience in truck acquisition programs. Could it still be counted on to provide this information and expertise to the MTVR Program and additional Marine Corps acquisition programs? Additional strategic considerations included logistics support and the MARCORSYSCOM relationship with MCLB Albany. With the loss of TACOM logistics matrix support in the program transition, would the Marine Corps be able to provide adequate logistical support through MCLB Albany?

Program Management factors that were considered included impact of personnel on existing In-Process Teams (IPT). With the potential loss of team members in the transition, what impact would this have on IPT continuity and decision making ability? Additional factors included personnel morale and

program leadership. Another major consideration was the impact of having a centralized vs. a decentralized project office. Is it easier to manage an entire PM from one location? What effect would office dispersion have on the program?

Program factors affecting the politics of the transition were also considered. These included Congressional political considerations, such as removing from TACOM its role as the tank-automotive developer and acquirer for the various DoD services. TACOM had an excellent reputation in executing current Marine Corps programs, such as the Light Armored Vehicle, so why change now? Why not let TACOM execute the MTVR Program? Why upset critically important Congressional support for DoD acquisition programs? [Ref. 26]

One final factor in the collaborative process had to do with facilities and their impact on the transition. TACOM offered available space to the current PM-MTVR Product Office along with its broad matrix support organizations. This support also included computer equipment and software. Consideration had to be given to the lack of current office space at MCB Quantico for the PM Office, as well as to new office facilities at Hospital Point MCB Quantico. [Ref. 26]

The overall priorities of the transition were as follows:

- Maintaining the current schedule
- Achieving Quality
- Maintaining Continuity
- Engineering Expertise
- Experience with major production program

(See Appendix D for the detailed transition plan and collaboration scoring results)

In conjunction with the collaboration, and in preparation for the MTVR transition to Quantico, an MTVR Transition Steering Committee was established in November 1999. The steering committee consisted of: PM, Transportation

Systems, CSLE, MARCORSYSCOM; Medium Fleet Project Officer (APM), CSLE, MARCORSYSCOM; PM-MTVR, PEO-GCSS (resident at TACOM); and Deputy PM-MTVR, PEO-GCSS (resident at TACOM). [Ref. 19]

This Steering Committee acted on the recommendations of the MTVR Transition IPT comprised of the following: PM-MTVR, PEO GCSS and selected TACOM personnel, along with their MARCORSYSCOM counterparts: Chief Engineer, Chief of Logistics, Test and Evaluation Officer, Procuring Contracting Officer, Legal Representative, Budget Analyst, and Quality Assurance Representative.

Various phases for this committee were established, with Phase 0 originating in November 1999. The committee was tasked with identifying: 1) total transition cost; 2) contract implications; 3) required funds and their availability; 4) required MARCORSYSCOM Government personnel; 5) MARCORSYSCOM required contractor personnel; and 6) commitments associated with staffing actions synchronized to specific dates. [Ref. 19]

This was followed by Phase I, which began in June 2000. The committee was tasked with beginning the "incremental stand up of minimal essential Core Team," including the MTVR Team at MCB Quantico and MCLB Albany, GA. It also was charged with establishing a working interface with PM MTVR, PEO-GCSS counterparts. Estimated completion date of Phase I was set for December 2000.

Phase II was set to begin in January 2001. During this phase, personnel within PEO-GCSS and TACOM continued to manage the MTVR acquisition, but designated personnel at MARCORSYSCOM holding tenure for six-months or more assumed a deputy role. Phase II was planned to be completed by April 2001.

The final phase, Phase III, had PEO-GCSS withdrawing its PM-MTVR team beginning in April 2001, to be completed by October 2001. This marked the planned end of Army personnel working on the MTVR program. [Ref. 19]

The transition planning for the MTVR called for the relocation of the MTVR office to COMMARCORSYSCOM in Quantico, VA shortly after Milestone III. The Milestone III Acquisition Decision Memorandum was signed on 12 April 2001. Consistent with that event, the Production Year Three contract with Oshkosh Truck Corporation initiating full-rate production for the MTVR, was signed 13 April 2001. The MTVR Material Release was approved on 27 April 2001. [Ref. 17]

The official transition for the MTVR Program Office occurred on 30 June 2001. The Marine Corps expected to be fully staffed by that time and ready to take over the execution of the program. In preparation for this transition, the MTVR Base Contract was transferred to USMC MARCORSYSCOM on 31 May 2001. The MTVR Variant Contract was transferred 6 June 2001. [Ref. 19]

4. Analysis of the Transition

The Marine Corps conducted a detailed collaboration in May 1999. It examined seven possible options to the eventual location of their Program Office. These options ranged from leaving the current program office in place at TACOM to moving to Quantico or even to Oshkosh Truck Corporation. Factors most relevant to the Marine Corps and the MTVR were examined. [Ref. 26]

The conclusion drawn from the Marine Corps's own report was that leaving the Program Office at TACOM, PEO-GCSS, with its existing matrix support organization in place, was the highest scoring choice. This choice was the least disruptive to schedule, cost, and performance. (See Appendix D, slide 8, page 9) The weighted average score of 8.99 far exceeded the next best choice of also leaving the PM office at TACOM under the PM-FMTV Program Office (6.53), which came in slightly ahead of the third choice of moving the PM Office to Quantico after Milestone III (6.51). However, all three of these choices were above the threshold of the minimally acceptable 5.5 score required to avoid negative program impacts.

These three choices, along with a fourth—leaving the MTVR Product Office at TACOM and moving it under the PM-LAV Office—were deemed

“acceptable” to the Marine Corps under their collaborative parameters. They based this “acceptability” on the most important factor to be considered in any planned relocation—the program’s schedule—and weighted this factor accordingly. The seven additional factors that were considered and weighted accordingly were manpower, cost, contracts, strategic decisions, program management, politics, and facilities. [Ref. 26]

Each of the four acceptable relocation choices had one or more negatives.

The first choice—leaving the PM Office as it now stood—was the least disruptive to the program schedule and the additional seven program impact factors. The negative impact was that it would not fulfill the Marine Corps requirement to relocate the PM Office to Quantico. [Ref. 26]

The second acceptable relocation choice was leaving the PM Office at TACOM under FMTV. Moving PM-MTVR under FMTV had the same technical and management advantages as leaving the office under the PEO, except for adding another management layer. The same people working on the program now would continue to work the program under this alternative. However, this alternative was unacceptable to the Marine Corps since it would have put the MTVR program under the PM of a then "failing, or perceived failing, program.” The MTVR at one point had been placed under PM-FMTV with disastrous results and, although there has been a PM change in FMTV, there were no assurances that personnel assigned to the MTVR program would not have been diverted to support the FMTV at the expense of the MTVR. [Ref. 26]

The acceptable relocation choice rated fourth was leaving the PM Office at TACOM, but placing it under PM Heavy Tactical Vehicles. This would have placed the MTVR Project Office in with the management of similar vehicles and with a common contractor, Oshkosh Truck Corporation. It would have provided PM-MTVR with a common TACOM matrix support organization, but possibly not the same people who had worked on the program before. However, the Marine

Corps felt that its Product Office would lose program visibility working within another U.S. Army Product Office.

The Marine Corps, therefore, decided that in order to satisfy the Commander's requirement to create a center of acquisition excellence at MCB Quantico, Virginia, their "best" choice would be "acceptable relocation choice number three"—moving the program office to Quantico after Milestone III. The Corps felt that transitioning the program after Milestone III would allow time for the program to stabilize and provide sufficient time to plan, organize, hire, and train the required personnel to execute their program. [Ref. 26]

Several interviews with Program officials highlighted the problem of the timing of the transition. U.S. Army program officials felt that the transition came too soon after the program received Milestone III approval, whereas the Marines thought that it was the opportune time for the transition. Questionnaire responses on the subject clearly showed that all respondents, including the Marines, thought that the Corps was not fully prepared for the transition. They did not have the proper level of support to staff this new PM office adequately. [Ref. 27]

5. Transition Advantages

Transitioning the Program Office to Quantico satisfied the Marine Corps requirement to form a "center of acquisition excellence" within Hospital Point at MCB Quantico. The MTVR Program Office joined the other Marine Corps PMs at a central acquisition center, where each could share program and acquisition experience from within the Marine Corps itself. Up until that point in time, many of the Marine Corps' acquisition programs were based on other services' concepts and designs, and many were largely managed by the other services, as we have seen in its LVS and LAV programs being managed by the U. S. Army at TACOM. In fact, by developing the acquisition center at Hospital Point MCB Quantico, the Marines were able to centralize nearly all their PMs within a four-

building radius at Quantico. Prior to this, the programs that the Marine Corps was managing in-house were scattered all across Quantico, an arrangement that had not been conducive to centralizing their acquisition base. [Ref. 11]

One new Marine Corps acquisition center program that clearly demonstrates the commitment of the Corps to having a "center of acquisition excellence" was the planned MTVR Trailer acquisition program. A total of 5,248 MTVR'S had been fielded as of 21 May 2004. The MTVR Product Office has initiated a new acquisition program of MTVR trailers. At present, the MTVR Truck is still utilizing a variety of trailers left over from the days of the original five-ton truck the MTVR is replacing. The MTVR-Trailer program is an initiative to replace the current M105 Cargo Trailer, M149 Water Buffalo, and the M353 General Purpose Trailer. The new trailers will be capable of augmenting the MTVR's increased mobility without degrading its operational capabilities. This program will develop and field trailers with greater mobility characteristics, while maximizing the commonality of parts across the three trailer platforms. [Ref. 28]

6. Transition Challenges

The Marine Corps, by creating a new center of acquisition excellence, also has created new challenges. It must meet these challenges in order to achieve true acquisition excellence. The Corps must create a pool of talented acquisition professionals who can meet the managerial and technical demands of a Program/Product Office. Like their counterparts whom they are leaving behind at TACOM, the Marines must start to build the years of knowledge and experience required for truck acquisition programs.

Manpower. As was clearly stated in the responses to my questionnaire, even from the Marines themselves, the Marine Corps simply was not as ready for the MTVR Project Office transition as it could have been. The dedicated personnel required to staff a PM office were not in place. This area of concern is discussed in later sections, including the questionnaire findings.

Contracting Issues. One major concern that arose during the MTVR transition involved the existing contracts between the U.S. Army TACOM and Oshkosh Truck Corporation. Transferring the contracts from the Army to the Marines, though legally possible, was very complex. Up until the MTVR transition, a contract transfer between the services was "unfamiliar territory." The contract had to remain in effect. OTC had to have a contract on hand at all times, and two contracts covering the identical requirements, even with different services involved, cannot exist at the same time. The MTVR Production Contracts with Oshkosh Truck Corporation was successfully transitioned from TACOM to the MARCORSYSCOM on 31 May 2001 and 6 June 2001. [Refs. 11, 19]

While transitioning the MTVR Program from the U.S. Army at TACOM, the Marine Corps initially established a separate PM Office at Quantico for MTVR in June 2001. This PM Office merged in October 2002 with PM Transportation to form PM Motor Transport. [Ref. 11] By establishing an operational Product Office at Quantico, the Marine Corps with the Army's cooperation had to continue to provide a positive environment where both service could draw upon the other for expertise and advice on this and future program issues. Each service had something to offer the other. The transition had to be accomplished in such a way that only positive feelings and attitudes would be established and left behind. Future DoD vehicle programs will depend on this cooperative working relationship.

As part of this transition, the Marine Corps not only faced the establishment of an acquisition center at Quantico, but it also faced the need to expand its logistics activity at Marine Corps Logistics Base, Albany, GA. The Marines had been heavily involved on the logistics side since the inception of the MTVR program. However, matrixed TACOM logistics personnel provided the bulk of the logistics support prior to the MTVR transition due to their extensive experience in truck-related programs.

Multi-service or joint programs will encounter many challenges in the area of logistics due to the variety of logistic support structures of the various services. Logistic supportability must be accomplished in a manner that all support requirements are adequately considered, planned, and budgeted from the beginning of the acquisition process. Logistics management objectives of multi-service or joint programs are the efficient performance of Integrated Logistics Support (ILS) planning, analysis and documentations to satisfy essential needs of each of the participating services, and the achievement of established readiness and supportability objectives. [Ref. 29]

By assuming direct management of many of its acquisition programs, the Marine Corps has reduced day-to-day communication with the Army for sharing technical expertise, management approaches, revolutionary ideas for future systems, and common solutions to similar operational challenges. Although there will be future joint programs between the Army and the Marine Corps, new bridges will have to be built to replace past cooperative arrangements.

B. USMC PERSPECTIVE

1. MARCORSYSCOM Project Officer Interviews

a. Major Lee Morton, USMC Project Officer for MTVR from December 1999 to October 2002

In an interview held in October 2000, Major Lee Morton, USMC Project Officer for the MTVR Program, discussed the MTVR accomplishments and challenges. These accomplishments, included the signing of the MTVR Variant contract with OTC, as well as having the program overall on schedule and, in a few areas, ahead of schedule. [Ref. 30]

Major Morton indicated that the most pressing challenge was the delay of the Milestone III decision. He stated that the MCOTEA report indicating that the MTVR was “Operationally Effective, but not Operationally Suitable” was not unexpected; however, he was surprised with the overall ratings. As a result of the report, the Marines decided to extend the Operational Test on the MTVR in an attempt to improve upon the operational performance.

Major Morton also discussed the difficulties and risks associated with running concurrent developmental and operational tests in an attempt to implement acquisition streamlining reforms. Major Morton also pointed out that the delay in the Milestone III decision was the direct result of trying to run operational testing concurrently with developmental testing, an acquisition reform initiative. This left no time to correct deficiencies that were uncovered during DT and incorporate these changes into the MTVR prior to the start of OT. He further commented that the schedule delay was also indirectly compounded by the change in presidential administration in Washington D.C., with its typical delays in completing new appointments to various key DoD positions, among them the Milestone Decision Authority (MDA) for the MTVR.

Major Morton also discussed the then upcoming transition of the program to the Marine Corps and stated that the Marines were simply not as ready as they could be. This was due to administrative delays, such as the delay in recruiting for such key positions as a procurement officer and quality assurance personnel. However, the transition did take place on 30 June 2001.

In dealings with OTC, Major Morton stated that the contractors had done a “real good job.” From his point of view, OTC treated the Marine Corps as a full business partner in the development and manufacture of the MTVR system. The Marines were considered an OTC customer and were treated as such. Many revisions were requested and implemented on the MTVR, and OTC performed in keeping with the good faith that exists between OTC and the Marine Corps, even in the absence of supporting contract language. [Ref. 30]

The biggest challenge to the MTVR program, Morton said, was that the partners were geographically dispersed. “But [with] frequent phone calls, e-mails, and the video teleconferences, combined with everybody wanting to do what’s best for the program, we were able to make things work.” Morton went on to say that the Army provided outstanding support via PEO-GCSS and TACOM.

"Both the Marines and the Army worked closely together with Oshkosh to ensure the MTVR would meet the Marine Corps' demanding requirements," Morton said. "The Army's PM MTVR Office has supported the program as if it were their own. Their assistance in contract and production management has been top-notch. We know the Marine Corps couldn't have gotten this far without the Army's support." [Ref. 30]

b. Mr. Dennis Haag, USMC Liaison Officer to USATACOM from June 1993 to August 1997, Science Applications International Corporation MTVR Contractor August 1997 to May 2000

I interviewed Mr. Dennis Haag, current PEO-CS&CSS G3/G4, on 28 May 04 at TACOM. Mr. Haag is a retired Marine Corps Major who served as the liaison officer at TACOM, serving in PM-MTTR and completing his tour of duty in PM-MTVR prior to his retirement. He continued to work in the PM MTVR Product Office for another two years as a contract employee with Science Application International Corporation, assisting with the program's logistics. [Ref. 31]

Mr. Haag touched on the history of the MTVR Truck, stressing the historical development of the MTVR Truck and why the Marine Corps required a new truck as opposed to rebuilding its existing five-ton truck fleet. Oshkosh Truck Corporation proved to the Marines that in order to meet the requirements specified, it would be cheaper in the long run to develop and build a new truck. These requirements included being able to travel and perform in difficult terrain; being able to transport minimum weight requirements; and being able to tow the M198 Howitzer. The truck had to be C-130 transportable and able to be air lifted by the Marine Corps CH-53 E Helicopter.

Mr. Haag discussed his impression, and that of the Marine Corps, of having the U.S. Army execute the MTVR Program at the outset. He stated that, due to the limited size of the Marine Corps acquisition center, the Marines would never have gotten the required paperwork through in order to start the MTVR acquisition program. The U.S. Army had the right mix of people and the

experience required to get the program moving. He also stated that the PMO and TACOM put the right standards in for the Marines' new truck. The Marine Corps itself historically funded its truck programs at levels below that of its combat vehicles, such as the LAV. Obtaining required funding levels for its truck programs was risky, with only certain "windows of opportunity" available. When funding did become available, the Marines moved to make it happen quickly.

The Marines lacked the staff at MCB Quantico to stand up a new PM Office. The Marine Corps and the U.S. Army had already been executing a joint program at TACOM under PM-MTTR. This office was largely staffed by U.S. Army personnel, along with a couple of Marine Corps liaison officers. The Army terminated its portion of the program, so their staff became available for the new PM-MTVR Product Office. The Marines had an opportunity to make use of the TACOM PM-MTTR Product Office and its staff to initiate the MTVR Program. The Marines have historically exercised fiscal restraint by using "economies of buying"—i.e., let others buy it first, and then "jump in" to purchase it after it has already been developed and tested. In this case, they were jumping into an existing PM Office to share economies of scale.

Mr. Haag stated that the Marines had an excellent impression of the Army's handling of the MTVR Program. They were "well pleased," had a good relationship with the Army, and, above all, had complete "trust" in the Army's handling of their program. The Marines also were well pleased in their dealings with Oshkosh Truck Corporation. OTC, the U.S. Army, and the Marine Corps exercised "true partnering" and, as a result, produced a good product, the MTVR Truck. [Ref. 31]

2. Marine Corps Viewpoint

When it comes to multi-service or joint programs, the Marine Corps has been a willing participant for many years attaching their acquisitions to TACOM and associated PEOs for trucks and combat vehicles. The philosophy of the Marines to exercise fiscal restraint by using "economies of buying"—i.e., let others buy it first, and then jump in to purchase it—has clearly been

demonstrated by the Corps' acquisition programs for many years. The Army has successfully supported or managed the Marines LAV and LVS Product Offices at TACOM for over 20 years.

As documented in the interviews with senior Marine Corps MTVR Product Office personnel and in the responses to my questionnaire (see Appendix K for complete questionnaire), the Marine Corps respondents were very satisfied with the MTVR and the multi-service Army/Marine Corps product office that managed it. Not withstanding the temporary setback of the MCOTEA operation test report, the MTVR Product Office produced for the Marines a vehicle that, from every account, is successful. As one respondent stated, "The Marines got their program dollar's worth in the MTVR." Another stated, "Overall, the perception is that the truck is a new awesome capability."

C. U.S. ARMY PERSPECTIVE

1. Army Product Manager Interviews

a. LTC George Schneller, Product Manager for the MTVR from September 1996 to July 1999

In December 2000, I interviewed LTC George Schneller, the former Product Manager for PM-MTTR. LTC Schneller was the Product Manager immediately preceding LTC Walter Raymond. LTC Schneller discussed the advantages of having a joint or multi-service Product Office shared by the Army and the Marine Corps. He stated that, for the Army, it had provided an opportunity for the office to keep going, especially after the completion of the ESP Program and the subsequent transition of that program from the PEO to TACOM. He also felt that if the Army should ever decide to change course and purchase the MTVR Truck, they would be ready to go. [Ref. 32]

There are additional advantages, as well, in having a joint Product Office. Each of the services can share in the costs and reap the benefits of combining their requirements into a joint Product Office. Savings occur through the use of joint designs, testing, quality assurance, scheduling, and production.

LTC Schneller went on to state that he felt the Marine Corps definitely benefited "big time" in the current arrangement of a joint Product Office. Its program was able to leverage the truck knowledge base that existed at TACOM. It also gained the expertise of the automotive industry in the Detroit area. The PEO structure that PM-MTVR operated under provided the key leadership over the program that was especially critical in the early days of the program. The Project Office was already set up and ready to go. The Marines also benefited from TACOM's acquisition know-how and the use of the acquisition center to place a contract for the MTVR. The Corps also was able to use TACOM's legal expertise, its safety office, and the infrastructure that having a multi-service office at TACOM had to offer.

A major contribution that came from earlier experience in Army-managed programs was the valuable knowledge of how to manage the corrosion prevention/control program. The FMTV Program Office started this effort, built on it, and accelerated the testing that eventually led to the industry's standard 22-year corrosion requirement now required in DoD vehicles. [Ref. 32]

b. LTC Walt Raymond, Product Manager for the MTVR from July 1999 to June 2001

I interviewed LTC Walt Raymond in December 2000. He recalled the major program accomplishments he had seen. The first accomplishment he cited was the 17 January 2000 MTVR rollout ceremony at Oshkosh Truck Corporation, attended by various corporate and Government officials. Other accomplishments included successful completion of the first article test and the production verification test. [Ref. 17]

In dealing with the Marine Corps, LTC Raymond stated that the Marines stressed at every point that "this was a Marine Corps program funded with Marine Corps dollars." While the contract was between OTC and the U.S. Army, all efforts were on behalf of the Marine Corps. As such, this program presented him with an unusual operating arrangement.

Regarding relationships with the contractor, OTC, LTC Raymond noted that they were of outstanding character, team players, and a company very much committed to the concept of teaming. They made an honest attempt to accommodate the Marine Corps and the Army demands, as well as their own unique reporting requirements.

Like nearly all programs, the MTVR had its challenges, as well. In an attempt to reduce the program schedule, the Developmental and Operational testing programs were combined. A problem arose when the Marine Corps' operational evaluation agency determined that the MTVR was Operationally Effective, but not Operationally Suitable. In order to meet the Milestone III Decision, this would have to be (and eventually was) overcome.

The major disappointment for the program (at the time of this interview) was the lack of a Milestone III decision. Despite the good intentions of implementing schedule reduction, having a combined Developmental and Operational test program had created problems. [Milestone III Acquisition Decision Memorandum was signed 12 April 2001, about six months after this interview.]

The Marine Corps' acquisition team required to be ready and fully operational by 1 July 2001 did not meet that date. The recruiting effort for the varied acquisition positions needed to support the transition was behind schedule and the team was not available. Valuable transition time between the Army and Marine Corps PM organizations had been lost. [Ref. 17]

I conducted a follow-up interview with LTC (USA, Ret.), Raymond on 27 May 2004, held at TACOM. Mr. Raymond is currently employed by Science Applications International Corporation as Director, Program Development. Immediately prior to his current position, he was International Sales Manager for Oshkosh Truck Corporation, a position he held for two years. [Ref. 17]

With regard to the Marine Corps' transition of the MTVR Program to MCB Quantico, Mr. Raymond felt that the decision had been made at a very high level within the Marine Corps and the MTVR move simply supported their new strategy for acquisition. It was just a matter of executing the transition. He stated that, as the Product Manager for the MTVR Product Office, he and a senior team of PEO-GCSS Officials had visited MCB Quantico in the Fall of 1999 to brief Mr. Lawrence P. Kreitzer, Executive Director, Marine Corps Systems Command. The purpose of the briefing was to convince the Marine Corps to delay the transition of the MTVR program for at least another year beyond the Milestone III decision, and longer if possible. This would have pushed the transition back to June 2002 at the earliest. [Ref. 17]

Mr. Raymond felt that the Marine Corps representatives listened respectfully to the Army's briefing, but that they had already made up their mind as to the date of the transition and were committed to making it a reality. The briefing pointed out the fact that transitioning the program shortly after Milestone III was not the best time to do it. Typically with truck programs, once Milestone III is approved, the PMO suffers about a year of turbulence as equipment deficiencies are corrected and fielding is initiated. This period requires a great deal of the Project Office's time and skillful handling to make required adjustments. He felt that the program suffered delays by transitioning so soon after Milestone III.

The transition itself was quite a challenge for the Product Manager. Coming in as the new PM for MTVR, Mr. Raymond had been faced with the challenges of executing the program, knowing that it was being transitioned to the Marine Corps. He had to try to convince the Marines to delay the transition and, at the same time, keep up the morale of his personnel so that they could properly execute their programs. He viewed his leadership role to include keeping his employees informed; letting them know that he and the Army were actively trying to keep the MTVR program at TACOM; having regular two-way

communications with his staff; and letting them know that he was actively working to help them secure new positions if and when the program transitioned. [Ref. 17]

Mr. Raymond felt that the Marines were not fully prepared for the transition. The Marine Corps was not used to managing and executing on its own such a large and complex program. The Corps had depended on the other DoD services, especially the U.S. Army, to take the lead in its acquisition programs. However, he felt that the transition itself was professionally executed due to the commitment of all the involved parties to keep the program going.

Mr. Raymond considered it a privilege to have been a PM in a multi-service Product Office. It had been a unique experience that offered new challenges, and it provided insight into the operations of additional DoD services, which, for the MTVR included not only the Marine Corps, but also the Navy. He characterized the experience as “professionally, a rewarding experience.”

Mr. Raymond stated that, prior to the transition, the working relationship among the U.S. Army, the Marine Corps, and OTC had been excellent and an example of “true partnering” in a DoD acquisition. The MTVR was a model acquisition program. However, after the transition of the program to the Marines and the placement of new Marine Corps contracting personnel and support staff, the work environment deteriorated. OTC felt the `transition of the program from the U.S. Army to the Marine Corps was “rough.” Raymond felt that the work environment never regained its past success. [Ref. 17]

2. Collective Viewpoint of Army Personnel

The Army community at TACOM clearly believed that keeping the MTVR Product Office at TACOM was the best option. Under the PEO-GCSS vision statement, the Marine Corps was provided a flexible and integrated organization of highly trained and motivated military and civilian acquisition experts committed to ensuring that the soldier [or in the case of MTVR, “the Marine”] was equipped with the world’s finest Ground Combat and Support Systems. The PEO and

TACOM had the required personnel with the experience to execute the program fully. The Army had been successfully executing the Marine Corps' Light Armored Vehicle and Logistics Vehicle System Programs at TACOM for many years. The Product Office was highly regarded and recognized by DoD and had received several awards, including the David Packard Award for best defense acquisition processes. Feedback obtained from my questionnaire and several interviews that I conducted with U.S. Army MTVR Product Office personnel clearly showed the Army's satisfaction with the experience it had gained from managing the MTVR program. The MTVR Program provided an opportunity for TACOM-based U.S. Army personnel to continue to work in a truck-related program after terminating their Army truck program. In other words, PEO-GCSS was able to keep its Product Office employees employed. This provided new opportunities to gain valuable experience by working on a new truck program for the Marines. In interviews, the former Army Product Managers clearly stated that the MTVR Program was a valuable experience for both the Marines and the Army. The Marine Corps gained by utilizing a Product Office that had abundant talent and experience in truck acquisition programs. The MTVR program was able to leverage the critical truck knowledge base that existed at TACOM. The Marines were able to jump into an existing Product Office and keep an Army Product Office operating even after the Army had terminated their program.

The question asked on my questionnaire "Do you feel that the Army provided the "best value, best alternative" at the start of the MTVR Program until the Marine Corps could provide its own MTVR Product Office?" The answer was a unanimous yes. All felt that the Army provided outstanding support for the MTVR Program. [Ref. 27]

D. OSHKOSH TRUCK CORPORATION PERSPECTIVE

1. Mr. Steve Zinke, MTVR Program Director Interview at OTC

I attended the MTVR IPR at Oshkosh Truck Corporation (OTC) on 23-25 October 2000 and interviewed the MTVR Program Director for OTC, Mr. Steve Zinke. Mr. Zinke's background is in engineering. He had been working on the

MTVR Program since 1996 and was OTC's MTVR Program Director. In comparing the MTVR Program with other Army Programs that he had worked on during his 20 years at OTC, Zinke said that he and OTC were committed to making this program work. Unlike other Army programs where the contractor had just the Army to contend with, the MTVR Program had the Army and the Marines. All three principal groups—OTC, Army, and the Marines—had to work in concert to make this program successful. Through the use of partnering, each had to be committed to the others in the sharing of ideas, test results, plans, and other aspects. OTC would go the extra mile in order to make this happen. As an example, the Oshkosh, when faced with a contractual Engineering Change Proposal (ECP), "through the goodness of their heart," had made the required changes without additional cost to the Government. [Ref. 33]

OTC was aware that, even though the contractual relationship existed between OTC and the Army at TACOM, the ultimate customer was the Marines. The Marines Corps was to eventually take over the program and take delivery of the finished product. The transition program that was being planned between the Army and the Marines was something new and unique for OTC. Zinke considered it an education process for OTC.

Zinke commented on the Marine Corps' approach to the program. He felt that TACOM and the PEO had a more methodical approach to solving problems, while the Marines exhibited a more "roll up your sleeves and let's get the job done" approach. He also felt that the Marines were thin in terms of personnel directly working on the program. [Ref. 33]

2. Summary of Interviews

In interviews conducted with U.S. Army, Marine Corps, and OTC officials involved in the MTVR program, the unifying word used by all three groups was "partnering." Everybody involved with the MTVR Project Office worked together as a team to make the MTVR a reality. Everyone wanted this to be the best truck possible, to do everything that needed to be done, and do it at the least possible cost.

This recurring theme was clearly shown in all the interviews that I had conducted, and also reflected in the responses to my questionnaire, below. Naturally, the Program encountered some problems, as one would expect in a new truck program. What wasn't expected, however, was how well all the team players worked together to resolve these problems. As one program member commented, Oshkosh Truck took the idea of true "partnering" to "the max." OTC made an honest attempt to accommodate both the Army and Marine Corps in producing the MTVR Truck and, through the use of "partnering," made it a reality.

E. PROGRAM TRANSITION QUESTIONNAIRE

In order to obtain a wider database of information regarding the MTVR Program, especially its transition from the U.S. Army to the Marine Corps, I prepared a formal questionnaire that asked a variety of questions pertaining to the MTVR Program. Questions were arranged in several groups, including: transitioning the MTVR Program from the Army to the Marine Corps; Marine Corps' impression of the MTVR; Marine Corps' impression of the U.S. Army's Product Office; Marine Corps' impression of Oshkosh Truck Corporation; Marine Corps acquisition center at Hospital Point. Each category contained several questions, and participants answered a total of 27 questions. All participants were asked the same questions, even those that might not apply to them. [Ref. 27] (see Appendix K for the complete questionnaire).

I attempted to contact both current and past members of the MTVR Product Office. I was interested in the opinions of those who worked originally in the Army-managed MTVR Product Office, as well as those that were or currently are working in the Marine Corps-managed MTVR Product Office. It would have been interesting to question individuals who had transitioned with the program from TACOM to MCB Quantico to gain their impressions of working at both Project Office locations. However, no MTVR personnel did, in fact, transfer with the program.

In May 2004, I emailed the questionnaire to more than 30 Army and Marine Corps MTVR Product Office participants and received 20-plus responses. In a few cases, I followed up the responses with phone interviews in order to clarify some responses and obtain additional program information.

The individuals that I contacted at the Marine Corps included Mr. Paul Neubert, Medium Fleet Team Leader of PM Motor Transport. He has been involved with the MTVR Program since its inception in the 1990s, actively attending IPRs when the Product Office was still located at TACOM. He has worked on the program continuously since the transition to the Marine Corps MCB Quantico. [Ref. 27]

The additional Marine Corps MTVR Product Office personnel who were contacted, and who responded, included Major Mike Loos (Ret.), who served as the USMC liaison officer in the MTVR Product Office at TACOM and who remained with the program until he retired from the active military when the program transitioned to MCB Quantico. Two additional people who currently work in logistics and engineering at MCB Quantico for the MTVR program also responded.

On the U.S. Army side, I contacted and received responses from the former MTVR Product Managers, along with those working in logistics and engineering on the program. The questionnaire responses supplemented the detailed interviews with two of the former U.S. Army product managers for the MTVR program while it was at TACOM.

Below are a series of key questions from the questionnaire and a digest of the responses.

