

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. Contract ID Code
Firm Fixed Price

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2. Amendment/Modification No. P00024	3. Effective Date 2013AUG21	4. Requisition/Purchase Req No. SEE SCHEDULE	5. Project No. (If applicable)
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6. Issued By U.S. ARMY CONTRACTING COMMAND DEBRA S. DRUMMOND WARREN, MICHIGAN 48397-5000 HTTP://CONTRACTING.TACOM.ARMY.MIL EMAIL: DEBRA.S.DRUMMOND@US.ARMY.MIL	Code W56HZV	7. Administered By (If other than Item 6) DCMA PHILADELPHIA 700 ROBBINS AVENUE, BLDG 4-A P.O. BOX 11427 PHILADELPHIA PA 19111-0427	Code S3915A
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8. Name And Address Of Contractor (No., Street, City, County, State and Zip Code) BAE SYSTEMS LAND & ARMAMENTS L.P. 1100 BAIRS RD YORK, PA 17408-8975	<input type="checkbox"/>	9A. Amendment Of Solicitation No.
	<input type="checkbox"/>	9B. Dated (See Item 11)
	<input checked="" type="checkbox"/>	10A. Modification Of Contract/Order No. W56HZV-08-D-0041
	<input type="checkbox"/>	10B. Dated (See Item 13) 2007DEC19
Code 06085	Facility Code	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers

is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing items 8 and 15, and returning _____ copies of the amendments; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting And Appropriation Data (If required)

NO CHANGE TO OBLIGATION DATA

**13. THIS ITEM ONLY APPLIES TO MODIFICATIONS OF CONTRACTS/ORDERS
It Modifies The Contract/Order No. As Described In Item 14.**

<input type="checkbox"/>	A. This Change Order is Issued Pursuant To: The Contract/Order No. In Item 10A.	The Changes Set Forth In Item 14 Are Made In
<input type="checkbox"/>	B. The Above Numbered Contract/Order Is Modified To Reflect The Administrative Changes (such as changes in paying office, appropriation data, etc.) Set Forth In Item 14, Pursuant To The Authority of FAR 43.103(b).	
<input checked="" type="checkbox"/>	C. This Supplemental Agreement Is Entered Into Pursuant To Authority Of:	Mutual Agreement of Both Parties
<input type="checkbox"/>	D. Other (Specify type of modification and authority)	

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the Issuing Office.

14. Description Of Amendment/Modification (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

SEE SECOND PAGE FOR DESCRIPTION

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. Name And Title Of Signer (Type or print)	16A. Name And Title Of Contracting Officer (Type or print) LORETTA BURSEY LORETTA.H.BURSEY@US.ARMY.MIL (586)282-8115		
15B. Contractor/Offeror (Signature of person authorized to sign)	15C. Date Signed	16B. United States Of America By _____ /SIGNED/ (Signature of Contracting Officer)	16C. Date Signed 2013AUG21

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Name of Offeror or Contractor: BAE SYSTEMS LAND & ARMAMENTS L.P.

SECTION A - SUPPLEMENTAL INFORMATION

Buyer Name: DEBRA S. DRUMMOND
Buyer Office Symbol/Telephone Number: CCTA-HTM-A/(586)282-6384
Type of Contract: Firm Fixed Price
Kind of Contract: System Acquisition Contracts
Type of Business: Large Business Performing in U.S.
Surveillance Criticality Designator: A
Contract Expiration Date: 2015DEC10

*** End of Narrative A0000 ***

Modification P00024 to W56HZV-08-D-0041:

1. The purpose of Modification P00024 of W56HZV-08-D-0041 is to correct a typo in C.29.1 and to incorporate the agreement between the parties regarding the following:
 - a. Approved Deviation D0041-DO08-026 A-Pillar Reinforcement Addition dated 5 April 2013.
2. In consideration for the approval of the above listed deviation and for the associated testing at Aberdeen Proving Grounds (APG), BAE Systems, Land & Armaments L.P. (BAE Systems) shall provide the following:
 - a. A 24-month warranty from 1 February 2014 for cracking of High Hard 46100 Steel on the 138 vehicles to be delivered under MMPV Delivery Order 0008. Section C, Clauses C.29.2 and C.36 have been added to reflect this consideration.
 - b. Agreement that no equitable adjustment request will be submitted for additional cost incurred for shipment of Vehicle Number MMPVS0001 to SPAWARSYSCEN. Authorization for shipment was provided pursuant to Government letter dated 14 March 2013.
 - c. BAE Systems shall provide labor support to install padlocks and secure vehicles prior to shipment from BAE York to SPAWARSYSCEN for all remaining Delivery Order 0008 MMPV vehicles. The padlocks were provided as Government Furnished Material (GFM) pursuant to Government letter dated 6 May 2013 and via Modification 15 to Delivery Order 0008.
 - d. BAE Systems shall update DO 0008 CLIN 5001AA Prescribed Load List (PLL) kit to remove three pieces of "dirty" hardware and replace them with "clean" hardware. (This issue relates to the presence/absence of a hazardous material, Hexavalent Chromium Plating.) PLL Kit contents and delivery date updates are reflected pursuant to Government Letter dated 16 May 2013. Attachment 0004 Prescribed Load List (PLL) Parts List for the Program of Record (POR) vehicles and CLIN 5001AA delivery schedule were updated via Modification 15 to Delivery Order 0008.
 - e. BAE Systems shall provide a Level of Repair Analysis (LORA) as specified in C.9.3 Level of Repair Analysis (LORA) and in accordance with CDRL A052 Level of Repair Analysis (LORA).
3. The above mentioned approved deviation D0041-DO08-026 has been incorporated into Section C, clause C.3.8 titled Approval of Waivers and Deviations to ATDP 2372 and Section J (via Attachment 0043 Approval of Waivers and Deviations of the contract to ATPD 2372).
4. Material Review Board (MRB) section C.21.14 has been updated to include Government representation on the MRB.
5. Section E.11.8 is being added to make reference to the effect of this Modification P00024.
6. As a result of this modification, there is no change in funding.
7. Except as stated herein all other terms and conditions remain the same and in full force and effect.
8. The contractor hereby releases the Government from any and all liability under this contract for further equitable adjustments attributable to such facts or circumstances giving rise to the changes incorporated under this Modification P00024.

*** END OF NARRATIVE A0025 ***

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Name of Offeror or Contractor: BAE SYSTEMS LAND & ARMAMENTS L.P.SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT
SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

- C.1 SCOPE
- C.2 APPLICABLE DOCUMENTS
- C.3 SYSTEM REQUIREMENTS
- C.4 DATA AND SOFTWARE DELIVERABLES
- C.5 SYSTEM/PROJECT MANAGEMENT
- C.6 HARDWARE DELIVERIES
- C.7 MEETINGS/CONFERENCES
- C.8 ILS DEVELOPMENT
- C.9 MAINTENANCE CONCEPT
- C.10 PARTS SUPPORT
- C.11 PROVISIONING PROGRAM
- C.12 EXPENDABLE DURABLE ITEMS LIST
- C.13 SPECIAL TOOLS/TMDE
- C.14 TECHNICAL PUBLICATIONS
- C.14.5. NATIONAL MAINTENANCE WORK REQUIREMENTS (NMWR)
- C.14.6. LOGISTICS DEMONSTRATION
- C.15 MANPRINT
- C.16 SAFETY ENGINEERING AND HEALTH HAZARDS
- C.17 HAZARDOUS MATERIALS MANAGEMENT
- C.18 TRAINING
- C.19 PACKAGING
- C.20 TEST & EVALUATION SUPPORT
- C.21 QUALITY ASSURANCE MANAGEMENT
- C.21.7 FIRST ARTICLE TEST REQUIREMENTS
- C.22 CONFIGURATION MANAGEMENT
- C.23 VEHICLE HAND-OFF
- C.24 LIFE CYCLE SUSTAINMENT
- C.25 RELIABILITY, AVAILABILITY, MAINTAINABILITY (RAM) PROGRAM
- C.26 TECHNICAL SUPPORT
- C.27 MODELING & SIMULATION
- C.28 CAMOUFLAGE LINE ART DATA
- C.29 WARRANTY
- C.30 EXPLOSIVELY PROTECTIVELY PENETRATOR (EFP) KIT
- C.31 ROCKET PROPELLED GRENADE (RPG) KIT
- C.32 BALLISTIC TEST ASSET

C.1 Scope - NOTE: The Term "Medium Mine Protected Vehicle" or "MMPV" as used throughout this Scope of Work shall be interpreted to apply to MMPV. (~~DELETED "and MMPV with Arm."~~)

C.1.1 The United States Government has a requirement for blast-protected vehicles to support Engineer and Explosive Ordnance Disposal units. This statement of work defines the effort required to produce and field the Medium Mine Protected Vehicle (MMPV). The Medium Mine Protected Vehicle is a blast protected, wheeled vehicle platform that will operate in explosive hazardous environments to support emerging Future Engineer Force (FEF) Clearance Companies in route and area clearance operations, Explosive Hazards Teams in explosive hazards reconnaissance operations, and EOD companies in Explosive Ordnance Disposal operations. Additionally the MMPV provides Command and Control and Electronic Counter-measures for explosive hazards in support of military operations. During route clearance operations, the Vehicle Mounted Mine Detection system (VMMD) and Mine Protected Clearance Vehicle (Buffalo MPCV) complement the MMPV.

C.1.2 The MMPV will enter the Acquisition Life Cycle at Milestone C (Production and Deployment) and immediately begin Low Rate Initial Production (LRIP). The Government is seeking an existing, proven material solution for the MMPV that represents low risk in force protection/system survivability, system-level maturity, manufacture, supportability, and life cycle cost. Full Material Release and a favorable Full Rate Production Decision will depend in large part on acceptable performance in test and evaluation and Initial Operation Test; no significant manufacturing risks; acceptable interoperability; acceptable operational supportability; and demonstration that the system is affordable throughout its life cycle.

C.1.3 The Contractor shall manufacture and deliver an MMPV System that meets all the threshold technical requirements of the Automotive-Tank Purchase Description for the Medium Mine Protected Vehicle, Number ATPD-2372 (dated 14 April 2009) (Attachment 001) and the addendums to the ATPD listed in paragraph C.3.1. Delivery Orders under this contract will specify the quantities, delivery dates, destinations, paint color in accordance with paragraph 3.2.6 of the Purchase Description (PD). This scope includes both the development of the Hardware and the Logistics required to support the MMPV.

C.2 APPLICABLE DOCUMENTS

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Name of Offeror or Contractor: BAE SYSTEMS LAND & ARMAMENTS L.P.

C.2.1 The following documents form a part of the SOW to the extent specified herein. Additional applicable documents can be found in the MMPV Purchase Description (Section 2). Note: While every effort has been made to ensure the completeness of these lists, the contractor is cautioned that he must meet all the specified requirements in MMPV Purchase Description (cited in Sections 3 & 4), whether or not they are listed in Section 2 of the PD.

-Federal Motor Vehicle Safety Standards and Regulations (U.S. Department of Transportation, National Highway Traffic, Safety Administration, Safety Assurance, Office of Vehicle Safety Compliance)

-AFJMAN 24-104/TM 38-250

-AR 700-15

-AFJMAN 24-104/TM 38-250

-DLAD 4145.41/AR 750-143

-MIL-STD-129

-MIL-STD-2073-1

C.2.2 The following documents form a part of the SOW to the extent specified herein. The listing of required documents may not be fully inclusive of all required specifications or standards required for support of logistic documentation development.

Note: The most recent versions of these documents shall be utilized. Data Items can be found at:

://assist.daps.dla.mil/quicksearch/fsc_quicksearch.cfm

DATA ITEMS

DI-ADMN-81505	REPORT, RECORD OF MEETING/MINUTES
DI-ALSS-80686	SPECIAL TOOLS TEST EQUIPMENT (STTE)
DI-ALSS-81529	LOGISTICS MANAGEMENT INFORMATION DATA PRODUCTS
DI-ALSS-81530	LOGISTICS PRODUCTS
DI-CMAN-80639C	ENGINEERING CHANGE PROPOSAL (ECP)
DI-CMAN-80640C	REQUEST FOR DEVIATION (RFD)
DI-CMAN-81253A(T)	CONFIGURATION STATUS ACCOUNTING INFORMATION
DI-ILSS-80868 (T)	SUPPORT EQUIPMENT TOOLS AND TEST EQUIPMENT
DI-ILSS-80872	TRAINING MATERIALS
DI-MGMT-80177A	BAR CODE IDENTIFICATION REPORT
DI-MGMT-80368A	STATUS REPORT
DI-MISC-80176A	CAMOUFLAGELINE ART DATA
DI-MISC-80508A	TECHNICAL REPORT STUDY/SERVICES
DI-MISC-81397	HMMP REPORT
DI-PACK-80120B	PACKAGING
DI-PACK-80121B	SPECIAL PACKAGING INSTRUCTIONS (SPI)
DI-PACK-80880C	TRANSPORTABILITY REPORT
DI-QCIC-81110	INSPECTION AND TEST PLAN
DI-SAFT-80102B	SAFETY ASSESSMENT REPORT
DI-SESS-81000C	PRODUCT DRAWINGS/MODELS AND ASSOCIATED LISTS
DI-SESS-81002D	DEVELOPMENTAL DESIGN DRAWINGS/MODELS AND ASSOCIATED LISTS
DI-SESS-81315	FAILURE ANALYSIS AND CORRECTIVE ACTION REPORT

SPECIFICATIONS/STANDARDS

MIL-DTL-31000C	TECHNICAL DATA PACKAGES
MIL-HDBK-1222C-1	GUIDE TO STYLE AND WORK PACKAGES FOR TECHNICAL MANUALS
MIL-PRF-49506	PERFORMANCE SPECIFICATION IN LOGISTICS MANAGEMENT INFORMATION
MIL-PRF-63002J	REQUIREMENTS FOR PREPARATION OF
MODIFICATION WORK ORDERS	
MIL-PRF-63004D	LUBRICATION ORDERS
MIL-STD-882D	STANDARD PRACTICE FOR SYSTEM SAFETY
MIL-STD-1472F	DOD HUMAN ENGINEERING
MIL-STD-1474D	DESIGN CRITERIA STANDARD: NOISE LIMITS
MIL-STD-2073-1D	STANDARD PRACTICE FOR MILITARY PACKAGING
MIL-STD 3003	PREPARATION FOR SHIPMENT AND STORAGE OF WHEELED VEHICLES
MIL-STD-40051-2	PREPARATION OF DIGITAL TECHNICAL INFORMATION FOR PAGE-BASED TECHNICAL MANUAL

OTHER GOVERNMENT DOCUMENTS

DA PAM 700-60	DEPARTMENT OF THE ARMY SKO
DA PAM 700-21	TMDE REGISTER INDEX
AMC-P 700-25	GUIDE TO PROVISIONING
ASTM D4169	STANDARD PRACTICE FOR PERFORMING TESTING OF SHIPPING CONTAINERS

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NAS 411	HAZARDOUS MATERIALS MANAGEMENT
FM 21-10	FIELD HYGIENE AND SANITATION
CFR 29, 40, 49	CODE OF FEDERAL REGULATIONS
AFMAN 24-204	HAZMAT AND GENERAL PACKAGING
QAPQ	QUALITY ASSURANCE PROVISIONING GUIDANCE
INTERNATIONAL MARITIME DANGEROUS GOODS CODE	
TB 750-93-1	FUNCTIONAL GROUP CODES (FGC) TECHNICAL BULLETIN
AR 750-1	ARMY MATERIAL MAINTENANCE POLICY
MIL-HDBK-502	ACQUISITION LOGISTICS
FM 3-5	NBC DECONTAMINATION
TRADOC REG 350-70	TOTAL ARMY TRAINING SYSTEM
AR 700-15	PACKAGING OF MATERIEL

C.3 SYSTEM REQUIREMENTS.

C.3.1 Performance requirements for the MMPV are listed in ATPD 2372, Attachment 1. The Contractors proposed system must meet or exceed all threshold requirements in the MMPV Purchase Description. The Government reserves the right to test the proposed MMPV against the requirements of the Purchase Description and the following requirements which are addendums to the ATPD 2372. Where the requirements contradict, the requirements listed below supersede the (~~DELETED "original"~~) purchase description for this contract:

C.3.1.1 ATPD 2372 paragraph reference 3.2 Physical Characteristics. The MMPV vehicle shall be a variant of the RG-33L 6x6 with a fully welded monocoque hull (~~DELETED "and GVW of approximately 29 tons"~~). The hull shall be divided into an engine capsule and a (~~DELETED "force protected"~~) crew capsule joined by a bolted fuse plane joint. The force protected crew capsule shall have an internal armor bulkhead that segregates the crew compartment from the cargo compartment, which houses the mission equipment, robots and fuel tanks. The vehicle shall have a powered ramp for robot deployment (~~DELETED "and a variant shall have an interrogator arm. Both variants"~~) The MMPV shall have the capability to accept either a remote weapons station or a crew served weapons station. (~~DELETED "and an Interrogation arm."~~)

C.3.1.2 ATPD 2372 paragraph reference 3.12.4.1 Robot Ingress/Egress. The vehicle shall have a remotely operated, powered ramp and an interior armored bulkhead that allows deployment of the robot with no exposure of the crew to direct fire, fragmentation or blast threats. The armor bulk head shall offer, at a minimum, threshold level survivability protection (ref ATPD 3.18/3.19)

C.3.1.3 ATPD 2372 paragraph reference 3.18/2.19 Force Protection/System Survivability. The vehicle shall have internal and external mounting provisions to facilitate (~~DELETED "ease of"~~) armor upgrades. The vehicle shall meet objective mine blast protection and partially meet objective ballistic and IED fragmentation protection. Spall liners shall be included as (~~DELETED "the final" an additional~~) layer of protection. The MMPV shall utilize a bolt-on engine compartment fuse plane to mitigate shock and acceleration from overmatch mine blasts under the engine compartment.

C.3.1.4 The ATPD dated 01 May 2009 supersedes all previous contract language addressing vehicle performancne or characteristics.

C.3.2 The Contractor, as an independent Contractor and not as an agent of the U.S. Government, shall furnish all data, supporting labor, supplies, services, facilities and equipment necessary for the delivery of MMPVs, as required under this contract.

C.3.3.1 Transportability. The Contractor shall deliver a transportability report (~~DELETED "within 75 days of contract award"~~) for the MMPV IAW CDRL A001. Transportation plans, load plans, shipping and clearance diagrams shall be prepared in accordance with and guidance specified in Chapter 6, MTMCTEA Pam 70-1 and DI-PACK-80880C.

C.3.3.2 The Contractor shall provide a system physical shipment configuration procedure and information necessary to support the US Army in obtaining an air transportability certificate with the US Air Force.

C.3.4 The Government reserves the right to withhold payment of hardware if data deliverables are delinquent. The Contractor is responsible for ensuring that all data deliverables required in this scope are completed and accepted in order to meet contractual over pack requirements.

C.3.5 APPROVAL OF WAIVERS TO ATDP 2372

C.3.5.1 The following approved waivers to ATDP 2372 were incorporated into the contract under Modification P00019:

a. Waiver to ATPD 2372 (01May2009), section 3.18.2 Chemical Biological Radiological and Nuclear (CBRN) Collective Protection dated 24 May 2012.

b. Waiver to ATPD 2372 (01May2009), section 3.5.2 Electrical System Capacity dated 22 Feb 2012.

c. Waiver to ATPD 2372 (01May2009), section 3.6.2 Blackout Lights dated 9 May 2012.

d. Waiver to ATPD 2372 (01May2009), section 3.16.6 and 3.18.1 Electromagnetic Environmental Effects (E3) requirements. and Electromagnetic Radiation Hazards (EMRADHAZ) dated 22 Feb 212.

e. Waiver to ATPD 2372 (01May2009), section 3.17.5 Repairability dated 22 Feb 2012.

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- f. Waiver to ATPD 2372 (01May2009), section 3.12.5 Storage. (FOUO) dated 22 Feb 2012.
- g. Waiver 0041-D-001, DO 008-05 to ATPD 2372 (01May2009), section 3.13.2.9 Turning performance dated 9 May 2012.
- h. Waiver 0041-D-001, DO 008-04-A to ATPD 2372 (01May2009), section 3.14.4 Rail Transportability dated 22 Feb 2012.
- i. Waiver 0041-D-001, DO 008-04-B to ATPD 2372 (01May2009), section 3.14 Transportability dated 24 May 2012.

C.3.5.2 As a result of the above waivers, Attachment 0043 "Approval of Waivers to ATDP 2372 has been incorporated into Section J of the contract.

C.3.6 APPROVAL OF WAIVER AND DEVIATIONS TO ATDP 2372 (Reference Modification P00022)

C.3.6.1 The following approved waiver and deviations to ATDP 2372 were incorporated into the contract under Modification P00022:

- a. Waiver to ATPD 2372 (01May2009), section 3.16.1 Connectors on Wiring Harnesses, Operating temperatures dated 5 Oct 2012.
- b. Deviation to ATPD 2372 (01May2009), section 3.12.3 EOD Conversion - Capsule Deviation, Ventilation System dated 24 Sep 2012.
- c. Deviation to ATPD 2372 (01May2009), section 3.17.3 EOD Conversion - HVAC Evaporator Drain Configuration, Ease of Maintenance dated 24 Sep 2012.
- d. Deviation to ATPD 2372 (01May2009), section 3.12.3 EOD Conversion - Personal Heater Deviation, Ventilation System dated 24 Sep 2012.
- e. Deviation to ATPD 2372 (01May2009), section 3.12.2 EOD Conversion - Roof Armor Deviation, Glass dated 24 Sep 2012.

C.3.6.2 As a result of the above waiver and deviations, Attachment 0043 "Approval of Waivers and Deviations to ATDP 2372" has been updated in Section J of the contract.

C.3.7 APPROVAL OF WAIVER AND DEVIATIONS TO ATDP 2372 (Reference Modification P00023)

C.3.7.1 The following approved waiver and deviations to ATDP 2372 were incorporated into the contract under Modification P00023:

- a. Deviation D0041-DO08-025 "Corrosion and Paint" to Section E-8 "52.211-4030 BASIC APPLICATION AND TESTING REQUIREMENTS FOR CHEMICAL AGENT RESISTANT COATINGS (CARC) ON METALLIC SURFACES" and E.13 "CARC Paint-Pretreatment Requirements for Ferrous Armor, Steel and Aluminum Surfaces" dated 13 March 2013.
- b. Deviation 0041-D-001, DO 008-3 Rev 1 to section C.17 "Hazardous Material" dated 19 March 2013.

C.3.7.2 As a result of the above waiver and deviations, Attachment 0043 "Approval of Waivers and Deviations to ATDP 2372" has been updated in Section J of the contract.

*C.3.8 APPROVAL OF WAIVER AND DEVIATIONS TO ATDP 2372 (Reference Modification P00024)

*C.3.8.1 The following approved deviation D0041-DO08-026 to ATDP 2372 was incorporated into the contract under Modification P00024:

- a. Approved Deviation D0041-DO08-026 A-Pillar Reinforcement Addition dated 5 April 2013.

*C.3.8.2 As a result of the above deviation, Attachment 0043 "Approval of Waivers and Deviations to ATDP 2372" has been updated in Section J of the contract.

C.4 DATA AND SOFTWARE DELIVERY

C.4.1 The Contractor is responsible for meeting all of the requirements defined in this contract. The Contractor shall furnish all information, data and software required for testing, Logistics Demonstration, Verification, and fielding electronically in accordance with the provisions of this contract.

C.4.2 The Contractor shall deliver all data in English.

C.4.3 All data submitted must be in MS Office Suite and Windows 2000 compatible format

C.4.4 Electronic Submissions:

C.4.4.1 Cover/Transmittal Letter: The Contractor shall annotate the following information in the electronic cover letter for the submission:

- Contract Number
- CDRL Number and Item (e.g., A001 TRANS RPT)
- Delivery Type (Draft, Final)
- Date
- Contractor Name
- System Name

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C.4.4.2 The contractor shall use the following naming convention for electronic files submitted:

CDRL Number and Item
Delivery Type (Draft, Final)
Date

For example: A001 Trans Rpt Draft 1 Aug 07.doc

C.4.5 The Procuring Contracting Officer (PCO) or designated representative is the approving authority for all documents delivered under this contract. All guidance will be provided by PCO. Any guidance provided by any other Government representative should immediately be brought to the PCOs attention for concurrence or rejection of the guidance. Only the Government PCO is authorized to modify or change this scope of work.

C.5 SYSTEM/PROJECT MANAGEMENT [CDRL A006]

C.5.1. The Contractor shall provide a detailed Integrated Master Schedule (IMS) covering the first twenty-four (24) months of the contract, updated from the Start of Work Meeting, outlining its plans for meeting the required delivery schedules for the hardware services and data documentation under this contract. The IMS shall identify all work events that are required to achieve the required delivery dates. The schedule(s) shall clearly identify critical path activities. The IMS shall be delivered and updated on a monthly basis in accordance with CDRL A006. Microsoft Project is the preferred format. If another software program is used, the Contractor shall provide software licenses and training to the Government as required to access and review the IMS in electronic format (maximum of 10 Government users).

C.5.2 The Contractor shall provide Government personnel with in-plant (prime and subcontractors) access to hardware and all technical and logistics data in support of all contract efforts. The Contractor, upon request, shall allow Government review of all documents generated through the course of the contract.

C.6 HARDWARE DELIVERY

C.6.1 The Contractor is responsible for meeting all of the requirements defined in this contract. The Contractor shall furnish all additional hardware, support equipment, and support packages required throughout this scope of work. In addition to the equipment defined below, the Contractor is required to provide parts and equipment required for testing, Logistics Demonstration and Verification, and Fielding.

C.6.2 Basic Issue Items (BII). (CDRL A002)

BII are those items identified as essential for an operator or crew to place the MMPV into initial operation to accomplish its defined purpose. These items are essential to perform (Operator Maintenance) repairs which cannot be deferred until completion of an assigned mission. The BII are not listed on the engineering drawings. The BII includes those select common and special purpose tools, Test Measurement and Diagnostics Equipment (TMDE), Operator publications, first aid kits, and safety equipment (for example fire extinguishers). Attachment 014 contains the list and pricing for these items.

C.6.3 Component Of End Items (COEI) (CDRL A003)

All major components of the MMPV shall be identified and described in the appropriate MMPV operator's manual. In addition, any component identified on the engineering drawing that is physically separate and distinct and that must be removed from the MMPV and separately packaged and stored for transportation will be separately listed by National Stock Number (NSN) in a table as an appendix in the operator's manual. The Contractor shall provide an initial list of recommended COEI items which the Government review and provide a final list to the contractor for provisioning. The Contractor shall provide an initial list of recommended COEI items which the Government will review and provide a final list to the contractor for provisioning. The pricing received with the offerors proposal will be used.

C.6.4 Initial Service Package (ISP) (CDRL A004)

The Contractor shall over-pack an Initial Service Package with each vehicle so the Government can properly service the MMPV vehicle. The ISP shall consist of all service parts and/or items required to meet warranty service requirements (See C.23.1.5) and perform the first scheduled maintenance; this package shall also include all mandatory replacement parts required for the service. The Contractor shall mark each item with the nomenclature and part number to ensure the correct application. ~~(DELETED "A separate ISP shall be generated to support the MMPV with Arm variant capable of supporting the projected number of fielded MMPV's with Arm variant for the first 12 months of vehicle fielding.")~~

C.6.5 Hardware Spares Support

Authorized Stockage List (ASL) shall be delivered with each fielding of the MMPV and shall be capable of supporting 22 systems for the stated time period. ~~(DELETED "ASL for the MMPV with Arm variant shall be capable of supporting 12 systems for the stated time period. Prescribed Load List (PLL) shall be delivered with each vehicle produced under this contract. PLL for the MMPV with Arm variant shall be delivered with each vehicle produced under this contract.")~~ All PLL shall be consolidated and packaged separately from the individual vehicles. ASL and PLL for MMPV ~~(DELETED "and PLL for the MMPV with Arm variant")~~ shall be packaged in ~~(DELETED "separate")~~

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containers IAW with paragraph C.19 of this SOW. (CDRL A004)

C.6.5.1 Authorized Stockage List (ASL) (CDRL A004) consists of a Stockage of parts that are stocked at each support / direct support unit or Government base that the MMPV will be fielded to. The ASL shall be able to support 22 vehicles fielded to a company/unit for the first 12 months of vehicle fielding. The Government may purchase ASL lots based on the number of base vehicles procured. ASL consists of major assembly items, items that have a long lead time for procurement, items that may have a shorter than normal useful life span. Examples of ASL items are; Engine, Transmission, Transfer, Axles, Air and Fluid Filters.

C.6.5.1.1 Modification P00022 incorporates a revised Authorized Stockage List (ASL) as agreed to by both parties on 20 November 2012. Attachment 0019 has been revised to reflect this update. (Reference Modification P00022)

~~(C.6.5.1.2 A separately packaged ASL shall be generated to support the MMPV with Arm variant capable of supporting 12 MMPVs with Arm variant for the first 12 months of vehicle fielding. The Government may purchase ASL lots based on the number of base vehicles with arm procured. The ASL for the MMPV with Arm variant shall include ASL parts required for the base vehicle to support 12 vehicles.)~~

C.6.5.2 Prescribed Load List (PLL) (CDRL A004) packages repair parts and spares. The Contractor shall provide one PLL package per unit/company fielded. The PLL items shall be delivered with quantities sufficient to support 22 vehicles fielded to a company/unit. The PLL shall be able to support the fielded vehicle for the first 12 months of the contract. PLL will consist of common items that unit level maintenance personnel can replace. Examples of PLL items are; Lights, Fan Belts, Fuses, Switches, Circuit Breakers etc. as well as items in the ISP.

~~(C.6.5.2.1 The Contractor shall provide one MMPV with Arm PLL package per unit/company fielded. The PLL items shall be delivered with quantities sufficient to support 12 vehicles fielded to a company/unit. The PLL shall be able to support the fielded MMPV with Arm vehicle for the first 12 months of vehicle fielding. The PLL for the MMPV with Arm variant shall included PLL parts required for the base vehicle to support 12 vehicles.)~~

C.6.6 Ballistic Test Coupons. The contractor shall deliver test coupons for each armor surface, representing material recipe/configuration used in/on the MMPV for test and evaluation. These coupons as specified below shall be delivered not later than 120 days after contract award to Aberdeen Test Center or other government test site as specified in the delivery order. The coupons shall be representative of the production vehicle including the thickness(es), spacing(s), as well as the Spall liner.

C.6.6.1 Transparent Armor Coupons:

Size: 400 mm X 400 mm (Length x Width); Quantity: 8

C.6.6.2 Opaque Armor Coupons:

Size: 24 inch X 24 inch (Length x Width); Quantity: 6

C.7 MEETINGS/CONFERENCES/REVIEWS. The Contractor and Government will have meetings and reviews during this contract's performance period as outlined below. The objectives of these meetings are to review progress and provide guidance on contractual, technical, logistics, or other issues that are critical to successful contract performance. The Contractor shall provide a draft agenda for Government review seven days prior to the meeting. At the conclusion of each meeting, the Government and Contractor will jointly write and agree on a summary of the key items of discussion. The summary will identify all action items assigned for both parties to accomplish, along with a completion date for each action item, and all actions requiring Contracting Officer approval. The Contractor shall take minutes for all meetings, and submit them to the Government for review and approval. The contractor will distribute the Government approved minutes to all parties not later than 5 days after the completion of the meeting, in accordance with CDRL A005. The Contractor shall attend the following meetings, as well as any additional meetings mutually agreed to by both parties:

- a) Start of Work (SOW) Conference
- b) Maintenance, Provisioning, and Publication (MPP) Review
- c) Maintenance Analysis Planning meeting
- d) Provisioning Conference
- e) Integrated Product Team Meetings
- f) Contract Status Review Conference
- g) Program Status Reviews
- h) Pre-First Article Test Meeting

C.7.1 Start of Work (SOW) Conference

C.7.1.1 Not more than fourteen (14) days after contract award a Start of Work Conference shall be held at the Contractors facility. This meeting will focus on contract terms and conditions, a review of all data requirements, required specifications, program schedule, test requirements and relevant logistics requirements to ensure a complete understanding of the requirements. The meeting shall also include a reliability meeting, publications meeting, a provisioning guidance conference, and a new equipment training meeting, as well

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as the formation of Government/Contractor integrated product teams (IPT). The Start of Work objective is to confirm a full and mutual understanding of Government requirements, program obligations, objectives, and responsibilities, and to conduct an overall review of the projected Contractor approach, general assumptions, schedule, anticipated level of effort, and any other areas needing clarification.

C.7.1.2 The Contractor shall make available contract administration personnel, management, engineers, logistic support, and other personnel involved with producing the MMPV. Corporate participation may include appropriate major and critical subcontractor representatives, at the discretion of the contractor. Representatives from the following corporate and Government management functions shall participate in the Start-of-Work meeting: program office, customer (operational user), technical, and functional management, PCO, Administrative Contracting Officer, financial, and other personnel with an assigned management responsibility for the MMPV. The PCO and contractor lead will finalize the attendance list prior to the start of work meeting.

C.7.1.3 At the Start of work meeting, the Contractor shall present detailed paths and/or milestone graphic presentations that detail the performance necessary to meet contract delivery requirements as defined in the Scope of Work. The Contractor shall provide to the Government an internal list of all functional Contractor personnel involved in this contract. This list will be updated as changes occur to maintain accuracy. The following discussions are to be part of the Start of Work Conference:

Contract/SOW/CDRL/PD Review

Contract Deliverables and Administration (DCMA)

Integrated Program Schedule, milestones, fielding

Test & Evaluation

Safety

Fielding/New Equipment Training

Logistics:

- Provisioning Guidance: to provide guidance to the Contractor for documenting and submitting provisioning data.
- Engineering Data for Provisioning (EDFP): During this conference, the Government will discuss all EDFP requirements.
- Publications Guidance: To review and discuss publications requirements.
- Maintenance Planning: To review and discuss operator and maintenance functions and what constitutes reparable items.
- Other Integrated Logistics Support (ILS) issues.

C.7.2 Maintenance, Provisioning, and Publication (MPP) Review: These conferences will be held at the Contractors facility unless the parties agree to move it to a different location. The first conference will be held fifteen (15) days after the Start of Work Meeting. At that meeting the next MPP Conference will be scheduled. An MPP Review will be held each month for 18 months. The areas identified in paragraphs C.7.2.1 C.7.2.4 below shall be discussed at the MPP review.

C.7.2.1 Provisioning Data: The Government shall review the Contractors available provisioning data and provide guidance.

C.7.2.2 Engineering Data for Provisioning (EDFP): The Government shall review all EDFP requirements. The Government shall review the Contractors EDFP, to facilitate the NSN request process, prior to the provisioning conference.

C.7.2.3 Publications Guidance: The Government shall review and discuss publications requirements. The Government will review at least one work package that the Contractor has prepared to provide clarification and guidance.

C.7.2.4 Maintenance Analysis Planning meeting: The Government shall review and discuss operator and maintenance functions and reparable items.

C.7.3 Provisioning Conference: A Provisioning Conference shall be held (at the contractors facility) fifteen (15) days after the first MPP review. Follow-on provisioning conferences will be held at the contractors facility I/A/W Attachment 0011. The contractor shall provide the following documentation at each conference:

1. Hard copy of the Provisioning Parts List (PPL) in a format acceptable to TACOM Commodity Command Standard System (CCSS) database (1552 or LSA-036 format).
2. Each line (Part List Item Sequence Number) on the Provisioning Parts List (PPL) will have an accompanying Engineering Data for Provisioning (EDFP) or other supporting documentation

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3. Facilities and office space including copying and data processing access.

4. Access to the End Item

C.7.4 Integrated Product Teams and Integrated Product Team Meetings. Integrated Product Teams (IPTs) shall be used in the manufacture, test, refurbishment, and management phases of this program. These IPTs shall include Government, Contractor, and Subcontractor participation. The IPT will be used as a forum for program reviews, design reviews, resolution of issues, and other contract-related items. IPT meetings may be held at the Contractors or Governments facilities. IPT meetings will be held every four (4) months. Conference calls/video conferences may suffice for IPT meetings, when appropriate. The Government and Contractor will jointly schedule the meetings and establish the agenda at least 10 working days before the IPT start to allow for travel time.

C.7.4.1 Contract Status Review Conferences. The Contractor shall provide technical and managerial representative(s) to review contract status in conjunction with integrated product team meetings. Topics to be discussed shall include contract status, testing, production, logistics, technical issues, and deliverables. The Contractor will coordinate an agenda with the Procuring Contracting Officer (PCO) no later than 5 days prior to the meeting. Additional conferences may be called by either the Government or the Contractor as necessary to clarify any questions regarding contract requirements.

C.7.4.2 Program Status Reviews. Program Status Reviews (PSRs) will be conducted in conjunction with integrated product team meetings, until completion of all data deliverables. The meetings will cover the Contractor's production status, data deliverable status, and progress on all logistics requirements. Supportability Integrated Product Team (SIPT) meetings will be part of the PSRs.

C.7.5 When meetings are held at the Contractor's facility, the Contractor will make the following available for the Government's use:

- (a) Applicable technical, logistics or other documentation (including drawings, computer data bases, publications, and other applicable data)
- (b) Applicable Computer resources compatible with Government Automated Data Processing.
- (c) Access to Internet, via LAN connection
- (d) Access to an MMPV System

C.7.6 A Pre-First Article Test Meeting shall be held ninety (90) days prior to Government FAT at a Government specified test facility to review and discuss testing, support, and training.

C.7.7 The Government reserves the right to call any other meetings required for successful execution of the MMPV contract and program, throughout the life of this program. If the Government determines a meeting is required, the Government will provide the Contractor with ten (10) days notice.

C.7.8 Meeting Minutes. Prior to the conclusion of each meeting, the Government and Contractor will jointly write and agree on the draft minutes. The summary will identify all action items assigned for both parties to accomplish, along with a completion date for each action item, and all actions requiring Contracting Officer approval. The contractor shall take minutes for all meetings. The contractor shall compile a complete account of all meetings and reviews and provide them to the Systems Acquisition Manager (SAM) for acceptance. The contractor shall distribute draft minutes at the completion of all meetings and reviews. The contractor shall distribute SAM approved minutes not later than 5 days after each meeting. [CDRL A005]

C.8 INTEGRATED LOGISTICS SUPPORT (ILS) DEVELOPMENT

C.8.1 The Contractor shall create logistics documentation for the delivered MMPVs. This documentation shall include all components, assemblies, or parts changed or inserted in the MMPV due to testing, upgrades, or design changes.

C.8.2 The Contractor shall submit acceptable documentation on the required due date as detailed in the applicable Scope of Work paragraphs and CDRLS. It is the Contractors responsibility to validate the accuracy of all documentation prior to submittal to the Government. If the Government finds that there has not been validation of data submitted, review of documentation will cease and the data submittal will not be considered for acceptance.

C.8.3 Government receipt of documentation does not constitute acceptance. Government acceptance of documentation is contingent upon on the completeness, accuracy, compatibility of submitted documentation and the following of applicable military standards.

C.8.4 The Contractor shall use Military Performance (MIL-PRF) Specification 49506, Logistics Management Information (LMI), dated 11 November 1996, in identifying content, format, delivery and related guidance for logistics data except as otherwise identified in this contract.

C.9 Maintenance Concept. The MMPV will be serviced, maintained, repaired and overhauled at the lowest levels possible. This will require the utilization of the Army two level maintenance policy, as outlined below and in accordance with AR 750-1. The Contractor shall conduct a Maintenance Analysis and Supportability Analysis to develop logistics products described in this contract. The Contractor will use Military Performance (MIL-PRF) 49506 for use in identifying content, format, delivery and related guidance for

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logistics data, except where otherwise identified in this contract.

C.9.1 Maintenance Analysis [CDRL A007]. The Contractor shall analyze the operational, maintenance and support function of the system in the identification of required operator and maintenance tasks. Maintenance of the MMPV will be driven by the Army two level maintenance concept: Field and Sustainment. The analysis shall be documented in Contractor format as an LMI summary entitled "Maintenance Analysis" (See Attachment 002) and shall identify maintenance functions, levels of maintenance, manpower, spare parts and the support equipment required.

NOTE: Maintenance tasks shall be designated to the appropriate Level of Maintenance in accordance with AR 750-1.

C.9.1.1 Field Level Maintenance is comprised of the Unit (Crew, Organizational) and Direct Support functions. The Field Maintenance consists of Operators/Crew, Organizational and selected Direct Support maintenance capabilities from the previous four level maintenance system where the maintenance functions of inspection, test, service, adjust, align, remove/install, install, replace, and repair are performed. Field Maintenance will consist of Preventative Maintenance Checks and Services (PMCS) (lubricate, clean, preserve, tighten, replace, adjust), inspection of external and easy access components, diagnosis of faults repairs accomplished on a component, accessory, assembly, subassembly, plug-in unit or other portions either on the system or after it is removed from the equipment. Field Level Maintenance is conducted in a field environment forward of the operating base. Major assemblies that require rebuild are evacuated to Sustainment Level Maintenance for repair or rebuild and then returned to the supply system for re-issue.

C.9.1.2 Sustainment Level Maintenance is comprised of General Support and Depot functions. Sustainment Maintenance consists of repairing components, assemblies, modules, and end items in support of the supply system. Sustainment maintenance is characterized as "off system" and "repair rear". The intent of this level is performing commodity-oriented repair on all supported items to one standard that provides a consistent and measurable level of reliability. GS Maintenance provides rear echelon repairs of major components or assemblies, sub-assemblies or plug-in units to like new or nearly new condition. MMPV System components repaired at GS Level are turned in to the Army Supply System as replacement parts ready for issue. Such repairs or restorations require skills, tools and expertise not found in the unit-focused, forward Field Level maintenance support facilities. GS maintenance is skilled repairs to include routine calibration, but it does not include overhaul nor specialized machining or specialized calibration such as calibration of fuel injector pumps. Sustainment Level Maintenance requires a National Maintenance Work Requirement (NMWR).

C.9.1.3 The analysis shall determine maintenance requirements, including all Preventative Maintenance Checks and Services (PMCS), based on: (1) identification of components which are critical in terms of mission and operating system; (2) components whose functional failure will not be evident to the operator; (3) economical and/or operational consequences of failure; and (4) when scheduled maintenance can prevent failures (A007).

C.9.1.4 In consideration for the approval of waivers under Modification P00019 The contractor shall modify CDRL A007 Maintenance Analysis (MA) from the current excel format to a format compatible with the Governments approved LORA Software, COMPASS. The update shall include pricing and weight information. All other fields required within the MA will remain unchanged from previous submissions provided for CDRL A007.

C.9.2 MAINTENANCE PLANNING

C.9.2.1 The Contractor shall conduct Maintenance Planning that determines maintainability characteristics of the MMPV. This analysis shall be incorporated into the Maintenance Analysis (see 002) (CDRL A007) described in Scope of Work paragraph C.9.1 and shall identify all maintenance functions, manpower, spare parts, and the support equipment required. The analysis will be in End Item hardware top down breakdown, disassembly sequence with attaching hardware being called off first. It will identify Functional Group Codes (FGC) in accordance with Technical Bulletin (TB) 750-93-1 for each repairable item.