Question: “What was your impression of the collaboration that the Marine Corps conducted for the MTVR Transition?” One Marine responded: “It was just used to validate the transition of the program—it was already a done deal.” Additional Marine Corps respondents felt that it was a professional tool to determine the validity of any planned transition; however, another Marine Corps

respondent stated that it “was a waste of time since the recommendations were ignored.” The Army respondents were concerned with the collaborative process itself and not surprised with the actual results, which indicted that leaving the MTVR program at TACOM was the first, best choice. Most felt that the decision had already been made at higher levels and the collaboration was an attempt to justify that decision. [Ref. 27]

Question: “What was your feeling about transitioning the program at that point in time [June, 2001]?” This was just a few months after obtaining Milestone III approval for the MTVR program. Responses varied, from stating that the program should not have transitioned at all from the Army, to stating that it was the most appropriate time to make the transition. However, just about all respondents stated that the Marine Corps had not been fully prepared for the transition. Even the Team Leader for PM Motor Transport at MCB Quantico stated that the transition could have been better executed if they had had more personnel dedicated to the program at Quantico. [Ref. 27]

Question: “Did you feel that the Marine Corps was ready at that point in the program for the transition?” The Marine responses varied from a short and to the point “yes” to “at the time of the transition it seemed that the Marine Corps team was not complete. This was due to slow hiring actions for permanent employees. Unlike the Army (TACOM), the Marines did not have a matrix of employees from which to quickly fill positions.” The Army responses were consistent in that they felt the Marine Corps was not ready to transition the program, noting that the Marines simply did not have the support staff in place to take on the MTVR program at that particular time. [Ref. 27]

One Marine Corps respondent stated on the questionnaire:

> [T]he transition seemed to have happened too soon. I felt our PM was fully accepting of the transition and believed it was definitely the best route to take; initially, this action did leave the remaining Marine Corps team members in a very stressful (overworked)

> environment. Manpower actions were slow in coming, turnover was basically non-existent, so all newcomers had to do just what they could do until a nitch could be created for them. [Ref. 27]

Question: "Do you feel that the Army provided the best value, best alternative at the start of the MTVR Program until the Marine Corps could provide its own MTVR Product Office?" The respondents felt unanimously that the U.S. Army did an outstanding job in executing the MTVR program. This was fully supported by both Army and Marine Corps respondents. One Marine responded that, "The Army had all the corporate knowledge for military truck programs. There was no alternative." [Ref. 27]

Question: "What has been the Marine Corp's overall impression of the MTVR truck?" All respondents, both Marine Corps and the U.S. Army, responded that the truck was outstanding. It had done everything that it was supposed to do. The Marines had received "best value" for their program dollars. One Marine Corps respondent stated that, "Overall, the perception is that the truck is a new awesome capability." [Ref. 27]

Question: "What had been the overall Marine Corps impression of Oshkosh Truck Corporation?" The Marine Corps responded with favorable comments, stating that "they are a professional organization and have built a good truck" for the Marines. Another response was: "The Marine Corps understands that OTC is a business that makes business decisions. In general, they have been responsive for technical and logistics issues but tend to be slow with contract negotiations." The U.S. Army respondents indicated that they were quite favorably impressed with OTC and that OTC displayed a true sense of partnering. [Ref. 27]

F. CHAPTER SUMMARY

Chapter III provided background on the joint DoD Program Office for the Marine Corps MTVR Program, including the collaboration that the Marine Corps prepared for the transition of the MTVR Program Office from the Army at TACOM to the Marine Corps at Quantico. It provided insights from several interviews with

both Marine Corps and U.S. Army officials of the MTVR Project Office. It also provided insight from a key contractor manager. The chapter also offered additional insights from a detailed MTVR Program Transition Questionnaire that was sent to both the Marine Corps and Army personnel, asking program-related questions.

IV. CONCLUSION

A. RESEARCH QUESTIONS AND ANSWERS

The primary research question was: What impact did Army management of the MTVR Program have on the Marine Corps future acquisition methodology?

The Marine Corps' strategy for acquisition of military systems changed in the late 1990s from buying their acquisition support from the other DoD services to standing up their own acquisition center-of-excellence. Taking over the "hands-on" management of MTVR acquisition was not due to unhappiness with the Army's acquisition support. The move was a logical outcome of the USMC's pursuit of a larger strategy to stand up a uniquely Marine Corps acquisition capability.

1. Subsidiary Research Questions

- Was the transition of the MTVR program from the Army to the Marine Corps adequately studied and planned?

The Marine Corps examined various alternatives to the possible relocation of the Program Office for the MTVR. A collaborative meeting was conducted on 27 May 1999, which evaluated seven possible options. Those ranged from leaving the current program office in place at TACOM to moving it immediately to Quantico, Virginia. Various factors were considered in examining the seven possible alternatives, with appropriate scores being assigned to the seven alternatives. Weighted means and averages were used which eventually led to the order ranking of the alternatives.

The Marine Corps conducted an orderly study to evaluate the feasibility and impacts of moving the MTVR from Army management in Warren, MI to the USMC center of acquisition excellence at Quantico, VA in support of its new acquisition strategy. Marine and Army acquisition managers set up a team structure to oversee, plan, and execute the move of MTVR acquisition management from Warren, MI to Quantico, VA with all the required associated details.

- How did the decision to transition the MTVR Program from the U.S. Army to the Marine Corps impact the program?

Based on the Marine Corps strategy for acquisition and the MTVR study, the Marines decided that the proposed move of the MTVR Product Office did not present a major risk to the MTVR fielding schedule. The move of MTVR management was accomplished with only minor impact to the program's schedule, even though there were difficulties along the way. The MTVR production contracts transitioned on 31 May and 6 June 2001. MTVR management transitioned to the Marine Corps at Quantico from the Army at TACOM on 30 June 2001 and the Army product office in Warren, MI that had managed the MTVR program stood down.

- What impact will the establishment of the Marine Corps new acquisition center at Quantico have on future joint or multi-service acquisitions?

The Marine Corps action to stand up their own center of acquisition excellence at Quantico, VA may create barriers to future joint or multi-service acquisitions. The manner in which this reorganization of acquisition will interface with JCIDS and precisely the way it will affect relationships with defense contractors is still unknown.

B. THESIS CONCLUSION

The MTVR is a unique Army/Marine Corps ACAT II program. The overall program goal was to obtain a cost-effective, state-of-the-art vehicle to replace the Marine Corps' Medium Tactical Truck. The Product Office was a result of a Congressional directive that required the "harmonization" of the truck acquisition programs of both the Army and the Marine Corps. This was accomplished by a rather distinctive multi-service Product Office administered by both the Army, and the Marine Corps. Despite the obvious impediments that this arrangement could have encountered, the professional staff and outstanding support and dedication that each service has offered ensured that the MTVR Program met its primary objective of providing the best possible truck to the Marine Corps. The MTVR Program Management Team, made up of the Army, the Marine Corps, and

Oshkosh Truck Corporation, excelled in developing and manufacturing a state-of-the-art 21st- Century truck. In support of the USMC strategy for standing up its own center of acquisition excellence, the MTVR transitioned following the April 2001 Milestone III Decision. The Army and Marine Corps accomplished this action cooperatively in accordance with the published transition plan.

C. RECOMMENDATIONS

Managing multi-service programs is a huge and challenging undertaking for professionals in the acquisition field. Effective multi-service program management necessitates the understanding of each service's missions and operational needs, as well as the differences in their acquisition approaches. Amalgamating the system acquisition needs of two or more military services under the charter of a multi-service program office and successfully delivering the full system capability on time and within the budget requires exceptional managerial skills.

The lessons learned by the Marine Corps should be carefully recorded to support future shifts of other Marine Corps programs to the Marine Corps center of acquisition excellence.

Thought should be given to the design of pre-acquisition and acquisition organizational structures for multi-service or joint ground mobility systems, consistent with the addition of the Marine Corps center of acquisition excellence. New teaming arrangements will need to involve the new player. Obviously, older formats are no longer applicable.

The Future Combat System (FCS) may serve as a useful vehicle to study the effects of the new center-of-excellence on partnering for multi-service acquisition.

D. LIMITATIONS OF THE RESEARCH

Although most individuals and organizations contacted by the author either by phone and email responded reasonably well, a site visit to MCB Quantico to interview current PM MTVR Product Office officials would have

helped immensely. My repeated requests for a visit, and even for some phone interviews, were declined. This was due, in part, to the Marine Corps' involvement in the War in Iraq. Updated program data would have been interesting and informative to add to my thesis. However, I was limited to what was made available to me in the preparation of this thesis.

Also, the MTVR is a relatively new truck. It is currently in production and many are just being fielded. Despite an exhaustive search, there was not an abundant source of printed articles and materials that analyzed the MTVR Truck. Much of the information that I was able to obtain was through program briefings as well as questionnaires and personal interviews with program officials.

APPENDIX A. HISTORY OF TACOM

TACOM traces its beginnings to the buildup for U.S. involvement in World War II. The Detroit Tank Arsenal began on 15 August 1940, when Chrysler Corporation and the U.S. Army signed a contract to build a $20 million plant and fill an initial order of one thousand tanks at $33,500 apiece.

Chrysler promised to roll the first tank off the production line in twelve months, but it took even less time than that. The first tank appeared on 24 April 1941. During the World War II years, that production line would generate another 25,058 tanks.

Tank-automotive management moved to Detroit shortly after the tank plant was built. Before World War II, two technical services had managed the Army's tank-automotive items: Ordnance managed tracked and Ordnance-unique vehicles, while Quartermaster controlled wheeled vehicles. In order to meet World War II's increasing demands, the Army consolidated the tasks of tank-automotive management development, procurement, and maintenance under the control of the Office, Chief of Ordnance (OCO).In September 1942, Ordnance established the Tank-Automotive Center (T-AC) in Detroit. Because T-AC replicated the structure of the OCO in Washington, the Army redesigned it as the Office, Chief of Ordnance-Detroit (OCO-D), on 1 January 1944.

During the post-war demobilization, the Army dismantled OCO-D on 20 March 1946 and transferred its personnel and functions to the Detroit Tank Arsenal facilities. However, the Arsenal's peacetime missions pilot tank development and rebuild programs expanded again when war broke out in Korea. Consequently, a newly-formed Ordnance Tank-Automotive Center (OTAC), replicating the earlier OCO-D, began operations at the Detroit Arsenal on 24 October 1950. The Army elevated OTAC to command level on 1 May 1954, a status it retained until the Army reorganization of 1962.

In order to rationalize management of the logistics system, the Army created the U.S. Army Materiel Command (AMC) in May 1962. The Army established seven major subordinate commands under AMC control, and together they assumed many of the research, development, and supply tasks performed by the Ordnance Corps and the other Technical Services. As a consequence of this reorganization, OTAC's functions were reduced. The newly-created U.S. Army Weapons Command (WECOM) in Rock Island, Illinois, took control of the combat vehicle program. At the same time OTAC, now renamed the U.S. Army Tank-Automotive Center (ATAC), came under the control of another new command, the U.S. Army Mobility Command (MOCOM), established in Detroit in December 1962. MOCOM had responsibility for a variety of unrelated equipment: locomotives and rolling stock, fixed-wing and rotary aircraft, and general purpose and tactical vehicles.

In January 1967, the Army dissolved MOCOM; one month later, ATAC was elevated to a major subordinate command, with the new title “U.S. Army Tank-Automotive Command” (TACOM). With this new status, TACOM gradually acquired control over other tank-automotive systems. Later that month, WECOM transferred the armored personnel carrier mission to TACOM. In June 1972, TACOM assumed from WECOM the responsibility for the tank management program. One exception was management of the Abrams tank, which, similar to the Bradley fighting vehicle system, was under AMC project management during the development and initial production phase. (WECOM'S successor, the U.S. Army Armament, Munitions, and Chemical Command, retained overall responsibility for self-propelled artillery systems until TACOM took operational control of these functions on 1 July 1994.)

In January 1976, the Army Materiel Acquisition Review Committee (AMARC) initiated some significant changes in commodity command structure. AMARC hoped to elevate the status of research and development (R&D) by creating distinct R&D commands. On 1 July 1976, TACOM's R&D division became the U.S. Army Tank-Automotive Research and Development Command

(TARADCOM) and the rest of TACOM became the U.S. Army Tank-Automotive Materiel Readiness Command (TARCOM). AMARC redesigned AMC the U.S. Army Materiel Development and Readiness Command (DARCOM) in order to highlight these dual functions of commodity management. During the next four years, TARADCOM strove to improve tank-automotive research and development activities, while TARCOM directed its attention to support of fielded systems.

By 1980, both commands faced manpower shortages, and on 1 October 1980, the two commands were reunited as TACOM. Less than three years later, on 17 June 1983, TACOM's responsibilities expanded when DARCOM transferred the Abrams tank series and Bradley fighting vehicle system to TACOM program managership. By incorporating these technologically advanced systems under its command flag, TACOM became the one central point for all of the Army's tank-automotive activities, a focus unaltered when DARCOM reverted to its AMC designation on 1 August 1984.

For a few years, TACOM's missions and organization structure remained relatively stable. However, another period of change commenced in 1987. Specifically, Army-wide implementation of the Program Executive Officer (PEO) concept resulted in TACOM's transferring research, development, and acquisition management responsibilities for many major systems to two tenant organizations provisionally formed on 1 May 1987. The Bradley fighting vehicle system, the high-mobility multi-purpose wheeled vehicle, and the Abrams tank series are a few of the systems controlled by the PEOs. Under the PEO arrangement, TACOM provided technical and functional support for those systems assigned to the two PEOs. In 1989, DA directed that the PEOs transfer back to TACOM several systems, including the PMs for the M60 and M113 family of vehicles, the M9 armored combat earthmover, and the field artillery ammunition support vehicle.

In the early 1990s, the two PEOs collocated at TACOM underwent changes affecting acquisition and mission. On 11 January 1990, DA implemented Management Review recommendations pertaining to financial management. As a result, a streamlined acquisition process for major systems allowed a direct flow of funding from DA through the PEOs to the Program Managers. TACOM continued to provide support services to the PEOs, whose staff remained small and dependent upon the command. In addition, the PEO for Heavy Force Modernization became renamed the PEO for Armored Systems Modernization. The name change more appropriately reflected that organization's mission to upgrade both the light and heavy armored systems needed for a more mobile and deployable force.

TACOM changed its structure slightly in late 1991, synthesizing major directorates around the business center concept. Major organizations undergoing structural or name changes included the Integrated Materiel Management Center (formerly Procurement and Readiness), the Acquisition Center (formerly the Directorate for Procurement and Production), the Comptroller (formerly the Directorate for Resource Management), and the Human Resources Center (formerly the Directorate for Civilian Personnel).

FY 94 saw the realignment in place of the material management functions of the U.S. Army Armament, Munitions, and Chemical Command (AMCCOM), Rock Island, Illinois, with TACOM. This was directed in the 1993 Defense Base Realignment and Closure (BRAC). The BRAC report also directed that TACOM acquire the supply, bridging, counter mobility, water purification, and fuel and lubricant business areas of the U.S. Army Belvoir Research, Development, and Engineering Center at Fort Belvoir, Virginia. In addition to BRAC recommendations, AMC directed the in-place realignment of the U.S. Armament Research, Development, and Engineering Center (ARDEC) at Picatinny Arsenal, New Jersey, from AMCCOM to TACOM. TACOM took operational control of these functions on 1 July 1994.

The U.S. Army Tank-Automotive Command was designated the U.S. Army Tank-automotive and Armaments Command (TACOM) on 1 October 1994.The new name coincided with TACOM's full assumption of command and control of missions gained from BRAC 93 recommendations and AMC direction.

On 1 October 1998, TACOM took operational control of two depots: Anniston Army Depot and Red River Army Depot. Beginning on 1 October 1999, the command took take full command and control of these depots. [Ref. 2]

A. TACOM TRUCK DEVELOPMENTS

The Army is the largest owner of medium and heavy trucks with over 250,000 vehicles within the Government. The vast majority of these U.S. Army trucks have been developed, acquired, and maintained by some Product Office, at one time or another, at TACOM. The Army spends approximately $2 billion per year operating and maintaining its truck fleet. Early on, DOD and DA realized that a national partnering initiative for trucks, focusing on increased fuel efficiency, safety, and affordability of medium and heavy truck, would greatly benefit both the military and the private sectors. [Ref. 13]

On April 21, 2000, Vice President Al Gore, along with various Government officials and key industry partners, announced the formation of the 21st Century Truck Initiative. This initiative represents an extraordinary partnership between the U.S. Departments of Defense (DoD), Army (DA), Energy (DoE), and Transportation (DoT); the Environmental Protection Agency (EPA); and the U.S. Trucking industry. The purpose is to develop, demonstrate, and integrate commercially viable advanced technologies for the Nation’s military and commercial truck fleets in the 21st century.

The National Automotive Center (NAC), located within the U.S. Army Tank-automotive and Armaments Command’s Tank Automotive Research, Development and Engineering Center (TACOM-TARDEC) fostered this initiative at the request of senior DoD and DA leadership. The initiative’s mission is to

improve fuel efficiency, increase safety, reduce ownership and operating costs, reduce emissions, and enhance the performance of military and commercial trucks. [Ref. 13]

In order for the United States to remain in a position of economic and military superiority, the Nation must continue to improve the efficiency of all processes, including transportation services. With the advent of the 21st century, our Nation faces huge challenges in the areas of energy consumption, affordability, safety, performance, and environmental protection. The development of better-performing, more fuel-efficient, safer, more affordable, and cleaner vehicles is a formidable yet necessary goal for both military and commercial truck fleet owners and operators.

Trucks are the critical lifeline for the movement of supplies and equipment, and their importance cannot be overstated. Army trucks are key to providing logistical support to those involved in any military operation. Fuel is by far the greatest logistical challenge, comprising 70 percent of the bulk tonnage shipped in support of military deployments. Trucks also represent a critical link in the Nation's economy and are, therefore, a vital national resource. Nearly 85 percent of the U.S. commercial freight, by dollar value, is transported via truck, and data collected over the past 35 years indicate a direct correlation between the Nation's economic performance and the efficiency of the trucking industry. In other words, the requirement for rapid and economic transportation of supplies remains critical for both the military and the Nation.

Tasked by the Army, the NAC developed a 21st Century Truck Initiative Plan that was approved by Paul J. Hoeper, Assistant Secretary of the Army for Acquisition, Logistics and Technology, in September 1998. The plan served as a catalyst for the national initiative. The NAC, established in 1992, is DoD's and the Army's focal point for partnering with industry to share costs in the development and demonstration of automotive and truck technologies. It is therefore, the logical choice to establish and play a central role in managing a partnership between the trucking industry and the Government. [Ref. 13]

One of NAC's vehicles was unveiled on March 5, 2001, at the Society of Automotive Engineers International World Congress and Exhibition held in Detroit, MI. Called the "Smart, Intelligent Systems, Intelligent Vehicle" (Smar Truck) and looking like a James Bond futuristic vehicle, the Smar Truck capabilities include:- Headlights that will detect and disorient the enemy.- Electrified door handles to keep enemies at bay.- Ability to obscure the line of pursuers' vision with a smoke screen.- Shoots pepper spray.- Protects occupants with bullet proof glass. The Smar Truck is a test bed for NAC and TACOM with the hopes that it will keep these organizations on the cutting edge of commercial and military technology. [Ref. 13]

Both the Army and the Nation will benefit. As the Army transforms into a lighter, more mobile, more fuel-efficient force, the rapid integration of advanced commercially viable technologies into military trucks, such as the Marine Corps Medium Tactical Vehicle Replacement (MTVR) Truck, will be enhanced. Advancements in technologies such as hybrid-electric propulsion are an eagerly awaited result of the 21st-Century Truck Initiative. Advancements such as these are the foundation to improve combat effectiveness through enhancements in acceleration and stealth capability and reductions in fuel usage and stand-alone power-generation equipment.

As efforts progress under the 21st-Century Truck Initiative, research and development will result in the integration of commercially viable advanced technologies into commercial trucks. In addition, the integration of more common components between Government and military fleets will result in reduced logistical burdens and economies of scale. DoD, DA, DoE, DoT, and the EPA will build on existing R&D investments. Through cooperative efforts, industry is expected to rapidly and continuously transition these R&D achievements into production vehicles. The 21st-Century Truck Initiative is geared to achieving the following ten-year research objectives:

- Improve fuel efficiency of heavy-duty trucks and buses. Significantly improve miles-per-gallon usage by the year 2010.
- Reduce emissions. Exceed standards for oxides of nitrogen, particulate matter, carbon monoxide, and hydrocarbons by the year 2010.
- Enhance safety. Meet or exceed the motor carrier safety goal of reducing fatalities by half within ten years.
- Improve the crash friendliness of trucks for other road users.
- Conduct operation road tests of truck safety improvement components.
- Enhance affordability.
- Maintain or enhance performance.

Government and industry will coordinate R&D efforts and equally share costs for this ten-year initiative. Federal agencies will likely cover a larger portion of research expenses for work involving long-term, high-risk research, while industry funding will be greater for research likely to be converted relatively quickly to commercial products. The President's budget in FY01 included $142 million for truck research and related fact-finding, an increase of $46 million from FY00. It is anticipated that the initiative will expand future federal budgets for truck research from $96 million to approximately $250 million. Equal investments from industry and Government will address the full range of research areas associated with the trucking industry and its suppliers. These research areas are as follows:

- Advanced propulsion technology, with a focus on advanced diesel-engine, hybrid-electric, fuel-cell, and advanced drive train technologies.
- Alternate fuels that are adaptable to the full range of propulsion sources, with a focus on clean burning.
- Advanced materials such as high-strength steels, aluminum, magnesium, and composites, with a focus on their optimized use.
- Vehicle intelligence, with a focus on advanced-communication and early warning technologies, vehicle diagnostics, and prognostics.

- Advancement in vehicle designs to reduce aerodynamics drag, with a focus also on reducing other forms of parasitic losses like rolling resistance.
- Safety, with a focus on the driver environment, driver hardware and hardware environment areas.

Emission reductions, to include exhaust gas recirculation, selective catalytic reduction, particulate matter catalytic reduction, particulate matter catalytic soot filters, oxidation catalyst, Nox absorber/catalyst, homogeneous charge compression ignition combustion, and fuel cell/hybrid power trains.

A Partnership Coordinating Committee has been formed and is responsible for coordinating the execution of the initiative. The committee includes senior representatives from industry, DoD, DA, DoE, DoT, EPA, the Office of Science and Technology Policy, the Council on Environmental Quality, the National Partnership for Reinventing Government, and the Office of Management and Budget.

With the assistance of the academic community, the Partnership Coordinating Committee will direct the development of both the initiative's overall research plan and associated technology roadmaps. The research plan and technology roadmaps are required to determine the appropriate level of investment in advanced technologies to meet the initiative's aggressive research objectives. Successful technology road mapping is very much dependent on an awareness of current research and technology programs, an understanding of the limitations of current research and technology, the technical barriers that need to be overcome, and a vision of potential future technologies.

Technology roadmaps will be continuously refined and will detail timetables for the ten-year span of this initiative. Throughout the duration of the initiative, close coordination will be maintained with the various managers of military trucks to ensure the rapid and cost-effective integration of advanced technologies into military trucks on an ongoing basis.

The Partnership Coordinating Committee will also coordinate and support the R&D teams organized around specific research objectives in order to achieve the program's goals (such as technologies for improving power trains, reducing aerodynamics and rolling resistance losses, and reducing vehicle weight). Each team will include Government and industry partners and representatives from the academic community.

The Partnership Coordinating Committee will also create an overall Cooperative Research and Development Agreement (CRADA) for the partnership. The committee will develop guidelines that will facilitate the development and the use of CRADAs and other procurement mechanisms, such as other transaction agreements involving individual federal agencies and their laboratories. In addition, an external advisory board consisting of individuals with appropriate expertise from industry, academia, state and local Governments, and public interest groups will be established to develop peer review to assess technical and program progress. [Ref. 34]

The 21st-Century Truck Initiative is the culmination of efforts by Government and industry to greatly benefit both the Nation's military and civilian communities and to increase the Nation's overall economic welfare. This initiative represents a key milestone for the Army, DoD and TACOM in the quest to not only develop, but also to demonstrate advanced technologies that can be integrated into commercial and military trucks such as the MTVR. It will assist the military immensely in achieving a lighter and more fuel-efficient mobile force. [Ref. 13]

APPENDIX B. HISTORY OF OSHKOSH TRUCK COMPANY

In the early 1900s, shade-tree mechanics all over the United States tinkered in barns and sheds with the idea that a vehicle could run on its own power. They dreamed of a vehicle that would go where the usual forms of mechanized transport—trains and boats—could not go. It would run wherever it was pointed.

For several years, a vehicle capable of going almost anywhere remained a dream because early roads were a nightmare. Created from dirt and gravel, with no thought given to drainage, early 20th-century roads in the United States evolved from the paths of Native Americans and from pioneer wagon tracks. In warm weather they were dusty, dirty, and unreliable, and at other times they were either snow-covered or immersed in mud, slush, or standing water. As a result, American productivity declined each year with cold or wet weather and spiraled upward again in late spring.

This problem was attacked from two unique angles. The first concrete street in North America was laid down in Bellefontaine, Ohio in 1891. Concrete and asphalt eventually found favor and spread.

A second development occurred in Clintonville, Wisconsin. The Wisconsin Duplex Auto Company was organized to develop and produce a four-wheel-drive vehicle. Like paved roads, the vehicle was a gradual but resounding success, improving productivity and helping tame what was still a raw and rugged country.

The founders of Oshkosh Truck, W.R. Besserdich and B.A. Mosling, looked at transportation problems in different ways. Besserdich, the mechanic, believed that power to all four wheels was the answer to the problem of traveling over the awful roads, whereas Mosling, the merchant, realized that once roads were developed, a new, nationwide era in transportation and productivity would evolve.

Making productive transportation equipment that goes on and off the road has been the Oshkosh Truck Corporation's hallmark throughout its history. From the first prototype (a four-wheel-drive truck named "Old Betsy") to the current ten-wheel-drive military vehicles that provide the U.S. Army and the Marine Corps with superior mobility and efficiency, the company has filled a distinctive niche in the story of American Transportation.

Oshkosh Truck Corporation was incorporated on 1 May 1917, as the Wisconsin Duplex Auto Company. The first production truck was the Oshkosh Model A, which featured a door on each side of the cab. Most trucks with cabs in those days required entry from the passenger's side because the steering wheel blocked entry from the driver's side. Their four-wheeled truck produced 72 horsepower (hp), largely due to the fact that the Herschel-Spillman four-cylinder engine heated the fuel at three different points to get the most from the low-octane gasoline of the time. The Brown-Lipe Model 35 transmission featured four forward speeds and a reverse. The truck frame was fabricated by A.O. Smith Company.

Early Oshkosh Trucks were fully suspended and seldom got stuck. Under rugged conditions, drivers reported being able to average an amazing "14 to 20 miles an hour" traveling between Oshkosh and Milwaukee because of the truck's all-wheel drive capability.

Oshkosh Truck Corporation's entry into the U.S. Military was a far cry from the large, complex vehicles that they produce today for the U.S. Army and Marine Corps. It began in 1939, with the W-Series—trucks used primarily as snowplows and dump body vehicles.

The first W-Series to see military duty during World War II was the Model W-700, chosen by the U.S. Army Corps of Engineers. The Engineers employed rotary snow-blower equipment to keep Army Air Corps runways free of snow around the world, along with a number of trucks configured as wreckers. The

rotaries were powered by a 175hp Climax engine mounted on the back of the truck. Both the Climax and the six-cylinder, 112hp Hercules RXC truck engine powering the truck were gasoline-fueled.

As early as 1960, the military was a major customer of the company and would continue to be a significant factor in the company's growth and technological advancement for years to come. The first major defense contract since World War II came as a result of the Cold War. The United States knew that the Soviet Union was capable of launching a surprise air attack on North America. In order to prevent such an attack, the United States and Canada strung a line of distant early warning (DEW) radar stations across Canada and Alaska. This web of radar would alert the military, especially the U.S. Air Force.

The Air Force had several Strategic Air Command (SAC) bases in the northern tier of states with B-36 and later, B-52, bombers poised to retaliate. But since most bases were deep in the snow belt, the military needed a method to open runways immediately and to keep them open, no matter how much snow should fall. Oshkosh Truck created a revolutionary new model.

The WT-2206 Truck was the solution. These large, heavy-duty trucks with 325hp Hall-Scott engines and Allison TG 602-RM automatic transmissions were capable of operating at 55 miles per hour (mph) while plowing in formation, pushing snow in a wide, one-way arc past runway lights. The high-speed truck was half the equation. The other half involved a plow that was as innovative as it was simple.

Before Oshkosh Truck addressed the challenge, snow removal vehicles moved down runways, then lifted their conventional blades and returned to their starting point so that all the snow could be pushed in the same direction. But Oshkosh specified a big rollover plow that could be raised and rolled over. The trucks could then simply turn around at the end of the runway and make another

pass, since all of the snow was now being pushed in the direction of the first pass. Oshkosh won the contract to produce more than 1000 vehicles, which also could be equipped with rotary snowblowers.

The WT-2206 also showed commercial airport management the benefits of high-speed snow removal. Sales increased significantly as airport managers realized they could remain open during most storms, reducing disruption to airline schedules.

In 1981, the company won its largest government contract to date. Oshkosh Truck was the successful bidder to construct Heavy Expanded Mobility Tactical Trucks (HEMTT), the trucks that proved crucial for ground support during Operation Desert Storm in 1991. General H. Norman Schwarzkopf, Commander in Chief, U.S. Central Command during Operation Desert Shield/Desert Storm, told the House Armed Services Committee that, without trucks, "we never would have had the supplies far enough forward to go ahead and launch the war. . . . I am a great believer in the HEMTT." More than 13,000 have been produced and delivered so far. [Ref. 35]

Oshkosh Truck also supports the Marine Corps. In addition to its MTVR truck program, since 1985, the Corps has taken delivery of 1,400 Logistics Support Vehicle Systems (LVS) trucks, which feature center articulation for increased mobility over soft and uneven terrain. The vehicles have several different rear sections that can be uncoupled and interchanged. Uncoupling also permits lifting by helicopter. [Ref. 35]

In recent developments involving the MTVR truck program, Oshkosh Truck Corporation and Ohio State University have partnered to create TerraMax, a unique and completely autonomous MTVR. TerraMax has a complex sensing system and a global positioning sensor. Six high-powered computers control the functions of driving and navigating. The computers run on software developed by Ohio State University for map and route planning, obstacle detection and avoidance, sensor data input, and interpretation and diagnostics.

The MTVR drive-by-wire technology allows the computers to control steering. An actuator operates the brakes, and acceleration is controlled electronically. Sending systems—including a laser range finder, sonar, radar and digital video—allow TerraMax to "see" in order to avoid obstacles. [Ref. 36]

A. OSHKOSH TRUCK CORPORATION PERSPECTIVE

Oshkosh Truck Corp. (OTC) engineers trucks for markets where unique, innovative designs outperform general purpose equipment in all types of terrain. OTC uses commercial engines, transmissions, axles, suspensions, tires, valves, pumps and many other components, but they also design and build them into severe-duty vehicles with capabilities much greater than commercial off-the-shelf vehicles. These commercial components have been developed, tested, and proven for an intended market and are then adapted for use in the unique or specialized applications. This can include a wide assortment of concrete mixers, snowplows, and tactical vehicles, such as the Palletized Load System (PLS), Heavy Equipment Transporter (HET), or Heavy Expanded Mobility Tactical Truck (HEMTT). [Ref. 35]

The Marine Corps' MTVR Truck will be added to this impressive list of vehicles that OTC produces. The use of commercial components reduces development and production costs, and improves serviceability. OTC was the first worldwide manufacturer of heavy-duty off- and on-road commercial and military trucks to be International Standards Organization (ISO)-9001 certified. OTC has operated under a certified ISO-9000 quality assurance program since May 1995. All personnel who manage, perform, and verify work affecting quality are responsible for implementing the quality system. Four levels of documentation are utilized and maintained to meet the requirements of ISO-9001. [Refs. 33, 35] These are:

- Level 1: ISO Quality System Policies
- Level 2: Quality System Procedures
- Level 3: Work Instructions, Quality Control Procedures
- Level 4: Records and Checklists

With the use of these four levels, a closed loop system is achieved that can be certified by a third party registrar. Oshkosh's quality policy is focused on customer satisfaction: "To design, produce, deliver, and service quality vehicles and components."

ISO 9000 is a series of standards agreed upon by the International Organization for Standardization (ISO) and was adopted in 1987. More than 100 countries now recognize the 9000 series for quality standards and certification for international trade. ISO 9000 evolved in Europe and in the European Common Market, and almost 50,000 companies have been certified as complying with these standards. Historians claim that ISO 9000 originated from the quality standards of the U.S. Department of Defense (MIL-Q9858) in the late 1950s. The British Standards Institution adopted these standards and expanded them to include the entire business process in 1979, calling them the "British Standard 5750." The International Organization for Standardization adopted the British Standard 5750 in 1987, calling it the ISO 9000 series.

ISO consists of five primary parts numbered 9000 through 9004. This series ranges from design and development through procurement, production, installation, and servicing. While ISO 9000 and 9004 only establish guidelines for operation, ISO 9001, 9002 and 9003 are well-defined standards. The highest level of certification is 9001. There are 20 elements in the ISO 9000 standards that relate to how the system operates and how well it is performing.

ISO 9000 is somewhat intentionally vague. A firm such as Oshkosh Truck Corporation interprets the requirements as they relate to its business. From a practical and useful standpoint for businesses, ISO 9000 is valuable to firms because it provides a framework so they can assess where they are and where they would like to be. In other words, ISO 9000 directs you to "document what you do and then do as you documented." ISO is much more, in that it also promotes awareness and continuous improvement.

The International Organization for Standardization intended the 9000 series to be more than a standard, reflecting a well-organized operation with trained, motivated people. It is proposed as the new challenge, with firms that move quickly enjoying the benefits of being a leader and those that delay losing business. There are three forms of ISO 9000 certification:

- First party: A firm audits itself against ISO 9000 standards.
- Second party: A customer audits its supplier.
- Third party: a “qualified” national or international standards or certifying agency serves as an auditor.

It is regarded by most that the best certification of a firm is through a third party. Once passed by the third-party audit, a firm is certified and may be registered and recorded by having achieved ISO 9000 status, and it becomes part of a registry of certified companies. Certification can take as little as three to six months, or as long as two years. Certification involves getting the proper documents, initiating the required procedures and practices, and conducting internal audits. This can then be followed by second or third party audits as required.

The 20 elements to be addressed by a firm in an ISO 9000 Quality System are:

- Management Responsibility
- Quality System
- Contract Review
- Design Control
- Document Control
- Purchasing
- Customer-Supplied Material
- Product Identification and Trace ability
- Process Control
- Inspection and Testing
- Inspection, Measuring, and Test Equipment

- Inspection and Test Status
- Control of Nonconforming Product
- Corrective Action
- Handling, Storage, Packaging, and Delivery
- Quality Records
- Internal Quality Records
- Training
- Servicing
- Statistical Techniques

How does ISO 9000 relate to the Malcolm Baldrige Award? ISO is at the beginning of the quality evaluation. ISO 9000 provides stability in the system and minimum requirements for market survival. Once this is accomplished and in place, it is much easier to build to higher levels and obtain additional recognition and awards such as the Baldrige Award.

Achieving certification will help a company to prepare for the Baldrige Award. Since 1992, applications for the Baldrige Award have dropped, and the Baldrige committee believes that this drop is caused by companies going for ISO 9000 certification first. ISO focuses very closely on internal processes, especially manufacturing, sales, administration, and technical support and services. The Baldrige places more emphasis on customer satisfaction and business results. The Baldrige also assumes that you have your processes under control and, therefore, awards relatively few points in this area of consideration. On the other hand, the Baldrige addresses the issues of customer satisfaction, business results, and the competitive aspects of gaining increased sales and therefore profits. ISO 9000 virtually ignores competitive positioning. [Refs. 33, 35

APPENDIX C. HISTORY OF MARINE CORPS-QUANTICO

It is called the “Crossroads of the Marine Corps,” and during its 80-year tenure on the approximately 100 acres located along the western bank of the Potomac River, Marine Corps Base Quantico has been a birthplace and training area for Marine Corps concepts.

Prior to the Marines arriving here in 1917, the Town of Quantico owned the land. At the turn of the 20th century, Quantico Land Company was formed on Quantico Creek. The company, which promoted the town as a tourist attraction, offered such enticing inducements as refreshment stands, boats, and beaches with dressing rooms in order to help promote the tourist trade.

By 1916, the Quantico Company began advertising Quantico as “The New Industrial City” and pushed for industry to come to the area. At the same time, the Quantico Shipyards were established on the land that is now located by the Naval Medical Clinic, to build ocean freighters and tankers. With growing tensions of war in Europe, the construction of U.S. Navy ships was a major moneymaker for the Quantico Shipyards.

While the town of Quantico was rapidly growing as a fishing village, excursion center and shipbuilding center in early 1917, the town was not large or significant and was suffering many financial difficulties. Around this time, then-Major General Commandant of the Marine Corps, Major General George Barnett, sent a board to find possible sites for a new Marine Corps base in the Washington D.C. area.

Aside from the expected requirements resulting from the impending threat of World War I and the resultant expansion of the Corps, many senior Marine Corps officers believed that the Corps needed an East Coast base just for the Advanced Base Force. The force, a brigade of infantry plus artillery and service units, needed more space for quartering, training, and storage than the current site at Philadelphia Navy Yard could offer. An area with suitable tactical terrain

for artillery and infantry maneuvers and that could be reached by rail and water was needed. This requirement had been discussed by the Navy's General Board years earlier, but no decision had been made.

With these two important considerations—the needs of the Advanced Base Force and anticipated war requirements, compounded by Navy takeover of traditional Marine Training areas—Major General Barnett began searching for an East Coast base, emphasizing that he "did not want a base within the limits of an active navy yard," as the industrial and other Navy requirements paramount there would probably crowd out the Marine Corps requirements.

In 1917, Marine Barracks, Quantico was established with 91 enlisted men and four officers. As technology grew and expanded, so did Quantico. Thousands of Marines were trained during World War I, and by 1920, the Marine Corps schools were founded, as then-Commandant Col. Smedley D. Butler put it, "to make this post and the whole Marine Corps a great university." These schools eventually developed into today's Marine Corps University, where most Marine Corps Officers begin their careers and many enlisted types keep up with the primary military education.

Quantico also has had other firsts, including a first in Marine aviation and warfare indoctrination. The Marine Aircraft Wing was developed here, as well as the Corps' first helicopter squadron, Marine Helicopter Squadron One. HMX-1 was the first helicopter squadron to provide rapid transportation of U.S. Presidents, which continues to this day.

On 1 December 1947, the Marine Helicopter Squadron One was established. Its mission was to test a new concept known as vertical envelopment. The strange machines that would be tested were called helicopters, innovations, which would make the Marine Corps more versatile: get on and off the battlefields more quickly and safely; airlift casualties; cut down on re-supply missions; and move troops behind enemy lines.

Since 1947, the squadron has continued in its mission of "testing and evaluating military helicopters" with various aircraft and setting the standards in aviation excellence through its Operational Test and Evaluation department. More recently, the MV-22 Osprey was brought to Quantico for testing before being developed for use in the Fleet Marine Force. However, the HMX-1's role has expanded and now includes not only testing, but also an even greater responsibility.

In 1957, ten years after the HMX-1's establishment, President Dwight D. Eisenhower became the first U.S. President to use HMX-1 helicopter for quick transportation. Leaving his vacation grounds in Newport, Rhode Island on short notice, Eisenhower needed to fly to Naval Air Station Quonset Point to board Air Force One. Spearheading the task, HMX-1 used one of its UH-34 Seahorse helicopters to fly the President to the air station. Realizing the usefulness of the helicopter, Eisenhower continued to use the HMX-1 aircraft for the remainder of his term.

More than 40 years since that first Presidential flight aboard an HMX-1 helicopter, the squadron takes pride in continuing the mission of transporting the President in its various aircraft. Today, the "First and Finest" Marine helicopter squadron in the Corps has grown to employ more than 700 personnel. The squadron has four different aircraft: the CH-53E Super Stallion, the CH-46E Sea Knight, the VH-3D Sea King and the VH-60N Whitehawk.

In 1987, the Marine Corps Development and Education Command at Quantico was changed to the "Marine Corps Combat Development Command," signifying Quantico's role in the 21st-Century Marine Corps. [Ref. 37]

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APPENDIX D. COLLABORATION DECISION PAPER/POINT PAPER

12 Jul 99
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CSLE-MT

DECISION PAPER

To: Commander, Marine Corps Systems Command
From: Director, Combat Support and Logistics Systems (CSLE)

SUBJ: RELOCATION OF THE MEDIUM TACTICAL VEHICLE REPLACEMENT (MTVR) PROGRAM OFFICE

1. Background. The MTVR program is under the cognizance of the APM Transportation Systems, CSLE Directorate for overall program direction and lifecycle management. The Principal Executive Office, Ground Combat Support Systems (PEO GCSS) in Warren, Michigan (is responsible by MOA for technical and contractual management). On 23 March 1999, the Commander, MARCORSYSCOM directed a feasibility study to relocate all technical and management efforts from the PEO, GCSS to Quantico. This decision paper outlines the results and makes recommendations on relocation.

2. Study Results. The following table summarizes the raw collaborative evaluation of seven program office location alternatives. Rank order was determined by the final "Weighted Mean" composite value of eight critical areas: Schedule, Manpower, Cost, Contract Administration, Commander's Strategic Direction, Program Management, Politics, and Facilities. "Acceptable" alternatives had a weighted mean score equal to or greater than 5.5.

	Quantico Now	*Quantico Post MS III*	*PM MTVR PEO GCSS*	*PM FMTV PEO GCSS*	*PM HTV DSA*	*PM LAV DSA*	*Co-locate Oshkosh*
Rank Order	7	3	1	2	4	5	6
*Weighted Mean **	*2.82*	*6.51*	*8.99*	*6.53*	*6.19*	*5.85*	*3.57*

3. Recommended Alternative. "Move to Quantico after Milestone III" is the recommended alternative. Of the "acceptable" alternatives, it is the only one that meets the Commander's guidance to consolidate the program office functions in the Quantico area. It also provides time for the program to achieve a steady state and for planning to develop, recruit, and hire the requisite manpower, and identify functions and facilities. It also addresses facilities issues by coinciding with the consolidation and move of MARCORSYSCOM to Hospital Point.

M.A. Kephart

COMMARCORSYSCOM Approved _____

Disapproved _____

Medium Tactical Vehicle Replacement (MTVR)

Program Office Move

LtCol Thomas F Manley
APM Transportation
DSN: 274-4278 x250
Comm: 703-784-4278 x250
manley_iitf@quantico.usmc.mil

Purpose

- *Program Office Move Study*
- *Study Methodology*
- *Study Results*
- *CSLE Recommendation*

Background

- ***Commander directed study to move MTVR Program Office From PEO GCSS & TACOM To MARCORSYSCOM***
- ***CSLE Tasked to ...***
  - **Establish Alternatives**
  - **Use Collaboratory Process to ...**
    - **→Analyze**
    - **→Weight**
    - **→Rank Order**
  - **Make Recommendation(s)**

Methodology

- *Use Collaboratory Process*
  - Mr. Lee Cohen as Facilitator
- *Bring in Range of Program People*
  - MARCORSYSCOM
    - → Col Johnson — PM
    - → LtCol Manley — APM
    - → Maj Morton — PO
    - → A Faulkner — Engr
    - → B Fout — Spt Ktr Programmatics
    - → J Munn — Spt Ktr Technical
  - MCOTEA
    - → Maj Howell — OTPO
  - PEO / TACOM
    - → LTC Schneller — PM Reman
    - → T Franquist — Chief Engineer
    - → Maj Loos — USMC Rep PM Reman
    - → S Brown — Budget analyst
    - → C Grgurich — ILS

Methodology *(con't)*

- *Developed Alternative Courses of Action for Consideration*
- *Collectively Came up with ~ 200 Points to be Considered*
- *Consolidated into 8 Overall Criteria*

Alternative Courses of Action

- ***Quantico Options***
  - 1 Move Immediately
  - 2 Move Post MS III
- ***PEO GCSS Options***
  - 3 Separate PM MTVR
  - 4 Move under PM FMTV
- ***Defense Systems Acquisitions Options***
  - 5 Move under PM Heavy Tactical Fleet (HTV)
  - 6 Move under PM LAV
- ***Other Option***
  - 7 Collocate w/ Oshkosh Truck Co

Criteria

Category	Weight	Description
Schedule	.19	➢ Schedule impacts to meet test, milestones, production, and fielding ➢ Includes schedule risks due to the actual move and slips caused by a lack of continuity and historical perspective that might impact test execution, test results, and vehicle performance
Manpower	.16	➢ Availability of skilled, knowledgeable personnel for each alternative ➢ How fast can people unfamiliar with the program come up on the learning curve
Cost	.15	➢ Cost implications ➢ Costs of the move, overall programmatic costs and risks to outyear funding ➢ Schedule or performance slips due to program inexperience, lack of the right mix of skills, test execution problems, and quality assurance problems
Contracts	.14	➢ Legal considerations since the five year multi-year contract is signed by TACOM ➢ Ability to manage a large, complex system, production contract
Strategic Direction	.12	➢ Support the Commander's intent for making MARCORSYSCOM a world class acquisition organization ➢ Potential for synergy with other truck programs
Program Management	.10	➢ Meet the program goals of timely fielding a cost effective, capable, medium truck t ➢ Level of program management expertise in budgeting, contract management, engineering, quality, testing , and logistics
Politics	.08	➢ Impact on the internal and external politics that can influence the program ➢ Includes Congressional interest in "harmonizing" with the Army, potential concerns raised by the PEO, TACOM, and/or the Department of the Navy/Army, and any impact on MATCOM standup
Facilities	.06	➢ Availability of working spaces ➢ Impacts from or on the MARCORSYSCOM Hospital Point

Collaboratory Results

	Schedule	Manpower	Cost	Contracts	Strategic Direction	Program Mgmt	Politics	Facilities	Weighted Total
1 Quantico - Immediately	1.41	2.24	2.24	2.18	6.76	3.41	3.41	2.18	2.82
2 Quantico - Post MSIII	6.59	5.71	5.94	5.88	8.12	6.82	7.12	6.76	6.51
3 PM MTVR GCSS-Warren,MI	9.82	9.65	9.29	9.41	6.29	9.12	8.06	9.24	8.99
4 PM FMTV-GCSS-Warren,MI	9.82	9.82	9.82	9.82	2.82	6.24	2.41	8.12	6.53
5 PM HTV (DSA) - Warren, MI	9.82	9.82	9.82	9.82	5.06	6.24	5.82	5.82	6.19
6 PM LAV (DSA) - Warren, MI	9.82	9.82	9.82	9.82	5.47	5.76	5.29	5.47	5.85
7 Co-locate OSHKOSH, WI	3.12	3.29	3.41	3.12	4.12	3.82	4.65	4.24	3.57

Unacceptable Program Impacts **(< 5.5)**

Acceptable Program Impacts **(≥ 5.5)**

"Acceptable" C/A

- ***Remain as PM MTVR under PEO*** **8.99**
  - Status Quo, Least Disruptive
  - Not clear if PEO will resist
- ***Move Under PM FMTV*** **6.53**
  - Same people, different reporting chain
  - Overall "*Acceptable Rating*" under the collaboratory process, however ...
  - *Not Acceptable* due to FMTV association
- ***Move to Quantico after MS III*** **6.51**
  - Meets Commander's guidance
  - Allows program to stabilize
  - Allows time to plan, organize, hire, & train
- ***Move Under PM Heavy*** **6.19**
  - Similar PM, similar vehicles & works w/ Oshkosh
  - Same matrix support, but NOT same core group
  - Loss of program visibility

"Unacceptable" C/A

- ***Move under PM LAV*** **5.85**
  - Different PM orientation, i.e., armored vehicle
  - Different matrix support & core group
  - Loss of program visibility
- ***Co-locate to Oshkosh*** **3.57**
  - Isolation from MARCORSYSCOM
  - Too many unknowns
  - Barely Marginal
- ***Move to Quantico Immediately*** **2.82**
  - Too disruptive w/ program at critical point
  - Difficulty in establishing a work force
  - Most potential for schedule impacts that would jeopardize outyear funding

Recommendation

- ***Based on Commander's Intent ...***
- ***Initiate action to move to Quantico after MS III***
  - Standup to coincide w/ MARCORSYSCOM going in Hospital Point
  - Allows ...
    - → Time to plan and organize shift down
    - → Moves when Program Office can be located in one place
  - Initiate Coordination with ...
    - → MDA
    - → PEO, GCSS

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POINT PAPER

To: Commander, Marine Corps Systems Command

From: Assistant Program Manger, Transportation or Program Manager Engineer / Motor Transport

Via: Director, Combat Support and Logistics Systems (CSLE)

SUBJ: RELOCATION OF THE MEDIUM TACTICAL VEHICLE REPLACEMENT (MTVR) PROGRAM OFFICE

1. Background. The MTVR is combined effort of the APM for Transportation (APM TRANS) (overall program direction), the Principal Executive Office, Ground Combat Support Systems(PEO GCSS) in Warren, Michigan (technical, and contractual management), and the Materiel Command Albany (life cycle support). On 23 March 1999, the Commander directed a study to relocate all technical and management efforts from the PEO, GCSS to Quantico under the APM TRANS. This point paper provides the results of that study effort.

2. Study Results. Table 1 summarizes the collaboratory evaluation of seven program office location alternatives. The scale is from 1 to 10, with "10" considered "Most Desirable" and "1" as "Least Desirable". Rank order was determined by the final "Weighted Mean" value.

Table 1 - MTVR Program Management Alternative Evaluations

	Quantico Now	*Quantico Post MS III*	*PM MTVR PEO GCSS*	*PM FMTV PEO GCSS*	*PM HTV DSA*	*PM LAV DSA*	*Co-locate Oshkosh*
Rank Order	7	3	1	2	4	5	6
Weighted Mean *	***2.82***	***6.51***	***8.99***	***6.53***	***6.19***	***5.85***	***3.57***
Schedule	1.41	6.59	9.82	7.35	6.41	6.00	3.12
Manpower	2.24	5.71	9.65	7.47	6.24	5.65	3.29
Cost	2.24	5.94	9.29	7.59	6.35	6.18	3.41
Contracts	2.18	5.88	9.41	8.29	6.94	6.41	3.12
Strategic Direction	6.76	8.12	6.29	2.82	5.06	5.47	4.12
Program Mgmt	3.41	6.82	9.12	6.24	6.24	5.76	3.82
Politics	3.41	7.12	8.06	2.41	5.82	5.29	4.65

	Quantico Now	*Quantico Post MS III*	*PM MTVR PEO GCSS*	*PM FMTV PEO GCSS*	*PM HTV DSA*	*PM LAV DSA*	*Co-locate Oshkosh*
Facilities	2.18	6.76	9.24	8.12	5.82	5.47	4.24

3. Alternatives Evaluated. The alternatives considered in the study are outlined in Table 2. They include more than just a Quantico alternative to insure that all prudent alternatives were evaluated in case the Quantico alternatives was not feasible. Annex A is the MTVR program schedule. Annex B provides additional information on pros and cons of each alternative.

Table 2 – MTVR Program Office Location Alternatives

Alternative	*Description*
Move to Quantico Immediately	Move the program office to the Quantico immediately after the Commander's decision.
Move to Quantico Post-Milestone III	Delay the move until after the December 2000 MS III cargo production decision, the Spring 2001 MS III (V) decision for the wrecker, dump and trailer variants, and the consolidation move of MARCORSYSCOM into Hospital Point.
PM MTVR - PEO, GCS in Warren, MI	Create a separate entity under the PEO, GCSS. The current PM, Reman office would change titles to PM MTVR and retain the same organization and personnel reporting directly to the PEO.
PM FMTV - PEO GCSS in Warren, MI	Move the current PM Reman organization and personnel under the auspices of the PM FMTV. The internal structure and personnel of PM Reman would remain, but report to the PEO through the PM FMTV.
PM, Heavy Tactical Vehicles (HTV) - Defense Systems Acquisition (DSA) in Warren, MI	Move the functions of the program office under PM HTV in Warren, MI who manages the Army heavy tactical wheeled fleet and is the contract agency for the Marine Corps Logistics Vehicle System (LVS). While the PM Reman functions would move, there is no guarantee that the people would move since DSA and the PEO are separate commands.
PM, LAV - DSA in Warren, MI	Move the functions of the program office under PM LAV. As in the PM HTV alternative, the PM Reman functions would move, but there is no guarantee that the people would move since DSA and the PEO are separate commands.
Co-locate with Oshkosh Truck Company in Oshkosh, WI	Establish the program office at the Oshkosh production site.

4. Discussion

a. Leaving the Program Office at PEO, GCSS with the associated TACOM matrix support was the first choice (8.99). This alternative poses the least risk to schedule, cost, and performance. The people in place have been working the program since Milestone I/II and have the historical perception to know the how and why the program has evolved to where it is now. They are the experienced in executing large complex heavy vehicle contracts and have worked with the prime contractor on other truck programs. However, this alternative also requires the PEO to change its current planning to move the program office under another PM rather than retaining it as a separate PM in its own right.

b. Moving the Program Office under PM FMTV (6.53) and to Quantico after MS III (6.51) were the second choices.

(1) Moving under FMTV has the same technical and management advantages as leaving the office under the PEO except for adding another management layer. The same people working the program now would work the program under this alternative. However, this alternative is unacceptable since it puts the MTVR program under the PM of a failing, or perceived failing, program. The MTVR started out under this PM with disastrous results and although there has been a PM change, there are no assurances that the MTVR people wouldn't be pulled off to support the FMTV at the expense of the MTVR.

(2) Moving the office to Quantico after MS III has all the disadvantages inherent in finding, hiring, and transitioning a new team to execute the program. There is also no indication that any people could be expected to follow the program down from Warren. However, it does meet the Commander's intent and, more importantly, it gives MARCORSYSCOM the time to properly plan the transition, pick the right point in time to move, and get the right mix of people on board, trained , and transitioned.

c. Moving the program to the PM-HTV (6.19) or PM-LAV (5.85) are the third choices. Both these alternatives have inherent weaknesses in that there are no available billets to staff the program office and the people on the program now would probably not move since DSA and the PEO are two separate commands. The PEO is still looking at further RIFs and cannot establish the billets it needs now . DSA would have to establish billets, hire new personnel, and transition them just as the move to Quantico alternative would.

d. Moving to Quantico now (2.82) and establishing a collocated office with the prime contractor (3.57) were both unacceptable due a myriad of problems and high risk to the schedule, cost, and performance.

5. Process. The APM TRANS assembled a group of subject matter experts from within MARCORSYSCOM and PEO GCSS to use the collaboratory process to evaluate and rank various alternatives. Annex B provides the list of participants. .Initially a smaller group from within MARCORSYSCOM used the collaboratory to determine alternative courses of action and establish criteria that would need to be considered to evaluate and rank the alternatives. The final effort involved the same MARCORSYSCOM group plus additional people from MCOTEA and the PEO GCSS. The MCCDC motor transport officer was invited, but was unable to attend due to other commitments. On 26 and 27 May 1999 the various alternatives were briefed and the categories for evaluation were discussed. On 27 May a "vote" was taken using the collaboratory software.

6. Categories Considered in Rank Ordering Alternatives. A series of criteria related to the program and program execution were developed in the collaboratory . The initial MARCORSYSCOM participants individually posed a general "laundry list" of various questions, concerns, or factors that they saw as bearing on the question of moving the program office. These individual criteria were collectively grouped into the overall categories described in Table 3. The categories were then ranked and weighted. Annex C provides details on the specific criteria under each category.

Table 3 – Evaluation Criteria Categories

Category	*Weight*	*Description*
Schedule	.19	How does each alternative impact the schedule for meeting test, milestones, production, and fielding? This includes not only schedule risks due to the actual move, but also slips caused by a lack of continuity and historical perspective that might impact test execution, test results, and vehicle performance.
Manpower	.16	What is the availability of skilled, knowledgeable personnel for each alternative? How fast can people unfamiliar with the program come up on the learning curve?
Cost	.15	What are the cost implications for each alternative? This includes not only the costs of the move itself, but overall programmatic costs and risks to outyear funding if there are schedule or performance slips due to unfamiliarity with the program history, lack of the right mix of skills, inexperience, test execution problems, and quality assurance problems.
Contracts	.14	The MTVR is executing a five year multi-year contract signed by TACOM for the Government. Are there any legal or other impacts on who manages the contract and what is the ability of the new location to manage a large, complex system, production contract?

Category	*Weight*	*Description*
Strategic Direction	.12	How does the alternative support the Commander's intent for making MARCORSYSCOM a world class acquisition organization? What is the potential for synergy with other truck programs?
Program Management	.10	How does the alternative meet the program goals towards the timely fielding a cost effective, capable, medium truck that meets the ORD? What is the level of program management expertise in budgeting, contract management, engineering, quality, testing , and logistics?
Politics	.08	How does the alternative impact on the internal and external politics that can influence the program? This includes Congressional interest in "harmonizing" with the Army, potential concerns raised by the PEO, TACOM, and/or the Department of the Navy/Army, and any play on the standup of the Marine Corps Materiel Command (MATCOM).
Facilities	.06	What is the availability of working spaces at the proposed site? Are there any impacts from or on the MARCORSYSCOM consolidation move to Hospital Point?

7. Categories Considered, But Not Evaluated. Two areas, performance and logistics, were not evaluated as separate categories. This does not mean they were not considered important to the overall program management, just that they were not directly impacted by the location the program office. References to vehicle performance were addressed under schedule and cost. Logistics would be the primary responsibility of MATCOM, Albany, no matter where the overall program office resided. Criteria from the original "laundry list" that may have fallen under either of these categories were incorporated into one of the other categories.

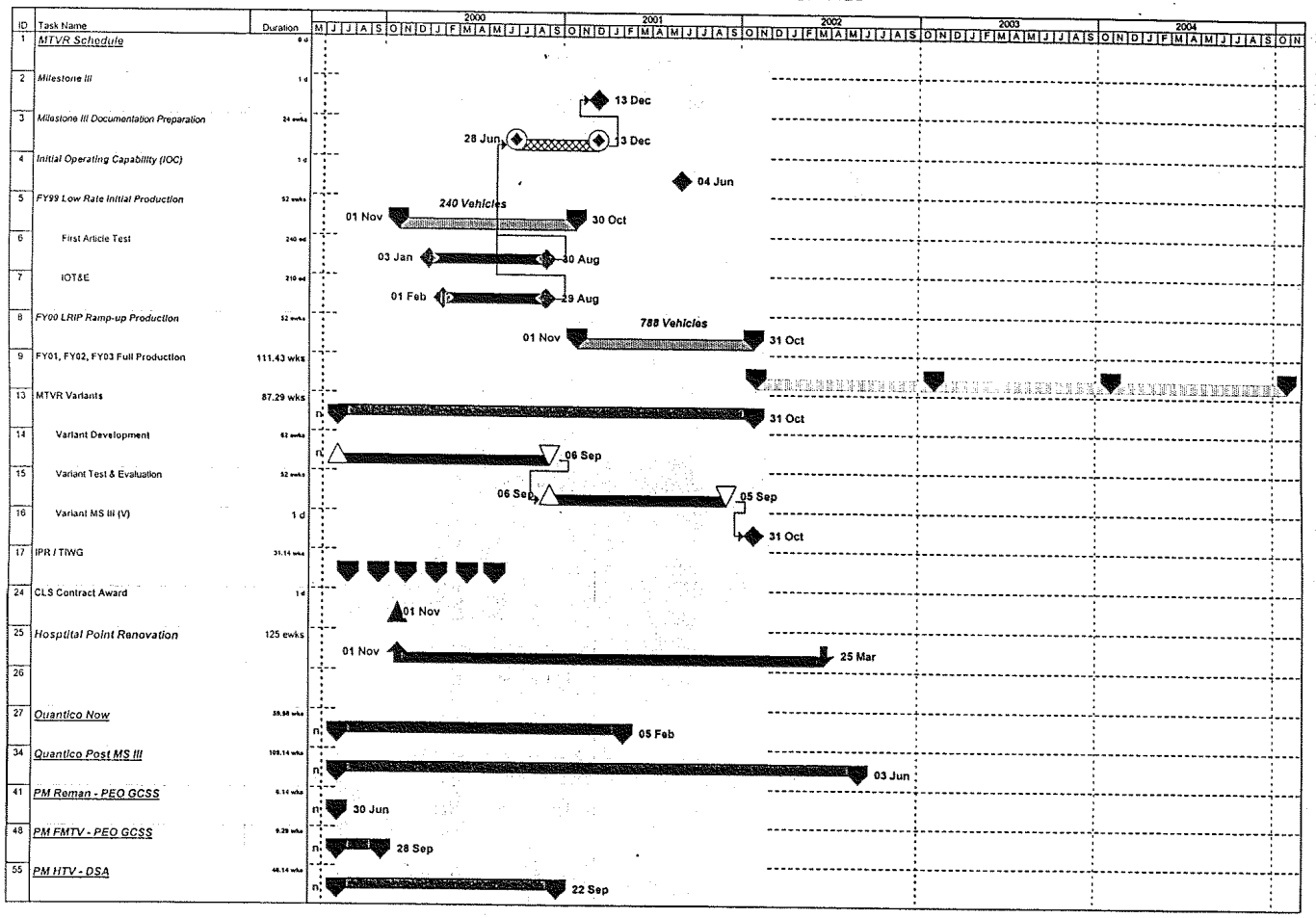
8. Conclusion. The best alternative would be to leave the current organization and structure in place at the PEO. If the Commander's still requires moving the program office to Quantico, then planning for a move post MS III is the best alternative.

M. M Kephart

Annex A

MTVR Schedule

MTVR PROGRAM OFFICE MOVE TIMELINES



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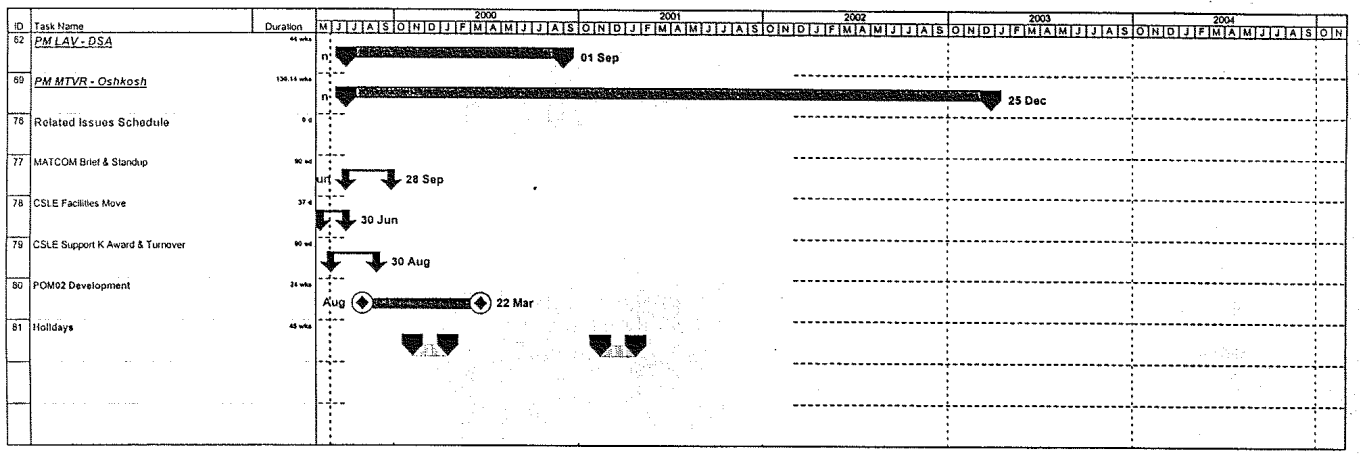
MTVR PROGRAM OFFICE MOVE TIMELINES



Schedule Event Explanations

ID#	Event	Explanation
2	Milestone III	Request authorization from the MDA (ASN, RDA) to go to full production. MS III is scheduled for December 2000 for authorization to allow transition from LRIP to full rate production during the FY00 production.
3	Milestone III Documentation Preparation	This is a planned 6 month effort with a two month overlap on the FAT & IOT&E. It includes time to develop, execute, and assemble all the appropriate documentation, pre-briefs, read aheads and other actions up to the actual formal decision brief to the MDA. While much of the documentation can be assembled and finalized at any point prior to the MS III, tests results and any changes to the documentation resulting from test data cannot be completed until the final test reports are in.
4	Initial Operational Capability (IOC)	First units equipped. One Division Truck Company, one Artillery Regiment, and one Motor Transport Direct Support Company – a total of approximately 586 vehicles.
5	FY99 Low Rate Initial Production (LRIP)	1st year's low rate production of 240 vehicles at a rate of 20 per month starting in November 1999.
6	First Article Test	Production performance and endurance testing scheduled for January 2000 until about August 2000. Vehicle must meet all critical performance and endurance parameters to receive authorization to go to full production.
7	Initial Operational Test & Evaluation	Operational testing under the cognizance of MCOTEA scheduled for February 2000 until July 2000. Vehicle must receive a favorable evaluation to receive authorization to go to full production and fielding.
8	FY00 LRIP Ramp-up Production	2nd year's production of 788 vehicles. Although technically still an LRIP, this year's production will steadily ramp up from 20 vehicles a month to approximately 160 vehicles per month. This is the last year of LRIP and the program must receive a favorable MS III decision to proceed to subsequent years' full production.
9	Variant Development	A sole source RDT&E contract to the Oshkosh Truck Company will be signed on 30 June 1999 to fund development of the wrecker, dump, telephone maintenance truck, and trailer variants. Developmental prototypes will be delivered for test and evaluation by September 2000
10	Variant Test & Evaluation	This will be a modified Developmental and Operational Test to prove out the variant bodies prior to their incorporation into the final year's (FY04) production.
11	IPR/TWIG	Regular Interim Program Reviews (IPR) and Test Integration Working Group (TIWG) meetings are currently scheduled approximately every two months. This may shift to once a month after the start of LRIP in November 1999.

ID#	Event	Explanation
18	CLS Contract	The Contractor Logistics Support Contract with the Oshkosh Truck Company is scheduled for signing in early November 1999. The CLS contract will be for three years with two, 1-year, options.
20	PM Move Timelines	This is a "roll-up" event comprised of a planning period, modification of the MOA, advertising for new hires, the new hiring process, and the transition period for the new team to pick up the management of the program. (See following definitions)
21	Transition Planning	This period is to develop the requisite plan of actions and milestones (POAM) to implement the decision to transfer the program management functions from PEO GCSS / TACOM to the option site. This time period will vary by option dependent on the actual or perceived complexity of getting the new management team on line.
22	Decision with MOA Lead Time	The existing MOA assigning responsibilities for program management between MARCORSYSCOM and the PEO, GCSS requires a 90 evaluation period after a request from either signing party to change or alter the MOA.
23	Advertise New Hire	This is the period of time to advertise for candidates for the civilian billets (either Government or support contractor). It is nominally set at 90 days for this evaluation. The actual time could be more or less depending on the response.
24	New Hire Process	This is the projected period of time to process applications, interview, evaluate, hire, and actually have personnel on board and ready to work. This time will vary between options depending on anticipated difficulty or ease of acquiring the right skills and skill levels. For instance, it is generally easier to hire engineers, analysts, quality assurance experts, etc with automotive backgrounds around the Detroit area, than the Quantico area.
25	New Hire Transition	This is the projected time to bring the new management team up to speed on the program and have it in place and functioning with the day-to-day programmatic and contractual issues. This is also a variable period depending on the option. For those options that would remain at TACOM, the transition is generally shorter than for standing up an entirely new team at Quantico.
26	PM in Place & Functioning	This is the point in time when the re-located PM is completely staffed, facilitized, and up-to-speed on the program and is fully capable of and is, in fact, executing all the program actions. It is at this point where the re-located PM functioning would be indistinguishable from the current PM functioning had it never moved

ID#	Event	Explanation
27	Related Issues Schedules	These are ancillary fact of life issues with no obvious direct bearing on the transition process. However, they need to be considered since they could impact on the resources (time, people, and funding) required to effect the planning and execution phases. (See following definitions)
28	MATCOM Brief & Standup	The decision brief for the standup of MATCOM is scheduled for late June 1999 with a planned 90 day period to execute the standup.
29	CSLE Facilities Move	The CSLE Directorate is scheduled to change office sites or rearrange existing spaces dependent on pending decisions. APM Transportation could stay in its current Bldg. 2006 spaces or move to another location. The decision, originally scheduled for 11 May 1999, has slipped which may drive the planned completion date of 30 June.
30	CSLE Support K Award & Turnover	The current CSLE support contractor will not be the prime under the new CSLE contract. Computer Science Corporation (CSC) or the Sverdrup Corporation will be the prime with MKI as a subcontractor. Contract award is scheduled for 15 June with an anticipated turnover time extending until 30 September 1999.
31	MCSC Move to Hospital Point	MCSC is scheduled to move to the renovated Old Hospital on Hospital Point in late 2000 or early 2001. This move will centrally locate all the Systems Command under one roof and allow for the extra facilities to support the increased local manning for locating the PM in Quantico
32	POM02 Development	1999 is a POM development year. The POM02 cycle will start in late summer and extend into February or March 2000.
33	Holidays	The winter holiday season extends from the Marine Corps Birthday until after New Years which could impact on personnel availability to implement any changes.