C.9.2.2 The Contractor shall develop a supportability analysis as part of the overall management and engineering process for the MMPV. This analysis shall address the supportability requirements of the MMPV in terms of operation and maintenance task requirements and the associated support resources to support it. This supportability analysis shall be incorporated into the Maintenance Analysis (see Attachment 002) (CDRL A007) described in Scope of Work paragraph C.9.1.

*C.9.3 As consideration for approval of the A-Pillar Weld Repair Deviation D0041-DO08-026 under Modification P00024, BAE Systems shall deliver a Level of Repair Analysis (LORA) as specified in C.36 and in accordance with CDRL A052 Level of Repair Analysis (LORA). (Reference Modification P00024).

C.10 PARTS SUPPORT

C.10.1 Interim Parts Support Contract (IPSC). The Contractor agrees to enter into a separate parts support contract to sustain the MMPV for twelve (12) months beginning at FUE, with an option for an additional 12 months of support. The intent of the IPSC is to allow the Government to sustain beyond the initial ASL & PLL, and provide spare and repair parts as needed to fielded units until the MMPV is fully organically supportable IAW paragraph C.10.2 below. The contractor shall be responsible for all shipping and packaging requirements IAW this SOW/Contract. The timeline and delivery schedule of parts shall be IAW paragraph C.10.5 below. The Government will use the pricing data received in the Contractors proposal and pricing negotiated in paragraph C.10.3.

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C.10.2 Direct Vendor Delivery (DVD) Contract. The Contractor agrees to enter into a separate parts support contract with the Defense Supply Center Columbus (DSCC) of the Defense Logistics Agency (DLA) for the expected life of the vehicle (at least 15 years). The initial contract will be for one to five years for a ready means of acquisition of replacement parts and/or components in support of the MMPV. It will include option periods for up to a 15-year Indefinite Quantity Contract (IQC), with prices negotiated annually. (Note: DLA may elect to award options of different lengths but the total length of support will be for 15 years.). The Contractor must be able to process both manual and electronic orders for DLA stock purchases and manual orders for TACOM and Foreign Military Sales (FMS) requirements.

C.10.3 Pricing data for spare parts support. The Contractor shall deliver a complete priced parts list for the MMPV I/A/W CDRL A008. The items on the pricing list are directly related to the provisioning effort required per this contract in that all procurable parts are required to be provisioned and are also required to be on the priced parts list required per this paragraph and CDRL A008. The priced parts list shall also match the Bill Of Materials (BOM) for the MMPV to the extent the parts are applicable. The Government intends on validating pricing that was not included in the contractors price proposal for ASL, PLL, and ISP including the arm parts for the MMPV with Arm variant of the MMPV after contract award by using the current army WEBFLIS and LOGRUN data base to find like items and manufactures pricing. The pricing parts list shall include the part name, price, unit of issue, and required lead time for delivery.

C.10.4 Electronic Data Interchange (EDI) Transactions

C.10.4.1 The Contractor shall provide parts support using Electronic Data Interchange (EDI) transactions. Direct coordination between the Contractor and the DLA will be required prior to the use of EDI. To allow the EDI process to happen, the Contractor shall fill out a Trading Partner Profile Worksheet (TPPW) and sign a Trading Partner Agreement. To support these EDI transactions, the Contractor shall establish links that are compatible with the DLA's EDI process. The Government will not fund the effort related to setting up the electronic links or other associated costs needed to set up DVD communications systems. If such costs are incurred, the Contractor shall include them in the vehicle prices proposed under MMPV contract.

C.10.4.2 In employing these EDI processes, the Contractor will need to incorporate predetermined communication filters to allow electronic transmissions using ANSI X12 standards. The ANSI X12 standards include, but are not limited to, transaction sets for purchase orders, delivery orders, invoices, and other contractual business related information between the Government and the Contractor.

C.10.5 Delivery Schedule

Each electronic Delivery Order placed under this contract will be based on issue group number and will include an Issue Priority Designator (IPD). The IPD designates the equated combination of force/activity and urgency of need. The following are required times under DVD for a stocked item to arrive at the designated location. Overseas locations will be shipped to a designated containerization point for transshipment on military aircraft/vessel to the originator. All efforts should be made to improve on the following delivery times:

ISSUE GROUP	IPD	Required Delivery Schedule
DVD Purchases	01-03	2 Days
DVD Purchases	04-15	5 Days
Stock (Depot) Orders		10 Days
FMS Orders		30 Days

C.10.6 Bar-code Labeling of Individual Shipments

C.10.6.1 The Contractor shall apply bar-coded labels to every shipment made under the DLA Parts Support Contract. The Government will not separately fund the effort related to meeting the bar-coding requirements. If such costs are incurred, they are included in the vehicle prices proposed under this contract. A bar code label is required for each exterior container or palletized load that contains a single item, each unit pack and intermediate container used in addition to the exterior container, and/or each item being shipped loose or unpacked.

C.10.6.2 In addition to other marking requirements in this contract, the Contractor shall provide the following separate lines of bar-coded data, with Human-Readable Interpretation (HRI) printed directly below the element:

C.10.6.2.1 Document number and suffix (The Document Number consists of a 14-character (15 characters when a suffix is included) alphanumeric code. It may be listed on a contract/order as the Requisition Number, Transportation Control Number (TCN), etc.)

C.10.6.2.2 National Stock Number (NSN) (in absence of the NSN, the CAGE and Part Number) (The NSN will appear as a 13-digit code without the dashes.)

C.10.6.2.3 ICP Routing Identifier Code (RIC), Unit of Issue, quantity, condition code, distribution code, and unit price. (The RIC is a three digit alpha-numeric code; the appropriate "UI" will appear as a two digit alpha character; the "QTY" will appear as a five position code, including zero fillers left of the number; the condition code will always be listed as an "A;" the distribution code will be a two position zero filled code; and the unit price will be a six position zero filled code. No spaces shall separate the individual

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data elements.)

C.10.6.2.4 The bar code symbology shall be Code 3 of 9 (Code 39) in accordance with AIM BCI. (Copy of AIM BCI is available from: AIM USA, 634 Alpha Drive, Pittsburgh, PA 15238-2802 (412) 963-8588.)

C.10.7 Unique Identification (UID) In accordance with DFARS 252.211-7003 Item Identification and Valuation, the Contractor shall provide unique identification marking IAW CDRL A039 of all items stocked, stored, issued or used; or any product, including systems, materiel, parts, subassemblies, sets, and accessories delivered under this Contract. Reference documents to be used as guidance are, DoD Guide to Uniquely Identifying Items V1.4 dated 16 April 2004; MIL-STD-130 Revision M; ATA Spec 2000, ISO/IEC 1543/ISO/IEC 15415.

C.11 PROVISIONING PROGRAM. Provisioning requires three key elements: the Provisioning Parts List (PPL), the Engineering Data for Provisioning (EDFP), and the Pre-procurement Screening (PPS). The Contractor is responsible to provide data required, as defined in this scope of work for each element. The Contractor shall develop and conduct a comprehensive provisioning program for the MMPV that allows for organic (Army) support. The Contractor shall develop provisioning data for the MMPV in accordance with MIL-PRF-49506, guidelines of MIL-HDBK-502, and Logistic Management Information (LMI) data worksheets found in 003. The Government shall use the guidance contained in the Quality Assurance Provisioning Guidance Book (QAPG) and AMC PAM 700-25 for acceptance of provisioning data delivered under the provisions of contract.

C.11.1 Provisioning Parts List (A008). The Contractor shall develop and deliver LMI, (Provisioning Parts List (PPL)) as specified on the LMI data worksheet, 003, for all parts, special tools, BII, COEI, and Additional Authorized List (AAL) items identified on the MMPV. LMI (PPL) data is required IAW MIL-PRF-49506 (dated 11 Nov 96).

C.11.1.1 The Contractor shall use the Provisioning Contract Control Number (PCCN) and PCCs provided. The Government will provide the PCCN and PCCs to the contractor within 30 days of contract award.

C.11.1.2 The Commodity Command Standard System (CCSS) has various methods by which the Contractor can deliver provisioning data and the Government will discuss these methods at the start of work meeting. All submissions of the LMI/PPL data must be compatible with the Governments CCSS/Provisioning on Line System. The data shall be capable of being loaded into the Governments Provisioning Master Record (PMR) without any modification to the data.

C.11.1.3 The Contractor shall correct rejections within 15 days and resubmit them electronically in ASCII text with accompanying 80/80 listing. The Contractor shall ensure that only those items that are repair parts or part of the end item's top-down generation breakdown will be loaded in the PMR. The Government will not accept any data that does not meet the stated requirements.

C.11.1.4 The Provisioning Parts List (PPL) shall be used to determine the range and quantity of support items required for maintenance and repair of the End Item. This includes all repairable Commercial off the Shelf (COTS) items, unless excluded by the Government. The PPL shall contain all tools, test equipment, repair kits and repair parts sets required to maintain the End Item, component or assembly equipment, unless excluded by the provisioning requirements. The PPL shall be formatted in accordance with 003 (PPL).

C.11.1.5 Input media requirements for provisioning data: TACOM uses the Army Materiel Command (AMC) developed Commodity Command Standard System (CCSS) applications (program). All submissions of Logistics Management Information (LMI)/Provisioning Parts List (PPL) data must be compatible with the Government CCSS Provisioning on Line (POL) system. All digital files are to meet the following criteria:

- (a) American Standard Code for Information Interchange (ASCII)
- (b) No Header Data
- (c) 80 columns in width
- (d) Carriage return code for line end

C.11.1.6 The provisioning data shall contain all data required to support the MMPV:

- (a) The assemblies, subassemblies, spare parts and modules;
- (b) Basic Issue Items (BII)
- (c) Expendable Durable Items List (EDIL)
- (d) Components of the End Item (COEI)
- (e) Long Lead Time Items (LLTI)
- (f) Special Tools and Test Equipment (STTE)

C.11.2 Provisioning Conference. Provisioning Conferences shall be held at the Contractors facility I/A/W SOW paragraph C.7.3. Delivery of less than 800 lines requires Government approval prior to submission. Each incremental submission must include at least one major assembly. All submissions will be labeled initial, changes, deletions or any combination of the three transactions.

C.11.2.2 The Contractor will provide the following to support the provisioning conference effort:

1. Two hard copies of the Provisioning Parts List (PPL) in a format acceptable to TACOM Commodity Command Standard System (CCSS) database (1552 or LSA-036 format).
2. Each line (Part List Item Sequence Number) on the Provisioning Parts List (PPL) will have an accompanying hardcopy EDFP drawing
3. For the PLISNs with National Stock Numbers (NSNs) hard copy Pre-Procurement Screening (PPS) will be submitted
4. An electronic copy of the LSA-036 (via email the morning of the conference)

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5. Facilities and office space including copying and data processing access.
6. Internet access

C.11.2.3 The Government, at its discretion, may request that the Contractor provide a Sample Data (5% of submittal which will consist of minimum of 100 lines or more) to AMSTA-LC-CJB not later than 14 days prior to attending Provisioning Conferences. If the sample is determined to not meet the requirements, general guidance comments will be provided, and determination of whether the conference should be cancelled will be made. If the conference is cancelled, the Contractor will have 7 days to fix all errors and resubmit the sample data. At that time, the next conference will be scheduled.

C.11.3 Engineering Data for Provisioning (EDFP) (A009).

C.11.3.1 The Contractor shall prepare the EDFP, i.e. drawings, in LMI Provisioning Line Item Sequence Number (PLISN) sequence for all parts, special tools, BII, COEI, and AAL items identified on the MMPV IAW DI-ALSS-81529, 003 (Provisioning Data)

C.11.3.2 Drawing Information: A separate drawing is required for each PLISN. Drawings are not required for items accompanied by a copy of provisioning screening (e.g. FLIS, WEBFLIS, or by batch submittal part numbers to DLIS) which indicates this item has previously been assigned a valid national stock number. The Contractor shall make available drawings, to include the top assembly drawing, at each provisioning conference for Government review. After the Government approves each drawing as being suitable for NSN assignment, the drawings shall be submitted on a Compact Disk-Read Only Memory (CD-ROM) in Adobe Acrobat .PDF file format, as a STEP (CAD file), or some other software product format that the Government agrees to, with each PPL submittal. All drawings (hardcopy and electronic) shall contain the following information:

C.11.3.2.1 Commercial and Government Entity Codes (CAGEC).

C.11.3.2.2 Part Number.

C.11.3.2.3 PLISN.

C.11.3.2.4 Provisioning Contract Control Number.

C.11.3.2.5 Nomenclature. A brief description to include sizes, grade, surface finish, and coatings for common hardware shall be available in LMI data.

C.11.4 Provisioning Parts Screening (PPS) [CDRL A008]

C.11.4.1 Contractor shall conduct provisioning screening of each item on the PPL using the Federal Logistics Information System (FLIS) for standardization or NSN assignment IAW CDRL A008. Provisioning screening results will be used to select valid part numbers, NSNs, and current unit of measure/issue prices for provisioning purposes. Common hardware item (nuts, bolts, screws, washers, lock washers, rivets, etc) will be screened by technical characteristics. The screening results must be available to review at each provisioning conference.

C.11.4.2 FLIS. For additional information on requesting software and passwords, refer to the Provisioning Screening User Guide at .dlis.dla.mil.

C.11.4.3 WEBFLIS. For additional information on WEBFLIS, go to .dlis.dla.mil/webflis. There are two versions of WEBFLIS: Public Query and Restricted/Sign-on. Anyone with access to the Internet may access the Public Query version. The Restricted/Sign-on version requires a valid user ID/password to access the system. User IDs may be obtained by filling out a registration form. The registration forms are found on the DLIS web site. After accessing the Home Page, go into the Forms and Publications section and select the registration form for WEBFLIS. There are two forms available - one for Government workers and one for Government sponsored Contractors.

C.11.4.4 Batch submittals to DLIS. For additional information on how to submit batch requests to DLIS, refer to the Provisioning Screening User Guide at .dlis.dla.mil.

C.11.4.5 PPS will be made available to Government representatives at each provisioning conference, and will be upgraded along with the Provisioning Parts List (PPL). The data shall be capable of being loaded into the Provisioning Master Record (PMR) without any modification to data. No errors are allowed. All submissions will be labeled Initial, Revised, or Final submissions.

C.11.5 Long Lead Time Items (LLTI) [CDRL A011]. The Contractor shall delivery the Long Lead Time Item (LLTI) List which contain items, that because of their complexity of design, complicated manufacturing processes, or limited production capacities, may cause extended production or procurement cycles beyond three months, resulting in untimely and inadequate delivery, if not ordered in advance of normal provisioning.

C.12 EXPENDABLE AND DURABLE ITEMS LIST (EDIL) [CDRL A012]

C.12.1 The Contractor shall delivery an EDIL I/A/W CDRL A012 which defines the expendable/durable supplies and materials required for

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operating and maintaining the End Item.

C.12.2 The minimum requirements for each submittal are the following: Item Number, Maintenance Level, National Stock Number, Description, Commercial and Government Entity (CAGE), Part Number, and Unit of Issue (UI). Final submittal of the Expendable and Durable Items List (EDIL) shall be in the format as depicted in MIL-STD-40051-2 and included in the applicable section of the final submission of the Department of Army (DA) Technical Manual (TM).

C.13 SPECIAL TOOLS AND TEST EQUIPMENT LIST (STTEL) [CDRL A013]/
TEST MEASUREMENT DIAGNOSTIC EQUIPMENT (TMDE) [CDRL A014]

C.13.1 Support Equipment Tools and Test Equipment (STTE). The Contractor shall deliver a list of Support Equipment Tools and Test Equipment IAW DI-ILSS-80868. The list shall be in tabular form and shall identify special tools and test equipment not contained in U.S. Army Supply Catalogs. Supply Catalogs contain common tool sets and are listed at US Army LOGSA web site at [://weblog.logsa.army.mil/sko/index.cfm](http://weblog.logsa.army.mil/sko/index.cfm). Maximum use of common tools, support equipment, and TMDE normally organic to the user is preferred. The list shall provide Nomenclature, Cage Code, National Stock Number (NSN), if assigned, Part Number, level of maintenance, and price of each item on the list.

Note: New TMDE items, those not identified in U.S. Army Supply Catalogs may require special source and calibration documentation in order to update/ provide data for possible inclusion to the TMDE register (DA Pam 700-21-1). The Contractor shall provide all required data for all new TMDE.

Note: The following paragraphs are included in this pamphlet to clarify special tools for Army use. Special tools are not identified as components in a SKO SC. Special tools are--

- a. Fabricated tools that are made from stocked items of bulk material, such as metal bars, sheets, rods, rope, lengths of chain, hasps, fasteners, and so forth. Fabricated tools are drawing number controlled and documented by functional group codes in RPSTLs and located in TMs as appendices. Fabricated tools are used on a single end item.
- b. Tools that are supplied for military applications only (that is, a cannon tube artillery bore brush, BII) or tools having great military use but having little commercial application.
- c. Tools designed to perform a specific task for use on a specific end item or on a specific component of an end item and not available in the common tool load that supports that end item/unit (for example, a spanner wrench used on a specific Ford engine model and on no other engine in the Army inventory).

The Contractor shall deliver a priced STTE List (A013). The list shall provide individual prices for each item on the list. It shall include those peculiar support items that are required to support and maintain the MMPV throughout its life cycle.

C.13.2 Electronic diagnostic testability analysis. The contractor shall perform a testability analysis of the MMPV diagnostic capability, to include number and types of diagnostic tests available for all MMPV components, assemblies, systems, sub-systems and deliver a testability analysis. The report shall specify number and types of required Test, Measurement, and Diagnostic Equipment (TMDE), as well as a brief narrative description of the benefits to be derived from each diagnostic test. The report shall include a description of any on-board electronic diagnostic systems that may be interrogated for the purpose of maintenance and troubleshooting via an on-board diagnostic display screen. The report shall also include a complete listing of the diagnostic error codes utilized in the troubleshooting of the system. The contractor shall maximize the use of embedded Built-in Test (BIT) / Built-in Test Equipment (BITE) diagnostic capabilities, and fully document and support embedded system software. Software shall not contain proprietary restrictions or run-time fees. Any on-board data buses and diagnostic connectors shall also be identified in detail.

C.14 TECHNICAL PUBLICATIONS [CDRL A015]; Attachments 004, 005, and 006.

C.14.1 Technical Publications

C.14.1.1 The Contractor shall deliver one set of DA Authenticated Operators and Maintenance Technical Manuals (TMs) for the MMPV in accordance with Publications Requirements, Attachment 004, and Publications Requirements, Department of the Army Repair Parts and Special Tools List (DA RPSTL), Attachment 005, TM Requirements Matrix, Attachment 011 and the CDRL A015.

C.14.1.2.1 The Contractor shall prepare DA TMs and DA RPSTLs to support the MMPV. The Contractor shall deliver the TMs for the MMPV in accordance with MIL-STD-40051-2 (Electronic Technical Manual (ETM)) (Dated 15 Oct 2004), Subject DoD Standard Practice-Preparation of Digital Technical Information for Page-Based TMs, Attachment 004, Publications Requirements and Attachment 005, Publications Requirements, Department of the Army Repair Parts and Special Tools List (DA RPSTL), the related Contract Data Requirements Lists (CDRL) A015, and A018. The Contractor is responsible for incorporating National Stock Numbers (NSN) and NSN Cross-Reference Lists into the RPSTL. NSNs are not required for the DEP submittal.

C.14.1.2.2 The Contractor will ensure that the MMPV systems are referenced in the MMPV System manual by serial number break-out. Tasks that vary between the MMPV Configurations shall have the serial numbers referenced for tasks unique to each vehicle.

C.14.1.2.3 The Contractor shall develop the manuals as follows:

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MMPV System

TM 9-2355-314-10 -- Operators Manual

TM 9-2355-314-23 -- Field Maintenance Manual

TM 9-2355-314-23P -- Field Repair Parts and Special Tools List

C.14.1.2.4 The TMs shall be divided into volumes if the page counts exceed 1500 pages (750 sheets.) An example of the TM Volume Designation would be TM 9-xxxx-xxx-10-1.

C.14.1.3 The Contractor shall prepare and deliver the following:

C.14.1.3.1 DA TM Operators and Maintenance Manuals IAW MIL-STD-40051-2, 004 (Publication requirements), and related CDRL A015.

C.14.1.3.2 DA RPSTL IAW MIL-STD-40051-2, Attachment 005 (RPSTL Requirements) and related CDRLs. The Contractor is responsible for including NSNs into the RPSTL once NSNs are available.

C.14.1.4 The Government requires the following instructions: Inspect, Test, Service, Adjust, Align, Calibrate, Remove/Install, Replace, and Repair which includes Fault Isolation/Troubleshooting, Removal/Installation, Disassembly/Assembly procedures, and Maintenance Actions to identify problems and restore serviceability to an item on all components and parts including the listing of items found in Attachment 005 (Publication Requirements).

C.14.1.5 In consideration for the approval of waivers under Modification P00019, instead of BAE delivering one (1) Technical Manual for the vehicle, BAE will also provide delivery of a separate Technical Manual for L-Rod kits in the form of a 13&P manual. The existing MMPV technical manual will be updated to remove L-ROD installations and add references to the stand-alone manual. A separate CLIN A052 has been established for this deliverable.

C.14.2 Contractor Validation Government Verification

C.14.2.1 The Contractor shall perform a 100% validation on all supplemental data to ensure accuracy, compatibility and completeness. The Contractor shall insure that the data accurately reflects and supports only the MMPV configuration procured including any and all changes to the configuration resulting from testing, vendor parts supply and production line changes. The Contractor shall notify the Government of planned validation schedule, start date, time, and location of validation 30 days prior to start of Government validation; this will allow the Government time to attend and observe the contractors processes.