Annex B

MTVR Program Management Re-location Alternative Pros & Cons

Option 1: Move to Quantico Immediately

PRO

- Meets Commander's Intent
- Allows development of an experienced team to execute follow-on large heavy vehicle programs, e.g., LVSR.

CON

- Short Term Personnel Turbulence. Getting the appropriate personnel ion place, bringing them up on the learning curve, and having them in place and functional to meet the Nov 99 FAT acceptance inspections, the Jan 00 FAT start, initiate quality assurance during PY-1 LRIP will be difficult at best.
- Potential for Long Term Major Schedule Disruptions. MS III could be set back 6 to 9 months. Slipping the MS III date would slow the last LRIP year from ramping up to full production and delay the call-up of PY-3 , the 1st year of full production, creating funding execution problems. Missing the call up puts FY02 and subsequent funding at risk.
- There are no readily identifiable facilities to accommodate the anticipated 20-30 civilian billets (based on current PM Reman core and matrix support).
- Allows development of an experienced team to execute follow-on large heavy vehicle programs, e.g., LVSR.

Option 2: Move to Quantico Post MS III

PRO

- Meets Commander's Intent, albeit later rather than sooner.
- Gives the program time to reach a steady state before initiating the move. Would allow the full production years to execute
- Gives more time to plan an orderly transition, hire the appropriate people, and transition them to the program.
- Would move when consolidated facilities are available.
- Allows development of an experienced team to execute follow-on large heavy vehicle programs, e.g., LVSR.

CON

- Poses most risk to program execution
- Program will still transition to a new team and require identifying, recruiting, and hiring all new personnel to execute a major acquisition program. While not as volatile as an immediate move, there are still risks to out year funding if the schedule slips due to a lack of program continuity.

Option 3: PM Reman – PEO GCSS in Warren, MI

PRO

- Leaves current team in place throughout the program.
- Poses the least risk to program execution.
- Requires no further action to implement.

CON

- Does not meet the Commander's intent to move the program office under MARCORSYSCOM.
- Would require a change to the PEO, GCSS current planning to move the office under another PM rather then retaining it as a separate PM.

Option 4: PM FMTV - PEO, GCSS at Warren, MI

PRO

- Leaves current team in place throughout the program.
- Poses the next to least risk to program execution.

CON

- Does not meet the Commander's intent to move the program office under MARCORSYSCOM.
- Lengthens chain of command by adding another layer in the form of PM FMTV.
- Puts the MTVR under a perceived failing program with a lot of close scrutiny.
- Poses a risk to MTVR resources being drawn off to support the FMTV.

Option 5: PM HTV - DSA at Warren, MI

PRO	CON
➢ Keeps the program under a tactical vehicle oriented PM.	➢ Does not meet the Commander's intent to move the program office under MARCORSYSCOM. ➢ No personnel billets in PM-HTV are available to transition to the MTVR. All billets would have to be either moved from the PEO or established a new billets. Warren is still in the process of a RIF action and is not allowed to establish new billets. ➢ No guarantee the current team would move intact. Would require identifying, recruiting, and hiring at least some if not all new personnel. ➢ Current facilities would not allow co-locating the program office with the PM.

Option 6: PM LAV - DSA at Warren, MI

PRO	CON
➢ Marine oriented PM	➢ Does not meet the Commander's intent to move the program office under MARCORSYSCOM. ➢ PM LAV is a weapon system oriented PM with little or no automotive experience. ➢ No personnel billets in PM-HTV are available to transition to the MTVR. All billets would have to be either moved from the PEO or established a new billets. Warren is still in the process of a RIF action and is not allowed to establish new billets. ➢ No guarantee the current team would move intact. Would require identifying, recruiting, and hiring at least some if not all new personnel. ➢ Current facilities would not allow co-locating the program office with the PM.

Option 7: PM MTVR – Co-locate at Oshkosh, WI

PRO	CON
➢ Establishes collocated PM with production facility similar to AAAV.	➢ There is no Government facility currently in place. Facility would be isolated from Quantico with day long travel times.
➢ Meets the Commander's intent to move the program office under MARCORSYSCOM albeit not at Quantico.	➢ Personnel billets would have to be established a new billets. Would require identifying, recruiting, and hiring at all new personnel.
	➢ Alternative that would take the most planning and time to implement.
	➢ What happens to the office at the end of the MTVR production?

Annex C

List of Personnel Involved in Collaboratory Evaluation

Initial Assessment Group

Name	*Organization*
LtCol Thomas Manley	APM Transportation
Maj Lee Morton	MTVR Project Officer
Ms Susan Brown	PM Reman, PEO GCSS
Mr. Robert Fout	MKI Systems, Inc
Mr. John Munn	MKI Systems, Inc

Final Evaluation Group

Name	*Billet*
CSLE MARCORSYSCOM	
Col Dean Johnson	PM ENGR/MT
LtCol Thomas Manley	APM Transportation
Maj Lee Morton	MTVR Project Officer
Maj Robert Reyburn	MTVR Logistics Officer
Mr. Andrew Faulkner	MTVR
Mr. Robert Fout	MKI Systems, Inc
Mr. John Munn	MKI Systems, Inc
MCOTEA	
Maj Edward Howell	MCOTEA Project Officer
PM Reman PEO GCSS	
LTC George Schneller, USA	PM
Mr. Thomas Franquist	MTVR Chief Engineer
Maj Michael Loos	MARCORLNO, APM Reman
Ms Susan Brown	MTVR Budget Analyst
Ms Colleen Grgurich	MTVR Logistics Analyst

Annex D

Move Criteria Categorizer

APPENDIX E. MTVR ANALYSIS

MTVR Analysis

Tuesday, May 04, 1999

Alignment of MTVR - Criteria (Categorizer)

Alignment of MTVR - Criteria (Categorizer)

Cost

1. Relevant costs: TACOM vs transfer

- What would be the difference between operating at TACOm and any other place? {#148}
- Cost of geographically relocating personnel and/or billets {#30}
- start-up and shut down costs for people and resource support {#51}
- Cost of moving people and things {#122}
- Cost of hiring new people (learning curve) {#152}

2. Cost sharing/levereging

- Able to tap into TACOM matrix resources for expertise and equipment {#149}

3. Cost of a possible schedule delay

4. contractor increased cost

Schedule

1. Milestone III preparation impacts

- Thsi might be lumped under schedule impacts. {#87}
- MS III risks: Phase II testing documetation, MS III, budget execution, production schedule (QA) {#59}

2. Transfer timeline/Learning Curve--What will be impact?

- Again, goes to schedule. {#92}
- Rate and duration of change {#45}
- Transient address and POC change effects (mail delays, lost data, time loss, etc.) {#33}
- Goes to schedule. {#107}

3. Impact on First Article Test (FAT) planning and execution

- Again, goes to schedule. {#98}

4. Trailer and variant effort impacts

5. Per MOA...90 days notice required before changes can be made.

6. External schedule considerations (POM Cycle, Marine Expo, Industry Day, MC B-day Ball through New year's)

7. Award of CSLE Service Support contract and transition

8. MATCOM PM - WSM integration timeline

9. LVSR program office standup timeline

MTVR performance

1. Technology Insertion

- Science & technology access {#130}
- Proximity to Technology Base {#162}
- Proximity to Trade Fairs {#85}

2. ECP impact

3. Plant production line surveillance

4. Test Planning Stability (TIWG)

Politics

1. ASN RDA(PEO) Approval of Program Office change

Do we need ASN approval? {#165}

Reporting Chains {#56}

Proximity to ASN RDA {#88}

2. Congressional Interest in PM Office shift

Absolutely; it is clear that Congress wants the Marine Corps and Army working together, not apart, on trucks, as evidenced by their "harmonization edict." {#113}

A "successful MTVR program's visibilty might attract joint interest... {#167}

3. Program Office reputation

Political sensativity to FMTV program alignment {#27}

How intent is the Army on moving PM reman under the FMTV? Why would they do that? {#99}

Impact of moving Pm Reman under FMTV? A "succesful" program being managed by a "struggling" program {#66}

A "successful MTVR program's visibilty might attract joint interest... {#111}

If the Army decides to scrap the FMTV, the MTVR becomes an attractive alternative acquisition. {#119}

4. Pentagon politics

TACOM PEO Prestige {#60}

Impact on other Service/Marine Corps programs {#41}

Conflicts of interest {#58}

Other service undue influence {#61}

Army Material Command (AMC) oversight if moved to Defense Systems Acq (DSA) {#71}

5. MATCOM - MARCORSYSCOM - USMC politics

A "successful MTVR program's visibilty might attract joint interest... {#169}

General McKissock's reaction - unknown {#170}

Building up SYSCOM goes against Marines "lean/mean" philosophy. {#43}

Strategic Direction

1. TACOM Designated truck expert.

Not sure FMTV support this. {#109}

Residual relationships with TACOM on modeling, failure scoring, steering panels? {#128}

Checking to confirm if this is in writing {#173}

2. Relationship with MCLB Albany/MARCORSYSCOM Albany

3. Impact to USMC/ APM Transportation Strategic Direction

Lessons Learned on similar endeavors {#46}

Oshkosh Truck strategic alliance {#77}

Impact to FMF {#117}

4. Synergies with other like programs

- Including LVSR {#153}
- Synergies of MTVR with other programs at TACOM {#25}
- Future Joint Program Impacts {#24}
- Future programs/Amry-Marine relations impact {#172}

5. Commander intent

- Reinforces MARCORSYSCOM or USMC {#89}
- What other programs would also move to Quantico? {#20}
- Doesn't seem relevant to MTVR issue. {#96}
- How is the "automotive section" of the AAAV set up? {#14}
- Doesn't seem relevant to arguement. MTVR is going to need its own set of people regardless how AAAV is set up. {#90}

6. What is the value added of moving?

Manpower

1. Automotive skills/expertise/experience

- Core expertise in automotive systems {#74}
- requesite skill levels...how quickly? {#3}
- Training in core subject area {#83}
- USMC Logistics Knowledge {#73}
- Available skill levels to administer MYP {#44}

2. Labor Pool

- Billet vacancies {#76}
- Are there talented, experienced people "available" for hire...for a relative short term? {#78}
- It can be said: "Chances are, if they have talent and experience - if they're GOOD - they're already employed somewhere" {#81}
- Surge capability {#123}
- Obtaining manpower in a timely manner {#121}
- Knowlegeable talent needed to run the program {#120}
- Migration of talent {#47}

3. Positions transition adjustment (time, hiring, expertise level)

- Slowdowns caused in retraining and reaquainting NEW personnel with gov't and non-gov't players..("norming") {#72}

4. T/O Organizational flexibility

- Matrix support availability {#54}
- Contract support availability {#55}
- New PM with LTCOL Schneller leaving {#4}
- Doesn't seem relevant to the study. {#80}
- Loss of the Core/Army PM positions if moved from PEO-GCSS {#9}
- If billets move to Quantico, what happens to them after the MTVR is fielded? {#22}

Does USMC have a PM position to move? {#23}

One isn't needed. {#102}

PM heavy - no established slots for MTVR {#32}

Military and civilian force structure {#42}

No core slots available for personnel (if they don't transfer) {#101}

Two "free" Army positions currently provided {#110}

Miscellaneous

Contracts

1. Impact and Legality of changing primary contract officers

Is there a fee to use TACOM as the PCO? {#176}

Contract management impact on SYSCOM? {#177}

PCO Expertise with Large Production contracts {#180}

2. Impact on Prime

OTC is already familiar with all the key players on the gov't side. What is the impact of "changing horses" in the middle of production? {#105}

Working relationship with Contractor. {#28}

Contactor agreed to travel to Detroit, may increase cost if now Quantico (further away) {#63}

3. Contract service support availability (DIR, CSLE - MKI ?)

Service support contract currently pending award. {#175}

4. Coordination with DCMC

Facilities

1. Facilities/office space availability

Facilities Availability {#16}

Subset of cost. {#94}

2. Automation transition

Cost of Equipment/Computers/Office Desks {#18}

3. Modernization ebb and flow

4. MARCORSYSCOM move to Hospital Point

MTVR Logistics Support

1. Impact on PICA

2. Impact on CLS

3. Impact on Training Simulator efforts

4. Total Life Cycle Management impact

Considered but not relevant

1. Impact on program reporting and budget/POM input

2. Cost of TACOM matrix is relatively small..compared to a $1.3B program.

Should be $1.3B {#137}

3. Programmatic impacts

4. Schedule Delay

5. Need to avoid delays in MTVR program with AAAV coming soon

6. It's a 5-year program.

7. Program is currently on schedule and well managed

8. Army REMAN restart?

9. Political implications?

NR {#164}

10. Political support for move/nonmove at ASN, DA, DOD, and Congressional Level

11. PM Levels of Reporting to Acq Exec

12. Should a MOA be signed at a higher level then PM? Prog Exec level?

MOA notification requirements {#31}

13. Impact to LW 155 Program (Prome Mover)

Program Management

1. Centralized vs. Decentralized

Distance, help or hinder {#124}

Easier to manage if "entire" PM office is located in Quantico {#34}

Improved responce time and cohesion if PM is all in one office. {#75}

2. Impact to standing IPTs

3. Staff expertise in Navy/Marine Corps matters

Marine Corps representation {#67}

4. Morale

Quality of life {#131}

5. Leadership

6. Impact to Strategic Business units

Categories - Vote 2 (Alternative Analysis)

Voting Results

A) Ballot

Method: 10-Point Scale

Options: Allow Bypass

Descriptions: Rate from 1 to 10, with 10 the highest value.

Vote On: Top Level Items of Both Lists

Primary List:

Top Level Items = 7

Secondary List:

Items = 8

N: 4

B) Results Matrix

View Cells by Mean

- Custom Weighted

Primary List	Weight	Schedule(1.00)	Manpower(1.00)	Cost(1.00)	Contracts(1.00)	Strategic Direction(1.00)	Prog Mngmnt (1.00)	Politics(1.00)	Facilities(1.00)	Total	Mean	Mode	High	Low	STD	Weighted Total
Weight		0.19	0.16	0.15	0.14	0.12	0.10	0.08	0.06							
1.Quantico - Immediately																
2.Quantico - Post MSIII																
3.PM MTVR GCSS-Warren, MI																
4.PM FMTV-GCSS-Warren, MI																
5.PM HTV (DSA) - Warren, MI																
6.PM LAV (DSA) - Warren, MI																
7.Co-locate OSHKOSH, WI																
Total																
Mean																

Facilitated by: LTCOL Manley, MARCORSYSCOM

Primary List	Weight	Schedule(1.00)	Manpower(1.00)	Cost(1.00)	Contracts(1.00)	Strategic Direction(1.00)	Prog Mngmnt (1.00)	Politics(1.00)	Facilities(1.00)	Total	Mean	Mode	High	Low	STD	Weighted Total
Mode																
High																
Low																
STD																
Weighted Total																

C) Vote Spread (Primary List)

Sorted By Mean

1.Quantico - Immediately																				
(N = 4)																				
Secondary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
Strategic Direction (0.12)							1	1	1	1	34	8.50	??	10	7	1.29	4	1.02	0.71		0.00
Prog Mngmnt (0.10)		1	1	1				1			17	4.25	??	8	2	2.63	4	0.43	0.42		0.00
Cost (0.15)		2		1		1					14	3.50	2	6	2	1.91	4	0.53	0.57		0.00
Manpower (0.16)		1	1	2							13	3.25	4	4	2	0.96	4	0.52	0.79		0.00
Politics (0.08)		2	1	1							11	2.75	2	4	2	0.96	4	0.22	0.79		0.00
Contracts (0.14)	1	1	1		1						11	2.75	??	5	1	1.71	4	0.39	0.62		0.00
Facilities (0.06)	1	1	1		1						11	2.75	??	5	1	1.71	4	0.16	0.62		0.00
Schedule (0.19)	1	3									7	1.75	2	2	1	0.50	4	0.33	0.89		0.00
2.Quantico - Post MSIII																				
(N = 4)																				
Secondary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
Schedule (0.19)								1	2	1	36	9.00	9	10	8	0.82	4	1.71	0.82		0.00
Strategic Direction (0.12)								3		1	34	8.50	8	10	8	1.00	4	1.02	0.78		0.00
Prog Mngmnt (0.10)							2			2	34	8.50	??	10	7	1.73	4	0.85	0.62		0.00
Politics (0.08)						1	1	1		1	31	7.75	??	10	6	1.71	4	0.62	0.62		0.00
Cost (0.15)					1		1		1	1	31	7.75	??	10	5	2.22	4	1.16	0.51		0.00
Contracts (0.14)					1		1		1	1	31	7.75	??	10	5	2.22	4	1.09	0.51		0.00
Facilities (0.06)					1	1		1		1	29	7.25	??	10	5	2.22	4	0.43	0.51		0.00
Manpower (0.16)						1	2	1			28	7.00	7	8	6	0.82	4	1.12	0.82		0.00
3.PM MTVR GCSS-Warren,MI																				
(N = 4)																				
Secondary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted	VCC	You	Zval

																	Total			
Schedule (0.19)										4	40	10.00	10	10	10	0.00	4	1.90	1.00		0.00
Facilities (0.06)										4	40	10.00	10	10	10	0.00	4	0.60	1.00		0.00
Contracts (0.14)									1	3	39	9.75	10	10	9	0.50	4	1.37	0.89		0.00
Manpower (0.16)								1		3	38	9.50	10	10	8	1.00	4	1.52	0.78		0.00
Prog Mngmnt (0.10)								1		3	38	9.50	10	10	8	1.00	4	0.95	0.78		0.00
Cost (0.15)								1	2	1	36	9.00	9	10	8	0.82	4	1.35	0.82		0.00
Politics (0.08)						1		3			30	7.50	8	8	6	1.00	4	0.60	0.78		0.00
Strategic Direction (0.12)				1	2			1			22	5.50	5	8	4	1.73	4	0.66	0.62		0.00
4.PM FMTV-GCSS-Warren,MI																					
(N = 4)																					
Secondary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
Contracts (0.14)								2		2	36	9.00	??	10	8	1.15	4	1.26	0.74		0.00
Facilities (0.06)							2			2	34	8.50	??	10	7	1.73	4	0.51	0.62		0.00
Manpower (0.16)						1			3		33	8.25	9	9	6	1.50	4	1.32	0.67		0.00
Schedule (0.19)						1		1	1	1	33	8.25	??	10	6	1.71	4	1.57	0.62		0.00
Cost (0.15)							2	1	1		31	7.75	7	9	7	0.96	4	1.16	0.79		0.00
Prog Mngmnt (0.10)		1			2				1		21	5.25	5	9	2	2.87	4	0.53	0.36		0.00
Strategic Direction (0.12)	3	1									5	1.25	1	2	1	0.50	4	0.15	0.89		0.00
Politics (0.08)	3	1									5	1.25	1	2	1	0.50	4	0.10	0.89		0.00
5.PM HTV (DSA) - Warren, MI																					
(N = 4)																					
Secondary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
Contracts (0.14)									1	3	39	9.75	10	10	9	0.50	4	1.37	0.89		0.00
Manpower (0.16)								1	2	1	36	9.00	9	10	8	0.82	4	1.44	0.82		0.00
Facilities (0.06)								2		2	36	9.00	??	10	8	1.15	4	0.54	0.74		0.00
Schedule (0.19)							1		1	2	36	9.00	10	10	7	1.41	4	1.71	0.69		0.00

Cost (0.15)								2	1	1	35	8.75	8	10	8	0.96	4	1.31	0.79		0.00
Prog Mngmnt (0.10)						1		1	1	1	33	8.25	??	10	6	1.71	4	0.83	0.62		0.00
Politics (0.08)				1		1		2			26	6.50	8	8	4	1.91	4	0.52	0.57		0.00
Strategic Direction (0.12)			1			1	1	1			24	6.00	??	8	3	2.16	4	0.72	0.52		0.00
6.PM LAV (DSA) - Warren, MI																					
(N = 4)																					
Secondary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
Contracts (0.14)								1	1	2	37	9.25	10	10	8	0.96	4	1.30	0.79		0.00
Facilities (0.06)							2			2	34	8.50	??	10	7	1.73	4	0.51	0.62		0.00
Manpower (0.16)							1	1	2		33	8.25	9	9	7	0.96	4	1.32	0.79		0.00
Schedule (0.19)							1	2		1	33	8.25	8	10	7	1.26	4	1.57	0.72		0.00
Cost (0.15)							1	3			31	7.75	8	8	7	0.50	4	1.16	0.89		0.00
Prog Mngmnt (0.10)					1		1	2			28	7.00	8	8	5	1.41	4	0.70	0.69		0.00
Politics (0.08)				1	1		1	1			24	6.00	??	8	4	1.83	4	0.48	0.59		0.00
Strategic Direction (0.12)			1			1	1	1			24	6.00	??	8	3	2.16	4	0.72	0.52		0.00
7.Co-locate OSHKOSH, WI																					
(N = 4)																					
Secondary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
Strategic Direction (0.12)						1	2			1	30	7.50	7	10	6	1.73	4	0.90	0.62		0.00
Politics (0.08)						1	2			1	30	7.50	7	10	6	1.73	4	0.60	0.62		0.00
Prog Mngmnt (0.10)						1	2		1		29	7.25	7	9	6	1.26	4	0.73	0.72		0.00
Facilities (0.06)					1		1	2			28	7.00	8	8	5	1.41	4	0.42	0.69		0.00
Manpower (0.16)					1	1	2				25	6.25	7	7	5	0.96	4	1.00	0.79		0.00
Schedule (0.19)			1		1		1		1		24	6.00	??	9	3	2.58	4	1.14	0.43		0.00
Cost (0.15)				1	1		2				23	5.75	7	7	4	1.50	4	0.86	0.67		0.00
Contracts (0.14)		1			1		1	1			22	5.50	??	8	2	2.65	4	0.77	0.41		0.00

D) Vote Spread (Secondary List)

Sorted By Mean

1.Schedule																					
(N = 4)																					
Primary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
PM MTVR GCSS-Warren,MI										4	40	10.00	10	10	10	0.00	4		1.00		0.00
Quantico - Post MSIII								1	2	1	36	9.00	9	10	8	0.82	4		0.82		0.00
PM HTV (DSA) - Warren, MI							1		1	2	36	9.00	10	10	7	1.41	4		0.69		0.00
PM LAV (DSA) - Warren, MI							1	2		1	33	8.25	8	10	7	1.26	4		0.72		0.00
PM FMTV-GCSS-Warren,MI						1		1	1	1	33	8.25	??	10	6	1.71	4		0.62		0.00
Co-locate OSHKOSH, WI			1		1		1		1		24	6.00	??	9	3	2.58	4		0.43		0.00
Quantico - Immediately	1	3									7	1.75	2	2	1	0.50	4		0.89		0.00
2.Manpower																					
(N = 4)																					
Primary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
PM MTVR GCSS-Warren,MI								1		3	38	9.50	10	10	8	1.00	4		0.78		0.00
PM HTV (DSA) - Warren, MI								1	2	1	36	9.00	9	10	8	0.82	4		0.82		0.00
PM LAV (DSA) - Warren, MI							1	1	2		33	8.25	9	9	7	0.96	4		0.79		0.00
PM FMTV-GCSS-Warren,MI						1			3		33	8.25	9	9	6	1.50	4		0.67		0.00
Quantico - Post MSIII						1	2	1			28	7.00	7	8	6	0.82	4		0.82		0.00
Co-locate OSHKOSH, WI					1	1	2				25	6.25	7	7	5	0.96	4		0.79		0.00
Quantico - Immediately		1	1	2							13	3.25	4	4	2	0.96	4		0.79		0.00

3.Cost																					
(N = 4)																					
Primary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
PM MTVR GCSS-Warren,MI								1	2	1	36	9.00	9	10	8	0.82	4		0.82		0.00
PM HTV (DSA) - Warren, MI								2	1	1	35	8.75	8	10	8	0.96	4		0.79		0.00
PM LAV (DSA) - Warren, MI							1	3			31	7.75	8	8	7	0.50	4		0.89		0.00
PM FMTV-GCSS-Warren,MI							2	1	1		31	7.75	7	9	7	0.96	4		0.79		0.00
Quantico - Post MSIII					1		1		1	1	31	7.75	??	10	5	2.22	4		0.51		0.00
Co-locate OSHKOSH, WI				1	1		2				23	5.75	7	7	4	1.50	4		0.67		0.00
Quantico - Immediately		2		1		1					14	3.50	2	6	2	1.91	4		0.57		0.00
4.Contracts																					
(N = 4)																					
Primary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
PM MTVR GCSS-Warren,MI									1	3	39	9.75	10	10	9	0.50	4		0.89		0.00
PM HTV (DSA) - Warren, MI									1	3	39	9.75	10	10	9	0.50	4		0.89		0.00
PM LAV (DSA) - Warren, MI								1	1	2	37	9.25	10	10	8	0.96	4		0.79		0.00
PM FMTV-GCSS-Warren,MI								2		2	36	9.00	??	10	8	1.15	4		0.74		0.00
Quantico - Post MSIII					1		1		1	1	31	7.75	??	10	5	2.22	4		0.51		0.00
Co-locate OSHKOSH, WI		1			1		1	1			22	5.50	??	8	2	2.65	4		0.41		0.00
Quantico - Immediately	1	1	1		1						11	2.75	??	5	1	1.71	4		0.62		0.00
5.Strategic Direction																					
(N = 4)																					

Primary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
Quantico - Post MSIII								3		1	34	8.50	8	10	8	1.00	4		0.78		0.00
Quantico - Immediately							1	1	1	1	34	8.50	??	10	7	1.29	4		0.71		0.00
Co-locate OSHKOSH, WI						1	2			1	30	7.50	7	10	6	1.73	4		0.62		0.00
PM HTV (DSA) - Warren, MI			1			1	1	1			24	6.00	??	8	3	2.16	4		0.52		0.00
PM LAV (DSA) - Warren, MI			1			1	1	1			24	6.00	??	8	3	2.16	4		0.52		0.00
PM MTVR GCSS-Warren,MI				1	2			1			22	5.50	5	8	4	1.73	4		0.62		0.00
PM FMTV-GCSS-Warren,MI	3	1									5	1.25	1	2	1	0.50	4		0.89		0.00
6.Prog Mngmnt																					
(N = 4)																					
Primary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
PM MTVR GCSS-Warren,MI								1		3	38	9.50	10	10	8	1.00	4		0.78		0.00
Quantico - Post MSIII							2			2	34	8.50	??	10	7	1.73	4		0.62		0.00
PM HTV (DSA) - Warren, MI						1		1	1	1	33	8.25	??	10	6	1.71	4		0.62		0.00
Co-locate OSHKOSH, WI						1	2		1		29	7.25	7	9	6	1.26	4		0.72		0.00
PM LAV (DSA) - Warren, MI					1		1	2			28	7.00	8	8	5	1.41	4		0.69		0.00
PM FMTV-GCSS-Warren,MI		1			2				1		21	5.25	5	9	2	2.87	4		0.36		0.00
Quantico - Immediately		1	1	1				1			17	4.25	??	8	2	2.63	4		0.42		0.00
7.Politics																					
(N = 4)																					
Primary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval

Quantico - Post MSIII						1	1	1		1	31	7.75	??	10	6	1.71	4		0.62		0.00
PM MTVR GCSS-Warren,MI						1		3			30	7.50	8	8	6	1.00	4		0.78		0.00
Co-locate OSHKOSH, WI						1	2			1	30	7.50	7	10	6	1.73	4		0.62		0.00
PM HTV (DSA) - Warren, MI				1		1		2			26	6.50	8	8	4	1.91	4		0.57		0.00
PM LAV (DSA) - Warren, MI				1	1		1	1			24	6.00	??	8	4	1.83	4		0.59		0.00
Quantico - Immediately		2	1	1							11	2.75	2	4	2	0.96	4		0.79		0.00
PM FMTV-GCSS-Warren,MI	3	1									5	1.25	1	2	1	0.50	4		0.89		0.00
8.Facilities																					
(N = 4)																					
Primary List	1	2	3	4	5	6	7	8	9	10	Total	Mean	Mode	High	Low	STD	n	Weighted Total	VCC	You	Zval
PM MTVR GCSS-Warren,MI										4	40	10.00	10	10	10	0.00	4		1.00		0.00
PM HTV (DSA) - Warren, MI								2		2	36	9.00	??	10	8	1.15	4		0.74		0.00
PM FMTV-GCSS-Warren,MI							2			2	34	8.50	??	10	7	1.73	4		0.62		0.00
PM LAV (DSA) - Warren, MI							2			2	34	8.50	??	10	7	1.73	4		0.62		0.00
Quantico - Post MSIII					1	1		1		1	29	7.25	??	10	5	2.22	4		0.51		0.00
Co-locate OSHKOSH, WI					1		1	2			28	7.00	8	8	5	1.41	4		0.69		0.00
Quantico - Immediately	1	1	1		1						11	2.75	??	5	1	1.71	4		0.62		0.00

List Items in Original Order

A) Primary List

1. Quantico - Immediately
2. Quantico - Post MSIII
3. PM MTVR GCSS-Warren,MI
4. PM FMTV-GCSS-Warren,MI
5. PM HTV (DSA) - Warren, MI
6. PM LAV (DSA) - Warren, MI
7. Co-locate OSHKOSH, WI

B) Secondary List

1. Schedule
2. Manpower
3. Cost
4. Contracts
5. Strategic Direction
6. Prog Mngmnt
7. Politics
8. Facilities

Categories - Vote 2 (Alternative Analysis)

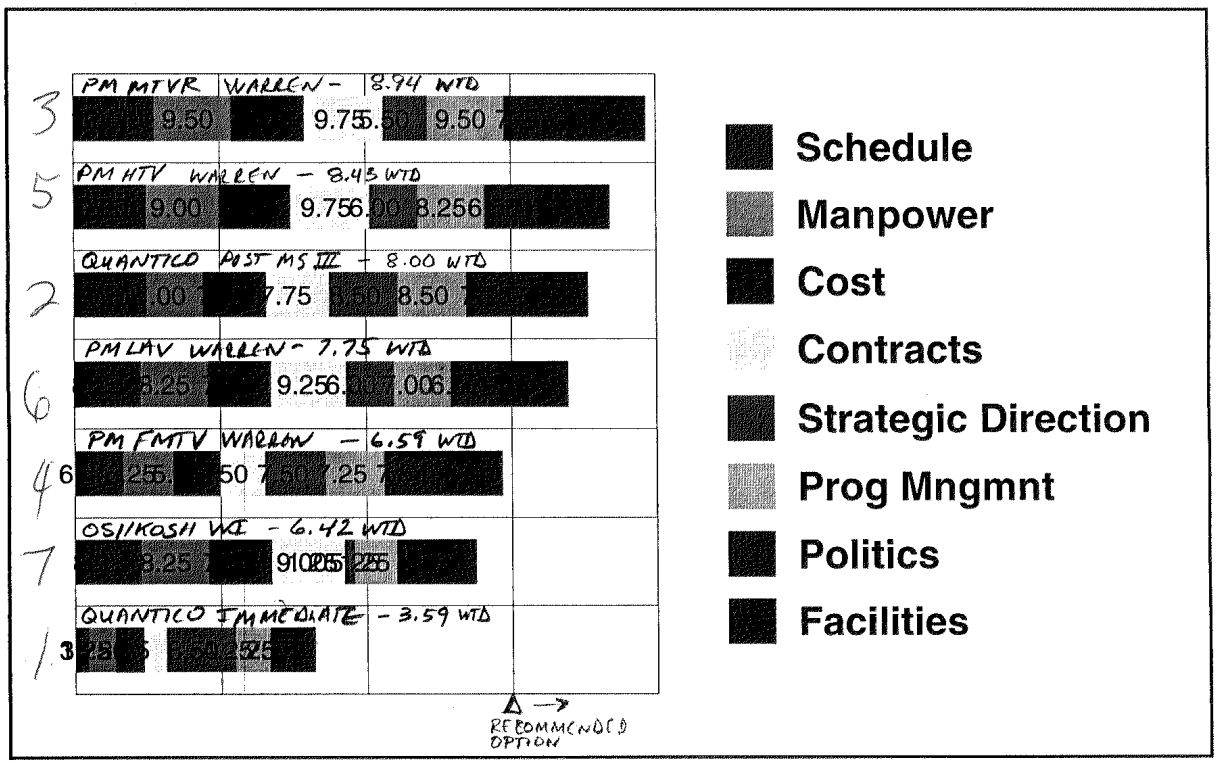
Voting Results

A) Ballot

Method:	10-Point Scale
Options:	Allow Bypass
Descriptions:	
Rate from 1 to 10, with 10 the highest value.	
Vote On:	Top Level Items of Both Lists
Primary List:	
Top Level Items = 7	
Secondary List:	
Items = 8	
N:	4

B) Results Matrix

- *View Cells by Mean*
- *Custom Weighted*



Results Chart

	Primary Line	Schedule(0.15)	Manpower(0.15)	
1	Quantico - Immediate	1.75	3.25	
2	Quantico - Post MSII	9.00	7.00	
3	PM MTVR GCSS-Warren,	10.00	9.50	
4	PM FMTV-GCSS-Warren,	8.25	8.25	
5	PM HTV (DSA) - Warre	9.00	9.00	
6	PM LAV (DSA) - Warre	8.25	8.25	
7	Co-locate OSHKOSH, W	6.00	6.25	
	Total	52.25	51.50	
	Mean	7.46	7.36	
	High	10.00	9.50	
	Low	1.75	3.25	
	STD	2.80	2.13	

[illegible]	[illegible]	[illegible]
8.50	4.25	2.75
8.50	8.50	7.75
5.50	9.50	7.50
1.25	5.25	1.25
6.00	8.25	6.50
6.00	7.00	6.00
7.50	7.25	7.50
43.25	50.00	39.25
6.18	7.14	5.61
8.50	9.50	7.75
1.25	4.25	1.25
2.49	1.85	2.58

Low	STD	Weighted Total
1.75	2.07	3.59
7.00	0.68	8.00
5.50	1.58	8.94
1.25	3.25	6.59
6.00	1.33	8.43
6.00	1.19	7.75
5.50	0.81	6.42

C) Vote Spread (Primary List)

- Sorted by Mean

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APPENDIX F. MTVR TRANSITION PLAN FROM U.S. ARMY, TACOM TO MARINE CORPS, QUANTICO

PLAN FOR TRANSITION OF THE

USMC MEDIUM TACTICAL VEHICLE REPLACEMENT (MTVR) PROGRAM

FROM

U. S. ARMY, PROGRAM EXECUTIVE OFFICER,

GROUND COMBAT AND SUPPORT SYSTEMS

WARREN, MI

TO

U. S. MARINE CORPS SYSTEMS COMMAND,

DIRECTOR, COMBAT SUPPORT AND LOGISTICS EQUIPMENT

QUANTICO, VA

Submitted by
Lt Col Thomas Manley II
Transportation Systems Program Manager
Updated 3-9-00

PLAN FOR TRANSITION OF THE

MEDIUM TACTICAL VEHICLE REPLACEMENT

MTVR PROGRAM

APPROVAL SHEET

Reviewed & Concurred By

JOHN F. MICHITSCH **Major General, USA** **Program Executive Officer** **Ground Combat and Support Systems**	**Date**

Approved By

JAMES M. FEIGLEY **Brigadier General, USMC** **Commander, Marine Corps Systems Command**	**Date**

TABLE OF CONTENTS

Section I

GENERAL

1. Purpose. This transition plan outlines recommended actions, responsibilities, and agreements necessary to transfer the Medium Tactical Vehicle Replacement (MTVR) program management from the U.S. Army Program Executive Officer, Ground Combat and Support Systems (PEO, GCSS), Warren, MI to U.S. Marine Corps Systems Command (MARCORSYSCOM), Director, Combat Support and Logistics Equipment (CSLE), MCB Quantico, VA.

2. MTVR Program Background. Originally Congress directed the Marine Corps to harmonize the MTVR re-manufacturing strategy program with the U.S. Army's Medium Tactical Truck Re-manufacturing (MTTR) program. The PEO-GCSS and the U.S. Army Tank-automotive and Armaments Command (TACOM) are currently the recognized MTVR program office and contracting agency. An evaluation conducted during the Engineering and Manufacturing Development (EMD) phase revealed that the re-manufacturing of 5-ton trucks was more costly than a new procurement. After careful consideration, the Navy Acquisition Executive (NAE) abandoned the re-manufacturing approach in favor of a new vehicle development strategy. PEO-GCSS Product Manager (PM) for the MTVR led the EMD source selection, a drive off, and a downselect for entry into Low Rate Initial Production (LRIP).

3. Current Responsibilities. A Memorandum of Agreement (MOA) delineates the current responsibilities between the Department of the Navy and Department of the Army with respect to the management of the MTVR. The MOA was revised and is being staffed for signatures by the Combat Support Logistics Equipment (CSLE) Program Manager for Transportation Systems, and by the PEO-GCSS, Product Manager Medium Tactical Vehicle Replacement (PM-MTVR).

4. MTVR Transition Background. On 12 July 1999, MARCORSYSCOM notified the PEO, GCSS of a study to transition the MTVR program management office from PEO-GCSS to MARCORSYSCOM. The authority to proceed with the MTVR management transition rests with the PEO, GCSS and COMMARCORSYSCOM.

5. System Description. MTVR is a cost-effective, state-of-the-art system to replace the aging fleet of M809 and M939 series five-ton trucks. The Approved Acquisition Objective (AAO) is 7,360. It is scheduled for production from FY99 through FY03. The MTVR will replace the existing medium 5-ton fleet with a fast and nimble corrosion protected reliable truck capable of carrying a greater payload over a greater range of terrain. Specifically, this advanced technology vehicle offers cargo capacities of 7.1 tons off-road and 15 tons on-road. This increased agility and mobility over diverse terrain is well suited for the expeditionary nature of the Marine Corps missions. A Central Tire Inflation System (CTIS) and six-wheel independent suspension combine to support the 70% off-road requirements. The MTVR program incorporates high-end /low-risk unmodified commercial truck components to include an electronically controlled engine; seven-speed, continuous power, electronically-controlled, automatic transmission; single-speed transfer case; automatic traction control; engine retarder (jake brake); CTIS; and antilock brake system. The MTVR will boast a sophisticated, SAE

standard internal diagnostics capability and will employ Interactive Electronic Technical Manuals (IETMs).

6. MTVR Program Status. The MTVR, an ACAT II program, entered LRIP in February 1999 upon award of a five-year multi-year contract to Oshkosh Truck Corporation (OTC). Milestone III decision is scheduled/programmed for December 2000. The MTVR is programmed for First Article Test (FAT), Initial Operational Test and Evaluation (IOT&E), and implementation of Contractor Logistics Support (CLS) during the 2000 calendar year. The MTVR program evolved from a baseline cargo truck replacement program to a program that now includes the dump, wrecker, and trailer variants. OTC was awarded a sole-source contract on July 22, 1999 to pursue variant feasibility studies to build and test six variant prototypes.

7. MTVR Management Transition Date. The target "Fully Transitioned date" is October 2001, which allows for smooth transition following the scheduled/programmed Milestone III decision while allowing for proper focus to the program in preparation for Initial Operational Capability (IOC).

8. Assumptions.

   a) The Assistant Secretary of the Navy Research, Development and Acquisition, Navy Acquisition and Executive supports the MTVR management transition to MARCORSYSCOM.

   b) The Commander, Marine Corps Systems Command and Program Executive Office-Ground Combat Support Systems support the MTVR management transition to MARCORSYSCOM.

   c) The Transportation Systems Program Manager, Combat Support & Logistics Equipment and PEO-GCSS-Product Manager (PM), Medium Tactical Vehicle Replacement (MTVR) fully support the MTVR transition and identified staffing requirements.

   d) The currently assigned PEO-GCSS PM-MTVR team identified in Section V of this document will remain appropriately staffed and functional through the programmed transition as depicted in Section IV, Transition Schedule and in the Incremental Standup diagram captured in Section VIII.

   e) The new MARCORSYSCOM – MTVR staff will be in place at MCB Quantico as depicted in Section IV, Transition Schedule and in the Incremental Standup diagram captured in Section VIII.

   f) MTVR will be awarded Milestone III during December 2000.

9. Transition Methodology. MARCORSYSCOM will incrementally stand up an MTVR management team, estimated to begin in April 2000 as graphically captured in the transition schedule found in Section IV and in the incremental standup plan found in Section VIII of this document. The MARCORSYSCOM MTVR management team will mirror, or parallel the actions of their PEO-GCSS PM-MTVR counterparts to support an orderly handoff of management functions. The responsibilities established in the MTVR- MOA in concert with

direction from the transition steering committee will dictate how and when the transfer of responsibilities to MARCORSYSCOM occurs. This approach will mitigate the risks associated with the transfer. As a minimum, the steering committee will meet in conjunction with scheduled MTVR IPRs. The Steering Committee, will be comprised of the following personnel: :

- PM - Transportation, CSLE, MARCORSYSCOM
- Medium Fleet Project Officer, CSLE, MARCORSYSCOM
- PM-MTVR, PEO GCSS
- Deputy PM-MTVR, PEO GCSS

a) The Steering Committee will act on recommendations of the MTVR Transition IPT (comprised of the following PEO-GCSS functional personnel and their MARCORSYSCOM counterparts):

- Lead Engineers
- Chief of Logistics
- MARCORSYSCOM , Albany
- Test and Evaluation Officer/Lead
- Procurement Analyst (Represents PCO)
- Legal Representative
- Program Analyst
- Program Integrator/DCMC Representative
- Quality Assurance Representative

Note: The MTVR Transition IPT will meet, at a minimum, incident to regularly scheduled MTVR IPRs. Additional meetings and splinter meetings will be scheduled as necessary, or as directed by the Steering Committee. Subordinate focus teams will be formed as necessary.

b) OTC representatives will be asked to participate in transition IPT meetings and activities.

10. Facilities. Section VII of this document captures the facilities requirements associated with the MTVR transition to MARCORSYSCOM.

11. Funding Requirements. Section IX of this document captures the funding requirements associated with the MTVR management transition to MARCORSYSCOM.

SECTION II

REQUIREMENTS

1. Responsibilities. This section defines the transition responsibilities of the losing and gaining system managers as well as the physical transfer of documentation and records.

    a) The MTVR Memorandum of Agreement (MOA) between the PEO, GCSS and MARCORSYSCOM delineates the responsibilities between the Department of the Navy and the Department of the Army with respect to the management of the MTVR Program. Specifically, it provides detailed guidelines for the Commander, Marine Corps Systems Command; Director, Combat Support and Logistics Equipment; the U.S. Army Program Executive Officer, Ground Combat and Support Systems; and U.S. Army Product Manager, MTVR. The provisions of the MOA will be employed to resolve conflicts. The steering committee, in concert with guidance and recommendation from the transition IPT comprised of functional working groups and subject matter experts will adjust this transition plan and responsibilities therein as necessary to successfully execute this transition plan within the timeline established.

    b) PEO-GCSS PM-MTVR is comprised of core personnel and augmented with matrix support personnel as depicted in Section V of this document. The PEO-GCSS is responsible for the adequate core and matrixed support until successful transition is complete. The program will transition to MARCORSYSCOM without transferring of PEO-GCSS personnel and billets to MCB, Quantico.

2. Transition Coordination.

    a) The PM - Transportation, CSLE or his assigned MTVR Project Manager will:

        1. Chair the MTVR Transition Steering Committee.

        2. Notify pertinent Department of the Navy and Marine Corps offices and agencies of the intent to initiate transition activities according to the MTVR transition schedule located in Section IV of this document.

        3. Actively participate in resource management and staffing processes as they affect transitioning.

        4. Elevate transitioning issues to the appropriate management level for early consideration and resolution.

b) The PM-MTVR, GCSS will:

1. Co-chair the MTVR Transition Steering Committee.

2. Notify pertinent Department of the Army offices and agencies of the intent to initiate transition activities according to the MTVR Transition schedule located in Section IV of this document.

3. Actively participate in resource management and staffing processes as they affect transitioning.

4. Elevate transitioning issues to the appropriate management level for early consideration and resolution.

SECTION III

PROGRAM FUNCTIONAL STATUS AND RESPONSIBILITIES

1. Contract. U.S. Army TACOM Contracting is the official contracting agency for the MTVR Base & Variant contract until transferred. PEO-GCSS PM-MTVR will provide MARCORSYSCOM the necessary liaison and assistance in establishing the necessary mechanisms to obtain applicable contractual documentation for the MTVR base program and R& D variant program. MARCORSYSCOM is responsible to identify and formally establish the framework necessary to manage the below listed active MTVR contracts. They will establish the required coordination with the listed parent contracting organization for contracts to be transferred. This framework for contracts to be transferred must consider the legal relationships between the contracting offices and the contractors. MARCORSYSCOM Contracts representatives will review the TACOM based contracts and will report any identified transition issues to the Program Manager for Transportation Systems, MARCORSYSCOM-CSLE as indicated in the transition schedule which can be found in Section IV of this document.

   a) MTVR Base Program: DAAE07-99-C-M007

Contract Award:	1 February 1999
Contractor:	Oshkosh Truck Corporation
Contract:	5-year multi-year, FFP
Status:	LRIP (PY-2)
Contracting Agency	U.S. Army TACOM (To be transferred to MARCORSYSCOM)

   b) R&D Variant Program: DAAE07-99-C-M042

Contract Award:	22 July 1999
Contractor:	Oshkosh Truck Corporation
Contract:	Sole source, CPFF
Status:	Prototype development
Contracting Agency	U.S. Army TACOM (To be transferred to MARCORSYSCOM)

   c) Contractor Logistics Support (CLS) Program:

Phase 1 Contract Award:	Feb 2000
Contractor:	Oshkosh Truck Corporation
Contract:	Sole source, FFP
Status:	Awarded 2-15-00
Contracting Agency	MCLB Albany (To remain at MCLB Albany)
Phase 2 - Contract Award:	January 2001
Supply Support/Contractor	Technical Services
Contractor:	Oshkosh Truck Corporation
Contract:	Sole source, CPFF
Status:	Pending award
Contracting Agency	MCLB Albany (To remain at MCLB Albany)

d) Training Devices (Operator Simulators)

Contract Award:	Feb 1999
Contractors:	First Ann Arbor Corporation
Contract	CPFF
Status:	Prototype development
Contracting Agency	Naval Surface Warfare Center (NSWC) (To remain at NSWC)

e) Maintenance Trainers:

Contract Award:	4 Feb 1999
Contractors:	Metters Inc.
Contract	CPFF
Status:	Prototype development
Contracting Agency	NSWC (To remain at NSWC)

2. Programmatic. The responsibility for all programmatic documentation (IPS, APB, IPA, ORD, COEA, ILSP, LCCE, ICA, TEMP, and STAR) shall remain with Marine Corps activities (MARCORSYSCOM, MCCDC, and MCOTEA). No transition planning or activities are necessary. MARCORSYSCOM is responsible for the preparation and coordination of all Milestone III documentation.

3. Technical

a) Specifications. The PEO, GCSS, is the current official repository for MTVR system specifications contained or referenced in the base and variant contracts and modifications thereto until transition is complete.

b) Contract Data Deliverables. The PEO, GCSS, is the current official repository for MTVR data delivered in response to statement of work requirements contained in the base, variant contracts and modifications thereto. Copies of all MTVR delivered data will be provided to MARCORSYSCOM during the process of the transition.

c) Configuration Management. Configuration management will continue in accordance with the MOA but will transfer to MARCORSYSCOM, MCLB at the determined program transition date.

7. Budget and Execution. The MTVR programming and budgeting remain the sole responsibility of MARCORSYSCOM. Budget execution will be the joint responsibility of the PEO, GCSS, and MARCORSYSCOM until fully transferred. MARCORSYSCOM will als fund the activities of PEO-GCSS PM-MTVR until the MTVR is fully transferred. MARCORSYSCOM will program necessary funding to sustain the MTVR transition and contract activities. The transition funding requirements are captured in Section IX of this document.

8. Security. MTVR program is an unclassified program.

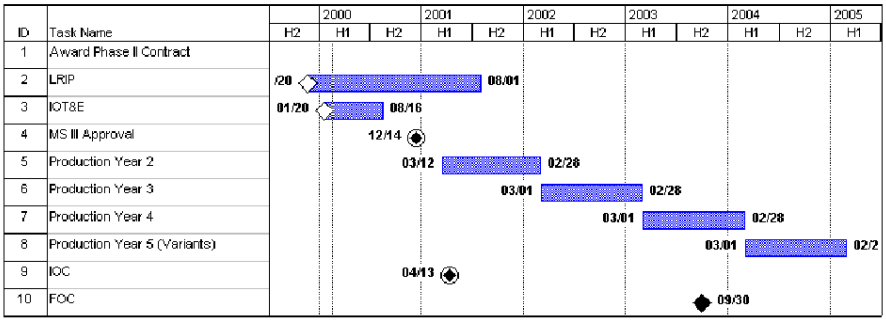
9. Physical Security. Not applicable.

10. Foreign Military Sales (FMS). None planned.

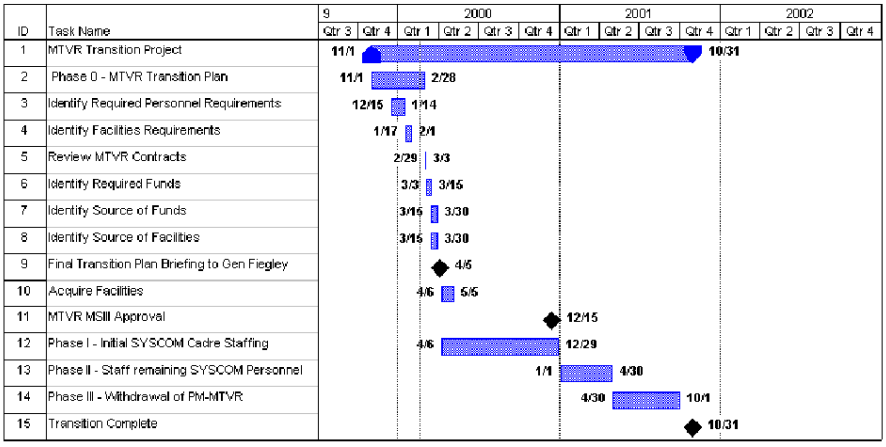
SECTION IV

MEDIUM TACTICAL VEHICLE PROGRAM SCHEDULE AND TRANSITION SCHEDULE

1.0 Medium Tactical Vehicle Program Schedule.



2.0 Detailed MTVR Transition Schedule.



SECTION V

CURRENTLY ASSIGNED MTVR PROGRAM MANAGEMENT TEAM

1.0 The following personnel are currently assigned to the MTVR program office at Marine Corps Base, Quantico Virginia and at Marine Corps Logistics Base, Albany GA.

Name	Grade	Focus	Manyear
Major Morton	O-4	Project Officer	1.00
Major Reyburn	O-4	ILS Manager	1.00
GySgt Winborne	Gunnery Sergeant	Operations Officer	1.00
Mr. Andrew Faulkner	NH-III	Lead Engineer	1.00
Mr. John Munn	Contractor	Senior Process Engineer / Test & Evaluation	1.00
Frank Shay	GS-12	Weapons System Manager	0.25
Cindy Weaver	GS-11	Inventory Management	0.35
Jeff Verner	GS-11	Equipment Specialist	0.25
John Smith	Contractor	Program Analyst (ILS)	1.00
Tony Taylor	GS-9	Equipment Specialist	0.30
Sylvia Spradley	GS-9	Inventory Manager	0.15
GySgt Hatcher	Gunnery Sergeant	Equipment Specialist	0.10
Mr. Jon Buder	Contractor	Senior Functional Analyst Acquisition/Logistics	1.00
		Totals	**8.4**

2.0 The current PEO-GCSS, PM-MTVR Core Team is composed of the following team structure.

Name	Grade	Focus	Manyear
Lt Col Walt Raymond	0-5	Product Manager	1.00
Major Alexander Scott	0-4	Assistant Product Manager	1.00
Tom Franquist	NH-IV	Deputy Product Manager	1.00
Elaine Rudy	NH-III	Procurement Analyst	1.00
Colleen Grgurich	NH-III	Logistics	1.00
Mark Starr	NH-III	Engineer	1.00
Barbara Wlodek	NK-II	Administration	1.00
Vacant	0-4	Asst. Program Manager	1.00
Vacant	NH-III	Asst. Program Manager	1.00
		Totals	**9.00**

2.1 The current PM-MTVR Matrix Team is composed of the following:

Name	Grade	Focus	Manyear
Ron Beck (See Note 1)	GS-15	Model and Simulation	1.00
Gary Boyce	GS-13	Engineer	1.00
Allan Thornton	GS-13	Engineer	1.00
Carla Williams	GS-12	Engineer	1.00
Andy Edwards	GS-12	Engineer	1.00
Roger Smith	GS-12	Quality Assurance	1.00
Brad Jackson	GS-12	Quality Assurance	1.00
Max Luenser	GS-12	Quality Assurance	1.00
Tim Poplawski	GS-12	Quality Assurance	1.00
Jeff Darnell	GS-12	Logistics/ Variants	1.00
Connie Allen	GS-11	Logistics Maintenance	1.00
Franklin Ben Ami	GS-12	Logistics Tech Pubs	1.00
Sharon Viggato	GS-12	Budget Analyst	1.00
Patricia Elbinger	GS-12	Configuration Manager	0.30
Wayne Gray	GS-12	Configuration Manager	0.30
Joyce Jacks	GS-9	Test and Evaluation	0.30
Linda Stasiewicz	GS-9	Test and Evaluation	0.30
George Jarvis	GS-13	Safety Engineer	0.10
Tom Hinkley (See Note 2)	GS-13	TARDEC Packaging/Corrosion/Envr.	0.50
Data Automation	GS-9	Computer Support	0.50
Dennis Haag	Contractor	Program Management	1.00
Sharon Thomas (See Note 3)	GS-13	PCO	0.30
Ron Mandel (See Note 3)	GS-12	Contract Specialist	1.00
Aileen Germaine (See Note 3)	GS-12	Contract Specialist	1.00
John Kelcha	GS-13	Lawyer	.20
		Totals	**18.8**

Note 1 : Ron Beck of TARDEC represents 1 total man-year comprised of several people assigned to Dr. Beck's Model and Simulation (M&S) Team. Dr. Beck's TARDEC M&S team could potentially be retained on the MTVR team working for MARCORSYSCOM with appropriate funding coordination.

Note 2: Tom Hinkley's 0.50 Man-year represents partial effort in Packaging, Pollution & Prevention, NEPA, Weld Audit Oversights, and Corrosion. Handsey and Decker (Corrosion) are part of this group.

Note 3: Funded by TACOM.

SECTION VI

MARCORSYSCOM PERSONNEL REQUIREMENTS

1.0 Personnel Correlation Matrix PEO-GCSS vis-a-vis MARCORSYSCOM

Current PEO-GCSS Manning-WBS 3.1.1			MARCORSYSCOM Required Manning-WBS 3.1.2		
3.1.1.1	Lt Col Raymond	Product Manager	3.1.2.1	Lt Col Manley	Program Manager
3.1.1.2	Major Scott	Asst. Product Mgr.	3.1.2.2	Maj Morton	Asst. Program Manager
3.1.1.3	Tom Franquist	Dep. Product Mgr.	3.1.2.3	Vacant	Project Manager
3.1.1.4	Elaine Rudy	Proc. Analyst	3.1.2.4	Vacant	Procurement Analyst
3.1.1.5	Colleen Grgurich	Logistics	3.1.2.5	Maj Reyburn	Chief of Logistics
3.1.1.6	Gary Boyce	Engineer	3.1.2.6	Mr. Faulkner	Chief Engineer
3.1.1.7	Barbara Wlodek	Administration	3.1.2.7	Vacant	Administration
3.1.1.8	Michael Loos	Asst Program Mgr.	3.1.2.8	GySgt Winborne	Operations Officer
3.1.1.9	Susan Brown	Asst Program Mgr.	X	Position not necessary	Coordinated w/ PM
3.1.1.10	Ron Beck	Model & Simulation	3.1.2.9	Recommend / hire Dr. Beck through MIPR	Model and Simulation
3.1.1.11	Mark Starr	Engineer	3.1.2.10	Vacant	Engineer
3.1.1.12	Allan Thornton	Engineer	3.1.2.11	Vacant	Engineer
3.1.1.13	Carla Williams	Engineer	X	Position not necessary	Coordinated w/ PM
3.1.1.14	Andy Edwards	Engineer	X	Position not necessary	Coordinated w/ PM
3.1.1.15	Roger Smith	Quality Assurance	3.1.2.12	Vacant	Quality Assurance
3.1.1.16	Brad Jackson	Quality Assurance	3.1.2.13	Vacant	Quality Assurance
3.1.1.17	Max Luenser	Quality Assurance	X	Position not necessary	Coordinated w/ PM
3.1.1.18	Tim Poplawski	Quality Assurance	X	Position not necessary	Coordinated w/ PM
3.1.1.19	Jeff Darnell	Logistics/ Variants	3.1.2.14	Vacant (Albany)	Warranty Manager
3.1.1.20	Connie Allen	Logistics Maintenance	3.1.2.15	Vacant	Logistician Maintenance
3.1.1.21	Ben Ami Franklin	Logistics Tech Pubs	3.1.2.16	Vacant (Albany)	Logistician Tech Pubs
3.1.1.22	Sharon Viggato	Budget Analyst	3.1.2.17	Vacant	Budget Analyst
3.1.1.23	Patricia Elbinger	Configuration Mgr.	3.1.2.18	Vacant	Configuration Mgr.
3.1.1.24	Wayne Gray	Asst. Configuration Mgr.	3.1.2.19	Vacant	Asst. Configuration Mgr.
3.1.1.25	Jacks Joyce	Test and Evaluation	3.1.2.20	Mr. Munn	Test & Evaluation
3.1.1.26	Stasiewicz Linda	Test and Evaluation	X	Position not necessary	Coordinated w/ PM
3.1.1.27	George Jarvis	Safety Engineer	3.1.2.21	Vacant	ESH Engineer
3.1.1.28	Tom Hinkley (TARDEC)	Packaging/Corrosion/Environmental	3.1.2.22	Vacant-Carderock Matrixed Support	Corrosion
3.1.1.29	Data Automation	Computer Support	3.1.2.23	Shared Matrixed from CSLE Directorate	Computer Support
3.1.1.30	Dennis Haag	Program Mgmt.	3.1.2.24	Mr. Buder	Program Mgmt Support
3.1.1.31	Sharon Thomas	PCO	3.1.2.25	Vacant	PCO
3.1.1.32	Ron Mandel	Contract Specialist	3.1.2.26	Vacant	Contract Specialist
3.1.1.33	Aileen Germaine	Contract Specialist	X	Position not necessary	Coordinated w/ CTQ
X	No Corresponding	PEO-GCSS Position	3.1.2.27	Vacant (Albany)	Product management and unmatched invoices
X	No Corresponding	PEO-GCSS Position	3.1.2.28	John Smith (Albany)	CLS
X	No Corresponding	PEO-GCSS Position	3.1.2.29	Vacant (Albany)	Logistician QDRs Beneficial Suggestion
X	No Corresponding	PEO-GCSS Position	3.1.2.30	Vacant (Albany)	TOC
3.1.1.34	John Klecha	Lawyer	3.1.2.31	Vacant	Fret-Legal

2.0 Programmed Core MARCORSYSCOM – Actual MTVR Staffing to be established.

WBS 3.3	Name	Programmed Grade	Focus	Planned Manyears
3.3.1	Lt Col Manley	O-5/O-6	Program Manager (PM)	0.20
3.3.2	Maj Morton	O-5	Assistant Program Manager (APM)	1.00
3.3.3	Vacant	GS-13/14	Project Manager	1.00
3.3.4	Vacant	GS-12	Procurement Analyst	1.00
3.3.5	Maj Reyburn	O-4	Chief of Logistics	1.00
3.3.6	Mr. Faulkner	NH-III (GS-13/14)	Chief Engineer	1.00
3.3.7	Vacant	GS-7	Administration	1.00
3.3.8	GySgt Winborne	E-7/E8	Operations Officer	1.00
3.3.9	Recommend Hire Ron Beck through MIPR to TARDEC	GS-15	Model & Simulation	1.00
3.3.10	Vacant	GS-12/13	Engineer	1.00
3.3.11	Vacant	Contractor Support	Engineer	1.00
3.3.12	Vacant	GS-12	Quality Assurance	1.00
3.3.13	Vacant	Contractor	Quality Assurance	1.00
3.3.14	1) Sylvia Spradley (Albany) 2) Vacant Contr. (Albany)	1) GS-11/12 2) Contractor	Warranty Manager	1) 0.60 2) 0.40
3.3.15	Vacant (Albany)	GS-11/12	Logistician Maintenance	1.00
3.3.16	1) Jeff Verner (Albany) 2) Tony Tailor (Albany)	1) GS-11/12 2) GS-11/12	Logistician Tech Pubs	1) 0.60 2) 0.40
3.3.17	Vacant	Contractor	Budget Analyst	1.00
3.3.18	Vacant	GS-12/13	Config. Manager	1.00
3.3.19	Vacant	Contractor	Assistant Config. Mgr.	1.00
3.3.20	Mr. Munn	Contractor	(Test & Evaluation engineer)	1.00
3.3.21	Vacant	Contractor	ESH Engineer	1.00
3.3.22	Vacant-Not yet identified Carderock Matrixed Support	Carderock Support	Corrosion	0.50
3.3.23	Shared Matrixed from CSLE Directorate	CSLE Matrix	Computer Support	0.50
3.3.24	Mr. Buder	Contractor	Program Mgmt Support	1.00
3.3.25	Vacant	GM-14	PCO	1.00
3.3.26	Vacant	GS-12	Contract Specialist	1.00
3.3.27	1) Cindy Weaver (Albany) 2) Vacant (Albany) Contr.	1) GS-11/12 2) Contractor	Product management and unmatched invoices	1) 0.60 2) 0.40
3.3.28	John Smith	Contractor	CLS	1.00
3.3.29	Vacant (Albany)	GS-11/12	Logistician QDRs Beneficial Suggestion	1.00
3.3.30	Vacant (Albany)	Contractor	TOC	0. 50
3.3.31	Vacant	GS-13/14	Fret-Legal	0.50
			Totals	**28.20**

SECTION VII

MARCORSYSCOM FACILITIES REQUIREMENTS

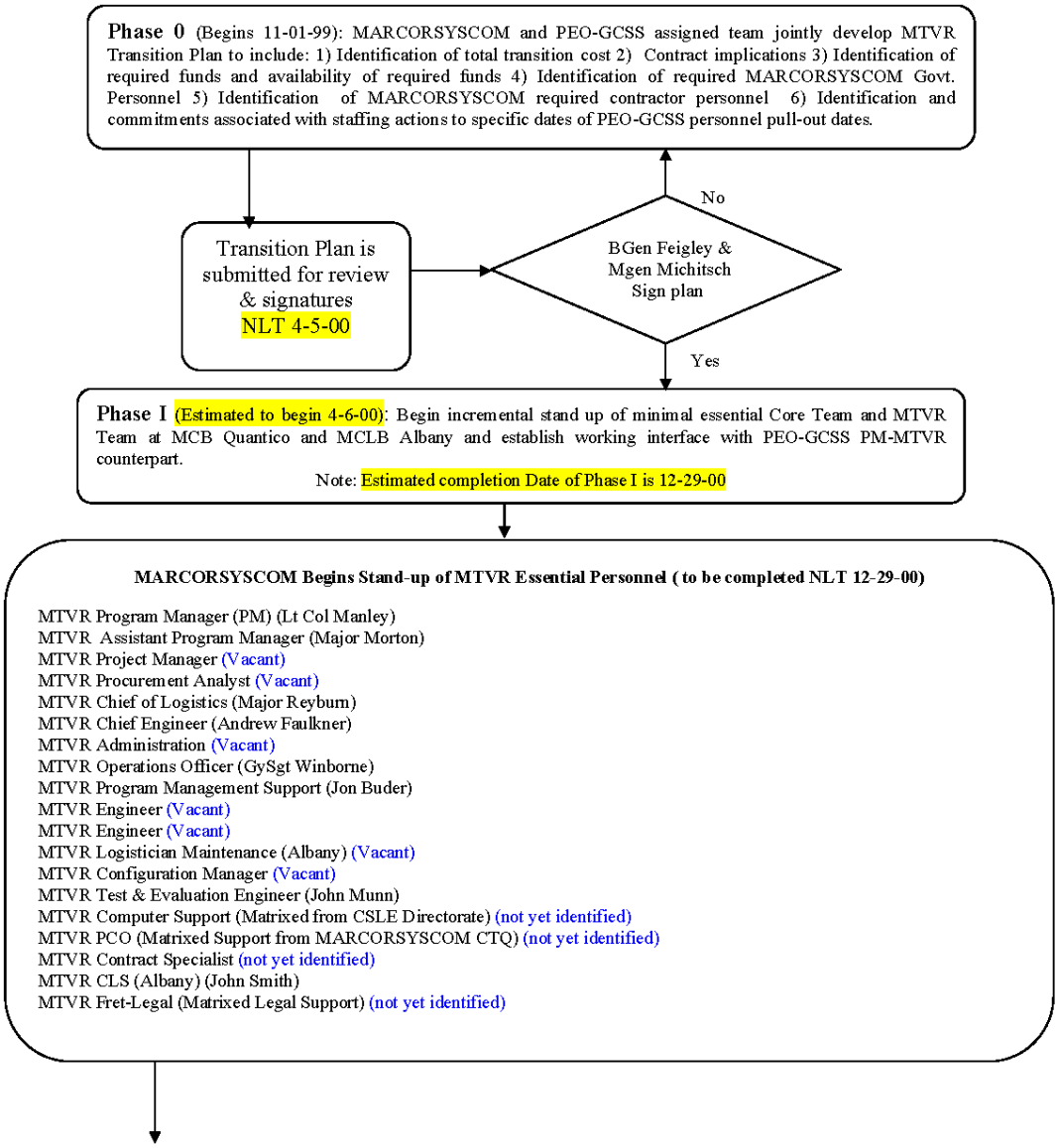
WBS 4.0	Position	Grade or Other Specifics	PM Transportation	MCLB Albany	Sverdrup CSLE	Others by Location
4.1	Program Manager	O-5/O-6	1			
4.2	Assistant Program Manager	O-5	1			
4.3	Project Manager	0-4 or GS-13/14	1			
4.4	Procurement Analyst	GS-12	1			
4.5	Chief of Logistics	O-4 or GS-13/14	1			
4.6	Chief Engineer	NH-III (GS-13/14)	1			
4.7	Administration	GS-7	1			
4.8	Operations Officer	E-7/E8	1			
4.9	Model & Simulation	GS-15 @ Tardec				TARDEC
4.10	Engineer	GS-12/13	1			
4.11	Engineer	Contractor Support			1	
4.12	Quality Assurance	GS-12	1			
4.13	Quality Assurance	Contractor			1	
4.14	Warranty Manager (Note 1)	1) GS-11/12 & 2) Contr.		2		
4.15	Logistician Maint. (Note 1)	GS-11/12		1		
4.16	Logistician Tech Pubs (Note 1)	1) GS-11/12 & 2) Contr.		2		
4.17	Budget Analyst	Contractor	1			
4.18	Config. Manager	GS-12/13	1			
4.19	Assistant Config. Mgr.	Contractor			1	
4.20	(Test & Evaluation)	Contractor			1	
4.21	ESH Engineer	Contractor			1	
4.22	Corrosion	Carderock Support				Carderock
4.23	Computer Support	CSLE Matrix				CSLE
4.24	Program Mgmt Support	Contractor			1	
4.25	PCO	GM-14				CTQ
4.26	Contract Specialist	GS-12				CTQ
4.27	Product management and unmatched invoices (Note 1)	1) GS-11/12 & 2) Contr.		2		
4.28	CLS (Note 1)	Contractor		1		
4.29	Logistician QDRs Beneficial Suggestion (Note 1)	GS-11/12		1		
4.30	TOC (Note 1)	Contractor		1		
4.31	Fret-Legal	GS-13				LAW
4.0	**Totals = 34 seats**		**12**	**10**	**6**	**6** (Note 2)