C.14.2.2 The Contractor shall support and provide one production configuration vehicle and its attachments for Contractor validation and Government verification (if conducted separately from the Contractor's validation). One of the first five vehicles produced by the contractor shall be used for contractor validation and Government verification. The MMPV used for contractor verification and Government validation can be submitted for acceptance for future deliveries, and must be refurbished to fully comply with approved production configurations.

C.14.2.3 The Contractor shall support In Process Reviews (IPR) by providing samples of work accomplished to date or other requested data and identify improvements to your manuals, data, or Quality Assurance (QA) process required as a result of IPR comments. The Government reserves the right to witness Contractor validation.

C.14.2.4 The Contractor shall furnish unrestricted copyright releases for all commercial manuals and supplemental data. The Contractor shall ensure that the Government has the right to use and distribute the ETMs and electronic data files delivered under this contract.

C.14.2.5 The Contractor shall correct all errors found in all publication deliverables resulting from Contractor and Government Reviews, validation, and verification at no additional cost to the Government. AMSTA-LC-CJB is designated as the Government logistics documentation acceptance activity. If the Contractor receives Provisioning, Publications, RPSTL, etc. comments or corrections from Government activities other than the Government logistics documentation acceptance activity, the Contractor shall forward these comments and corrections to the Government acceptance activity for approval or rejection.

C.14.2.6 The Government will review the Draft manuals to determine if the manuals are complete enough to go to verification (if conducted separately from the Contractor's validation) or be returned for corrections. If the Draft manuals pass this review the Government will perform its verification of the manuals. The Government retains the right to conduct its verification by witnessing the Contractor's validation.

C.14.2.7 The Contractor is required to validate the accuracy and usability of all publication deliverables. The Contractor shall have and use documented QA Review Processes and Inspections. The Government may, at its discretion, review validation records and witness validation processes. The Government may, at its discretion, verify all publication deliverables by conducting a Government Verification held at a location of the Governments choosing. Government reviews and verification may be done through statistical sampling and a mix of desktop, on-system review, and actual performance; but could include actual performance of all procedures and review of all tasks, if deemed necessary by the Government. The Government does not intend to review and verify every task at every review, but relies on complete, careful editing and review by the Contractor. If there are indications that the Contractor has performed incomplete or inadequate QA Reviews, the Government may elect to return products for rework and perform additional reviews on

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reworked product.

C.14.3 Approved Equipment Changes

C.14.3.1 The Contractor shall incorporate into each manual to be provided under this contract, all approved changes made to the equipment based on approved ECPs, Testing, and the results of the Log Demo, up to delivery of the final equipment under this contract.

C.14.3.2 Information based on Engineering Change Proposals (ECP) or equivalents approved for the convenience of the Contractor shall be incorporated into Repair Parts Special Tools List (RPSTL) by the Contractor at no additional cost to the Government.

C.14.4 Technical Publication Packaging

The technical publications (TMs and TBs) (see CDRL A015) shall be preserved in accordance with MIL-STD-2073, method 31 or 33, and shipped with each MMPV. It is understood between the parties that when the final Technical Manual (TM) and Maintenance Allocation Chart (MAC) are approved the Government will print a set of manuals for each MMPV. The Contractor is responsible for packaging the manuals in accordance with the contract and over packing one set of the approved manuals with each MMPV. The MMPV shall not be shipped without the approved manuals.

C.14.5 National Maintenance Work Requirement (NMWR)

C.14.5.1 National Maintenance Work Requirement (NMWR) Components Candidate Analysis [CDRL A020].

C.14.5.1.1 The Government's preliminary NMWR component candidate list consists of repairable assemblies such as:

- Engine
- Transmission
- Axles
- Transfer
- Electronic Control Modules/Units

The contractor shall expand on this list based on his proposed vehicle.

C.14.5.1.2 NMWR Candidate List. The Contractor shall deliver a NMWR candidate list consisting of all parts coded for repair at the Sustainment (General Support (GS) Level of Maintenance and above. The source data for this list will be the Maintenance Analysis, performed per paragraph C.9.1. The Government will review, make changes as necessary and provide the approved NMWR candidate list to the Contractor.

C.14.5.1.3 Remanufactured NMWR Component Candidates. The Contractor shall indicate for each NMWR candidate whether the item is currently available as a remanufactured, rebuilt or otherwise refurbished component, as part of their response to the NMWR candidate listing. The Contractor shall provide the following information:

C.14.5.1.3.1 If directly available from Contractor through same supply and distribution channels as all other parts/components.

C.14.5.1.3.2 Standard to which the remanufactured, rebuilt or otherwise refurbished:

C.14.5.1.3.2.1 Like-new condition, using only new components.

C.14.5.1.3.2.2 Using nonstandard (oversize/undersize) bearings or other components which may vary from the original component configuration.

C.14.5.1.3.3 Warranty, if different from new component

C.14.5.1.3.4 Method used to distinguish between new vs. rebuilt/remanufactured component, such as part number difference, etc.

C.14.5.1.4 NMWR Data Summary. The Contractor shall perform a data summary for components on the Government approved NMWR candidate list. The summary may be in the Contractors format, and shall be documented IAW 007 (NMWR Candidate List).

C.14.5.1.5 NMWR Final List. The Government will use the data summary to compare the cost to buy new vs. the cost to rebuild, establish inventory levels, and determine how often this item will need to be repaired. The Government will review this data and finalize the NMWR Candidate listing to identify which items are to have NMWRs developed.

C.14.5.2 NMWRs [CDRL A021]

C.14.5.2.1 The Contractor shall provide inspection procedures, overhaul inspection procedures, mandatory replacement parts list, and any refurbishing instructions for all items on the final NMWR Candidate List. The Contractor shall provide a list of maintenance procedures

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either published in an Army TM or new maintenance procedures not yet published. The maintenance procedures will also include information on replacing or upgrading testing/diagnostic sensors, final testing procedures and packing and preservation procedures.

C.14.5.2.2 The Contractor shall provide the technical rebuild standards, inspections, machining standards, and testing procedures that are required to write NMWR manual(s) from this analysis. Pre-shop analysis for sub-components, if required, shall also be developed.

C.14.5.2.3 Data developed from the analysis of each NMWR component candidate shall be used as source data for each NMWR. The Contractor shall provide a NMWR for each component on the final candidate list IAW MIL-STD-40051-2, Attachment 004 (Publication Requirements).

C.14.5.2.4 National Maintenance Point rebuild standards shall be numbered IAW AMC Supplement 1 to AR 25-30, dated 15 July 1993, Subject: The Army Integrated Publishing and Printing Program, paragraph 2-77i(1). NMWRs will use the N prefix in lieu of the D prefix for Depot Maintenance Work Requirements.

C.14.5.2.5 The Government reserves the right to combine all selected components into one NMWR for this vehicle series.

C.14.5.3 In consideration for the approval of waivers under Modification P00019 BAE will provide the following requirements under this contract: Incorporation of dressed vs. undressed configurations into logistics deliverables for the engine (P/N 4335772), transmission (P/N 4335783), alternator (P/N 4335799), Front Axle (P/N 4335793), Intermediate Axle (P/N 4335794), and Rear Axle (P/N 4335795). This includes updates to the Technical Data Package, re-provisioning and additional provisioning conference(s) of assemblies to account for new dressed configurations, updates to the Maintenance Analysis, updates to the -23 Technical Manual, modification of IUID tags on components installed on vehicles, updates and re-submittal of LLRC and packaging data for dressed assemblies. BAE Systems will also deliver NMWRs for the Rear Ramp Actuator & Transfer Case. The eight (8) installations listed herein represent the final NMWR list. Hands-on vs. desktop verification will be conducted for these eight (8) NMWR components.

C.14.6 Logistics Demonstration (LD)

C.14.6.1 The Government is planning to hold a Log Demo for the MMPV. The Government Log Demo will be held prior to the Government Verification. The scheduled start of the Log Demo is dependent on the acceptance of the Contractors Draft Equipment Publication (DEP) submittal. The Government Log Demo and Government Verification are separate events. At the Log Demo, the Government will utilize the Technical Manuals delivered in accordance with C14.1. The Contractor is required to support the Governments Log Demo by performing the tasks defined in C.14.6.2-C.14.6.5. The Log Demo will occur at the contractors facility.

C.14.6.2 The Contractor shall receive a Log Demo Plan including schedule, start date, and time of Log Demo 30 days prior to start of the Log Demo. The Log Demo Plan will outline the tests, fault insertions, and demonstrations that will take place. This will allow time for the Contractor to prepare all support materials required. The Demonstration tasks identified by CASCOM and TACOM will be reviewed and verified to determine the adequacy of:

- MAC Maintenance Levels, functions and time standards.
- Publications for clarity and completeness of instructions, accessibility, interchangeability, safety.
- Common and special tools, and tool sets required.
- Common and special test, measurement and diagnostic equipment required.
- RPSTL
- Maintainability of end item components

C.14.6.3 The Contractor shall support the MMPV configuration and it's attachments for Government Log Demo; support consists of providing any unique repair parts and mandatory replacement parts subject to damage or destruction during the course of the Log Demo as well as any unique support items (such as oil and transmission fluid), EDIL, and services to manage, support, operate and maintain the MMPV during the demonstration including replenishment of unique repair parts consumed during the demonstration. These repair parts will be made available 10 days prior to the beginning of the demonstration.

C.14.6.4 The Contractor shall provide technical representatives who are fully qualified to answer questions for the duration of the Log Demo.

C.14.6.5 The Contractor shall document all recommended changes to the Technical Manuals resulting from the demonstration. These changes are to be presented to the Publications Manager at the start of the Government Verification for approval and concurrence prior to being incorporated into the Technical Manuals.

C.14.7 Asset For Logistics Development And Asset Refurbishment.

C.14.7.1 System for Logistics Development: The Government will conditionally accept an MMPV System as a System for Logistics Development to support the development of the logistics data as identified in paragraph C.14.2.2. The contractor shall transport the system for Log Development, and is responsible for the cost of shipment. The Contractor shall use this system to validate its data. After the logistic development, the Contractor will return the system to its original production configuration, ready to be delivered to the Government for Log Demo and Verification. The location of Log Demo and Verification will be held at the contractors facility.

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C.14.7.2 The contractor shall refurbish the MMPV to its original production configuration after the completion of the Log Demo and Government Verification (both TM and Packaging). The Government will pay for refurbishment costs for the System for Logistics Development (only) which are determined fair and reasonable. The contractor will submit a proposal for refurbishing the logistics demonstration vehicle not later than 15 days after completion of the Logistics Demonstration and Government Verification. The MMPV shall be repackaged and ready for shipment to Government designated location(s) within 90 days of the completion of Verification.

C.15 MANPOWER AND PERSONNEL INTEGRATION (MANPRINT).

C.15.1 MANPRINT is a comprehensive management and technical program that focuses attention on human capabilities and limitations throughout the system life cycle. MANPRINT's goal is to optimize total system performance at acceptable cost and within human constraints. The MANPRINT program shall include aspects of all seven domains (Manpower, Personnel, Training, Human Factors Engineering, System Safety, Health Hazards, and Soldier Survivability). The Contractor shall participate in the MANPRINT IPT meetings and identify MANPRINT issues and recommend resolutions as appropriate. The Contractor will utilize AR 602-2 as a guide for the MANPRINT program.

C.15.2 Manpower, Personnel, and Training (MPT): The Contractor will ensure that soldier-related manpower and training costs are minimized while retaining maximum mission effectiveness through system design and the optimum use MPT resources. All designs and modifications shall be analyzed to ensure maximum use of available MPT resources within the appointed unit. The Contractor shall identify MPT shortfalls or issues and implement appropriate resolutions.

C.15.3 Human Factors Engineering (HFE). Human Engineering principals and design standards shall be applied in the vehicle design, systems integration and human-machine interfaces. The Contractor shall ensure that the vehicles operation, maintenance & repair activities and procedures shall accommodate a wide range of individual physical capabilities from the 5th percentile female to the 95th percentile male. The Contractor shall identify HFE shortfalls or issues and implement appropriate resolutions. The Contractor shall utilize MIL-STD-1472F as a guide for managing HFE.

C.15.4. Soldier Survivability (SSv). Soldier Survivability is the integration of the survivability of the individual soldier and how the system affects the soldiers survivability. The contractor shall utilize an existing SSv or establish a SSv program to evaluate the systems ability to reduce fratricide; reduce detectability, reduce the probability of being attacked; prevent damage; minimize injury, and reduce mental and physical fatigue.

C.16 SAFETY ENGINEERING AND HEALTH HAZARDS [CDRL A022]

C.16.1 Safety Engineering Principles. The Contractor shall follow good safety engineering practices during the design and/or modification of the vehicle and its components. System design and operational procedures shall be developed with at least the following considerations:

C.16.1.1 Identify hazards associated with the system by conducting safety analyses and hazard evaluations. Analyses shall include operational, maintenance, and transport aspects of the equipment along with potential interfaces with subsystems.

C.16.1.2 Eliminate or reduce significant hazards by appropriate design or material selection. If hazards to personnel cannot be avoided or eliminated, steps shall be taken to control or minimize those hazards.

C.16.1.3 Locate equipment components and controls so that access to them by personnel during operation, maintenance or adjustments shall not require exposure to hazards. All moving parts, mechanical power transmission devices, exhaust system components, pneumatic components and hydraulic components which are of such a nature or so located as to be a hazard to operating or maintenance personnel shall either be enclosed or guarded. Protective devices shall not impair operational functions. Examples of hazards to be considered include, but are not limited to: high temperature, chemical burns, electrical shock, cutting edges, sharp points, and toxic fumes above established threshold limit values.

C.16.1.4 The contractor shall include suitable warning and caution notes where required in instructions for operation, maintenance, assembly, and repairs and that distinct markings are placed on hazardous components of the equipment.

C.16.2 Safety Assessment Report (SAR). As a result of system safety analyses, hazard evaluations, and any independent testing, the Contractor shall perform and document a safety and health hazard assessment. The safety and health hazard assessment shall identify all safety and health features of the hardware, software, system design, and inherent hazards and shall establish special procedures and/or precautions to be observed by Government test agencies and system users. The Contractor shall prepare the Safety Assessment Report (SAR) in accordance with DI-SAFT-80102B and CDRL A022. The Contractor shall identify safety and health hazards associated with the system and incorporate them into the SAR.

C.16.2.1 In the hazard list portion of the SAR, the Contractor shall provide a description of each potential or actual safety and health hazard of the vehicle, the effects of the hazard, and when the hazard may be expected to occur under usual and unusual operating or maintenance conditions. The Contractor shall identify actions taken to mitigate the risk associated with the hazards and categorize the risk before and after mitigation in accordance with MIL-STD-882D. MIL-STD-882C provides further information that may be used for guidance. Risks must be identified by hazard severity, hazard probability, and risk level. Mitigation actions include recommended engineering controls, safety features or devices, warning devices, and procedures and training. Examples of hazards to be identified in

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the SAR including sharp edges/moving parts hazards, physical hazards (e.g. heat or cold stress, acoustical energy, ionizing and non-ionizing radiation, etc.), chemical hazards (e.g. flammables, corrosives, carcinogens, etc.), toxic fumes (exhaust emissions), electrical hazards, noise, whole-body vibration, compliance issues with regulatory organizations, fire prevention issues, and ergonomic hazards.

C.16.2.2 The Contractor shall include in the SAR, copies of Material Safety Data Sheets (MSDS) for all hazardous materials incorporated into the system. The final SAR is subject to TACOM approval. The Contractor shall update the SAR upon modification or procedural change of the system.

C.16.2.3 Radioactive Materials. If no radioactive materials are utilized in the system, this shall be so stated in the SAR. If radioactive materials must be utilized in the system, the following analysis must be performed as part of a request for Government approval: establish these materials as the only means of meeting military operational requirements; provide sufficient data to permit the Government to secure a license for the radioactive material; and describe design and procedures required to minimize hazards to personnel during manufacture, use, transportation, and disposal. The Contractor shall specify the following information and procedural controls for each item containing radioactive material: marking of the item(s); ultimate disposal method; NSN and part nomenclature of each radioactive item; NSN of all end articles containing the radioactive item; total number of radioactive items per end article; the total number of radioactive items to be procured (including spares); and, a Material Safety Data Sheet.

C.17 HAZARDOUS MATERIALS MANAGEMENT [CDRL A023]

C.17.1 Asbestos, radioactive materials, hexavalent chromium (electroplating and coatings), cadmium (electroplating), or other highly toxic or carcinogenic materials (as defined in 29 CFR 1910.1200) shall not be used in the manufacture or assembly of the MMPV without prior approval from the Government. The use of cadmium plated connectors is authorized. Class I and Class II Ozone Depleting Substances shall not be used. These requirements shall apply to any components/parts purchased through a subcontractor/vendor.

C.17.2 The Contractor shall prepare a Hazardous Material Management Report which, at a minimum, shall identify all hazardous materials required for system production, and sustainment, including the parts/process that requires them. This report should be prepared in accordance with National Aerospace Standard 411, section 4.4.1 per DI-MGMT-81397, [CDRL A023] See Deviation/Waiver incorporated into this contract via modification P00008, Attachment 0039.

C.17.2.1 Pursuant to modification P00023 and approved RFD 0041-D-001, DO 008-3 Rev 1, Attachment 0046 details those items/assemblies with hazardous materials.

C.18 TRAINING [CDRLS A024, A025, A026]

C.18.1 Training Support Package: The Contractor shall provide a critical tasks list, program of instruction (POI), lesson plans, instructor guide, student guide and training schedules for each level of training. The training material and support package shall be developed in accordance with TRADOC Reg 350-70. The Government will review, recommend changes, and serve as the final approving authority for the above documents. The Contractor shall notify the Government thirty (30) days in advance of its intended validation of the critical tasks so that the Government can make timely arrangements to attend the validation process. The Government may decide not to attend all validation processes, but, instead, may rely on complete and accurate critical task development by the Contractor. Critical tasks that are found to have deficiencies will be adjusted / corrected, at no additional cost to the Government. Training tasks shall also be corrected or updated, at no additional cost to the Government, after completion of Instructor and Key Personnel Training (I&KPT) class. A024

C.18.2 Log Demo & Verification Training

C.18.2.1 An additional Operator and Field Maintenance course will be provided at a to be determined location for Government Test Personnel and Data Collectors. The Contractor shall provide all unique tools and parts required to support the training. Training shall begin within five days of vehicle arrival at the designated CONUS training site. The Government will provide vehicles for the training.

C.18.3 Instructor And Key Personnel Training (I&KPT). The Government shall have the option to order training classes as described below.

C.18.3.1 The Contractor shall conduct an Instructor and Key Personnel Training session at Fort Leonard Wood, Missouri to include one operator class and one field level maintenance class to U.S. military trainers from the US Army Engineer School, US Army Ordnance School, Combined Arms Support Command (CASCOM), and Counter Explosive Hazard Center (CEHC), as well as other key Government personnel. The Contractor shall provide a complete training support package to each student. Students shall retain possession of the course technical manuals and training materials (CDRL A024). Each operators course shall be 5 days in length, 40 hours, and each field maintainers course shall be 10 days in length, 80 hours. The operators class size will not exceed 12 students. The maintenance class size will not exceed 8 students. The Contractor shall provide all unique tools and parts required to support the training. Training shall begin within five days of vehicle arrival at the designated CONUS training site. The Government will provide vehicles for the training.

C.18.3.3 I&KPT Training Location and Training Classes: The Contractor shall conduct the following I&KPT classes at Ft. Leonard Wood, MO

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and also at a Test location TBD:

- a. One (1) Operator class
- b. One (1) Field Maintainer class

C.18.3.4 In consideration for approval of waivers under Modification P00019. The contractor will provide One (1) I&KPT Operator training and one (1) I&KPT Maintainer course provided at a TBD CONUS location in support of verification of the Training Support Package. These classes are approximately one week in duration each and required to verify the content of the Training Support Package.

C.18.4 New Equipment Training (NET).

C.18.4.1 The Contractor shall conduct Operator and Maintenance-training sessions to U.S. Forces receiving and maintaining the Medium Mine Protected Vehicle systems in the Continental United States (CONUS), and at the Governments option, to U.S. forces and/or Contractor logistics support personnel deployed OCONUS (including Southwest Asia e.g., Iraq, Afghanistan, Kuwait) receiving and maintaining the Medium Mine Protected Vehicle systems.

C.18.4.2 Classroom size shall be 12 students for operator courses and 8 students for maintenance courses. These training sessions shall include train-the-trainer level training. Training shall begin within five days of vehicle arrival at the designated CONUS/OCONUS training site. The Government will provide vehicles for the training.

C.18.4.3 All NET instruction designed and developed by the Contractor shall be in accordance with TRADOC Regulation 350-70, and common standards and specifications used for NET. The Contractor shall work closely with the TACOM NET Manager in developing the NET packages to insure compliance with the NET objectives.

C.18.4.4 The Contractor shall provide all training aids, consumables, and required items for conducting NET training. The Contractor shall provide a complete Training Support Package (TSP) to each fielded unit. The Training support package will include one copy of the POI, Lesson Plan, Instructor Guide, Student Guide, and media used to conduct training. Students shall retain possession of the course technical manuals and training materials.