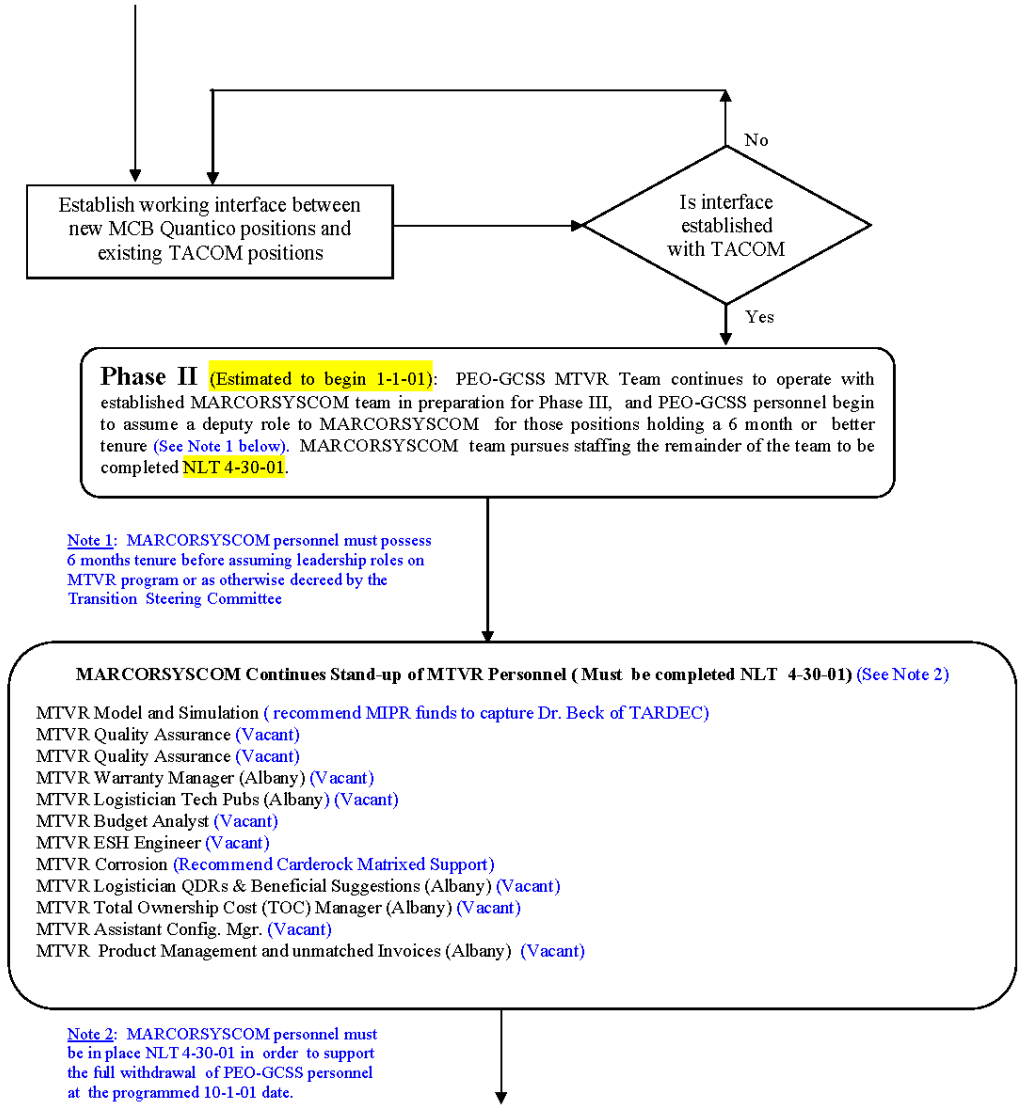
Note 1: Marine Corps Logistics Base Albany located workforce.

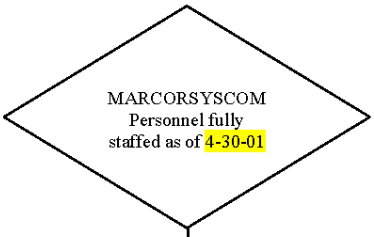
Note 2: Specific Locations are: (1 TARDEC Position) + (2 Quantico MCB –CTQ Position) + (1 Quantico MCB-LAW Position) + (1 CSLE Matrixed Computer person) + (1 Carderock Corrosion) = 7 position located at other than PM transportation facilities.

SECTION VIII

INCREMENTAL STANDUP




No
Establish working interface between new MCB Quantico positions and existing TACOM positions
Is interface established with TACOM
Yes
Phase II (Estimated to begin 1-1-01): PEO-GCSS MTVR Team continues to operate with established MARCORSYSCOM team in preparation for Phase III, and PEO-GCSS personnel begin to assume a deputy role to MARCORSYSCOM for those positions holding a 6 month or better tenure (See Note 1 below). MARCORSYSCOM team pursues staffing the remainder of the team to be completed NLT 4-30-01.
Note 1: MARCORSYSCOM personnel must possess 6 months tenure before assuming leadership roles on MTVR program or as otherwise decreed by the Transition Steering Committee
MARCORSYSCOM Continues Stand-up of MTVR Personnel (Must be completed NLT 4-30-01) (See Note 2)
MTVR Model and Simulation (recommend MIPR funds to capture Dr. Beck of TARDEC)
MTVR Quality Assurance (Vacant)
MTVR Quality Assurance (Vacant)
MTVR Warranty Manager (Albany) (Vacant)
MTVR Logistician Tech Pubs (Albany) (Vacant)
MTVR Budget Analyst (Vacant)
MTVR ESH Engineer (Vacant)
MTVR Corrosion (Recommend Carderock Matrixed Support)
MTVR Logistician QDRs & Beneficial Suggestions (Albany) (Vacant)
MTVR Total Ownership Cost (TOC) Manager (Albany) (Vacant)
MTVR Assistant Config. Mgr. (Vacant)
MTVR Product Management and unmatched Invoices (Albany) (Vacant)
Note 2: MARCORSYSCOM personnel must be in place NLT 4-30-01 in order to support the full withdrawal of PEO-GCSS personnel at the programmed 10-1-01 date.



Phase III
PEO-GCSS begins withdrawal of PM-MTVR team estimated to begin on or about 4-30-01 and fully withdrawn NLT 10-01-01

PEO-GCSS withdraws Personnel as follows: (to be completed NLT 10-01-01)

Name	Position	Date of Withdrawal
Lt Col Walt Raymond	Product Manager	
Major Alexander Scott	Assistant Product Manager	
Tom Franquist	Deputy Product Manager	
Elaine Rudy	Procurement Analyst	
Colleen Grgurich	Logistics	
Gary Boyce	Engineer	
Barbara Wlodek	Administration	
Michael Loos	Asst Program Manager	
Susan Brown	Asst Program Manager	
Ron Beck	Model and Simulation	N/A (Stays on Program)
Mark Starr	Engineer	
Allan Thornton	Engineer	
Carla Williams	Engineer	
Roger Smith	Quality Assurance	
Andy Edwards	Engineer	
Brad Jackson	Quality Assurance	
Max Luenser	Quality Assurance	
Tom Poplawski	Quality Assurance	
Jeff Darnell	Logistics/ Variants	
Connie Allen	Logistics Maintenance	
Ben Ami, Franklin	Logistics Tech Pubs	
Sharon Viggato	Budget Analyst	
Patricia Elbinger	Configuration Mgr.	
Robert Babcock	Test and Evaluation	
George Jarvis	Safety Engineer	
Tom Hinkley (Tardec)	Packaging/Corrosion/Environmental	
Data Automation	Computer Support	
Dennis Haag	Program Mgmt.	
Sharon Thomas	PCO	
Ron Mandel	Contract Specialist	
Aileen Germaine	Contract Specialist	
John Klecha	Lawyer	

SECTION IX

MTVR TRANSITION FUNDING REQUIREMENT

WBS	Description	FY00	FY01	FY02	FY03
2.1	**Transition Plan Total Funds Required**	**$2,326,471**	**$2,843,433**	**$1,478,119**	**$1,478,119**
2.1.1	TACOM Labor Funds Requirements	$1,689,285	$1,478,672	$0	$0
2.1.2	MARCORSYSCOM Labor Funds Requirements	$427,218	$1,123,406	$1,329,523	$1,329,523
2.1.3	Travel	$169,320	$208,166	$106,362	$106,362
2.1.4	Incidentals	$40,648	$33,188	$42,234	$42,234

WBS	Description	FY00	FY01	FY02	FY03
2.1.5	Programmed	$2,830,000	$2,830,000	$1,500,000	$1,500,000
2.1.6	Total Funding Req'd Minus Incidentals	$2,285,823	$2,810,244	$1,435,885	$1,435,885
2.1.7	Funding Requirement (Delta)	$544,177	$19,756	$64,115	$64,115

Note: Status Quo: (PEO-GCSS) + Current Syscom = $1,689,285 + $349,380 + $169,320 + $40,648 = $2,248,538
During Transition: See FY01 Totals = $2,843,433
Post transition: See FY02 Totals = $1,478,119

Fiscal Assumptions.

1. All computations in Base Year 2000 Dollars.
2. All calculations are based on the MTVR Transition Plan dated 3-9-00.
3. Govt. civilian labor rates are base-lined at a Step 5 of each identified pay rate using DoD composite rates for each locality unless otherwise noted as using actual salaries. It should be noted that the Govt. labor rates are direct labor rates and not burdened rates.
4. Contractor Labor rates are the Sverdrup CSLE negotiated "Sustaining Base Year one" rates. It should be noted that the contractor rates captured are fully burdened rates (Actual cost to Govt.).
5. Incidentals are specifically inclusive of PEO-GCSS and MARCORSYSCOM supplies computed at 2.5% of loaded labor rates and, PEO-GCSS and MARCORSYSCOM systems computed at 12.5% of loaded labor rates.

Note: Percentages stated in were extracted from the CSLE, Dec 99 Transportation Systems Business Processes Strategic Plan for Business Process Reengineering (BPR).

SECTION X

CALCULATION METHODOLOGY

WBS – 2.1.1 TACOM Team Funding Requirements

WBS Detail	Yearly Direct Govt Rate	Yearly Contractor Burdened Rates	Programmed Man-Years	Title	Name	Pay Rate	Monthly Labor Cost	Oct-99 Salaries	Nov-99 Salaries
2.1.1.1	$0		1	Product Manager	Lt Col Walt Raymond	Lt Col / O-5	$0	$0	$0
2.1.1.2	$0		1	Assistant Product Manager	Major Alexander Scott	Major / O-4	$0	$0	$0
2.1.1.3	$98,938		1	Deputy Product Manager	Tom Franquist	NH-IV	$8,245	$8,245	$8,245
2.1.1.4	$83,725		1	Procurement Analyst	Elaine Rudy	NH-III	$6,977	$6,977	$6,977
2.1.1.5	$83,725		1	Logistics	Colleen Grgurich	NH-III	$6,977	$6,977	$6,977
2.1.1.6	$83,725		1	Engineer	Gary Boyce	GS-13	$6,977	$6,977	$6,977
2.1.1.7	$39,691		1	Administration	Barbara Wodek	NH-II	$3,308	$3,308	$3,308
2.1.1.8	$0		1	Asst Program Manager	Michael Loos	Major / O-4	$0	$0	$0
2.1.1.9	$0		1	Asst Program Manager	Susan Brown	NH-III	$0	$0	$0
2.1.1.10	$100,000		1	Model and Simulation	Ron Beck (TARDEC)	GS-15	$8,333	$8,333	$8,333
2.1.1.11	$83,725		1	Engineer	Mark Starr	NH-III	$6,977	$6,977	$6,977
2.1.1.12	$83,916		1	Engineer	Allan Thornton	GS-13	$6,993	$6,993	$6,993
2.1.1.13	$70,568		1	Engineer	Carla Williams	GS-12	$5,881	$5,881	$5,881
2.1.1.14	$70,568		1	Engineer	Andy Edwards	GS-12	$5,881	$5,881	$5,881
2.1.1.15	$70,168		1	Quality Assurance	Roger Smith	GS-12	$5,847	$5,847	$5,847
2.1.1.16	$70,568		1	Quality Assurance	Brad Jackson	GS-12	$5,881	$5,881	$5,881
2.1.1.17	$70,568		1	Quality Assurance	Max Luenser	GS-12	$5,881	$5,881	$5,881
2.1.1.18	$70,568		1	Quality Assurance	Tim Poplawski	GS-12	$5,881	$5,881	$5,881
2.1.1.19	$70,568		1	Logistics/ Variants	Jeff Darnell	GS-12	$5,881	$5,881	$5,881
2.1.1.20	$58,879		1	Logistics Maintenance	Connie Allen	GS-11	$4,907	$4,907	$4,907
2.1.1.21	$70,568		1	Logistics Tech Pubs	Ben Ami, Franklin	GS-12	$5,881	$5,881	$5,881
2.1.1.22	$70,568		1	Budget Analyst	Sharon Viggato	GS-12	$5,881	$5,881	$5,881
2.1.1.23	$70,568		0.3	Configuration Mgr	Patricia Elbinger	GS-12	$1,764	$1,764	$1,764
2.1.1.24	$70,568		0.3	Configuration Mgr	Wayne Gray	GS-12	$1,764	$1,764	$1,764
2.1.1.25	$40,967		0.3	Test and Evaluation	Jacks Joyce	GS-9	$1,024	$1,024	$1,024
2.1.1.26	$40,967		0.3	Test and Evaluation	Staziewicz Linda	GS-9	$1,024	$1,024	$1,024
2.1.1.27	$83,920		0.1	Safety Engineer	George Jarvis	GS-13	$699	$699	$699
2.1.1.28	$83,916		0.5	TARDEC Packaging/Corrosion/E	Tom Hinkley	GS-13	$3,497	$3,497	$3,497
2.1.1.29	$0		0.5	Computer Support	Data Automation	GS-9	$0	$0	$0
2.1.1.30	$0	$215,384	1	Program Mgmt.	Dennis Haag	Contractor	$17,949	$17,949	$17,949
2.1.1.31	$0		0.3	PCO	Sharon Thomas	GS-13	$0	$0	$0
2.1.1.32	$0		1	Contract Specialist	Ron Mandel	GS-12	$0	$0	$0
2.1.1.33	$0		1	Contract Specialist	Aileen Germaine	GS-12	$0	$0	$0
2.1.1.34	$83,916		0.2	Lawyer / Legal	John Klecha	GS-13	$1,399	$1,399	$1,399
								Oct-99	Nov-99
								$141,706	$141,706

Total TACOM Man-Years **27.8**

TACOM Labor Funds Required	FY00 Totals	FY01 Totals
	$1,689,285	$1,478,672

Note: Above is for methodology demonstration only. Actual Spreadsheets are available for review by contacting PM-Transportation Systems or his POC, Marc Paquette, SVERDRUP CSLE Transportation Systems Manager.

Analysis Continues through 10-01-01

WBS – 2.1.2 MARCORSYSCOM Team Funding Requirements

WBS Detail	Yearly Direct Govt Rate	Yearly Contractor Burdened Rates	Programmed Man-Years	Title	Name	Pay Rate	Oct-99 Salaries	Nov-99 Salaries
2.1.2.1	$0		0.20	Program Manager	Lt Col Manley	O-5	$0	$0
2.1.2.2	$0		1.00	Assistant Program Manage	Maj Morton	O-4	$0	$0
2.1.2.3	$0		1.00	Project Manager	Vacant	GS-13/14		
2.1.2.4	$0		1.00	Procurement Analyst	Vacant	GS-12		
2.1.2.5	$0		1.00	Chief of Logistics	Maj Reyburn	O-4	$0	$0
2.1.2.6	$0		1.00	Chief Engineer	Mr. Faulkner	NHIII	$0	$0
2.1.2.7	$0		1.00	Administration	Vacant	GS-7		
2.1.2.8	$0		1.00	Operations Officer	GySgt Winborne	E-7/E8	$0	$0
2.1.2.9	$100,000		1.00	Model & Simulation	Dr. Ron Beck-TARDEC	GS-15 @ Tardec		
2.1.2.10	$0		1.00	Engineer	Vacant	GS-12/13		
2.1.2.11		$107,251	1.00	Engineer	Vacant	Sverdrup SE		
2.1.2.12	$0		1.00	Quality Assurance	Vacant	GS-12		
2.1.2.13		$97,766	1.00	Quality Assurance	Vacant	Sverdrup PA		
2.1.2.14	$48,420		0.60	1) Warranty Manager (Not	Vacant (Albany)	GS-11/12		
2.1.2.15		$117,120	0.40	2) Warranty Manager (Not	Vacant (Albany)	Sverdrup SFA		
2.1.2.16	$48,420		1.00	Logistician Maint. (Note 1)	Vacant (albany)	GS-11/12		
2.1.2.17	$48,420		0.60	1) Logistician Tech Pubs (I	Vacant (Albany)	GS-11/12		
2.1.2.18	$48,420		0.40	2) Logistician Tech Pubs (I	Vacant (Albany)	GS-11/12		
2.1.2.19		$87,725	1.00	Budget Analyst	Vacant	Sverdrup BA		
2.1.2.20	$0		1.00	Config. Manager	Vacant	GS-12/13		
2.1.2.21		$134,496	1.00	(Test & Evaluation)	Mr. Munn (Contr.)	Sverdrup SPE	$11,208	$11,208
2.1.2.22		$107,251	1.00	ESH Engineer	Vacant	Sverdrup SE		
2.1.2.23	$69,008		0.50	Corrosion	Vacant-Not yet identified (	Carderock Support		
2.1.2.24			0.50	Computer Support	Shared Matrixed from CS	CSLE Matrix GS-9		
2.1.2.25		$117,120	1.00	Program Mgmt Support	Mr. Buder (Contr.)	Sverdrup SFA	$9,760	$9,760
2.1.2.26	$0		1.00	PCO	Vacant	GM-14		
2.1.2.27	$0		1.00	Contract Specialist	Vacant	GS-12		
2.1.2.28	$48,420		0.60	1) Product management ar	Vacant (Albany)	GS-11/12		
2.1.2.29		$97,766	0.40	2) Product management ar	Vacant (Albany)	Sverdrup PA		
2.1.2.30		$97,766	1.00	CLS (Note 1)	John Smith (Contr.) (Alb	Sverdrup PA	$8,147	$8,147
2.1.2.31	$48,420		1.00	Logistician QDRs Benefici	Vacant (Albany)	GS-11/12		
2.1.2.32		$117,120	0.50	TOC (Note 1)	Vacant (Albany)	Sverdrup SFA		
2.1.2.33		$97,766	1.00	Assistant Config. Mgr	Vacant (Albany)	Sverdrup PA		
2.1.2.34	$0		0.50	Legal	Vacant	GS-13		

Total Manyears
28.20

Oct-99	Nov-99
Labor	Labor
$29,115	$29,115

MARCORSYSCOM Labor Funds Required	FY 00 Totals	FY 01 Totals	FY 02 Totals	FY 03 Totals
	$427,218	$1,123,406	$1,329,523	$1,329,523

Note: Above is for methodology demonstration only. Actual Spreadsheets are available for review by contacting PM-Transportation Systems or his POC, Marc Paquette, SVERDRUP CSLE Transportation Systems Manager.

Analysis Continues through 10-01-01

WBS – 2.1.3 Travel Funding Requirements

Travel

WBS	Description	FY00	FY01	FY02	FY03
2.1.3	Travel				
2.1.3.1	TACOM Travel	$121,669	$135,398	$0	$0
2.1.3.2	MARCORSYSCOM Travel	$61,654	$152,836	$170,819	$170,819
2.1.3	**Totals**	$183,323	$288,234	$170,819	$170,819

WBS – 2.1.4.1 TACOM Incidentals Funding Requirements

TACOM Incidentals.

WBS	Description	FY00	FY01
2.1.4.1	TACOM Incidentals		
2.1.4.1.1	TACOM Supplies	$38,194	$15,000
2.1.4.1.2	TACOM Telephone	$0	$0
2.1.4.1.3	TACOM Facilities	$0	$0
2.1.4.1.4	TACOM Utilities	$0	$0
2.1.4.1.5	TACOM Systems	$20,000	$0
2.1.4.1	Totals	$58,194	$15,000

WBS – 2.1.4.2 MARCORSYSCOM Incidentals Funding Requirements

MARCORSYSCOM Incidentals.

WBS	Description	FY00	FY01	FY02	FY03
2.1.4.2	SYSCOM Incidentals				
2.1.4.2.1	SYSCOM Supplies	$4,130	$6,638	$8,447	$8,447
2.1.4.2.2	SYSCOM Telephone	$0	$0	$0	$0
2.1.4.2.3	SYSCOM Facilities	$0	$0	$0	$0
2.1.4.2.4	SYSCOM Utilities	$0	$0	$0	$0
2.1.4.2.5	SYSCOM Systems	$20,648	$33,188	$42,234	$42,234
2.1.4.2	Totals	$24,777	$39,826	$50,680	$50,680

Note: Incidentals are specifically inclusive of PEO-GCSS and MARCORSYSCOM supplies computed at 2.5% of loaded labor rates and, PEO-GCSS and MARCORSYSCOM systems computed at 12.5% of loaded labor rates. Such expenses as telephone, facilities, and utilities are not reportable program costs. It should be noted that the percentages stated were extracted from the CSLE, Dec 99 Transportation Systems Business Processes Strategic Plan for Business Process Reengineering (BPR).

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APPENDIX G. MTVR PROGRAM TRANSITION BRIEFING TO EXECUTIVE DIRECTOR MARCORSYSCOM

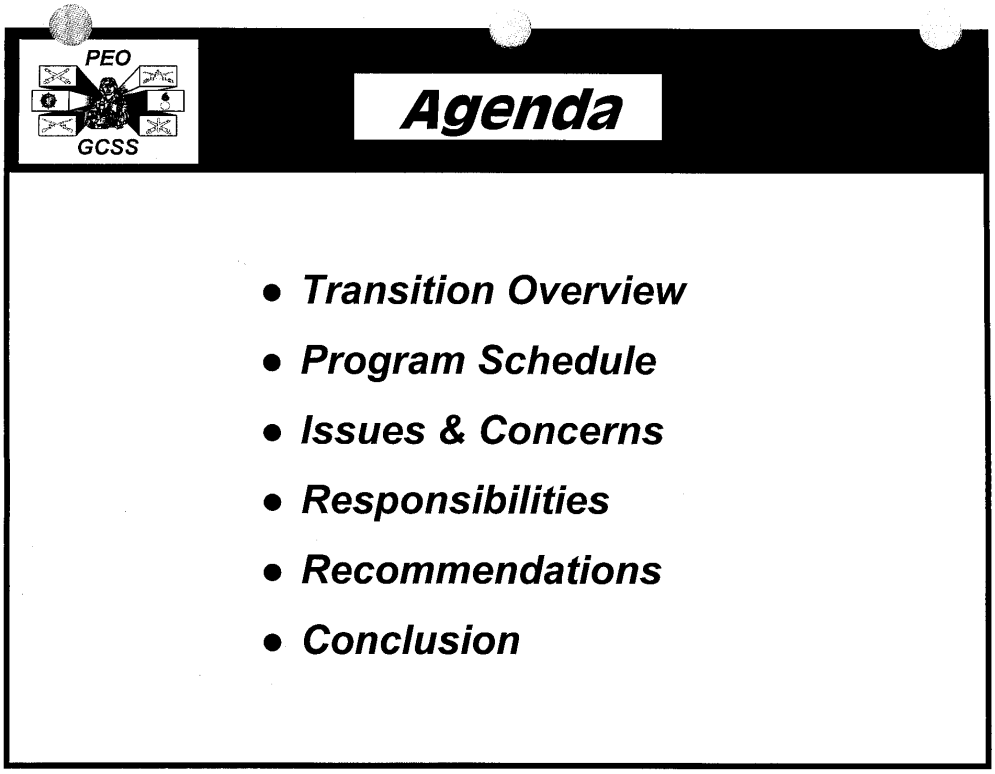
PEO GCSS

MTVR Program Transition

Presented to
Mr. Lawrence P. Kreitzer
Executive Director, MARCORSYSCOM

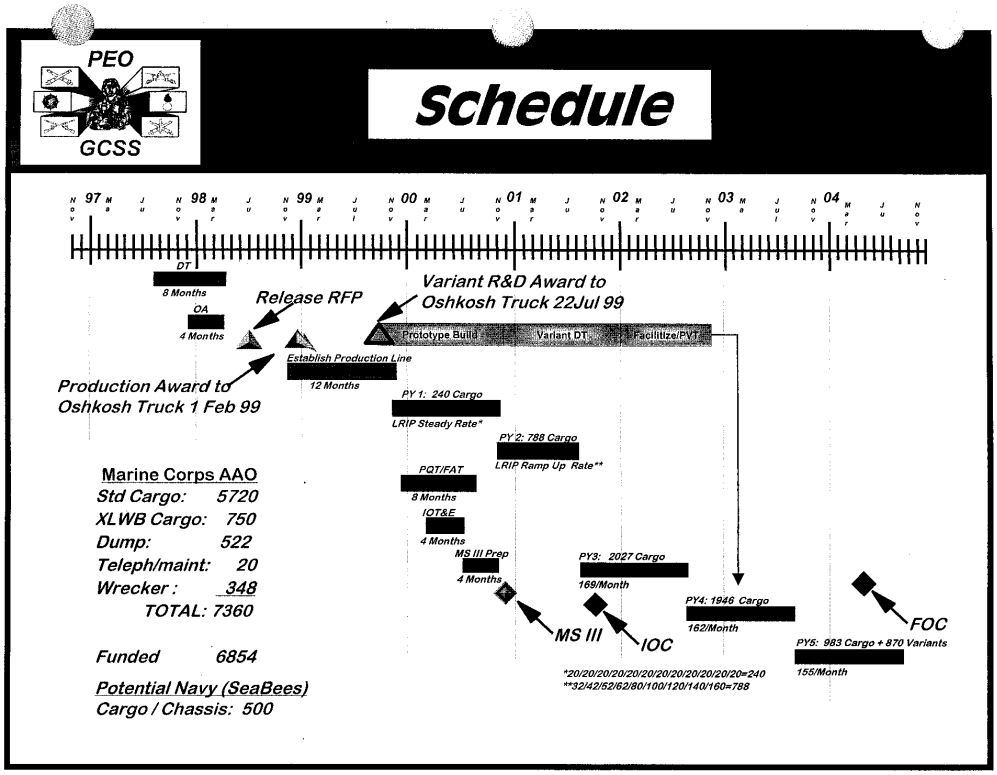
Mr. Al P. Puzzuoli
DPEO-GCSS

18 October 1999


PEO
GCSS
Agenda
• Transition Overview
• Program Schedule
• Issues & Concerns
• Responsibilities
• Recommendations
• Conclusion

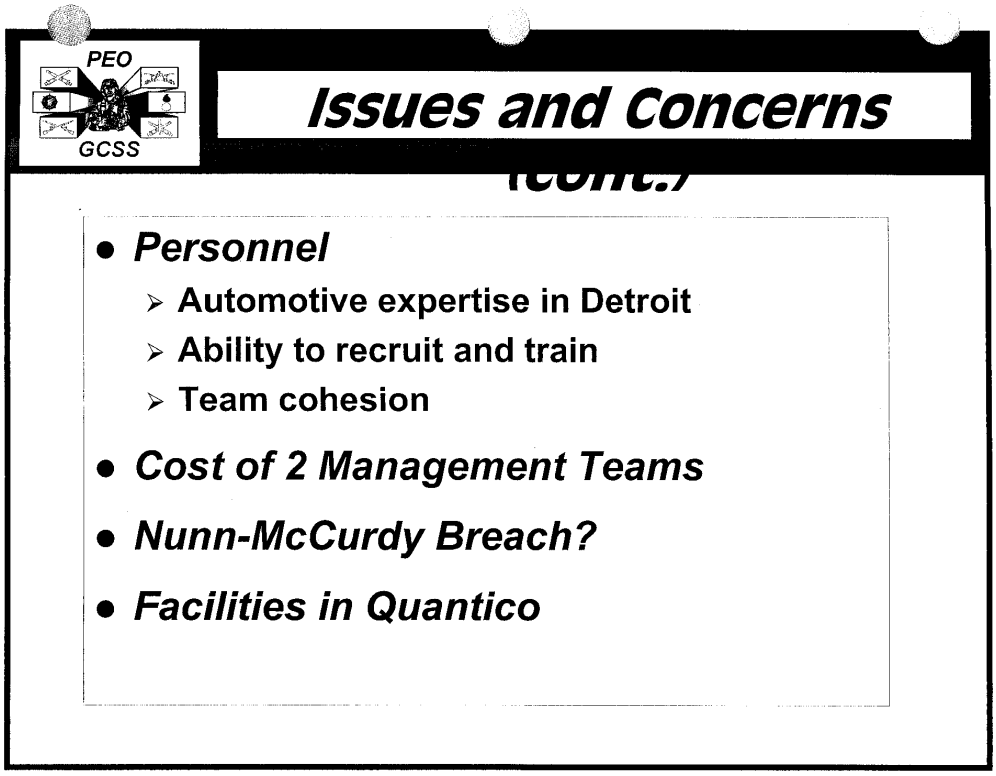
Transition Overview

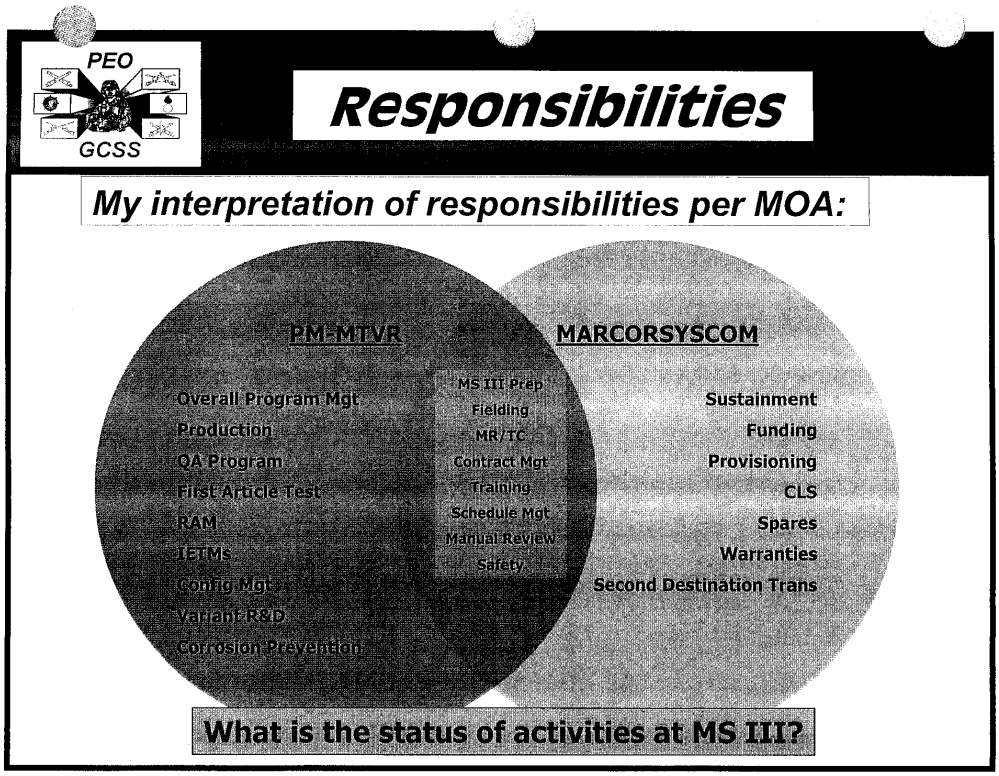
- *Brigadier General Feigley approved transition of Program Management to Quantico coincident with MS III.*
- *MOA modified with transition in mind*
- *Transition teaming initiative formed*
- *What are the resources required to transition at MS III?*
- *How do we transition in a way that will minimize risk and be affordable?*

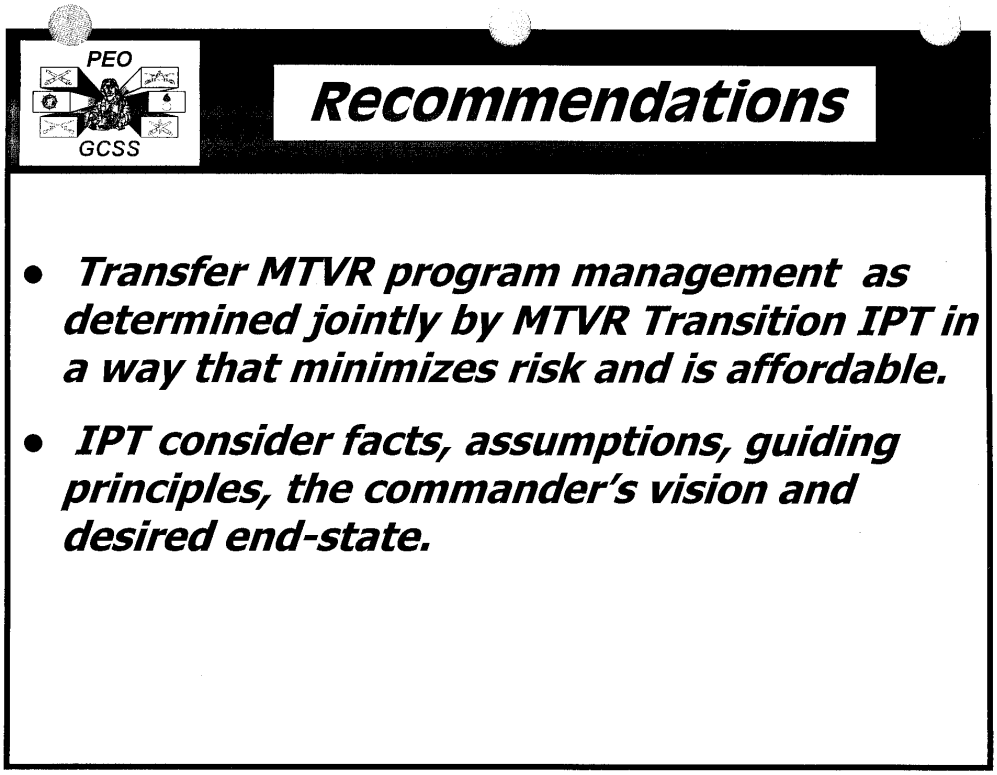

PEO
GCSS
Schedule
97 98 99 00 01 02 03 04
DT
8 Months
OA
4 Months
Release RFP
Variant R&D Award to
Oshkosh Truck 22Jul 99
Prototype Build
Variant DT
Facilitize/PVT
Establish Production Line
12 Months
Production Award to
Oshkosh Truck 1 Feb 99
PY 1: 240 Cargo
LRIP Steady Rate*
PY 2: 788 Cargo
LRIP Ramp Up Rate**
PQT/FAT
8 Months
IOT&E
4 Months
MS III Prep
4 Months
PY3: 2027 Cargo
169/Month
PY4: 1946 Cargo
162/Month
PY5: 983 Cargo + 870 Variants
155/Month
MS III
IOC
FOC
*20/20/20/20/20/20/20/20/20/20/20/20=240
**32/42/52/62/80/100/120/140/160=788
Marine Corps AAO
Std Cargo: 5720
XLWB Cargo: 750
Dump: 522
Teleph/maint: 20
Wrecker : 348
TOTAL: 7360
Funded 6854
Potential Navy (SeaBees)
Cargo / Chassis: 500

Issues and Concerns

- *Fielding Impact*
  - Timeliness in approving and applying ECPs & Retrofits
  - Responsiveness to QDRs
  - Maintaining user support
- *Variants Still In R&D*
- *MS III Preparation*
- *Interface with Oshkosh Truck Corp.*


PEO
GCSS
Issues and Concerns
(cont.)
• Personnel
➢ Automotive expertise in Detroit
➢ Ability to recruit and train
➢ Team cohesion
• Cost of 2 Management Teams
• Nunn-McCurdy Breach?
• Facilities in Quantico


PEO
GCSS
Responsibilities
My interpretation of responsibilities per MOA:
PM-MTVR
MARCORSYSCOM
Overall Program Mgt
Production
QA Program
First Article Test
RAM
IETMs
Config Mgt
Variant R&D
Corrosion Prevention
MS III Prep
Fielding
MR/TC
Contract Mgt
Training
Schedule Mgt
Manual Review
Safety
Sustainment
Funding
Provisioning
CLS
Spares
Warranties
Second Destination Trans
What is the status of activities at MS III?


PEO
GCSS
Recommendations
• Transfer MTVR program management as determined jointly by MTVR Transition IPT in a way that minimizes risk and is affordable.
• IPT consider facts, assumptions, guiding principles, the commander's vision and desired end-state.

Conclusion

- ***Must Minimize Impact to:***
  - **Fleet Marine Force**
  - **Program Personnel**
  - **Contractor (OTC)**
- ***Transitioning MTVR program management to Quantico coincident with MS III will add unnecessary risk and cost to the program.***

PLAN FOR TRANSITION OF THE

USMC MEDIUM TACTICAL VEHICLE REPLACEMENT (MTVR) PROGRAM

FROM

U. S. ARMY, PROGRAM EXECUTIVE OFFICER,

GROUND COMBAT AND SUPPORT SYSTEMS

WARREN, MI

TO

U. S. MARINE CORPS SYSTEMS COMMAND,

DIRECTOR, COMBAT SUPPORT AND LOGISTICS EQUIPMENT

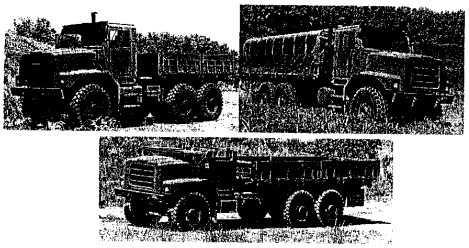
QUANTICO MCB, VA

3-13-00

Overview

- MTVR System Description
- MTVR Program Schedule
- Transition Assumptions
- MTVR Transition Timelines
- Transition Steering Committee and IPT
- Incremental Standup
- Correlation Matrix
- Planned MARCORSYSCOM Staffing
- Funding Requirements
- Risk Mitigation

MTVR System Description



DESCRIPTION

The Medium Tactical Vehicle Replacement (MTVR) is an ACAT II program to procure a cost-effective, state of the art system to replace the existing M809/M939 medium tactical trucks. The MTVR can readily negotiate terrain twice as rough as the current fleet's capability and has a mission profile of 70% off road and 30% on-road, increased payload (7.1 tons off road and 15 tons on road), and improved cross-country speed (up to 30 mph). It is also a safer, more reliable system through extensive use of proven commercial heavy truck componentry that meets today's over the road truck safety standards.

PROGRAM STATUS

- 5 Year Multi-year (Cargo & Variant Chassis)
  - LRIP FY99 - FY00
  - Full Rate FY01 - FY03
  - PVT FY00
- IOT&E FY00
- Variant R&D (Wrecker, Dump, Trailer)
  - DT FY01
  - Production FY02-FY03 (Wrecker & Dump)
  - Production* FY03-FY04 (Trailer)

* Expected- awaiting Strategy/POM 02 decision

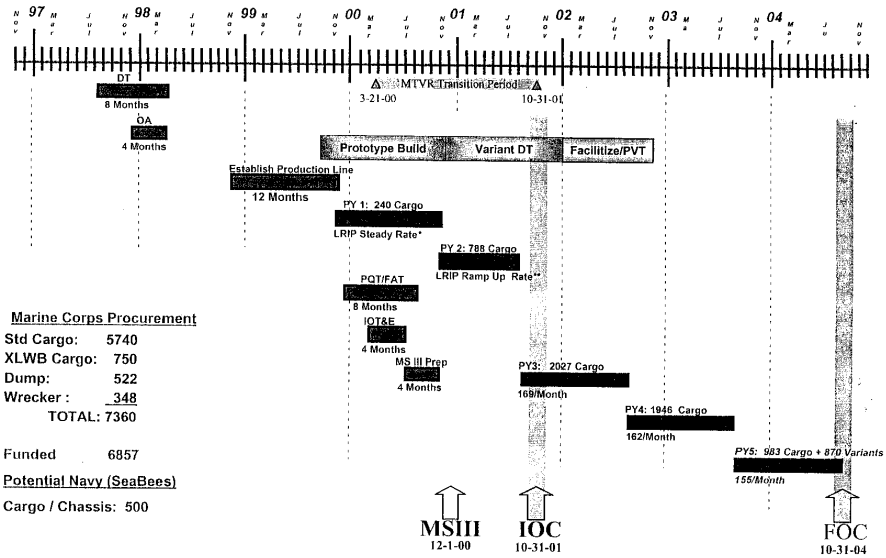
FUNDING PROFILE ($M)

	FY99	FY00	FY01	FY02	FY03	FY04
RDT&E	2.5	6.8	1.0	2.0		
PMC	69.5	138.3	325.3	311.8	380.5	5.9

MILESTONE SCHEDULE

	FY99	FY00	FY01	FY02	FY03	FY04
MS III			◊			
IOC			◊			
FOC						◊

Overall MTVR Schedule



Marine Corps Procurement

Std Cargo:	5740
XLWB Cargo:	750
Dump:	522
Wrecker :	348
TOTAL:	7360

Funded 6857

Potential Navy (SeaBees)

Cargo / Chassis: 500

Combat Support & Logistics Equipment -- Marine Corps Systems Command -- Marine Corps Materiel Command

Slide 4

Transition Plan Assumptions

a) The Assistant Secretary of the Navy Research, Development and Acquisition, Navy Acquisition and Executive supports the MTVR management transition to MARCORSYSCOM.

b) The Commander, Marine Corps Systems Command and Program Executive Office-Ground Combat Support Systems support the MTVR management transition to MARCORSYSCOM.

c) The Transportation Systems Program Manager, Combat Support & Logistics Equipment and PEO-GCSS-Product Manager (PM), Medium Tactical Vehicle Replacement (MTVR) fully support the MTVR Transition and identified staffing requirements.

d) The currently assigned PEO-GCSS PM-MTVR team identified in section V of the MTVR transition plan will remain appropriately staffed and functional through the programmed transition as depicted in section IV, Transition Schedule and in the Incremental Standup diagram captured in section VIII of the transition plan.

e) The new MARCORSYSCOM – MTVR staff will be in place at MCB Quantico as depicted in the MTVR transition plan, section IV, Transition Schedule and in the Incremental Standup diagram captured in section VIII.

f) MTVR will be awarded Milestone III during December 2000.

Detailed MTVR Transition Schedule

ID	Task Name	Calendar Years: 1999 Qtr 3	1999 Qtr 4	2000 Qtr 1	2000 Qtr 2	2000 Qtr 3	2000 Qtr 4	2001 Qtr 1	2001 Qtr 2	2001 Qtr 3	2001 Qtr 4
1	Phase 0 - MTVR Transition Plan	11/1		2/28							
2	Identify Required Personnel	12/15		1/14				MTVR MSIII			
3	Identify Facilities Requirements		1/17	2/1							
4	Review MTVR Contracts			2/29	3/3						
5	Identify Required Funds			3/3	3/15						
6	Identify Source of Funds			3/15	3/30						
7	Identify Source of Facilities			3/15	3/30						
8	Final Transition Plan Briefing to Gen Fiegley				4/5						
9	Acquire Facilities				4/6	5/5					
10	Phase I - Initial SYSCOM Cadre Staffing				4/6			12/29			
11	Phase II - Staff remaining SYSCOM Personn						1, 1	4/30			
12	Phase III - Withdrawal of PM-MTVR							4/30			10/1

MTVR Transition Steering Committee

- PM, Transportation Systems, CSLE, MARCORSYSCOM
- Medium Fleet Project Officer (APM), CSLE, MARCORSYSCOM
- PM-MTVR, PEO GCSS, TACOM
- Deputy PM-MTVR, PEO GCSS, TACOM

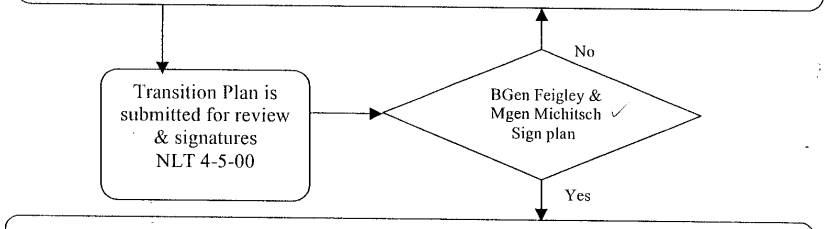
The Steering Committee will act on recommendations of the MTVR Transition IPT comprised of the following TACOM personnel and MARCORSYSCOM counterparts

Transition IPT

- Chief Engineer
- Chief of Logistics
- Test and Evaluation Officer/Lead
- Lead Contracting Officer
- Legal Representative
- Budget Analyst
- Quality Assurance

Incremental Stand Up

Phase 0 (Begins 11-01-99): MARCORSYSCOM and PEO-GCSS assigned team jointly develop MTVR Transition Plan to include: 1) Identification of total transition cost 2) Contract implications 3) Identification of required funds and availability of required funds 4) Identification of required MARCORSYSCOM Govt. Personnel 5) Identification of MARCORSYSCOM required contractor personnel 6) Identification and commitments associated with staffing actions to specific dates of PEO-GCSS personnel pull-out dates.



Phase I (Estimated to begin 4-6-00): Begin incremental stand up of minimal essential Core Team and MTVR Team at MCB Quantico and MCLB Albany and establish working interface with PEO-GCSS PM-MTVR counterpart.

Note: Estimated completion Date of Phase I is 12-29-00

Incremental Stand Up (Cont'd)

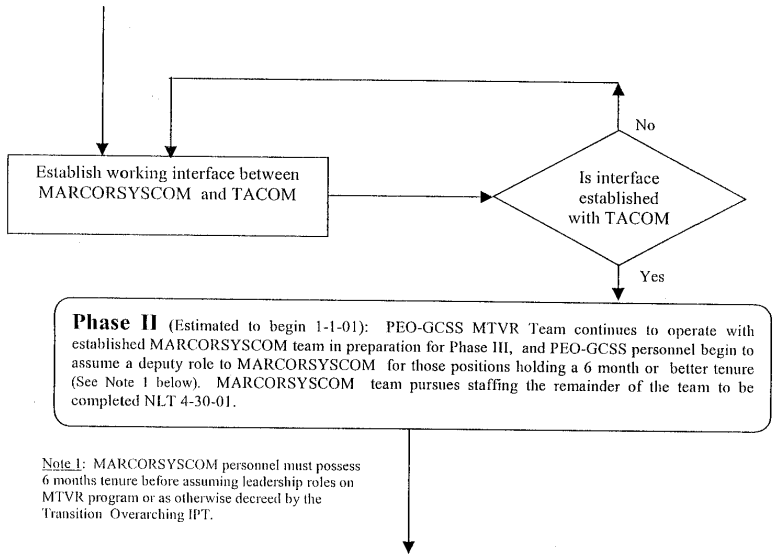
Phase I (Estimated to begin 4-6-00): Begin incremental stand up of minimal essential Core Team and MTVR Team at MCB Quantico and MCLB Albany and establish working interface with PEO-GCSS PM-MTVR counterpart.

Note: Estimated completion Date of Phase I is 12-29-00

MARCORSYSCOM Begins Stand-up of MTVR Essential Personnel (to be completed NLT 12-29-00)

MTVR Program Manager (PM) (Lt Col Manley)
MTVR Assistant Program Manager (APM), (Major Morton)
MTVR Project Manager (Vacant)
MTVR Procurement Analyst (Vacant)
MTVR Chief of Logistics (Major Reyburn)
MTVR Chief Engineer (Andrew Faulkner)
MTVR Administration (Vacant)
MTVR Operations Officer (GySgt Winborne)
MTVR Program Management Support (Jon Buder)
MTVR Engineer (Vacant)
MTVR Engineer (Vacant)
MTVR Logistician Maintenance (Albany) (Vacant)
MTVR Configuration Manager (Vacant)
MTVR Test & Evaluation Engineer (John Munn)
MTVR Computer Support (Matrixed from CSLE Directorate) (not yet identified)
MTVR PCO (Matrixed Support from MARCORSYSCOM CTQ) (not yet identified)
MTVR Contract Specialist (not yet identified)
MTVR CLS (Albany) (John Smith)
MTVR Fret-Legal (Matrixed Legal Support) (not yet identified)

Incremental Stand Up (Cont'd)



Phase II (Estimated to begin 1-1-01): PEO-GCSS MTVR Team continues to operate with established MARCORSYSCOM team in preparation for Phase III, and PEO-GCSS personnel begin to assume a deputy role to MARCORSYSCOM for those positions holding a 6 month or better tenure (See Note 1 below). MARCORSYSCOM team pursues staffing the remainder of the team to be completed NLT 4-30-01.

Note 1: MARCORSYSCOM personnel must possess 6 months tenure before assuming leadership roles on MTVR program or as otherwise decreed by the Transition Overarching IPT.

Incremental Stand Up (Cont'd)

Phase II (Estimated to begin 1-1-01): PEO-GCSS MTVR Team continues to operate with established MARCORSYSCOM team in preparation for Phase III, and PEO-GCSS personnel begin to assume a deputy role to MARCORSYSCOM for those positions holding a 6 month or better tenure (See Note 1 below). MARCORSYSCOM team pursues staffing the remainder of the team to be completed NLT 4-30-01.

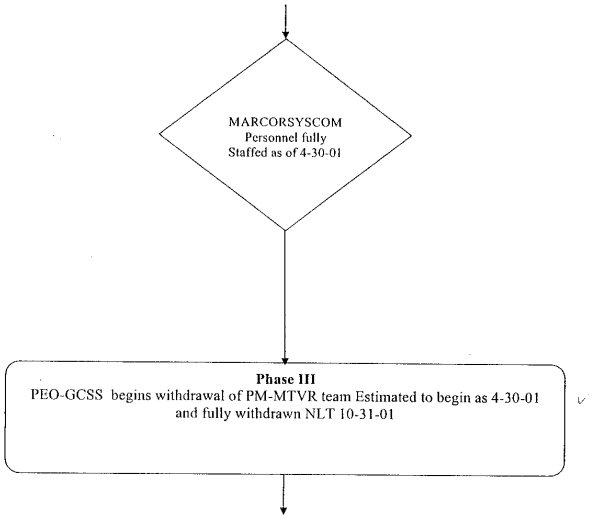
Note 1: MARCORSYSCOM personnel must possess 6 months tenure before assuming leadership roles on MTVR program or as otherwise decreed by the Transition Overarching IPT.

MARCORSYSCOM Continues Stand-up of MTVR Personnel (Must be completed NLT 4-30-01) (See Note 2)

MTVR Model and Simulation (recommend MIPR funds to capture Dr. Beck of Tardec)
MTVR Quality Assurance (Vacant)
MTVR Quality Assurance (Vacant)
MTVR Warranty Manager (Albany) (Partly Vacant)
MTVR Logistician Tech Pubs (Albany) (Partly Vacant)
MTVR Budget Analyst (Vacant)
MTVR ESH Engineer (Vacant)
MTVR Corrosion (Recommend Carderock Matrixed Support)
MTVR Logistician QDRs & Beneficial Suggestions (Albany) (Vacant)
MTVR Total Ownership Cost (TOC) Manager (Albany) (Vacant)
MTVR Assistant Config. Mgr. (Vacant)
MTVR Product Management and unmatched Invoices (Albany) (Vacant)

Note 2: MARCORSYSCOM personnel must be in place NLT 4-30-01 in order to support the full withdrawal of PEO-GCSS personnel at the programmed 10-31-01.

Incremental Stand Up (Cont'd)



Incremental Stand Up (Cont'd)

PEO-GCSS withdraws Personnel as follows: (to be completed NLT 10-01-01)

Name	Position	Date of Withdrawal
Lt Col Walt Raymond	Product Manager	
Major Alexander Scott	Assistant Product Manager	
Tom Franquist	Deputy Product Manager	
Elaine Rudy	Procurement Analyst	
Colleen Grgurich	Logistics	
Gary Boyce	Engineer	
Barbara Wlodek	Administration	
Michael Loos	Asst Program Manager	
Susan Brown	Asst Program Manager	
Ron Beck	Model and Simulation	N/A (Stays on Team)
Mark Starr	Engineer	
Allan Thornton	Engineer	
Andy Edwards	Engineer	
Carla Williams	Engineer	
Vacant	Engineer	
Roger Smith	Quality Assurance	
Brad Jackson	Quality Assurance	
Max Luenser	Quality Assurance	
Tom Poplawski	Quality Assurance	
Jeff Darnell	Logistics/ Variants	
Connie Allen	Logistics Maintenance	
Ben Ami, Franklin	Logistics Tech Pubs	
Sharon Viggato	Budget Analyst	
Patricia Elbinger	Configuration Mgr	
Robert Babcock	Test and Evaluation	
George Jarvis	Safety Engineer	
Tom Hinkley (Tardec)	Packaging/Corrosion/Environmental	
Data Automation	Computer Support	
Dennis Haag	Program Mgmt.	
Sharon Thomas	PCO	
Ron Mandel	Contract Specialist	
Aileen Germaine	Contract Specialist	

Personnel Correlation Matrix
Accurate Identification of Personnel WBS 3.1

Current PEO-GCSS Manning-WBS 3.1.1			MARCORSYSCOM Required Manning-WBS 3.1.2		
3.1.1.1	Lt Col Walt Raymond	Product Manager	3.1.2.1	Lt Col Manley	Program Manager
3.1.1.2	Major Alexander Scott	Assistant Product Manager	3.1.2.2	Maj Morton	Assistant Program Manager
3.1.1.3	Tom Franquist	Deputy Product Manager	3.1.2.3	Vacant	Project Manager
3.1.1.4	Elaine Rudy	Procurement Analyst	3.1.2.4	Vacant	Procurement Analyst
3.1.1.5	Colleen Grgurich	Logistics	3.1.2.5	Maj Rayburn	Chief of Logistics
3.1.1.6	Gary Boyce	Engineer	3.1.2.6	Mr. Faulkner	Chief Engineer
3.1.1.7	Barbara Wlodek	Administration	3.1.2.7	Vacant	Administration
3.1.1.8	Michael Loos	Asst Program Manager	3.1.2.8	GySgt Winborne	Operations Officer
3.1.1.9	Susan Brown	Asst Program Manager	X	Position not necessary	Coordinated w/ PM
3.1.1.10	Ron Beck	Model and Simulation	3.1.2.9	Recommend we hire Dr. Ron Beck through MIPR to TARDEC	Model and Simulation
3.1.1.11	Mark Starr	Engineer	3.1.2.10	Vacant	Engineer
3.1.1.12	Allan Thornton	Engineer	3.1.2.11	Vacant	Engineer
3.1.1.13	Carla Williams	Engineer	X	Position not necessary	Coordinated w/PM
3.1.1.14	Andy Edwards	Engineer	X	Position not necessary	Coordinated w/PM
3.1.1.15	Roger Smith	Quality Assurance	3.1.2.12	Vacant	Quality Assurance
3.1.1.16	Brad Jackson	Quality Assurance	3.1.2.13	Vacant	Quality Assurance
3.1.1.17	Max Luenser	Quality Assurance	X	Position not necessary	Coordinated w/ PM
3.1.1.18	Tom Poplawski	Quality Assurance	X	Position not necessary	Coordinated w/ PM
3.1.1.19	Jeff Darnell	Logistics/ Variants	3.1.2.14	Vacant (Albany)	Warranty Manager
3.1.1.20	Connie Allen	Logistics Maintenance	3.1.2.15	Vacant (Albany)	Logistician Maintenance
3.1.1.21	Ben Ami Franklin	Logistics Tech Pubs	3.1.2.16	Vacant (Albany)	Logistician Tech Pubs
3.1.1.22	Sharon Viggato	Budget Analyst	3.1.2.17	Vacant	Budget Analyst
3.1.1.23	Patricia Elbinger	Configuration Mgr.	3.1.2.18	Vacant	Configuration Mgr
3.1.1.24	Wayne Gray	Configuration Mgr.	X	Position not necessary	Coordinated w/ PM
3.1.1.25	Jacks Joyce	Test and Evaluation	3.1.2.19	Mrs Munns	Test & Evaluation
3.1.1.26	Stasiewicz Linda	Test and Evaluation	X	Position not necessary	Coordinated w/ PM
3.1.1.27	George Jarvis	Safety Engineer	3.1.2.20	Vacant	ESH Engineer
3.1.1.28	Tom Hinkley	TARDEC Packaging/Corrosion/Enviro nmental	3.1.2.21	Vacant/Not yet identified Carderock Matrixed Support	Corrosion
3.1.1.29	Data Automation	Computer Support	3.1.2.22	Shared Matrixed from CSLB Directorate	Do we need position
3.1.1.30	Dennis Haag	Program Mgmt.	3.1.2.23	Mr. Bixler	Program Mgmt Support
3.1.1.31	Sharon Thomas	PCO	3.1.2.24	Vacant	PCO
3.1.1.32	Ron Mandel	Contract Specialist	3.1.2.25	Vacant	Contract Specialist
3.1.1.33	Aileen Germaine	Contract Specialist	X	Position not necessary	Coordinated w/ CTO
X	No Corresponding	PEO-GCSS Position	3.1.2.26	Vacant (Albany)	Product management and unmatched invoices
X	No Corresponding	PEO-GCSS Position	3.1.2.27	John Smith (Albany)	CLSS
X	No Corresponding	PEO-GCSS Position	3.1.2.28	Vacant (Albany)	Logistician ODRs Beneficial Suggestion
X	No Corresponding	PEO- GCSS Position	3.1.2.29	Vacant (Albany)	TOC
X	No Corresponding	PEO-GCSS Position	3.1.2.30	Vacant	Assistant Config. Mgt.
3.1.1.34	John Klecha	Lawyer	3.1.2.31	Vacant	Fiel-Legal

MARCORSYSCOM Required Personnel
WBS - 3.3

WBS 3.3	Name	Programmed Grade	Focus	Planned Manyears
3.3.1	Lt Col Manley	O-5/O-6	Program Manager (PM)	0.20
3.3.2	Maj Morton	O-5	Assistant Program Manager (APM)	1.00
3.3.3	Vacant	GS-13/14	Project Manager	1.00
3.3.4	Vacant	GS-12	Procurement Analyst	1.00
3.3.5	Maj Reyburn	O-4	Chief of Logistics	1.00
3.3.6	Mr. Faulkner	GS-13/14	Chief Engineer	1.00
3.3.7	Vacant	GS-7	Administration	1.00
3.3.8	GySgt Winborne	E-7/E8	Operations Officer	1.00
3.3.9	Recommend Hire Ron Beck through MIPR to TARDEC	GS-15	Model & Simulation	1.00
3.3.10	Vacant	GS-12/13	Engineer	1.00
3.3.11	Vacant	Contractor Support	Engineer	1.00
3.3.12	Vacant	GS-12	Quality Assurance	1.00
3.3.13	Vacant	Contractor	Quality Assurance	1.00
3.3.14	1) Sylvia Spradley (Albany) 2) Vacant Contr. (Albany)	1) GS-11/12 2) Contractor	Warranty Manager	1) 0.60 2) 0.40
3.3.15	Vacant (Albany)	GS-11/12	Logistician Maintenance	1.00
3.3.16	1) Jeff Verner (Albany) 2) Tony Tailor (Albany)	1) GS-11/12 2) GS-11/12	Logistician Tech Pubs	1) 0.60 2) 0.40
3.3.17	Vacant	Contractor	Budget Analyst	1.00
3.3.18	Vacant	GS-12/13	Config. Manager	1.00
3.3.19	Mr. Munn	Contractor	(Test & Evaluation engineer)	1.00
3.3.20	Vacant	Contractor	ESH Engineer	1.00
3.3.21	Vacant-Not yet identified Carderock Matrixed Support	Carderock Support	Corrosion	0.50
3.3.22	Shared Matrixed from CSLE Directorate	CSLE Matrix	Computer Support	0.50
3.3.23	Mr. Buder	Contractor	Program Mgmt Support	1.00
3.3.24	Vacant	GM-14	PCO	1.00
3.3.25	Vacant	GS-12	Contract Specialist	1.00
3.3.26	1) Cindy Weaver (Albany) 2) Vacant (Albany) Contr.	1) GS-11/12 2) Contractor	Product management and unmatched invoices	1) 0.60 2) 0.40
3.3.27	John Smith	Contractor	CLS	1.00
3.3.28	Vacant (Albany)	GS-11/12	Logistician QDRs Beneficial Suggestion	1.00
3.3.29	Vacant (Albany)	Contractor	TOC	0. 50
3.3.30	Vacant	Contractor	Assistant Config. Mgr.	1.00
3.3.31	Vacant	GS-13/14	Fret-Legal	0.50
			Totals	**28.20**

MARCORSYSCOM Required Facilities
WBS - 4.1

WBS 4.0	Position	Grade or Other Specifics	PM Transportation	MCLB Albany	Sverdrup CSLE	Others by Location
4.1	Program Manager	O-5/O-6	1			
4.2	Assistant Program Manager	O-5	1			
4.3	Project Manager	O-4 or GS-13/14	1			
4.4	Procurement Analyst	GS-12	1			
4.5	Chief of Logistics	O-4 or GS-13/14	1			
4.6	Chief Engineer	GS-13/14	1			
4.7	Administration	GS-7	1			
4.8	Operations Officer	E-7/E8	1			
4.9	Model & Simulation	GS-15 @ Tardec				TARDEC
4.10	Engineer	GS-12/13	1			
4.11	Engineer	Contractor Support			1	
4.12	Quality Assurance	GS-12	1			
4.13	Quality Assurance	Contractor			1	
4.14	Warranty Manager (Note 1)	1) GS-11/12 & 2) Contr.		2		
4.15	Logistician Maint. (Note 1)	GS-11/12		1		
4.16	Logistician Tech Pubs (Note 1)	1) GS-11/12 & 2) Contr.		2		
4.17	Budget Analyst	Contractor	1			
4.18	Config. Manager	GS-12/13	1			
4.19	(Test & Evaluation)	Contractor			1	
4.20	ESH Engineer	Contractor			1	
4.21	Corrosion	Carderock Support				Carderock
4.22	Computer Support	CSLE Matrix				CSLE
4.23	Program Mgmt Support	Contractor			1	
4.24	PCO	GM-14				CTQ
4.25	Contract Specialist	GS-12				CTQ
4.26	Product management and unmatched Invoices (Note 1)	1) GS-11/12 & 2) Contr.		2		
4.27	CLS (Note 1)	Contractor		1		
4.28	Logistician QDRs Beneficial Suggestion (Note 1)	GS-11/12		1		
4.29	TOC (Note 1)	Contractor		1		
4.30	Assistant Config. Mgr.	Contractor			1	
4.31	Fret-Legal	GS-13				LAW
4.0	**Totals = 34 seats**		**12**	**10**	**6**	**6** (Note 2)

Note 2: Specific Locations are: (1 TARDEC Position) + (2 Quantico MCB –CTQ Position) + (1 Quantico MCB-LAW Position) + (1 CSLE Matrixed Computer person) + (1 Carderock Corrosion) = 7 position located at other than PM transportation facilities.