C.18.4.5 Class Sizes and Class Lengths:

1. All classes shall not exceed twelve (12) students for Operators and eight (8) students for Maintenance.
2. Operator class shall not exceed forty (40) hours in duration
3. Field Maintainer class shall not exceed eighty (80) hours in duration

C.18.4.6 Estimated number of NET classes. The Contractor shall conduct NET in CONUS/OCONUS in accordance with the estimates below:

First Ordering Year: (Planned One Fielding)

1. Operator classes, quantity 2.
2. Field Maintainer classes, quantity 1.

Second Ordering Year: (Planned Three Fieldings)

1. Operator classes, estimated quantity 6.
2. Field Maintainer classes, estimated quantity 3.

Third Ordering Year: (Planned Three Fieldings)

1. Operator classes, estimated quantity 6.
2. Field Maintainer classes, estimated quantity 3.

Fourth Ordering Year: (TBD Fieldings)

1. Operator classes, estimated quantity (minimum 3, maximum 16)
2. Field Maintainer classes, estimated quantity (minimum 3, maximum 16).

Fifth Ordering Year: (TBD Fieldings)

1. Operator classes, estimated quantity (minimum 3, maximum 16)
2. Field Maintainer classes, estimated quantity (minimum 3, maximum 16).

First Option Ordering Period: (TBD Fieldings)

1. Operator classes, estimated quantity (minimum 1, maximum 13)

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2. Field Maintainer classes, estimated quantity (minimum 1, maximum 13).

Second Option Ordering Period: (TBD Fieldings)

1. Operator classes, estimated quantity (minimum 1, maximum 13)
2. Field Maintainer classes, estimated quantity (minimum 1, maximum 13).

Third Option Ordering Period: (TBD Fieldings)

1. Operator classes, estimated quantity (minimum 1, maximum 13)
2. Field Maintainer classes, estimated quantity (minimum 1, maximum 13).

Costs for the NET training classes will be as set forth in Section B.

C.18.5 Letter Of Support Requirements: The Contractor shall prepare a Letter of Support Requirements (in Contractor format) that depicts the materials and items needed on hand to support training at any given training location. The letter shall define training support requirements for Operator and Field Maintainer NET. [CDRL A025]

C.18.6 Instructors. All classes cited above shall be supported by two (2) certified MMPV instructors with one Original Equipment Manufacturer (OEM) Field Service Representative (FSR) on-call as needed. Instructors shall be U.S. Government certified, or have a teaching degree from a public/private training institution, or be certified by the OEM. Certification documentation shall be provided to the TACOM NET manager. At the Governments option, an FSR shall provide supplemental sustainment training to new military personnel who need to operate and maintain the system after the initial NET is complete.

C.18.7 Class Schedules: All training schedules shall be coordinated with the Contractor, the TACOM NET manager and each gaining command Training POC.

C.18.8 Training Certificates: The Contractor shall provide a training certificate for Operator and Maintainer training to each student that attends and successfully completes training. The training certificate shall be in the Contractors format. Both Operator and Maintainer classes shall have a written test administered at the end of the course. A score of 70% or above on the test shall be required for successful course completion and issuance of a training certificate. [CDRL A026]

C.18.9 Training Support: The Government will provide at least one (1) vehicle to support each NET class cited above. The Government will also provide the required common tools for support.

C.18.10 Travel Costs For Training. Travel costs for Training will be as stated in Section B.

C.19 MILITARY PACKAGING DOCUMENTATION REQUIREMENTS: [CDRLs A028, A029, A032].

C.19.1. Contractor shall develop Equipment Preservation Data Sheets (EPDS) for the MMPV. Contractor shall include requirements for long term outside storage for up to 2 years in adverse environments, long term controlled humidity (50%RH) storage aboard ships for 30 months at sea, short term administrative outside storage of 90 days, and disassembly procedures to meet clearance requirements for land, air, and sea shipments. Controlled humidity and administrative storage procedures shall ensure drive-on/drive-off capability. Packaging requirements for BII and COEI shall be developed by the contractor. BII shall be packed separate from COEI. HAZMAT COEI will be packaged and shipped separately from the system in accordance with CFR Title 49. The contractor shall designate stowage locations and securing provisions. The contractor shall ensure the stowage locations shall deter pilferage and shall not interfere with lifting, tie down or other transportation handling. The Contractor shall submit EPDS electronically to the Government with the capability to view, identify, make corrections, add comments and insert approval IAW CDRL A028.

C.19.1.1 Updates and Changes to Equipment Preservation Data Sheets: The contractor shall revise the Equipment Preservation Data Sheets to reflect design changes that affect the system's shipment configuration, weight, or transportability. The contractor shall also provide revisions to the Equipment Preservation Data Sheets for each logistics change affecting packaging instructions for BII or COEI.

C.19.1.2. The Government will determine if all or selected portions of the Equipment Preservation Data procedures shall be validated to verify the adequacy of the vehicle preservation procedures and exercising requirements. Primary considerations will be given to the complexity and/or uniqueness of the process and/or materials involved. Government representative will attend and witness Contractors procedures.

C.19.2 Compliance with Federal and Industry Transportation Requirements: The Government ships using truck, rail, plane, and ship. The contractor shall develop Equipment Preservation Data Sheets for these modes of transportation and identify unique requirements for each mode of transport. This will allow the Government to process for shipment based on the intended mode of transport. The contractor shall comply with the applicable codes and standards listed here: (1) Code of Federal Regulation Titles 29, 40 and 49, (2) International Maritime Dangerous Goods Code, for vessel transport, (3) AFMAN 24-204, Preparing Hazardous Materials for Military Air Shipments, and (4) International Air Transportation Association (IATA) Dangerous Goods Regulations. The contractor shall include disassembly procedures to meet the requirements of the codes and standards mentioned above.

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C.19.3 Component Parts Packaging Requirements: Contractor shall develop packaging data for all TACOM managed parts identified during the provisioning process with a SMR code of P excluding PR and PZ to provide for life cycle support and safe distribution of reparable items. Packaging data shall also be developed for Field Level Kits. Packaging shall be developed in accordance with MIL-STD-2073. All items shall be classified as select group (C.19.3.2) or special group (C.19.3.3) items. Any HAZMAT items shall be considered Special Group Items and have packaging designed to meet the requirement of the HAZMAT regulations identified in Paragraph C.19.2. The contractor shall provide LMI Data Products for packaging data systems, entry as specified in MIL-PRF-49506, Attachment 008 (Packaging Data Products) and Attachment 009 (Packaging Data Formatting Instructions). Contractor shall furnish drawings and notes sufficient for Government review concurrent with each packaging data submittal.

C.19.3.1 Excluded Items: Excluded items are those items with packaging data already in the TACOM Packaging File "PACQ", FEDLOG, FLIS, and those assigned a Contractor and Government Entity Code (CAGE) of: 1T416, 21450, 80204, 96906, 10060, 24617, 80205, 99237, 80244, 81343, 81346, 81348, 81349, 81352, 88044 or identified as GFE/GFM. Also EXCLUDED are items for: (1) not mission capable supply, (2) depot operational consumption, and (3) not-for-stock supply.

C.19.3.2 Coded Packaging Data: The Government will provide the contractor with periodic reports showing status of the program. Data is critical to populating the National stock Number Material Data Record (NSNMDR) and the Federal Logistics Information System (FLIS) Government data files and shall be 90% accurate. The contractor will rework submittal errors within 10 days after rejection by the Government. The contractor shall provide the necessary personnel, facilities, equipment, material, and the electronic data interface. The contractor shall include information for each of the items so TACOM can determine the adequacy of the packaging submittal. This includes item drawings and data such as Source, Maintenance & Reliability codes, Unit of Issue codes, Unit of Measure, Measurement Quantity, and copies of applicable Material Safety Data Sheets. The contractor shall furnish item drawings, photo documentation and notes sufficient for reviewing the packaging designs. Information shall be formatted and delivered in accordance with CDRL A029 and Attachment 008 and Attachment 009 (Packaging Data Products and Format).

C.19.3.3 Special Packaging Instructions (SPI): The contractor will prepare SPIs for each reparable item, each hazardous material item, each fragile, sensitive, critical item, shelf life items, electrostatic discharge sensitive items, disassembly procedures, items requiring special handling or condemnation procedures and any item that cannot be adequately packaged/defined as a Select item, following MIL-STD-2073-1D including kits and sets. SPIs shall meet the performance of ASTM D4169, Distribution Cycle 18, Assurance Level I, with Acceptance Criterion 3 (Product is damage free and package is intact). Each SPI submittal shall have a test report, including photographs, attached showing the condition of the package and part before and after the testing. Acceptable photographic evidence shall show the product is undamaged from all angles. SPI shall be in a format that can be viewed, changed, and commented upon. The contractor shall provide read/write access to SPI. All data submitted will be contractor validated and 95% accurate. The contractor will rework submittal errors within 10 days after rejection by the Government. Information shall be formatted and delivered in accordance with CDRL A029.

C.19.3.4 Any Engineering Change Proposal (ECP) to engineering and logistical data impacting packaging and distribution shall be provided by the Contractor. The ECP shall be complete and shall include packaging impact statement and assessments for items requiring special handling, storage or condemnation, HAZMAT, shelf life, and transportability problem items. The Contractor shall provide draft reports of logistics management information and draft packaging documents for provisioned items. The Contractor shall deliver the ECP IAW contract requirements and include associated packaging documents.

C.19.4 Packaging and marking for hazardous material shall be in accordance with MIL-STD-2073-1D Standard Practice for Military Packaging, Appendix J, Table J.Ia Specialized Preservation Code HM and the Joint Service Regulation AFMAN24-204/TM38-250 for Military Air Shipments.

C.19.5 Contractor shall conduct an assessment to determine if existing or new Long Life Reusable Container (LLRC) designs are suitable for reparable items including engine, transmission and transfer case. The contractor shall assess form, fit and function of existing containers. Contractor shall compare costs of modifications to existing designs and alternate new designs. Assessment data shall include analysis justifying the need for a new or modified container. If a new or modified LLRC is required, Contractor shall submit a proposal that includes development cost, validation testing requirements and cost, life cycle cost estimate, Container Design Retrieval System (CDRS) results and cost to develop a Technical Data Package (TDP) to develop new or modify existing LLRC. If a new or modified LLRC is required the Government shall be notified IAW CDRL A032.

C.19.6 Contractor shall conduct an assessment to determine if new or existing commercially available reusable container designs are suitable for any Line Replaceable Units (LRU). The contractor shall assess form, fit, and function. Compare costs to modify existing designs or alternate new designs. The commercially available reusable container must meet the validation testing requirements (Para. C.19.3.3). Contractor shall develop and submit a SPI (Para. C.19.3.3) for each LRU with a commercially available reusable container describing the packaging processes and materials IAW MIL-STD-2073-1D. Delivery of SPI shall be IAW CDRL A029. If a new or modified commercially available reusable container is required, Contractor shall submit a proposal for each commercially available reusable container that includes development cost, validation testing requirements and cost, life cycle cost estimate and cost to develop a Technical Data Package (TDP) to the Government for review and subsequent approval or rejection IAW CDRL A032.

C.20 TEST AND EVALUATION: [CDRL A033].

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C.20.1 The Government will conduct testing on a minimum of six (6) production MMPVs to verify that the vehicle meets threshold and objective performance requirements in the contract. The contractor shall be responsible for ensuring that the MMPVs are test-ready and delivered within the program schedule. The contractor shall inspect each vehicle for contractual compliance and test readiness prior to shipping it to the designated test site.

C.20.2 Contractor Shakedown Test. The contractor shall conduct a shakedown test prior to shipping MMPVs to the designated test site. The Government reserves the right to conduct an inspection at the conclusion of the shakedown test prior to shipment to verify test readiness and contract compliance. The contractor shall notify the Government when vehicles are ready to be shipped 14 days prior to the scheduled shipping date.

C.20.3 Reserved.

C.20.4 System Support. The contractor shall provide a system support package (SSP) and make technical support personnel available throughout performance testing.

C.20.4.1 Test Support Plan [CDRL A033]. System Support Package List (SSPL). The contractor shall prepare and provide a system support package list (SSPL) in the format agreed on by the ILS and Test IPTs. The listing(s) shall detail all system support requirements for each test. The SSPL shall identify the source of supply for each item whether provided by the contractor or government and the supply status of each. If any retest is required, the System Support Package shall be updated and available at the time of retest. The contractor shall also provide a test support plan in accordance with CDRL A033.

C.20.4.2 System support is defined as providing any items, parts, components, and technical service required to return the vehicle to testing within 24 hours of failure. The system support package shall include spare parts, BII, and any unique tools for MMPV that are required to sustain the vehicle during performance testing. The contractor shall deliver the SSP to the government test site no later than (30) days prior to the start of testing. Items not furnished in sufficient quantity shall be provided by the contractor to return the test item to an operational configuration within 24 hours. The SSP will be inventoried and characterized, by test center personnel, upon arrival at the test center. The test center may, upon request provide security for the SSP. The contractor may not make substitutes to the SSP, or use parts from the SSP without notifying the test center. Damaged parts will not be returned to the SSP. All parts in the SSP must meet applicable specifications. Test site personnel will maintain a record of all parts withdrawn from the SSP. The SSP and SSP List shall consist at a minimum, of the following:

- (1) Spare/Repair Parts. All SSPs shall contain parts to meet the requirements arising from predicted failures, scheduled maintenance, and anticipated wear.
- (2) Common and Special Tools. Required common tools/took kits to address predicted failures, scheduled maintenance, and anticipated wear.
- (3) Basic Issue Items (BII), Component of the End Item (COEI).
- (4) Expendable Supplies. Expendable supplies, including system-unique oils and lubricants. The Government will provide standard petroleum oil and lubricants (POL) for each vehicle undergoing testing.
- (5) Picture ready Technical data/manuals in quantities sufficient to support the vehicles undergoing performance tests
- (6) A listing of all materials, supplies, end items and facilities required from the government to support testing.

C.20.4.3 The contractor shall provide all other tools to support the on-vehicle maintenance that is to be performed by the Government. The contractor shall also provide TMs for all tests that include, as a minimum, all operations and remove/replace maintenance procedures. The contractor shall conduct an analysis on failed items/components and will provide the Government the analysis results.

C.20.4.4 The contractor shall provide capable and knowledgeable personnel to support the system with on-vehicle maintenance, at the test site. The contractor shall provide field service support (FSR) personnel to support testing. The contractor shall advise the government on routine operation, safety, maintenance, calibration, and system support package matters and provide interface with any component part involving the contractor and his suppliers. The FSRs shall be available to provide maintenance, troubleshooting and support the entire maintenance workday (not to exceed 12 hours). Personnel may be required to work during non-duty hours, under the observation of test site personnel, to return the vehicle to an operational condition within 24 hours. All vehicle maintenance and repair will be conducted under the observation of test site personnel; FSR personnel will not have unobserved access to the vehicles under test. Any deviations from procedures prescribed in the Technical Manuals will be recorded. Actual maintenance times, times awaiting parts, times awaiting maintenance personnel will be recorded and will be used to compute maintenance ratios.

C.20.5 Government Facilities for storage of SSP items and test support. The Government may provide space (if available) at each test site for storage of system support items, access to maintenance facilities, and may provide office space and facilities (telephone, facsimile, copier, desks, etc.) for contractor personnel supporting MMPV testing. It is incumbent upon the contractor to request this support through the PCO to the test site as soon as requirements are known, but in any case not later than 15 days after the Pre-First Article Test meeting.

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C.20.6 Refurbishment of test assets for subsequent fielding. The contractor shall complete a detailed inspection and assessment of test vehicles upon their return to the contractors facility after testing. The contractor shall submit a detailed inspection/assessment report on each vehicle to the Government for review within fifteen (15) working days after arrival of the test vehicles at the contractors facility identifying the repairs or refurbishment necessary to bring the vehicle to a production configuration for subsequent fielding. The Government will review the report within twenty (20) working days and provide direction on which refurbishment tasks to perform. Within thirty (30) days after receipt of Government direction, the contractor shall submit a ceiling price proposal for reconditioning the vehicles to production configuration. The contractor shall complete refurbishment to production configuration within sixty (60) days after government direction to start the work.

C.20.7 Relationship Between Test and Evaluation and Quality Assurance Management. The complete provisions stipulated in paragraph C.21, Quality Assurance Management, Section E, and the ATPD (MMPV), shall apply entirely for all MMPVs delivered for performance testing.

C.21 QUALITY ASSURANCE MANAGEMENT

C.21.1 Quality Management System. The contractor shall implement a quality management system in accordance with the provisions of ISO 9001:2000 or an equivalent quality system as a measurement of product quality for the MMPV systems that are produced, in order to satisfy the contractual quality requirements. The contractors quality management system shall be made available and accessible at anytime for government review and evaluation to assess the contractors quality system compliance, implementation and effectiveness.

C.21.2 Final Inspection Record (FIR). The contractor shall develop a Final Inspection Record (FIR) for the production vehicle systems delivered under this contract. The FIR shall incorporate the contract requirements for technical, quality, purchase description and technical documents that are utilized for the build of the production MMPV systems. The FIR shall also contain a Deficiency Sheet and a Deprocessing Sheet. The contractor shall submit the FIR to the PCO (Procuring Contracting Officer) or designated representative for review and approval. The contractor shall update the FIR as necessary throughout the production contract period. Each update and/or revision shall require government review and approval. Revisions and updates shall be submitted to the PCO or designated representative for review and approval. [CDRL A036]

C.21.2.1 Vehicle System Final Inspection. The contractor shall utilize the approved FIR to completely inspect each vehicle system, produced under this contract. The deficiencies detected during inspection shall be described in writing on the FIR Deficiency Sheet and corrected by the contractor prior to offering the vehicles to the Government for acceptance. The completed FIR (marked-up copy) for each vehicle system shall be provided to government representative(s).

C.21.3 Form, Fit, and Function Data. When the contractor proposes to make a change, and the Government subsequently requests it, the contractor shall, within 1 business day, provide form, fit and function data that relates to the MMPV system delivered under this contract. This data shall include all configuration changes, components, processes utilized to build the production and test vehicles, and all examinations and tests.

C.21.4 Reserved.

C.21.5 Reserved.

C.21.6 Reserved.

C.21.7 First Article Test (FAT). The Government shall conduct a First Article Test (FAT), as specified in the MMPV system purchase description and the contract. This test will verify that the vehicle meets the threshold and proposed objective performance requirements in the contract. The FAT requirements under this contract shall consist of the following:

- a. First Production Vehicle Inspection (FPVI) (see paragraph C.21.7.1)
- b. Production Verification Test (PVT) (See paragraph C.21.7.2)
- c. Logistics Demonstration (see paragraph C.14.6)
- d. Initial Operational Test (IOT) (C.21.10)

C.21.7.1 First Production Vehicle Inspection (FPVI) [CDRL A031]. The Contractor will conduct, and the Government will verify, FPVI on the second MMPV system produced to verify that the MMPVs meet requirements delineated in the contract and purchase description. The contractor shall prepare and submit an FPVI plan based on the aforementioned requirements and the requirements of this paragraph. As part of the FPVI process, the contractor shall make available for Government review, all records of inspection and test, drawings, configuration changes, Qualified Products List (QPL), technical documentation, specifications, certifications (material, process, product, test, etc.), Build Books, Bill of Materials (BOM) and purchase orders. This includes all information and documents (contract, purchase description, and technical documents) that contribute to the build of the production MMPV systems. The contractor will conduct the FPVI and the Government will verify the FPVI. The contractor shall prepare and submit a test report at completion of FPVI, in accordance with DI-NDTI-80809B. The report shall define all deficiencies and root cause corrective actions taken. [CDRL A031]. The contractor shall not ship the Production Verification Test vehicle system to the government test site until acceptance of the FPVI report has been provided, or as directed by the Contracting Officer.

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C.21.7.1.1 First Production Vehicle Acceptance. The contractor shall submit an inspection and test report that provides detailed results of the FPVI within 14 days of completion. The PCO will notify the contractor within 10 calendar days after receipt of the report of approval or disapproval of the FPVI Report. If the FPVI Report is disapproved and additional inspections are required, the contractor shall resubmit an inspection and test report within 7 days of receipt of Government comment/review. All costs related to additional FPVI inspections and tests shall be borne by the contractor at no increase in contract price.

C.21.7.1.1.1 Certification Requirements. The contractor shall prepare certifications for specific items as identified in the MMPV system purchase description. Certifications shall include all documentation, objective evidence, examinations and test results where applicable. Certification of compliance to specific contract and/or specification requirements shall be in contractor format. Certifications shall be complete and available (and copies provided) to the Government for review at the time of the First Production Vehicle Inspection (FPVI). If any certification is unacceptable to the Government, the contractor shall conduct additional examinations/tests or provide additional documentation as required to validate the unacceptable certification at no increase in contract price. Information on acceptable certifications is identified in E.8 of this contract.

C.21.7.2 Production Verification Test (PVT). The PVT shall be conducted by the Government at Government selected test sites in accordance with ATPD 2372 (Attachment 1) and the addendum in paragraph C.3. The vehicles for testing are identified in paragraph E-4 First Article Approval -- Government Testing. Delays caused by test vehicle breakdown(s) due to poor vehicle quality or workmanship, or failure of the Contractor to provide adequate test support IAW contractual requirements, or failure of the Contractor to comply with the vehicle specification technical requirements shall not be the basis for adjustment of the contract delivery schedule or the contract price.

C.21.7.2.1 Requirements Applicable to Production Verification Test

a. The test vehicles, representative of the production deliveries, shall be furnished to the Government test site(s) listed in the respective paragraphs. Transportation charges from the Contractor's plant to and from the test sites shall be the sole responsibility of the Contractor.

b. Under no circumstances shall any test vehicle be shipped from the Contractor's facility to the test sites until:

(1) A complete inspection has been performed on each vehicle by a Government team consisting of a formally designated representative of the ACO or a designated TACOM representative.

(2) All deficiencies disclosed by the Government inspection have been corrected by the Contractor and approved by the Government, as evidenced by the DD Form 250, signed by an authorized Government representative before shipment.

C.21.7.2.2 Test Vehicle System Failure. Failure of the Production Verification Test (PVT) (clause E.8) vehicle systems as a result of any defect detected shall be cause for rejection of such test vehicle systems and vehicle systems being offered for acceptance, until objective evidence has been provided by the contractor that corrective action has been taken to eliminate the defect. Any defect found during, or as a result of the PVT shall be prima facie evidence that all vehicle systems produced that are represented by the PVT and FPVI are similarly deficient unless contrary objective evidence satisfactory to the Contracting Officer is furnished by the contractor. Such a defect on all affected vehicle systems associated repair parts and in the production process itself, shall be corrected by the contractor at no increase in contract price.

C.21.7.2.3 Vehicle System Retest. In the event of vehicle system test failures, the Government reserves the right to choose to retest the same or another vehicle system upon correction of the defect(s) by the contractor to the complete extent and duration specified in the test program, or to such lesser extent as the Procuring Contracting Officer deems appropriate. If another vehicle system is selected, the contractor shall be responsible for all deficiencies detected regardless of relationship to the original test failure and shall comply with the provisions of C.21.10, C.21.11, and C.21.8.1, below. The contractor shall bear responsibility for delays in the program test period resulting from vehicle defects or failure to adequately furnish parts support (within 24 hours on a scheduled test day) and the Government will have the right to extend the specified program test period accordingly for such contractor induced delay. The extent of any responsibility for contractor induced delay shall be limited to the Governments direct operating costs.

C.21.7.2.4 Transportation Costs. The PVT vehicle system shall be shipped to the specified Government test site(s) in accordance with the requirements of this contract. All vehicle shipment charges from the contractors plant to the various sites and their return to the plant for refurbishment shall be the sole responsibility of the contractor.

C.21.7.2.5 Test Vehicle System Shipment. Under no circumstances shall any test vehicle system be shipped from the contractors facility to the test site until:

a. A complete inspection has been performed by Government personnel, representing the ACO and the PCO at the procuring activity;

b. All deficiencies revealed by the Government inspection have been corrected by the contractor and approved by the Government, as evidenced by an Informational DD Form 250, signed by an authorized Government representative before shipment.

C.21.8 Test Deficiencies/Failures

C.2.8.1 A failure is defined as the condition of not achieving the desired end/requirement, i.e. an event, or state, in which a system

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or a component does not perform as specified in the ATPD 2372, Attachment 1 and the addendum paragraph C.3.

C.21.8.2 A deficiency is defined as a condition that lacks an essential quality or element and may be used synonymously as a failure.

C.21.8.3 In the event of a vehicle/component test failure, the Government reserves the right to retest the vehicle/component upon correction of the failure by the Contractor to the complete extent and duration specified in the test program, or to such lesser extent as the PCO shall consider appropriate in his/her sole discretion. The Contractor shall be responsible for delays in the program test period resulting from vehicle/component failures and for failing to adequately or timely furnish parts support. The Government shall have the right to extend the specified program test period accordingly at no increase in contract price.

C.21.8.4 The Contractor, when directed by the PCO, shall correct on-site any failure of the system, which occurs during testing. Delays caused by defective test items shall not be a basis for adjustment of the contract delivery schedule or the contract price.

C.21.8.5 Deficiencies found during or as a result of First Article Testing, see paragraph C.21.7.2.2.

C.21.9 TEST INCIDENT REPORTS/FAILURE ANALYSIS & CORRECTIVE ACTION REPORT

C.21.9.1 The Contractor shall be responsible for accessing VDLS [VISION (Versatile Information Systems Integrated On-line Nationwide) Digital Library System] and VDLS-S(Secure) for all Test Incident Reports (TIRs) released during Government-required tests. Receipt of a TIR is defined as the TIR Release Date. Upon receipt of a TIR, the Contractor shall determine the root cause of the failure and furnish a Failure Analysis and Corrective Action Report (FACAR) with the proposed corrective actions set forth in this contract provision and contract provision. The FACAR data stream (i.e. Section VI of the TIR) shall be prepared by the Contractor in the ASCII format for Corrective Action data streams identified at Attachment 10 of the contract and as described in the DI-RELI-81315 (T) (CDRL A034).

C.21.9.2 No Contractor entries are required in data blocks 102, 103, 104, and 105. The first Contractor entry for each FACAR shall record OPEN in data block 100. No subsequent changes should be made to data block 100. Responses to data blocks 120-123 shall also include the data identified in DI-RELI-81315 (T). With the exception of the supporting documents, all required text shall be submitted to ATIRS (Army Test Incident Reporting System) through the ASCII format Corrective Action data stream.

C.21.9.3 SUPPORTING DOCUMENTATION - The Contractor shall provide Supporting Documentation (internal assessment, supplier data/vendors analysis, test data, certifications, drawings, digital photographs, etc) for each FACAR IAW CDRL A034. The Supporting Documentation shall be submitted in .pdf format in conjunction with the ASCII Corrective Action data stream. To track multiple source documents related to a single FACAR, the file name shall be composed of a sequential FACAR numbering system [FACAR # - Version # .pdf].

For example:

L5-XXXXXXX-A.pdf	-----	1st document
L5-XXXXXXX-B.pdf	-----	2nd document
L5-XXXXXXX-C.pdf	-----	3rd document

For FACAR revisions, data blocks shall list any additional Supporting Documentation with the new file name.

C.21.9.4 The Contractor shall access VDLS (via //vlds.atc.army.mil) for TIRs and submit corresponding FACARs to ATIRS (via ATIRs @atc.army.mil). Following the first FACAR A034 CDRL submission (to assure system compatibility and smooth processing of emailed data deliverables), the Contractor shall confirm that submitted Corrective Action data streams have been converted to permanent VDLS FACARs. Upon observation, the Government CARB Chairperson shall be notified of submitted Corrective Action data streams that have not loaded in VDLS.

C.21.9.5 INTERIM FACARS - Interim FACARS shall be provided by the Contractor within the following specified time frames:

- a. Critical Defect 48 hours after the TIR Release Date.
- b. Major Defect 20 calendar days after the TIR Release Date.
- c. Minor Defect Optional.
- d. Informational N/A.

The Interim FACAR shall be submitted in the ASCII format Corrective Action Data Stream as identified at Attachment 8 of the contract. Each applicable Data Block shall retain the following structure:

- a. 1st line - Current Date/Name of team member generating the response
- b. 2nd line - Source Document file name per C.2.21.9.3
- c. 3rd line - Relevant content/date of the latest Government CARB Notification (if provided)
- d. 4th line - Content as described in C.2.21.9.5.1
- e. Last line Action Complete

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C.21.9.5.1 The Interim FACAR shall include the following content:

Data Block 120: Developers Analysis of the Problem.

1. Disposition of failed item.
2. Statement as to whether this is a pattern failure (if so, the reports of the other failure(s) shall be referenced).
3. Classification failure (independent or dependent).
4. Failure symptoms.
5. Failure mode.
6. Failure analysis methods to include a preliminary investigation and analysis of each failed test exhibit at a level necessary to identify possible root causes, mechanisms, and potential effects of that failure on the system.
7. Status of the Contractors preliminary investigation and any supplemental information related to the failure (i.e., any internal contractor assessments, records, reports, correspondence, etc.).

C.21.9.5.2 If the Government CARB determines that the Interim FACAR does not meet the above criteria, the Government CARB will notify the Contractor. The Contractor shall address the stated deficiencies in the Final FACAR.

C.21.9.6 FINAL FACARs - For TIRs where an interim response is required (Critical/Major) but not submitted within the specified time frame, a Final FACAR is due within 45 calendar days of the TIR Release Date. For TIRs where an interim response is required and has been submitted within the specified time frame, a Final FACAR is due within 65 calendar days of the TIR Release Date.. For TIRs where an interim response is optional (Minor), a Final FACAR is due within 45 calendar days after the TIR Release Date regardless of an Interim FACAR submittal.

The Final FACAR shall be submitted in the ASCII format Corrective Action Data Stream as identified at Attachment 8 of the contract. All Data Blocks shall retain the following structure:

- a. 1st line - Current Date/Name of team member generating the response
- b. 2nd line - Source Document file name per C.2.21.9.3
- c. 3rd line - Relevant content/date of the latest Government CARB Notification (if provided)
- d. 4th line - Content as described C.2.21.9.6.1
- e. Last line Action Complete

All subsequent FACAR updates shall retain the stated structure.

C.21.9.6.1 The Final FACAR shall include the following content:

- a. Data Block 120: Developers Analysis of the Problem.
 1. Disposition of failed item.
 2. Statement as to whether this is a pattern failure (if so, the reports of the other failure(s) shall be referenced).
 3. Classification failure (independent or dependent).
 4. Failure symptoms.
 5. Failure mode.
 6. Failure analysis methods/results to include a full investigation and analysis of each failed test exhibit at a level necessary to identify the root cause, mechanisms, and effects of that failure on the system.
 7. Status of the Contractors final investigation and any supplemental information related to the failure (i.e., any internal contractor assessments, records, reports, correspondence, etc.).
- b. Data Block 121: Status/description of the corrective action.
 1. Description of appropriate alternative corrective actions for the individual equipment failed.
 2. Status of the technical maturity of the proposed corrective action.
- c. Data Block 122: Test results on the corrective action.
 1. Expected useful life, i.e. projections of corrective action effectiveness based on test or analysis.
 2. Recommended corrective action.
- d. Data Block 123: Planned Production Implementation.
 1. Planned coordination effort
 2. Measures taken to prevent other failures.

C.21.9.6.2 If the Government CARB determines that a FACAR fails to address the criteria stated in C.2.5.9.6.1, the FACAR shall be rejected and the CDRL submittal shall be considered delinquent.

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C.21.9.7 The Government CARB chairperson may agree with the Contractor to extend or modify the time period for revised Final FACAR Submittals. No corrective action shall be implemented until the Contractor receives written notification from the Government CARB that the FACAR is approved/completed.

C.21.9.8 TIR Revisions as annotated in Data Block 1 (e.g. K2-XX0001 Rev 01) shall be handled in the same manner as stated in C.21.9.1 thru C.21.9.7. TIR Revisions shall include all previous FACAR submittals. Each FACAR submittal shall begin with the current date, author, and most recent official CARB comment.

C.21.9.9 The Contractor shall conspicuously mark, tag, and control each failed test exhibit received from the tester as it corresponds to its respective TIR. All identification markings/taggings placed on a failed test exhibit by the testers shall be maintained with the exhibit. Each failed test exhibit supporting the FACAR process shall not be handled in a manner that may obliterate facts which are viewed by the Government CARB as pertinent to the analysis. The Contractor shall be fully responsible for the storage of each failed test exhibit (no matter where the storage facility is located) and the item(s) shall remain stored pending disposition of the failure analysis and Government CARB notification and approval.

C.21.9.10 Scoring Conferences/Corrective Action Review Board (CARB) Meetings

C.21.9.10.1 Scoring conference. The Contractor shall identify any deficiencies as a part of their failure analysis. During and after Government testing, Scoring Conferences will be held to review and independently score Test Incident Reports (TIRs) primarily affecting blocks 41-44 of the TIR. The contractor will be able to attend the conference meeting to present to the Government Scoring Conference members information, evidence, or opinions that the members should consider IAW DA and Congressional directions. The Contractor will not attend the actual scoring of the TIRs. During these conferences, the Government will determine which TIRs would qualify as scored mission failures, essential maintenance actions, unscheduled maintenance actions, etc. IAW Failure Definition/Scoring Criteria, Attachment 11, to develop official reliability, maintainability, and durability assessments. The Scoring Conference may also at this time revise the incident classification (Critical, Major, Minor, Information) based on known test data and/or the quantity of TIRs for a particular failure mode (AR 73-1, DA PAM 73-1). The Government will notify the Contractor of the Scoring Conference results within 10 working days of the meeting through the PCO.

C.21.9.10.2 CARB Meetings. During and after Government testing, CARB meetings will be held to review the functional/performance failure data and corrective action status of all TIRs classified in block 32 of the TIR as Critical, Major, or Minor. The CARB will review the contents of CDRL A034(primarily affecting blocks 100-123 of the TIR). FACARs submitted IAW C.21.9 shall not conflict with Contractor submissions made at the Scoring Conference. The Government reserves the right to conduct either of the following meeting methodologies:

Traditional CARB Meetings (T-CARBs); Audio CARB Meetings (A-CARBs); or Electronic CARB Meetings (E-CARBs). Regardless of the methodology, the Contractor shall participate in all CARB meetings.

C.21.9.10.2.1 Schedules. Government will provide official notification on all CARB Meeting schedules at the inception of each test project. CARB Meeting schedule revisions are at the discretion of the Government and are subject to a 30-day preliminary written notification to the Contractor.

C.21.9.10.2.2 CARB Preparation/Notification. Fourteen (14) days prior to the scheduled CARB meeting, the Contractor shall provide an electronic CARB Meeting agenda in an MS Excel (.xls) format. It shall contain at a minimum the following information: TIR, Revision #, Date Occurred, Original Release Date, Release Date, Title/Maintenance Description, Mileage, Subsystem, Incident Class, FDSC Class, FDSC Step, Chargeability. Official CARB Notification of meeting results will be provided to the Contractor as stated in the following table:

	<u>T-CARBs</u>	<u>A-CARBs</u>	<u>E-CARBs</u>
Contractor's Agenda to Government CARB	Via Email 14 days prior to a T-CARB	Via Email 14 days prior to a T-CARB	Via Email 14 days prior to a T-CARB
Final Government	"T-CARB"	Pre "A-CARB"	Via E-mail 7 days prior to an E-CARB
Official CARB Notification (Verbal)		"A-CARB"	N/A
Official CARB Notification (Written)	NLT 14 days after T-CARB	NLT 14 days after T-CARB	"E-CARB"

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Authority: DI-RELI-81315 (T)

Remarks: Submit in accordance with C.2.21.9.

Addressee: atirs@atc.army.mil, ATIRS POC, CARB Chairperson(s)

C.21.10 Initial Operational Test (IOT). The Government shall conduct an Initial Operational Test to provide an opportunity to assess the integrated operational effectiveness and suitability of the Route Clearance Vehicle Squad. The systems will be assessed working together to perform the Route Clearance Vehicle Squad mission in accordance with the Operational Mode Summary/Mission Profile (OMS/MP), approved doctrine and organizational support test package (D&O TSP) and accompanying Tactics, Techniques and Procedures. The duration of this test is approximately 6 weeks.

C.21.11 Manufacturing Standard. The contractor is required to retain the FAT MMPV system(s) as manufacturing standard(s) and may be shipped as part of the contract quantity at the end of the contract. All Government approved configuration changes that occur following the FAT shall be made to this (these) vehicle(s) affected by the changes within 60 days of approval. At the discretion of the Government, a newly produced vehicle with the latest configuration of incorporated changes may be selected to represent the manufacturing standard. Accordingly, the previous manufacturing standard may then be shipped as part of the contract quantity.

C.21.12 Test Vehicle System Acceptance. Under no circumstances shall any test vehicle system be accepted by the Government (final DD Form 250), nor shall the contractor be eligible to invoice or claim any payment exceeding the progress payment rate or performance based payment rate, on the basis of the informational DD Form 250 until after (i) successful completion of all testing for that particular variant and (ii) completion by the contractor of all refurbishment, upgrading, and corrections required to bring such vehicles up to serviceable and like new condition. Should test units require refurbishment at the contractor's facility, the contractor shall be responsible for vehicle system shipment at no cost to the Government.

C.21.13 Reserved

*C.21.14 Material Review Board (MRB). The Contractor shall develop, implement and maintain an MRB certification program acceptable to the Government. Upon Government PCO or designated representative acceptance the Contractor is authorized to manage and approve MRB activities. A Government representative from DCMA shall serve as a member of the MRB. The Government shall monitor the processes and reserves the right to revoke authorization should the Contractor fail to meet the Government requirements. (Reference Modification P00024)

C.21.14.1 A minor nonconformance is defined as a nonconformance which does not adversely affect any of the following:

- a. Health or safety
- b. Performance or function
- c. Interchangeability, reliability, or maintainability
- d. Effective use or operation
- e. Weight or appearance (when a factor)

C.21.14.2 A major nonconformance is defined as a nonconformance other than minor that cannot be completely eliminated by rework or reduced to a minor. A nonconformance that is major or critical shall not be subjected to MRB disposition.

C.21.14.3 "Use-As-Is" is defined as a disposition of material with one minor nonconforming characteristics that has been determined (by MRB) to be usable for its intended purpose in its existing condition.

C.21.15 Reserved

C.21.16 Corrective Action Board (CAB). The contractor shall implement a CAB consisting of management representatives of appropriate contractor organizations with the level of responsibility and authority necessary to effect root cause corrective actions and continual improvement of product quality processes and to ensure that the root cause(s) of nonconforming material (product and process) has been identified and that corrective and preventative actions are timely and effective throughout the contractor's organization. The CAB shall have the authority to require investigations and studies necessary to define essential corrective and preventative actions which will result in continual improvement of product and processes and reducing costs associated with scrap, rework and repair, and reduction in nonconforming material. The establishment and implementation of the CAB shall be at no cost to the Government.

C.21.16.1 At no additional cost to the Government, the contractor shall develop and maintain a data system for recording nonconformance information. Typical data is as follows:

- a. Quantity of nonconforming items
- b. Recurrences (number and type)
- c. Cause determinations
- d. Root corrective actions (status and delinquent actions)
- e. Dispositions (number and type)
- f. Costs related to each type of disposition (rework, repair, and scrap)

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C.21.17 Acceptance Inspection Equipment. Except as otherwise expressly provided under this contract, the contractor is responsible for the supply and maintenance of all inspection and test equipment necessary to ensure that material and supplies involved in the production & assembly of MMPVs conform to contract requirements. Supplier-furnished inspection and test equipment shall equal or exceed the design criteria and shall be initially approved and certified by the supplier. All inspection and test equipment shall be made available to the Government Quality Assurance Representative (QAR) when required for verification purposes.

C.21.18 Vehicle System Deprocessing and Verification. The contractor shall develop a vehicle system-deprocessing sheet as part of the FIR (C.21.2 and CDRL A036) and submit it to the Government for approval. The Government approved deprocessing sheet shall accompany each MMPV system to verify the condition of all vehicles prior to delivery. The contractor shall correct any deficiencies discovered during verification and deprocessing at no cost to the Government.

C.22 CONFIGURATION MANAGEMENT; CONFIGURATION BASELINES: [CDRLs A035, A038, A040 and A042]. The MMPV System, delivered with this Contract, must comply with all testing requirements in the ATPD 2372 paragraph 4. The Configuration for the MMPV Systems is frozen at the completion of testing and meeting of the key performance parameters, as defined in Section E/PD Paragraph of this contract. This Configuration will be the basis for all new logistics documentation. The MMPV System will be subject to approval of Engineering Change Proposals (ECPs) and Design Change Notices (DCNs), as defined below, for Configuration Management. No changes shall be made to the hardware without appropriate documentation.

C.22.1 The Contractor shall be responsible for configuration control throughout the period of this contract. The Contractor shall establish a production baseline for each vehicle type after successful completion of both the Contractors and the Governments portions of the First Article Test (FAT). Any changes made prior to Testing must meet the requirements of ATPD 2372. This baseline will identify and document the functional and physical characteristics of the MMPV. The Government requires a standardized vehicle configuration to improve supportability. The Government acknowledges that the Contractor may want to offer, to the Government, configuration changes being introduced to its commercial production during the term of this contract. However, its important for the Government to assess the impact of any proposed vehicle changes to the logistics and technical requirements established for this program. The Contractor is therefore required to notify the Contracting Officer prior to implementing any configuration changes. The Government reserves the right to disapprove proposed changes that would adversely affect the program. Prior to production, the Contractor shall notify the Government of any impending federal laws and regulations scheduled to go into effect during the life of this contract that may impact configuration, i.e. Environmental Protection Agency (EPA) emissions requirements.

C.22.2 Configuration Management Requirements.

C.22.2.1 Configuration Management/Baseline Configuration. Upon completion of First Article Test and Inspection, the Contractor shall work with the U.S. Government to establish a product baseline. The Contractor shall implement configuration control methods and procedures that maintain the integrity of the unit to ensure that the form, fit and function characteristics of the MMPV are met. When configuration changes are proposed, the Contractor shall notify the Government PCO prior to change(s).

C.22.2.2 Configuration Status Accounting Report Information. The Contractor shall provide a Configuration Status Accounting Report in accordance with DI-CMAN-81253A, CDRL A035.

C.22.2.3 Allocated Baseline. The Contractor shall prepare a Bill of Material (BOM) in Contractor format. The BOM shall accurately reflect the as-built condition and shall be submitted concurrently with the First Production Unit Inspection (FPVI) item delivery. Changes made during FPVI will require the Contractor to update and resubmit the BOM prior to FPVI approval. Upon approval of the FPVI, the BOM shall constitute the approved Product Configuration Identification (PCI) for this item. The Contractor shall keep records of all changes which impact the PCI prior to First Article Test and Inspection. The records shall include at a minimum the following information: contractor-supplied unique control numbers, date of submission, complete technical description of change, reason for change, systems affected by the change, list of components remove/reused and/or new components and Contractor primary point of contact for Configuration Management. Logistics impacts (Maintenance, Spares, Training, Special Tools, Technical Manuals, etc.) shall be addressed and delineated. Upon request, Contractor records shall be made available for Government review. Any item changes made will require the Contractor to update and resubmit the affected portions of the BOM.

C.22.2.3.1 The Government will not be responsible for any additional costs to vehicles or software associated with any changes submitted by the Contractor under this section, nor will the Government be liable for costs incurred by the Contractor due to delay in contract performance which may result from any change submission unless the parties agree otherwise.