Identification of Required Funding
WBS - 2.1

WBS	Description	FY00	FY01	FY02	FY03
2.1	**Transition Plan Total Funds Required**	**$2,326,471**	**$2,843,433**	**$1,478,119**	**$1,478,119**
2.1.1	TACOM Labor Funds Requirements	$1,689,285	$1,478,672	$0	$0
2.1.2	MARCORSYSCOM Labor Funds Requirements	$427,218	$1,123,406	$1,329,523	$1,329,523
2.1.3	Travel	$169,320	$208,166	$106,362	$106,362
2.1.4	Incidentals	$40,648	$33,188	$42,234	$42,234

WBS	Description	FY00	FY01	FY02	FY03
2.1.5	Programmed	$2,830,000	$2,830,000	$1,500,000	$1,500,000
2.1.6	Total Funding Req'd Minus Incidentals	$2,285,823	$2,810,244	$1,435,885	$1,435,885
2.1.7	Funding Requirement (Delta)	$544,177	$19,756	$64,115	$64,115

Note: Status Quo = $2,248,5380 (PEO-GCSS + Current Syscom = $1,689,285 + $349,380 + $169,320 + $40,648)
During Transition = $2,843,433 (See FY01 Totals)
Post transition = $1,478,119 (See FY02 Totals)

Funding Calculation Methodology

WBS - 2.1.1 TACOM Labor

WBS Detail	Yearly Direct Govt Rate	Yearly Contractor Burdened Rates	Programmed Man-Years	Title	Name	Pay Rate	Monthly Labor Cost	Oct-99 Salaries	Nov-99 Salaries
2.1.1.1	$0		1	Product Manager	Lt Col Walt Raymond	Lt Col / O-5	$0	$0	$0
2.1.1.2	$0		1	Assistant Product Manager	Major Alexander Scott	Major / O-4	$0	$0	$0
2.1.1.3	$98,938		1	Deputy Product Manager	Tom Franquist	NH-V	$8,245	$8,245	$8,245
2.1.1.4	$83,725		1	Procurement Analyst	Elaine Rudy	NH-III	$6,977	$6,977	$6,977
2.1.1.5	$83,725		1	Logistics	Colleen Grgurich	NH-III	$6,977	$6,977	$6,977
2.1.1.6	$83,725		1	Engineer	Gary Boyce	GS-13	$6,977	$6,977	$6,977
2.1.1.7	$39,691		1	Administration	Barbara Wlodek	NK-II	$3,308	$3,308	$3,308
2.1.1.8	$0		1	Asst Program Manager	Michael Loos	Major / O-4	$0	$0	$0
2.1.1.9	$0		1	Asst Program Manager	Susan Brown	NH-III	$0	$0	$0
2.1.1.10	$100,000		1	Model and Simulation	Ron Beck (TARDEC)	GS-15	$8,333	$8,333	$8,333
2.1.1.11	$83,725		1	Engineer	Mark Stern	NH-III	$6,977	$6,977	$6,977
2.1.1.12	$83,916		1	Engineer	Allan Thornton	GS-13	$6,993	$6,993	$6,993
2.1.1.13	$70,568		1	Engineer	Carla Williams	GS-12	$5,881	$5,881	$5,881
2.1.1.14	$70,568		1	Engineer	Andy Edwards	GS-12	$5,881	$5,881	$5,881
2.1.1.15	$70,168		1	Quality Assurance	Roger Smith	GS-12	$5,847	$5,847	$5,847
2.1.1.16	$70,568		1	Quality Assurance	Brad Jackson	GS-12	$5,881	$5,881	$5,881
2.1.1.17	$70,568		1	Quality Assurance	Max Luenser	GS-12	$5,881	$5,881	$5,881
2.1.1.18	$70,568		1	Quality Assurance	Tim Poplawski	GS-12	$5,881	$5,881	$5,881
2.1.1.19	$70,568		1	Logistics/ Variants	Jeff Darnell	GS-12	$5,881	$5,881	$5,881
2.1.1.20	$58,679		1	Logistics Maintenance	Connie Allen	GS-11	$4,907	$4,907	$4,907
2.1.1.21	$70,568		1	Logistics Tech Pubs	Ben Ahl, Franklin	GS-12	$5,881	$5,881	$5,881
2.1.1.22	$70,568		1	Budget Analyst	Sharon Viggato	GS-12	$5,881	$5,881	$5,881
2.1.1.23	$70,568		0.3	Configuration Mgt	Patricia Elbinger	GS-12	$1,764	$1,764	$1,764
2.1.1.24	$70,568		0.3	Configuration Mgt	Wayne Gray	GS-12	$1,764	$1,764	$1,764
2.1.1.25	$40,967		0.3	Test and Evaluation	Jacks Joyce	GS-9	$1,024	$1,024	$1,024
2.1.1.26	$40,967		0.3	Test and Evaluation	Staziewicz Linda	GS-9	$1,024	$1,024	$1,024
2.1.1.27	$83,920		0.1	Safety Engineer	George Jarvis	GS-13	$699	$699	$699
2.1.1.28	$83,916		0.5	TARDEC Packaging/Corrosion/	Tom Hinkley	GS-13	$3,497	$3,497	$3,497
2.1.1.29	$0		0.5	Computer Support	Data Automation	GS-9	$0	$0	$0
2.1.1.30	$0	$215,384	1	Program Mgmt.	Dennis Haag	Contractor	$17,949	$17,949	$17,949
2.1.1.31	$0		0.3	PCO	Sharon Thomas	GS-13	$0	$0	$0
2.1.1.32	$0		1	Contract Specialist	Ron Mandel	GS-12	$0	$0	$0
2.1.1.33	$0		1	Contract Specialist	Aileen Germaine	GS-12	$0	$0	$0
2.1.1.34	$83,916		0.2	Lawyer / Legal	John Klecha	GS-13	$1,399	$1,399	$1,399
								Oct-99	Nov-99
								$141,706	$141,706

Total TACOM Man-Years 27.8

TACOM Labor Funds Required	FY00 Totals	FY01 Totals
	$1,689,285	$1,478,672

Note: Above is for methodology demonstration only. Actual Spreadsheets are available for review by contacting PM-Transportation Systems or his POC, Marc Paquette, SVERDRUP CSLE Transportation Systems Manager.

Analysis Continues through 10-01-01

Funding Calculation Methodology
WBS - 2.1.2 MARCORSYSCOM Labor

WBS Detail	Yearly Direct Govt Rate	Yearly Contractor Burdened Rates	Programmed Man-Years	Title	Name	Pay Rate	Oct-99 Salaries	Nov-98 Salaries
2.1.2.1	$0		0.20	Program Manager	Lt Col Manley	O-5	$0	$0
2.1.2.2	$0		1.00	Assistant Program Manag	Maj Morton	O-4	$0	$0
2.1.2.3	$0		1.00	Project Manager	Vacant	GS-13/14		
2.1.2.4	$0		1.00	Procurement Analyst	Vacant	GS-12		
2.1.2.5	$0		1.00	Chief of Logistics	Maj Reyburn	O-4	$0	$0
2.1.2.6	$0		1.00	Chief Engineer	Mr. Faulkner	NHill	$0	$0
2.1.2.7	$0		1.00	Administration	Vacant	GS-7		
2.1.2.8	$0		1.00	Operations Officer	GySgt Winborne	E-7/E8	$0	$0
2.1.2.9	$100,000		1.00	Model & Simulation	Dr Ron Beck-TARDEC	GS-15 @ Tardec		
2.1.2.10	$0		1.00	Engineer	Vacant	GS-12/13		
2.1.2.11		$107,251	1.00	Engineer	Vacant	Sverdrup SE		
2.1.2.12	$0		1.00	Quality Assurance	Vacant	GS-12		
2.1.2.13		$97,766	1.00	Quality Assurance	Vacant	Sverdrup PA		
2.1.2.14	$48,420		0.60	1) Warranty Manager (No	Vacant (Albany)	GS-11/12		
2.1.2.15		$117,120	0.40	2) Warranty Manager (No	Vacant (Albany)	Sverdrup SFA		
2.1.2.16	$48,420		1.00	Logistician Maint. (Note 1	Vacant (albany)	GS-11/12		
2.1.2.17	$48,420		0.60	1) Logistician Tech Pubs (	Vacant (Albany)	GS-11/12		
2.1.2.18	$48,420		0.40	2) Logistician Tech Pubs (	Vacant (Albany)	GS-11/12		
2.1.2.19		$87,725	1.00	Budget Analyst	Vacant	Sverdrup BA		
2.1.2.20	$0		1.00	Config. Manager	Vacant	GS-12/13		
2.1.2.21		$134,496	1.00	(Test & Evaluation)	Mr. Munn (Contr.)	Sverdrup SPE	$11,208	$11,208
2.1.2.22		$107,251	1.00	ESH Engineer	Vacant	Sverdrup SE		
2.1.2.23	$69,000		0.50	Corrosion	Vacant-Not Yet Identified	Carderock Support		
2.1.2.24			0.50	Computer Support	Shared Matrixed from CS	CSLE Matrix GS-9		
2.1.2.25		$117,120	1.00	Program Mgmt Support	Mr Buder (Contr.)	Sverdrup SFA	$9,760	$9,760
2.1.2.26	$0		1.00	PCO	Vacant	GM-14		
2.1.2.27	$0		1.00	Contract Specialist (1)	Vacant	GS-12		
2.1.2.28	$48,420		0.60	1) Product management a	Vacant (Albany)	GS-11/12		
2.1.2.29		$97,766	0.40	2) Product management a	Vacant (Albany)	Sverdrup PA		
2.1.2.30		$97,766	1.00	CLS (Note 1)	John Smith (Contr.) (Alt	Sverdrup PA	$8,147	$8,147
2.1.2.31	$48,420		1.00	Logistician QDRs Benefit	Vacant (Albany)	GS-11/12		
2.1.2.32		$117,120	0.50	TOC (Note 1)	Vacant (Albany)	Sverdrup SFA		
2.1.2.33		$97,766	1.00	Assistant Config. Mgr	Vacant (Albany)	Sverdrup PA		
2.1.2.34	$0		0.50	Legal	Vacant	GS-13		

Total Manyears
28.20

Oct-99	Nov-98
Labor	Labor
$29,115	$29,115

MARCORSYSCOM Labor Funds Required	FY 00 Totals	FY 01 Totals	FY 02 Totals	FY 03 Totals
	$427,218	$1,123,406	$1,329,523	$1,329,523

Note: Above is for methodology demonstration only. Actual Spreadsheets are available for review by contacting PM-Transportation Systems or his POC, Marc Paquette, SVERDRUP CSLE Transportation Systems Manager.

Analysis Continues through 10-01-01

Funding Calculation Methodology
Other Costs WBS - 2.1.3 & 2.14

WBS	Description	FY00	FY01	FY02	FY03
2.1.3	Travel				
2.1.3.1	TACOM Travel	$121,669	$135,398	$0	$0
2.1.3.2	MARCORSYSCOM Travel	$61,654	$152,836	$170,819	$170,819
2.1.3	**Totals**	$183,323	$288,234	$170,819	$170,819

WBS	Description	FY00	FY01
2.1.4.1	TACOM Incidentals		
2.1.4.1.1	TACOM Supplies	$38,194	$15,000
2.1.4.1.2	TACOM Telephone	$0	$0
2.1.4.1.3	TACOM Facilities	$0	$0
2.1.4.1.4	TACOM Utilities	$0	$0
2.1.4.1.5	TACOM Systems	$20,000	$0
2.1.4.1	**Totals**	$58,194	$15,000

WBS	Description	FY00	FY01	FY02	FY03
2.1.4.2	SYSCOM Incidentals				
2.1.4.2.1	SYSCOM Supplies	$4,130	$6,638	$8,447	$8,447
2.1.4.2.2	SYSCOM Telephone	$0	$0	$0	$0
2.1.4.2.3	SYSCOM Facilities	$0	$0	$0	$0
2.1.4.2.4	SYSCOM Utilities	$0	$0	$0	$0
2.1.4.2.5	SYSCOM Systems	$20,648	$33,188	$42,234	$42,234
2.1.4.2	**Totals**	$24,777	$39,826	$50,680	$50,680

Risk Identification Methodology

Step 1: Identify Factors by WBS as follows:

1.00 MTVR Program Execution Risk
2.00 Budget Risk
3.00 Personnel Risk
4.00 Facilities Risk
5.00 Schedule Risk
6.00 Contract Risk

Step 2: Assign weighted numbers to each WBS event as follows:

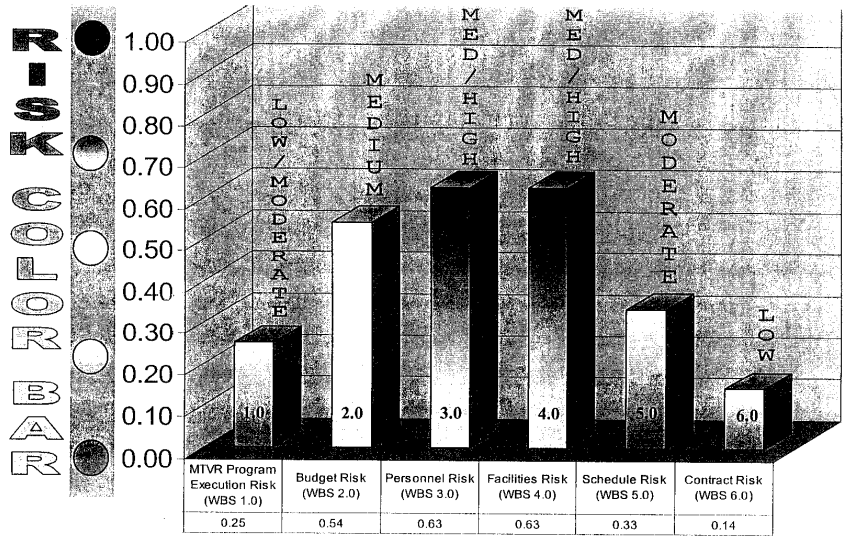
"0" = Planned, Understood & Commitment exists **(Zero-Risk)**
"0.5" = Planned but not fully understood and not fully committed **(Medium Risk)**
"1" = Not Planned, Not Understood or no commitment exist **(High-Risk)**

Step 3: Sum the weighted numbers of each WBS sub-category and divide the by total number of assigned Sub-WBS

(i.e. WBS 1.0 contains (1.1 @ "0") + (1.2 @ "0.5") + (1.3 @ "1") + (1.4 @ "0"))

Hence: (0 + 0.5 + 1 + 0 = 1.5) ⇒ (1.5 / 4 = 0.375) ⇒ .375 of a possible 1.0

MTVR Transition Risk Chart



Risk Identification Methodology (Cont'd)

1.0		MTVR Program Execution Risk (WBS 1.0)	0.25
	1.1	Milestone III Documentation	0
	1.2	Specifications	0.5
	1.3	Contract Data Deliverables	0.5
	1.4	Configuration Management	0
	1.5	Engineering Responsibility	0
	1.6	Safety Certification	0
	1.7	Quality Assurance	1
	1.8	Integrated Logistics Support	0
2.0		Budget Risk (WBS 2.0)	0.54
	2.1	Accurate Identification of Required Funds	0.75
	2.1.1	TACOM Labor Funding	0.5
	2.1.2	MARCORSYSCOM Labor	0.5
	2.1.3	Travel	0.5
	2.1.4	Incidentals (Facilities, Supplies, Systems, Utilites)	0
	2.2	Funds Availability	1
3.0		Personnel Risk (WBS 3.0)	0.625
	3.1	Accurate Identification of Required Personnel	0
	3.2	TACOM Personnel Stability / Availability	1
	3.3	Availability of Qualified Personnel for MARCORSYSCOM	1
	3.4	Technical Expertise of Locally Available Personnel	0.5
4.0		Facilities Risk (WBS 4.0)	0.63
	4.1	Facilities for MARCORSYSCOM Team - Govt Personnel (All Locations)	1
	4.2	Facilities for MARCORSYSCOM - Sverdrup-CSLE Personnel	0.5
	4.2	Facilities for MARCORSYSCOM - CTQ Personnel	0.5
	4.2	Facilities for MARCORSYSCOM - LAW Personnel	0.5
5.0		Schedule Risk (WBS 5.0)	0.33
	5.1	LRIP	0.5
	5.2	IOT&E	0.5
	5.3	R&D Variant	0
	5.4	MSIII Approval	0.5
	5.5	Production Year 2	0
	5.6	IOC	0.5
6.0		Contract Risk (WBS 6.0)	0.14
	6.1	MTVR Base Program (Feb 99) Award (to be trasnsferred to MARCORSYSCOM)	0.5
	6.2	R&D Variant Program (22 Jul 99) Award (to be trasnsferred to MARCORSYSCOM)	0.5
	6.3	CLS Program	0
	6.4	Phase I (Feb 2000) Award - Administered by MCLB Albany	0
	6.5	Phase II (January 2001) Award - Administered by MCLB Albany	0
	6.6	Training Devices (Feb 99) Award - Administered by NSWC	0
	6.7	Maintenance Trainer, Feb 99 Award - Administered by NSWC	0

Risk Drivers

1.0		MTVR Program Execution Risk (WBS 1.0)	0.25
	1.1	Milestone III Documentation	0
	1.2	Specifications	0.5
	1.3	Contract Data Deliverables	0.5
	1.4	Configuration Management	0
	1.5	Engineering Responsibility	0
	1.6	Safety Certification	0
	1.7	Quality Assurance	1
	1.8	Integrated Logistics Support	0
2.0		Budget Risk (WBS 2.0)	0.54
	2.1	Accurate Identification of Required Funds	0.75
	2.1.1	TACOM Labor Funding	0.5
	2.1.2	MARCORSYSCOM Labor	0.5
	2.1.3	Travel	0.5
	2.1.4	Incidentals (Facilities, Supplies, Systems, Utilites)	0
	2.2	Funds Availability	1
3.0		Personnel Risk (WBS 3.0)	0.625
	3.1	Accurate Identification of Required Personnel	0
	3.2	TACOM Personnel Stability / Availability	
	3.3	Availability of Qualified Personnel for MARCORSYSCOM	
	3.4	Technical Expertise of Locally Available Personnel	
4.0		Facilities Risk (WBS 4.0)	0.63
	4.1	Facilities for MARCORSYSCOM Team - Govt Personnel (All Locations)	1
	4.2	Facilities for MARCORSYSCOM - Sverdrup-CSLE Personnel	0.5
	4.2	Facilities for MARCORSYSCOM - CTQ Personnel	0.5
	4.2	Facilities for MARCORSYSCOM - LAW Personnel	0.5
5.0		Schedule Risk (WBS 5.0)	0.33
	5.1	LRIP	0.5
	5.2	IOT&E	0.5
	5.3	R&D Variant	0
	5.4	MSIII Approval	0.5
	5.5	Production Year 2	0
	5.6	IOC	0.5
6.0		Contract Risk (WBS 6.0)	0.14
	6.1	MTVR Base Program (Feb 99) Award (to be trasnsferred to MARCORSYSCOM)	0.5
	6.2	R&D Variant Program (22 Jul 99) Award (to be trasnsferred to MARCORSYSCOM)	0.5
	6.3	CLS Program	0
	6.4	Phase I (Feb 2000) Award - Administered by MCLB Albany	0
	6.5	Phase II (January 2001) Award - Administered by MCLB Albany	0
	6.6	Training Devices (Feb 99) Award - Administered by NSWC	0
	6.7	Maintenance Trainer, Feb 99 Award - Administered by NSWC	0

Specifications
Contract Deliverables
Quality Assurance
Funds Availability
TACOM Stability
Qualified Personnel
Technical Expertise
Govt Facilities
LRIP Execution
IOT&E Execution
MSIII Preparations
IOC Preparations
Transfer of 2 Contracts

How we Plan to Eliminate /Reduce our Risks

Risk Drivers	Risk Eliminators
Monitoring MTVR specifications	Immediately reach commitment and begin staffing initial cadre of engineering and program support personnel at MARCORSYSCOM CSLE see Section VI and Section VIII of the MTVR Transition Plan dated 2-24-00.
Monitoring Contract deliverables	Begin staffing initial cadre of program support personnel at MARCORSYSCOM CSLE see Section VI and Section VIII of the MTVR Transition Plan dated 2-24-00.
Quality Assurance	Begin implementation of Quality Assurance staffing plan to include offering MARCORSYSCOM positions to currently TACOM employed Quality Assurance personnel. Technical understanding of the MTVR and its associated hardware is paramount for the Quality Assurance billets. See Section VI and Section VIII of the Transition Plan dated 2-24-00.
Funds availability	Obtain MARCORSYSCOM commitment as stated in Section IX of the MTVR Transition Plan dated 2-24-00.
TACOM stability during transition	Obtain commitment to the MTVR Incremental Standup in accordance with Section VIII of the Transition Plan dated 2-24-00 by PEO-GCSS leadership.
Govt Facilities	Obtain MARCORSYSCOM commitment as stated in Section VII of the MTVR Transition Plan dated 2-24-00.
Finding qualified personnel	Begin staffing initial cadre of program support personnel at MARCORSYSCOM CSLE see Section VI and Section VIII of the MTVR Transition Plan dated 2-24-00.
Technical expertise	Begin staffing initial cadre of program support personnel at MARCORSYSCOM CSLE see Section VI and Section VIII of the MTVR Transition Plan dated 2-24-00.
LRIP Execution	Obtain PEO-GCSS and MARCORSYSCOM commitment to perform MTVR transition support as captured in MTVR Transition Plan dated 2-24-00.
IOT&E Execution	Obtain PEO-GCSS and MARCORSYSCOM commitment to perform MTVR transition support as captured in MTVR Transition Plan dated 2-24-00.
MS-III preparation	Immediately commit to staff up the initial MTVR cadre of personnel and Perform MS-III preparation with management oversight from the MTVR Transition Steering Committee as stated in the MTVR Transition Plan dated 2-24-00.
IOC preparation	Immediately commit to staff up the initial MTVR cadre of personnel and Perform MS-III preparation with management oversight from the MTVR Transition Steering Committee as stated in the MTVR Transition Plan dated 2-24-00.
Transfer of 2 contracts to MARCORSYSCOM	Immediately----- Perform a thorough contracts review with participation from PEO-GCSS contracts specialists and MARCORSYSCOM contracts specialists.


Any questions sir?

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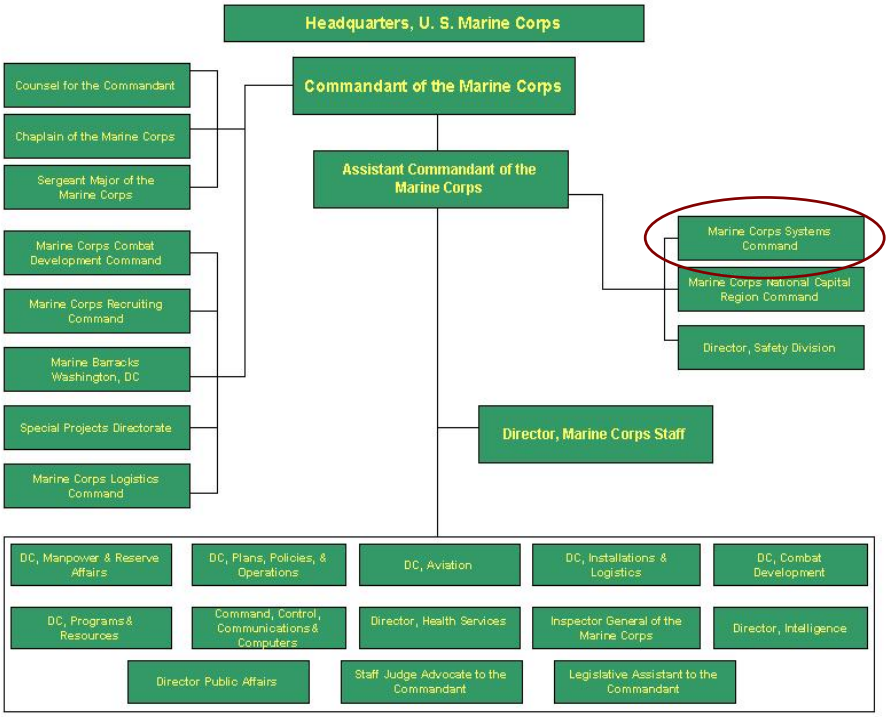
APPENDIX H. USMC MARCORSYSCOM ORGANIZATION CHART

HQ, US Marine Corps



as of 31 Mar 04

2

Marine Corps System Command

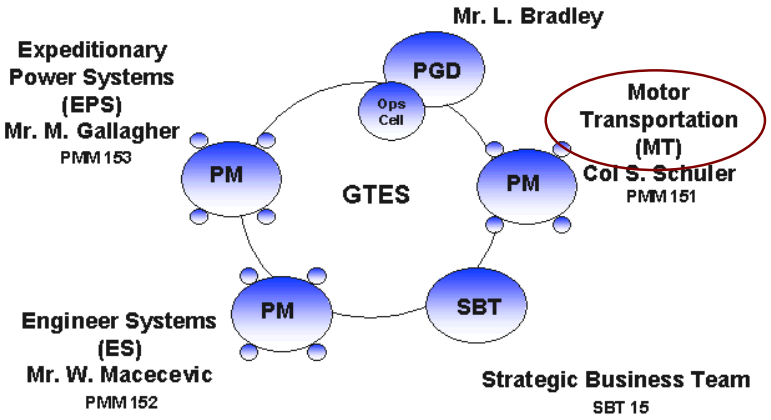
MARCORSYSCOM ORGANIZATIONS

as of 31 Mar 04

3

Ground Transportation & Engineering Systems

GROUND TRANSPORTATION & ENGINEER SYSTEMS
Product Group
PG 15



as of 31 Mar 04

4

PM Motor Transportation Programs

Moving our nations finest one mile at a time.

High Mobility Multipurpose Wheeled Vehicle A2 (HMMWVA2)	Interim Fast Attach Vehicle (IFAV)
Medium Tactical Vehicle Replacement (MTVR)	Medium Tactical Vehicle Replacement Trailers (MTVR-Trailer)
Aviation Refueling Capability (ARC)	Medium Heavy Equipment Trailer (MHET)
Internally Transport Vehicle (ITV)	Military Motorcycle (MILMO)

as of 31 Mar 04

5

Medium Tactical Vehicle Replacement (MTVR)

Websites

Slide 1 - http://www.hqmc.usmc.mil/hqmcmain.nsf/frontpage

Slide 2 – http://www.hqmc.usmc.mil/HQMCMain.nsf/HQMC+Org+Chart?OpenPage

Slide 3 – http://www.marcorsyscom.usmc.mil/sites/syscomorg/

Slide 4 – http://www.marcorsyscom.usmc.mil/sites/syscomorg/gtespg.asp

Slide 5 - http://www.marcorsyscom.usmc.mil/sites/GTES/PM%20MT/PM%20MT.asp

Slide 6 - http://www.marcorsyscom.usmc.mil/sites/GTES/PM%20MT/MTVR.asp
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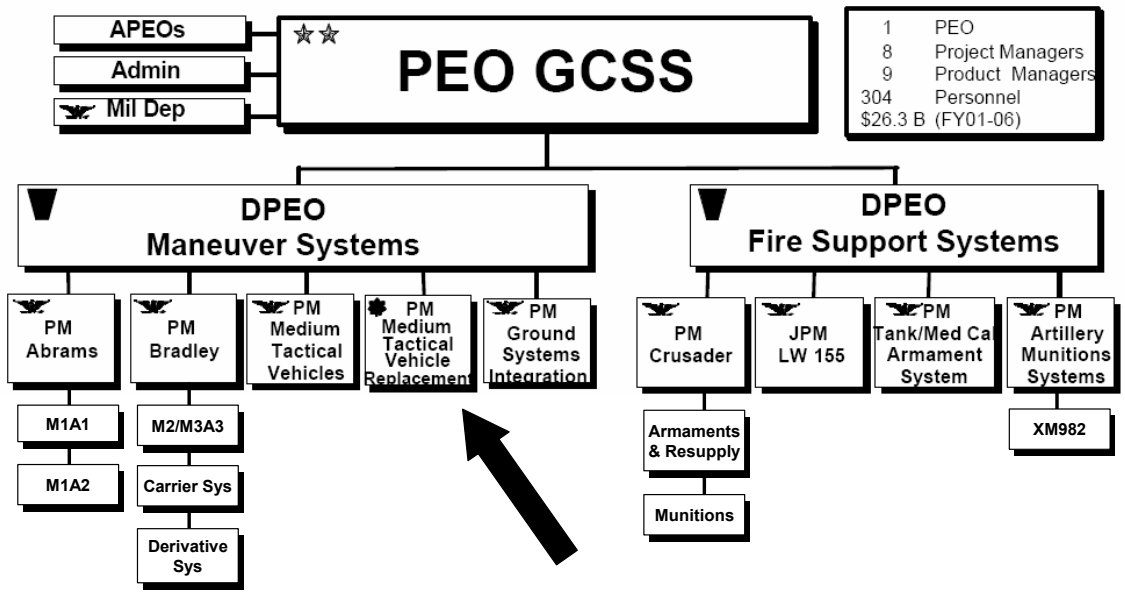
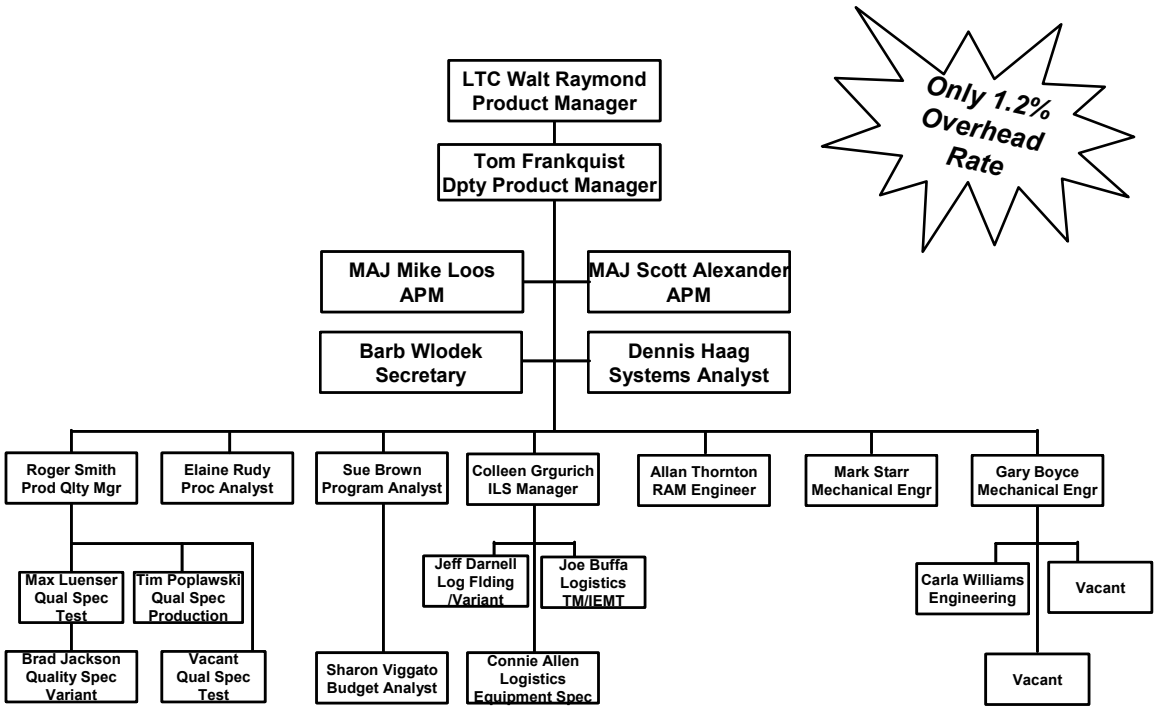
APPENDIX I. US ARMY PEO-GCSS ORGANIZATION CHARTS

PEO GCSS Organization



OPM MTVR Organization



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APPENDIX J. MTVR PHOTO COLLECTION

MTVR Photo Collection

Compliments of Mr. Randy Talbot

TACOM History Office

Warren, MI

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APPENDIX K. MTRV PROGRAM QUESTIONNAIRE

I. Transitioning the MTVR program from the U.S Army to the Marine Corps

1. What was your feeling about transitioning the program at that point?

2. What was your impression of the collaboratory that the Marine Corps conducted for the MTVR Transition?

3. Do you feel the Marine Corps was ready at that point in the program for the transition?

4. By transitioning he program at that point in time, do you feel the program schedule may have been adversely impacted and if so, how so?

5. Has the MTVR Program been on schedule since the transition of the program from the Army?

6. What factors have caused any MTVR Program delays?

II. Marine Corps Impressions of the MTVR

1. What has been the Marine Corps overall impression of the MTVR Program?

2. Now that the MTVR has been in the field for a couple of years, has the user suggested any modifications that could be incorporated for future trucks and upgrades?

3. Are there any plans for additional MTVRs or MTVR variants?

III. Marine Corps Impression of the Army's Product Office

1. How satisfied was the Marine Corps with the Army's handling of the Product Office for the MTVR during the early years of this program?

2. Were there any apparent deficiencies that the Marine Corps noted in the Army's MTVR Product Office?

3. When the Army dropped out of the initial joint Army-Marine Corps MTVR Program, what was the impression of the Marine Corps, at that time, in having to go ahead alone with the MTVR Program?

4. Do you feel the Army provided the “best value”, “best alternative” at the start of the MTVR Program until the Marine Corps could provide its own MTVR Product Office?

5. What was your impression of the relationship between the Army and the Marine Corps on the MTVR Program?

6. What was your overall impression of having a joint Army-Marine Corps Product Office?

IV. Marine Corps Impression of Oshkosh Truck Corporation (OTC)

1. What has been the overall impression held by the Marine Corps of Oshkosh Truck Corporation?

2. Does the Marine Corps feel that they have received “best value” for their program dollars with Oshkosh Truck Corporation?

3. Has there been any serious thought given to go with another competing truck manufacturer for the MTVR?

4. What has been you OWN impression of dealings with OTC?

5. Your impression of their senior company and MTVR Product management?

6. Would you say that OTC has been open and attentive to concerns that you have raised over the years regarding the MTVR?

7. Have they been able to make positive impacts and creative suggestions to the Marine Corps and your OWN concerns with the MTVR truck during its production?

V. Marine Corps Acquisition Center at Hospital Point, Quantico, Virginia

1. How successful has the creation of a Marine Corps acquisition center at Hospital Point been?

2. Do you personally think it has met its overall objectives?

3. By creating such a center, what do you think the impact has been on the MTVR Program?

4. Impact on additional Marine Corps acquisition program?

5. Any recent program developments at Hospital Point, Quantico, Virginia?

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