C.22.2.4 Approval of Engineering Changes. Government approval of changes, following acceptance of the Product Baseline, shall not be construed as relieving the Contractor from its responsibility to furnish all items in conformance with contract requirements, including full responsibility for failure in operation of equipment which resulted from changes previously approved by the Government. The Government reserves the right to disapprove any change where Government review shows the changes would have an adverse effect

C.22.2.5 Configuration Changes. Changes to the Product Baseline shall only be incorporated in accordance with (IAW) the requirement of this section. The Contractor shall propose changes to the established baseline via the submission of Engineering Change Proposals (ECPs), Value Engineering Change Proposals (VECPs), and Requests for Deviation (RFDs) - (See CDRL A038). The Contractor shall implement positive configuration control methods and procedures that maintain the integrity and history of the established baseline. Sufficient

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supporting data to evaluate the proposed change, such as drawings, supplemental drawings, sketches, specifications, or manufacturers data sheets, shall be submitted with ECPs, VECPs, and RFDs. If changes result in decreased cost, the Government may, at the sole discretion of the Contracting Officer, require an equitable downward adjustment to the contract price. The Contractor shall certify cost impact, and the Government will have the right to conduct post-change audits. If the Government desires a configuration change, the PCO will direct the Contractor to submit an ECP.

C.22.2.6 Engineering Change Proposal (ECP) Definitions. Class I ECP: An Engineering Change Proposal that AFFECTS the form, fit, or function of an approved configuration baseline and its associated technical documentation, and changes affecting the safety, logistics support, cost, warranties and the contract. Class II ECP: An Engineering Change Proposal that has NO EFFECT on any of the factors listed above for the Class I ECP definition.

C.22.2.6.1 Class I ECP Changes Contractor Requested. The contractor shall submit copies of proposed Class I ECP changes per DI-CMAN-80639C, CDRL A040 upon determination of a need for such changes. Supporting documentation shall be sufficient to fully understand the Class I ECP. Impact statements for safety, MANPRINT, integrated logistic support, technical manuals, and transportability will be in Contractor format. The Government reserves the right to require additional testing and test results for proposed changes. The Contractor shall not implement any Class I ECP change prior to Government approval. Notwithstanding any Contractor configuration changes under this provision, the Contractor shall not be relieved of its responsibility to conform to the delivery requirements of this contract.

C.22.2.6.2 Class I ECP Changes Government Directed. In the event the Government desires a change to the end item configuration, the PCO will request, in-writing, a technical/price proposal from the Contractor. Copies of ECPs will be submitted per DI-CMAN-80639C, CDRL A040 and forwarded to the PCO within 30 days of the request.

C.22.2.6.2.1 Technical Data for Government Directed Changes. Government Rights in Technical Data for Government Directed Changes will be allocated pursuant to applicable DFARS clauses. Where the Government pays for the entirety of a Class I (ECP) design change under this provision, all related technical data developed by the Contractor will come to the government with unlimited rights (for Vendor Item Control Drawings to the maximum extent practicable). All drawings developed for these changes shall be a contract deliverable to be delivered/prepared as Developmental Drawings (CDRL A042).

C.22.2.6.2.2 Technical Data Format for Government Directed Changes. At the Governments option, the data may be submitted in either Contractor format or Government formats. In the event Government format is required, the Government will request a pricing proposal. The cost of said data will be included in the funding provided for in the contract modification. The drawing format shall be IAW the TDP Option Selection Worksheet as cited in CDRL A042.

C.22.2.7 Value Engineering Change Proposals (VECPs). The Contractor shall prepare VECPs in the same manner as Class I ECPs.

C.22.2.7.1 Class II Changes. Class II changes have no effect on the Form, Fit, and Function of the item. The Government will review this documentation for the proper classification. If the Government determines that a change submitted as a Class II is actually a Class I, the Contractor will be notified and shall prepare and submit a Class I ECP within 5 working days for Government review. If the Government rejects the resubmitted Class I ECP, the Contractor shall be responsible to retrofit all items produced with the change.

C.22.2.7.2 Engineering Change Inspection and Test. The Government reserves the right to inspect any affected systems or components, at Contractor expense, in order to determine whether the change submitted by ECP should be approved. Any production or delivery delays caused by Government re-inspection will not be considered as excusable delay under the Default clause. In addition, such delays shall not be the basis for an upward adjustment in contract prices or an extension of delivery schedule. The Government reserves the right to conduct additional testing at Contractor expense if the Government believes any proposed engineering change may have a potential negative impact on the ability of the product to meet the requirements of the purchase description.

C.22.2.8 Effectivity Certification. Changes resulting from Class I ECPS and VECPs, shall be incorporated into the production line through contract modification. Actual cut-in of these changes shall be at a single END ITEM cut-in-point. Each ECP and VECP shall be applied to the production line at one time in their entirety. The Contractor shall maintain the original effectivity point Certification on file.

C.22.2.9 Electronic Data Delivery for Submittal of Configuration Data. The Contractor shall submit ECPs/VECPs/RFDs to the Government electronically. These data submittals shall be in MS Word or Adobe Acrobat formats. For all electronic files, File Transfer Protocol (FTP) can be used. A test transmission shall be conducted with 30 days after the start of contract to work out any problems associated with the electronic transfer.

C.23 VEHICLE HAND-OFF

C.23.1 The Contractor will be responsible to hand off all equipment deliverable under this contract to each gaining unit. The Contractor will perform the hand off. The Contractor shall deliver all the vehicles ready to operate prior to New Equipment Training. The hand-off effort includes:

C.23.1.1 Re-assembly of the vehicle to a fully operational configuration if the vehicle is shipped with any components removed. All

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tools and equipment required to complete the re-assembly will be the Contractor's responsibility.

C.23.1.2 Inventory of any material shipped with the vehicle, e.g., technical publications, special tools, initial service packages.

C.23.1.3 De-process each vehicle (includes all the activities to ensure vehicle is in operating order).

C.23.1.4 Provide one-hour familiarization to 68 people from the receiving unit on first machine delivered so they can safely move the vehicle until full training is conducted. Familiarization includes (at a minimum) operator set-up, operating and shut down procedures, safe operations, and daily and weekly service locations and checks.

C.23.1.4.1 In consideration for the approval of waivers under Modification P00019 instead of one Familiarization training as outlined in paragraph C.23.1.4 above, BAE will provide two (2) Familiarization Training Courses to Logistics efforts provided at BAE Systems, Sterling Heights, MI facility. These courses will be used to support the verification and logistics demonstration to be performed in Sterling Heights, MI. One course will be a familiarization training course for the Operator Verification- and Log Demo, and one course will be for the Maintainer Verification and Log Demo.

C.23.1.5 Reserved.

C.23.1.6 Allow time for the receiving unit to inventory the materials shipped with the vehicle.

C.23.2 Travel costs associated with Vehicle Handoff. Travel costs for Vehicle Handoff will be in as stated in Section B.

C.24 LIFE CYCLE SUSTAINMENT [CDRL A041]

C.24.1 The Contractor shall continually conduct life cycle sustainment analyses (LCS) on all MMPV equipment. The Contractor shall identify potential life cycle sustainment issues that will jeopardize the equipments continued supportability throughout the life cycle. The LCS analysis shall consider Continuous Technology Refreshment (CTR) initiatives, obsolescence elimination initiatives, weapon system concurrency issues, and define recommended remedies/courses of action in an overall effort to reduce total life cycle costs and to ensure continued sustainability, reliability, maintainability, and operability [CDRL A041].

C.24.2 Diminishing Manufacturing Sources and Material Shortages (DMSMS) CDRL A041

C.24.2.1 The Contractor shall develop and maintain a Diminishing Manufacturing Sources and Material Shortages (DMSMS) management plan for managing the loss, or impending loss of manufacturers or suppliers of parts and/or material as required by DOD 41051-4 DOD Supply Chain Management material Regulation.

C.24.2.2 The Contractor shall establish a process for identifying and notifying the Government of forecasted and identified DMSMS issues. The Contractor shall use predictive tools and methods to proactively forecast and monitor parts for DMSMS. The contractor shall also monitor low demand forecasted items to ensure that supportability/Sustainment issues are addressed. The Contractor shall provide access to the Government for their DMSMS forecasting tool.

C.24.3. Follow-on Provisioning Conference. The Government will at its option conduct a Follow-on Provisioning Conference 3-5 years after initial fielding that will require at a minimum, an update on all items required in paragraphs C.11 through C.13.2. The follow-on provisioning conference will be help to update provisioning information for any changes since original provisioning and update failure information based on actual demands, if applicable. Also any new information related to risk assessment (for example, changes in commercial usage of the parts that may increase or decrease our risk of supportability) should be provided by the contractor for the list of items that were originally determined to be high risk.

C.25 RELIABILITY, AVAILABILITY, MAINTAINABILITY (RAM) PROGRAM

C.25.1 The Contractor shall maintain a comprehensive RAM program to ensure that the MMPV meets the RAM standards set forth in the performance specification. The design shall be monitored throughout the entire period of performance to identify and assess any changes, which would impact RAM. The Contractor shall develop reliability analysis and predictions as required to ensure compliance with the performance specification. The program shall encompass all aspects of reliability with respect to design selection of components, predictions, and testing. If is determined that an item is a throwaway, an analysis shall be performed at the next higher indenture level. The Contractor shall maintain and make available to the Government all RAM data on any vendor or subcontractor supplied item and shall inform the Government of any part or component which will degrade system RAM requirements. The RAM program shall minimally include the following:

C.25.1.1 Procedures and Controls: The Contractor shall maintain procedures and controls, which ensure products, obtained from suppliers, vendors and subcontractors meet reliability requirements. The Contractor shall (a) Establish, implement, and maintain documented procedures, which detect and/or preclude the use of substandard or counterfeit parts in the production process, and impose similar requirements on subcontractors; and (b) Provide the Government with reasonable notice of any special RAM program review meetings scheduled with subcontractors so Government representatives may attend at their discretion.

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C.25.1.2 Reliability Predictions: The Contractor shall provide detailed design reliability predictions based on a defined configuration and associated models. The predictions shall be allocated down to the lowest indenture level and updated each time significant design or mission profile changes significantly impact the MMPV or any of its subsystems. The reliability modeling method shall mathematically relate the reliability block diagrams of the MMPV to time-event relationships. These tasks shall be performed in consideration of the end-user operational environment including sun load thermal, shock and vibrations.

C.26 TECHNICAL SUPPORT [CDRL A043]**C.26.1 Contractor Technical Assistance**

The contractor shall provide Contractor Technical Assistance CONUS, and OCONUS during non-contingency and contingency operations. This shall be at fixed hourly rates, with individual tasking to be determined later on an as needed basis. The contractor shall provide the man-hours of service specified in the task order. These man-hours may be in support of unforeseen events that require support that is not included in any other portion of this contract. We anticipate the effort to include these types of tasks: investigation and diagnosis of problems or issues in the field related to vehicle performance, maintenance, and training. The Contracting Officer shall designate the times and locations of the service to be performed, but will not supervise or otherwise direct activities. The Contracting officer or his authorized representative shall notify the contractor at least 10 days in advance of CONUS travel and 20 days in advance of OCONUS travel of the date representative(s) are required. Instructions and established itineraries will be provided as necessary.

C.26.2. Field Service Representatives (FSR). The contractor shall provide thoroughly experienced and qualified FSRs who will advise and make recommendations to orient and instruct key government personnel with respect to operation, maintenance, and repair of the MMPV and their components.

C.26.2.1 Man-Hours. The contractor shall provide man-hours of service to locations in both CONUS and OCONUS. The government reserves the right to change the number of hours of services to be furnished to the extent necessary to conform to our requirements and shall be obligated to pay for only actual services used. Each change in quantity shall be at the Man-hour rate established.

C.26.2.1.1 The Man-hour rate does not include travel costs (airfare, local car rental, lodging, meals, and incidental expenses) of the FSR while performing the services. The travel costs will be negotiated prior to the issuance of the delivery order, on a firm-fixed-price basis, and not to exceed the Joint Travel Regulation.

C.26.2.1.2 A Man-Day is 8 hours. The representative is to work no more than 8 hours per day, 40 hours per week, unless otherwise negotiated. Man-hours of service includes any period during which the representative is delayed or prevented from performing any task only if the delay or non-performance is solely the government's fault. Man-hours of service includes travel time for initial travel from contractor's facility to site of work, for travel between sites of work, and to contractor's facility. It also includes any time that the FSR is preparing required reports at the work site and we can verify the time involved in writing the report.

C.26.2.1.3 Saturday/Sunday. When work is not performed on a Saturday/Sunday, and the representative is on site, a man-hour shall be charged at the Saturday/Sunday man-hour per diem rate only.

C.26.2.1.4 Holidays. The government will pay for federal holidays in addition to the actual hours worked at the Man-hour rate established. The government is not responsible for vacation and other holidays and sick leave pay.

C.26.2.1.5 Emergency Leave. The government is not responsible for any emergency leave that the contractor may grant to the FSR while performing work under this contract. The government is responsible for actual hours worked by any qualified contractor representative. It is immaterial whether the same representative completes the assignment. The negotiated price for travel costs will include only one complete round-trip transportation and travel costs between sites of work per assignment.

C.26.2.1.6. FSR Personal Data. The contractor shall make available personal data related to the FSRs including documentary evidence such as birth certification and such evidence as is requested by the local government installation or area in which services are to be performed. The contractor shall request approval for each FSR and include a statement of qualification for each representative. Government approval shall be limited to granting or denying security clearance for the person(s) named. The contractor shall contact local personnel and comply with local procedures. The local personnel will be identified in the delivery order.

C.26.3 Contract Field Service Report/Field Service Representative (FSR) Reports CDRL A043

Each FSR shall prepare and deliver via e-mail a report in accordance with CDRL A043 following completion of each assignment covering his activities.

C.26.4 Field Service Representative Travel. FSR travel costs will be negotiated prior to the issuance of any task order on a firm-fixed price basis, not to exceed costs authorized in the Joint Travel Regulation (JTR).

C.27 Product Drawings/Models and Associated Lists - Technical Data Package

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C.27.1 The Contractor shall possess computer aided design (CAD) capabilities to produce drawings and models under this Contract.

C.27.2 The Contractor shall develop, prepare, manage, deliver and maintain non-commercial and commercial items engineering drawings and models, specifications and other required technical data defining the Medium Mine Protected Vehicle (MMPV) throughout the life of this contract. To the extent permitted under DFARS 252.227-7013, DFARS 252.227-7014, or DFARS 252.227-7015, the Government shall have unlimited data rights to the drawings or solid models provided under this contract. The Contractor shall store and protect master digital source data in the Contractors software application and/or product data management (PDM) system.

C.27.3 A full TDP for the procurement or manufacture of an interchangeable item that duplicates the physical and performance characteristics of the original product, without additional design engineering effort or recourse to the original design activity is not required.

C.27.4 The Contractor shall provide modeling and simulation data and required data sheets for their system (for Vendor Item Control Drawings to the maximum extent practicable). The items required and the formats are described in CDRL A044, Attachments 024 and 025.

C.27.5 The Government shall be provided electronic access to modeling and simulation data (CDRL A044) for components, assemblies, and the MMPV System as it exists within 30 days of contract award through the duration of this Contract.

C.27.6 The MMPV System data shall be generated and delivered IAW requirements cited herein and the following requirements:

- (1) DI-SESS-81000C, Product Drawings/Models and Associated Lists
- (2) Attachment 013, User-Defined Metadata Attributes
- (3) ASME Y14.41, Y14.100, Y14.24, Y14.34, Y14.35, Y14.5, and Y14.1 to the maximum extent practicable

C.27.6.1 Part, Assembly and Product Structure User-Defined Metadata Attributes (Attachment 013) shall be incorporated into the MMPV product data and Contractor engineering database system for TDP management control of the MMPV configuration baseline(s).

C.27.7 All technical data, including software and associated documentation, delivered under this contract shall have affixed the appropriate distribution statement and export control warning required by DoD Directive 5230.24 and 5230.25.

C.27.8 The Contractor shall construct encapsulated 3D product technical data sets that include part and assembly 2D drawings, 3D CAD models, associated lists, material and process specifications, and identify, by reference or entity, all MMPV 2D Installation and Kit Drawings, Special Tools and Materials, and specify Installation Test and Calibration Requirements.

C.27.8.1 The MMPV System product data in 2-Dimensional (2D) drawing formats shall be sourced directly from the native 3-Dimensional (3D) solid models with bi-directional associativity between engineering data. No conflict shall exist between the 3D solid model and its associated 2D drawing.

C.27.9 All Government Source Control and Vendor Item Control Drawings (to the maximum extent practicable) shall be delivered as a 3D CAD explicit (non-parametric) shrink-wrap solid model part. Non-parametric shrink-wrap solid models shall be complete with sufficient envelope, mounting and mating dimensions, applicable interface characteristics, accurate weight, center of gravity and inertia, complete with user-defined metadata attributes. Solid model requirements as stated in paragraph C.27.6, are required in the content and format of MMPV model data.

C.27.10 Product Data Approval Validation

C.27.10.1 For all 2D digital and CAD product drawings and associated lists released due to ECP approval requires the assigned vehicle system Government Design Engineers approval. The Contractor shall permanently record the Government approval name and organization user-defined metadata attributes (Attachment 013) in the Contractors PDM system, engineering release system, and CAD source software system.

C.27.10.2 For all newly generated or revised 3D solid model product data due to ECP requires the Government Design Engineers review of the data for technical acceptance. The Contractor shall record the Government approval name and organization user-defined metadata attributes (Attachment 013) in part and assembly 3D CAD model files, Contractors PDM system, engineering release system, and CAD source software system.

C.28 Camouflage Line Art Drawing [CDRL A010]

C.28.1.1 The contractor shall provide line art drawings for the MMPV in accordance with CDRL A010. The scale shall be no less than 1/8 inch equals one foot. The contractor shall prepare separate data depicting the following views:

- a. front.
- b. back.
- c. right side.

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d. left side.

e. top.

C.28.1.2 All camouflage line art data shall include length, width, and height dimensions relative to each other and shall be detailed to the extent that all surface features of the item that cover one square inch or more of area are clearly delineated to scale. The lower right hand corner of each drawing shall contain the following information:

a. nomenclature of the item depicted.

b. view depicted.

c. contract number.

C.29 Warranty

The contractor shall provide all applicable pass through warranties at no additional cost to the government.

*C.29.1 In consideration for the approval of Connectors on Wiring Harnesses waiver under Modification P00022, BAE shall provide a one year warranty on the seven specific harnesses covered by the waiver, on all 138 vehicles. If any of the subject harnesses fail during the one year warranty period due to nonconforming connectors, BAE shall provide replacement wiring harness(es) for those that failed at no cost to the Government. (Reference Modification P00024, previously changed in Modification P00022)

*C.29.2 In consideration for the approval of the A-Pillar Weld Repair Deviation under Modification P00024, BAE Systems shall provide the following Warranty on the 138 vehicles to be delivered under MMPV Delivery Order 0008 (Reference Modification P00024):

*C.29.2.1 TECHNICAL APPLICATION: This warranty is applicable to cracking of 46100 High Hard Armor Steel welded into the capsule. This warranty covers those cracks in the high hard steel that are identified by visual inspection as detailed in the Warranty Technical Bulletin and measure greater than 0.50 inches in length.

*C.29.2.2 DURATION/APPLICABILITY: As a condition of vehicle acceptance and as the exclusive remedy for the cracking of material as identified in C.29.2.1 above, the Contractor warrants against cracking of High Hard 46100 Steel welded into the capsule, of the 138 MMPV Delivery Order 0008 vehicles (singularly a Vehicle or cumulatively the Vehicles) for the duration of 24 months from 1 February 2014. In addition the Contractor shall provide warranty reports in accordance with section C.29.2.5 below for 60 days beyond the end of the warranty period.

*C.29.2.3 CLAIMS: Upon identification of a crack covered by this warranty, a claim will be submitted within 30 days per the process detailed in the to-be-provided Warranty Technical Bulletin. The defect must be identified within the time period specified in section C.29.2.2 Duration, meet the criteria specified in section C.29.2.1 Technical Application, and be reported in accordance with the Warranty Technical Bulletin.

*C.29.2.4 REPAIRS: For vehicles located in CONUS, the Contractor shall correct cracking of 46100 High Hard Armor Steel welded into the capsule as identified in section C.29.2.1 Technical Application or, if agreed with the US Government, provide repair materials and instructions to permit the Government to make the repair. Correction of the cracking shall be completed within thirty (30) calendar days of the date the vehicle(s) and facilities are made available to the Contractor by the Government after the claim is submitted to the Contractor. If repair kits are to be provided, rather than making the vehicle available to the Contractor for repair, then they will be provided within thirty (30) days after the Government approval for this approach is received. The repair procedure will, as applicable, include kit 12560960 as demonstrated by testing at Aberdeen Test Center in March of 2013. If a vehicle is located OCONUS, at its option the Contractor shall either correct the warranted cracking upon return of the vehicle to a CONUS location as set forth above, or shall provide repair materials and instructions required for the Government to make the correction.

*C.29.2.5 CONTRACTOR REPORTING: The Contractor shall conduct a Warranty Start of Work meeting with the Government within 30 days of acceptance of this contract warranty language. A draft Warranty Technical Bulletin (TB) IAW MIL-PRF-63034b shall be provided at the Start of Work Meeting. The Government will provide comments within 10 days of the Start of work meeting. The final Warranty Technical Bulletin shall be provided within 30 days of receipt of Government comments. The Contractor shall be responsible for providing status reports on Army unit warranty claims to include Army unit information, vehicle serial number, description of defect and the status of each claim to the Product Management Office Assured Mobility Systems and Contracting Officer within 7 calendar days of receipt of a claim. The contractor will provide a final report within 7 days of resolution of a claim.

*C.29.2.5.1 The Warranty Technical Bulletin shall include all content requirements of MIL-PRF-63034b and also comprehensively detail how the Contractor shall fully administer the warranty, name and contact information (to include email/phone number) of the Contractors warranty point of contact, how the unit will file a claim, how the claim will be processed, and turn-around time for claims.

*C.29.2.6 EXCLUSIONS: The warranty set forth shall not apply to any defect caused by misuse or abuse of the end item, damage incurred

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due to accident, during Government transportation, or due to combat damage.

C.30-Explosively Formed Penetrator (EFP) Kit

The contractor shall provide EFP Kits in accordance with the revised Purchase Description Paragraph 3.18e1), as specified in the Classified Addenda to the Purchase Description. The EFP kit is required to comply with all other sections of this contract. To include but not limited to Logistics.

C.31-Rocket-Propelled Grenade (RPG) Kit

The contractor shall provide RPG Kits in accordance with the revised Purchase Description Paragraph 3.18e2), as specified in the Classified Addenda to the Purchase Description. The RPG kit is required to comply with all other sections of this contract. To include but not limited to Logistics.

C.32-Ballistic Test Asset

The contractor shall provide a ballistic asset which will be used for mine blast testing to support Program of Record (POR) Testing for the Mine Protected Clearance Vehicle (MPCV). The test is specifically designed for crew survivability. The ballistic asset shall be developed with the same armor and seat locations that will be produced for the with arm vehicles produced under this contract.

C.32.1 The asset does not have to have an interrogation arm or be functional (no electrical wiring or hydraulic hose routing is required) but needs to have a rolling capability and shall have the following:

Required equipment:

- MMPV armor (including transparent) and spall liner configuration
- MMPV w/Interrogator Arm variant configured seats (including: seat mounts, foot rests, and restraints, etc.)
- Representative rear door installations, roof hatches, and floor
- Appropriate vehicle weight distribution (i.e. engine, transmission, transfer case, etc. see NOTE below)
- Appropriate vehicle ride height (does not have to contain POR {upgraded} suspension and tires. The Government can adjust the ballistic test asset ride height).
- Any additional undercarriage components that would aid the crew during a mine blast
- Non-functional instrument panel / dash board and steering column

NOTE:

- If a functional engine, transmission, and transfer case are not available, and/or their inclusion would impede delivery within the Governments required timeframe (July 31, 2008), the Government can ballast the vehicle with surrogate weight.

C.32.2 Vehicle Information The Contractor shall provide to the Government vehicle and major component (i.e. engine, transmission, transfer case, etc.) weights and locations as well as provide the center of gravity location so that the Government can ballast the vehicle to the proper weight for the mine blast event.

C.33 Operational Needs Statement (ONS) Vehicles:

The Contractor shall build and deliver ONS vehicles configured in accordance with ATPD 2372 MMPV ONS (Attachment 0028) Dated 15 April 2009. All sections of this contract apply to the production and procurement of the MMPV ONS vehicles unless otherwise noted below.

C.33.1 ONS Vehicle Test Requirements:

The Government requires that two vehicles be delivered IAW C.33 to be used for Capabilities and Limitations testing and Safety Confirmation to be completed at Aberdeen Proving Ground Maryland. 1 vehicle will be configured as a XM1226 and 1 configured as a XM1229 per ATPD 2372 MMPV ONS. Sections C.21.7 through C.21.7.2.3, C.21.10, and C.22 through C.22.2.9 do not apply to ONS vehicle produced under this contract. The Government also requires FSR support for the C&L/SC. The two C&L vehicles are required to have an RPG kit as referenced in paragraph C.31 installed once the vehicles are processed at APG. The two C&L vehicles and the Ballistic Test Asset referenced in paragraph C.32 require a simulated EFP kit to be installed at APG. The simulated EFP kit is a weight and dimensionally accurate representation of an actual EFP Kit as required in paragraph C.30. The simulated EFP kits are required to be marked with Weight Representative only not Armor.

C.33.2 ONS Vehicle CONFIGURATION MANAGEMENT:

C.33.2.1 The MMPV ONS Systems, delivered with this Contract, must comply with all testing requirements in ATPD 2372 MMPV ONS paragraph 4.

C.33.2.3 Configuration Management Requirements

C.33.2.3.1 Configuration Management Upon completion of the Final Inspection Record (FIR) the Contractor shall implement configuration control methods and procedures that maintain the integrity of the unit to ensure that the form, fit and function characteristics of the

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MMPV ONS are met. When configuration changes are proposed, the Contractor shall notify the Government PCO or designated representative prior to change(s).

C.33.2.3.2 Configuration Status Accounting Report Information. The Contractor shall provide a Configuration Status Accounting Report in accordance with DI-CMAN-81253A, CDRL A051.

C.33.2.3.3 The Contractor shall prepare a Bill of Material (BOM) in Contractor format. The BOM shall accurately reflect the as-built condition and shall be submitted concurrently with the initial ONS vehicle delivery. Changes made during production will require the Contractor to update and resubmit the BOM. The BOM shall constitute the approved Product Configuration Identification (PCI) for this item. The Contractor shall keep records of all changes which impact the PCI prior to C&L/SC and Inspection. The records shall include at a minimum the following information: contractor-supplied unique control numbers, date of submission, complete technical description of change, reason for change, systems affected by the change, list of components remove/reused and/or new components and Contractor primary point of contact for Configuration Management. Logistics impacts (Maintenance, Spares, Training, Special Tools, Technical Manuals, etc.) shall be addressed and delineated. Upon request, Contractor records shall be made available for Government review. Any item changes made will require the Contractor to update and resubmit the affected portions of the BOM. CDRL A051.

C.33.3 ONS Vehicle Logistics Requirements: The Government requires logistics support for the ONS vehicles delivered under this contract as outlined below.

C.33.3.1 The Contractor shall deliver BII, ISP, ASL and PLL that matches the vehicle configuration IAW paragraph C.33 and Attachments 0029, 0030, 0031 and 0032.

C.33.3.2 Transportability Report: The Contractor shall provide a transportability report that matches the ONS vehicle configuration IAW CDRL A046.

C.33.3.3 ONS Vehicle Commercial off the Shelf Manuals: The Contractor shall provide validated COTS Operator, Maintenance and Spare Parts manuals that match the vehicles delivered as ONS vehicles. COTS manuals shall be over-packed in each vehicle delivered under this contract. The Government requires two reviews of the COTS manuals before final delivery to be conducted at the contractors facility in York PA. CDRL A048.

C.33.3.4 Training Support Package: The Contractor shall provide a COTS critical task list, program of instruction (POI), lesson plans instructor guide and student guide for both operator and maintenance level training that supports the ONS vehicle configuration. FSR shall be capable of conducting ONS vehicles training IAW paragraph C.26.2. CDRL A050.

C.33.3.5 Special Tools: The contractor shall deliver special tools to support the ONS vehicles configuration IAW CDRL A047.

C.33.3.6 Safety Assessment Report: The contractor shall deliver a Safety Assessment report that matches the XM1226 and XM1229 ONS vehicles IAW CDRL A049.

C.34 Consideration Items (Reference Modification P00019)

C.34.1 In consideration for the approval of waivers under Modification P00019 BAE shall provide the following requirements:

a. Delivery of L-Rod kits to be installed on POR FAT vehicles delivered under Delivery Order 0001 / CLIN 1002AA Qty (6) MMPV Test Assets. L-Rod kits were delivered for ONS vehicles on Delivery Order 0007 / CLINS 2051AM, 2061BM and CLIN2071AA. This consideration provides new POR configuration kits to replace the previously installed kits. Two of the six kits are currently installed on test vehicles in Yuma. Two of the L-Rod kits shall be installed on MMPVT0001 and MMPVS0001 at BAE Systems Sterling Heights, MI Prototype facility to support logistics activities. The remaining two L-Rod kits will be delivered to Letterkenny Army Depot within 30 days of the date of this agreement.

b. Delivery of Side Door Assist Latch Lock retrofit kits for 156 EOD vehicles. BAE Systems will ship these kits to Letterkenny Army Depot for final acceptance. The delivery date of these kits will be mutually agreed to upon successful completion of the Performance Verification Testing and Baseline lockdown.

c. Delivery of AFES Crew Compartment retrofit kits for 156 EOD vehicles. BAE Systems will ship these kits to Letterkenny Army Depot for final acceptance. The delivery date of these kits will be mutually agreed to upon successful completion of the Performance Verification Testing and Baseline lockdown.

d. Delivery of water Intrusion retrofit kits for 156 EOD vehicles. BAE Systems will ship these kits to Letterkenny Army Depot for final acceptance. The delivery date of these kits will be mutually agreed to upon successful completion of the Performance Verification Testing and Baseline lockdown.

C.34.2. In addition to the above consideration, BAE Systems, Land & Armaments L.P. (BAE Systems) is required to perform the following as a condition of the Governments agreement to waive nine (9) requirements:

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a. All parts directly related to the CBRN Overpressure and Filtration System that do not affect the fresh air ventilation/air filtration shall be removed from the Delivery Order 01 and Delivery Order 08 vehicles at no cost to the Government and logistic deliverables, as specified in attached Waiver to ATPD 2372 (01May2009), section 3.18.2 Chemical Biological Radiological and Nuclear (CBRN) Collective Protection. The Technical Data Package, Operator Manual, Maintainer Manual and Training Support Package shall be updated to remove all work packages associated with the CBRN system. CBRN parts removed from vehicles will be abandoned in place upon removal from vehicle.

b. Updates to CDRL A022 the MMPV Safety Assessment Report (SAR) and CDRL A023 Hazardous Material Report (HAZMAT Reports). The scope of these updates will be in accordance with CDRL A022 and A023, previously submitted and approved.

c. One (1) I&KPT Operator training and one (1) I&KPT Maintainer course provided at a TBD CONUS location in support of verification of the Training Support Package. These classes are approximately one week in duration each and required to verify the content of the Training Support Package.

C.35 In consideration for the approval of Connectors on Wiring Harnesses waiver under Modification P00022, BAE shall provide a one year warranty on the seven specific harnesses covered by the waiver, on all 138 vehicles. If any of the subject harnesses fail during the one year warranty period due to nonconforming connectors, BAE shall provide replacement wiring harness(es) that failed at no cost to the Government. (Reference Modification P00022)

*C.36 Consideration Items (Reference Modification P00024)

*C.36.1 In consideration for the approval of deviation D0041-D008-026 A-Pillar Reinforcement Addition under Modification P00024 and for the associated testing at Aberdeen Proving Grounds (APG), BAE Systems shall provide the following:

*a. A 24-month warranty from 1 February 2014 for cracking of High Hard 46100 Steel on the 138 vehicles to be delivered under MMPV Delivery Order 0008. Clause C.29.2 has added to reflect this consideration.

*b. Agreement that no equitable adjustment request will be submitted for additional cost incurred for shipment of Vehicle Number MMPVS0001 to SPAWAR. Authorization for shipment was provided pursuant to Government letter dated 14 March 2013.

*c. BAE Systems shall provide labor support to install padlocks and secure vehicles prior to shipment from BAE York to SPAWAR for all remaining Delivery Order 0008 vehicles. Authorization to ship the padlocks was provided as Government Furnished Material (GFM) pursuant to Government letter dated 6 May 2013 and via Modification 15 to Delivery Order 008.

*d. BAE Systems shall update DO 0008 CLIN 5001AA Prescribed Load List (PLL) kit to remove three pieces of "dirty" hardware and replace them with "clean" hardware. (This issue relates to the presence/absence of a hazardous material, Hexavalent Chromium Plating.) PLL kit contents and delivery date were updated pursuant to Government Letter dated 16 May 2013. Updated Attachment 0004 Prescribed Load List (PLL) Parts List for the Program of Record (POR) vehicles and CLIN 5001AA delivery schedule update are reflected in Modification 15 to DO 0008.

*e. BAE Systems shall provide a Level of Repair Analysis (LORA) as specified in C.9.3 Level of Repair Analysis (LORA) and in accordance with CDRL A052 Level of Repair Analysis (LORA).

*Text Added/Changed by Modification P00024.

*** END OF NARRATIVE C0001 ***

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SECTION E - INSPECTION AND ACCEPTANCE

E.1 Specific First Article Test Vehicle Requirements Matrix (reference FAR 52.209-4 above):

<u>Vehicle</u>	<u>QTY</u>	<u>Mileage</u>	<u>Test Site</u>	<u>Test Type</u>
XM1226	1	--	York, PA	LOG DEMO / MFG STD
XM1226	1	--	EDGEWOOD/APG	Collective Protection Tests / Survivability
XM1226	3	6,000 each	YPG, AZ	Ram / Automotive Performance
XM1227	1	6,000	WISM/YPG	EMI / Automotive Performance LOG / MFG Standard

E.2 Control Test. At the discretion of the PCO, a vehicle may be selected by the Government from the production line and subjected to testing by the contractor (Government witnessed and participation) in accordance with quality conformance and test requirements prescribed in the purchase description, in order to evaluate and assess process control of production vehicles, as a result of quality deficiencies. When exercised by the PCO, the control test(s) shall be performed on selected production unit(s), at anytime either before or after completion of the contractor conducted FIR. The control test(s) shall provide documentation of all test results, deficiencies and root cause corrective actions. The control test(s) shall be conducted at no additional cost to the Government. Paragraphs C.21.7.2.2 (Test Vehicle System Failure) and C.21.7.2.3 (Vehicle Retest), shall apply.

E.3 Control Test Vehicle Acceptance. When exercised by the PCO, selected vehicle(s) that undergo the control test(s) will NOT be accepted by the Government on a DD 250, nor shall the contractor be eligible for payment until the control test vehicle has successfully passed all testing and FIR (government and contractor conducted). The final DD 250 will be approved AFTER the contractor has made all required root cause corrections to control test vehicle deficiencies and the lot inspections/corrections are completed.

E.4 Product Quality Deficiency Reports (PQDR) Field Generated. The contractor shall investigate and provide root cause failure analysis and corrective action for all PQDRs generated against products or supplies produced under this contract at no additional cost to the Government, including replacement of parts or components determined to be deficient or attributable to workmanship/product nonconformance. The contractor shall be responsible for all costs associated with shipping the QDR exhibit(s) to their designated location. Corrective actions requiring configuration changes shall follow the configuration requirements as specified in C.22.

E.5 PQDR Response Standard. The contractor shall provide a written response within 72 hours (electronically) to all field PQDRs. Product Quality Deficiency Reports that relate to criticality or safety shall require a written response within 24 hours.

E.6 A final written response in contractor format shall be submitted per DI-RELI-81315 (T) to the designated government representative within 30 calendar days of receipt of a PQDR. If a final response is not ready for submittal, the contractor shall submit an interim response detailing the status of the investigation. The response shall report on the actions taken, root cause, corrective action, and contractor's position with respect to repair or replacement parts [CDRL A037].

E.7 Product Quality Deficiency Report (PQDR) Government Furnished Material (GFM). Upon receipt of deficient Government Furnished Material (GFM), the contractor shall prepare and submit a PQDR (SF 368) to the designated government office per DI-QCIC-80736 [CDRL A037].

E.8 Certifications. All certifications provided by the contractor shall include appropriate supporting documentation such as, but not limited to: test data, materiel analysis, drawings, purchase orders, specifications, etc. In the event that particular certifications are not acceptable to the Government, the contractor shall conduct additional examinations and tests and/or provide additional documentation as required to verify conformance at no additional cost to the Government.

a. The contractor shall provide a new or updated certification whenever a change is made in the:

- (1) process used to produce a certified product.
- (2) legal requirement for a standard of a certified product.
- (3) supplier of a certified product.
- (4) event of a new contract/rebuy.

b. Subcontracting does not relieve the contractor from providing all the necessary supporting documentation for all certifications provided to the Government.

E.8.1 Process Certification. Process certifications shall include a written description of the process, the written instructions to those who conduct and assure the process with the title(s) of the individual(s) responsible for assuring the control of that process where it is manufactured into the product.

E.8.2 Material Certification. Material certifications shall include a copy of the material analysis. If the material is made by a

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subcontractor, a copy of the purchase order is also required.

E.8.3 Test Certification. Test certifications shall be prepared per the following information: drawing number; test/product specification title, number and edition; the grade or type for which the product was tested; the number of specimens/samples tested; the requirements; the actual results obtained; and copies of purchase orders for subcontracted products. Subcontracting does not relieve the contractor of providing the above information as part of the certification.

E.8.4 Compliance Certification. Compliance certifications shall include, as a minimum, a written description of how compliance was achieved.

E.9 Process Audits. The Government will conduct periodic process audits at the contractor's facilities to evaluate the effectiveness processes used in fabricating vehicles for delivery under this contract within his total quality system implemented for this contract. Additionally, the Government will participate in contractor conducted quality audits (quality system, product, and process) on his subcontractors and key suppliers.

E.10 Lot Size. For the purpose of this contract, a lot size shall be defined as two (2) items (whether 2 vehicle systems or 2 component parts). Inspection of the Medium Mine Protective Vehicle (MMPV) systems shall be 100 percent.

E.11 Welding

E.11.1 Welding Design. The Contractor in performance of this contract shall ensure that all steel and aluminum weldments meet the design and fabrication requirements in American Welding Society (AWS) D 1.1-96 and (AWS) D1.2-96 or approved equivalent.

E.11.2 Welding Procedures. Prior to production, the Contractor is responsible for developing welding procedures IAW American Welding Society (AWS) weld code requirements and submit the Contractors draft version to the procuring activity for approval. The use of pre-qualified weld joints as specified in AWS D1.1 does not preclude submittal of welding procedures. Repair welding of defective parts shall require Government approval and a written procedure identifying proper technique and approach to correct defective product. The Contractor, at his option, can utilize the Ground Combat Welding codes for Qualifying and repair of non-ballistic or ballistic welding processes. The Ground Combat Welding Code can be obtained by written request to:

Commander, US Army Tank-automotive and Armaments Command
ATTN: AMSTA-TR-E/Materials
6501 E. 11 Mile Road
Warren, MI 48397-5000

E.11.3 Alternate Welding Standards. The Contractor may utilize alternate standards or codes once the Contractor or the Contractors suppliers have demonstrated that equivalent or better quality and performance can be obtained by their use. It is the Contractors responsibility to demonstrate such equivalence. If the Contractors component supplier will not release specific proprietary information, the Government reserves the right to conduct an on-site review of the Contractors suppliers quality system and weld processes to verify his/her capability of producing acceptable welds. The Government reserves the right to approve/disapprove the use of any and all such alternative weld standards and specifications. The demonstrated equivalent shall be verified prior to fabrication of any production weldment.

E.11.4 Previously Qualified Procedures. If the Contractor previously qualified welding procedures under another DOD contract, the PCO may waive the requirements of paragraphs E.1.2 and E.1.3 of this clause. The Contractor must submit such a request to the PCO in writing, identifying the previous contract(s) under which the Contractor qualified procedures that produced acceptable workmanship specimens. The Contractor may use previously qualified weld procedures provided ALL the following requirements are met:

- a. The weld procedure was qualified and approved on a previous DOD contract
- b. The Contractor has certified welders and equipment
- c. There was no break in production for more than six months
- d. A favorable quality history

If the Contractor meets these requirements, and wants approval to use previously qualified weld procedures, the Contractor must submit a written request to the PCO, attaching proof of previous qualifications and summary of the Contractors and/or its quality history.

E.11.5 Welder Qualification. Before the Contractor or the Contractors suppliers assign any welder or welding operator to perform manual, semi-automatic or automatic welding work, or use any automatic welding equipment for work covered by this contract, the Contractor MUST ensure that all welding equipment used in the performance of this contract has been certified, and that the Contractors welders or welding operators have passed qualification testing, as prescribed by the applicable qualification standard identified in paragraphs E.1.2 or E.1.3 of this clause.

E.11.6 Visual Weld Inspection. During performance of this contract, the Contractor shall verify weld quality and workmanship using qualified inspectors trained to perform these inspection functions. Acceptable qualification of the Contractor inspectors may be based

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on:

- a. current or previous certification as an AWS Certified Welding Inspector; or
- b. current or previous certification by the Canadian Welding Bureau (CWB); or
- c. inspection performed by an engineer or technician who is competent in the use of weld inspection techniques and equipment, on the basis of formal training or experience, or both, in metals fabrication, inspection, and testing.

E.11.7 The contractor is authorized to make welds in accordance with BAE Systems Medium Mine Protected Vehicle Weld Procedure Book Supplement, 17 November 2008, Attachment 0033.

*E.11.8 See Modification P00024 regarding Approved Deviation D00041-D008-026. (Reference Modification P00024)

E.12 End Item Paint Requirements

E.12.1 The Contractor shall assure all painting operations and inspections comply with Specified Drawing or MIL-C-53072(T). In the event of a conflict between Specified Drawing and MIL-C-53072(T) requirements, MIL-C-53072(T) shall take precedence.

E.12.2 The primer drying time requirement prior to topcoat application (reference MIL-C-53072(T) paragraph 3.5) is to be considered met if the topcoat application is performed within the parameters provided by the primer and topcoat vendors. Up-to-date vendor data and process recommendations for primer and topcoat should be maintained at the production facility.

E.12.3 "Combat Grade" Powder Coat Primers shall not be used as a substitute for electrocoat primers.

E.12.4 CARC paint pretreatment shall be as described in Section E.6. For surfaces that exceed 400 degrees F, CARC shall not be used; a commercial high heat paint or paint meeting MIL-B-14105 may be used. Adhesion testing shall be performed on a completely cured CARC finish.

E.13 CARC Paint-Pretreatment Requirements for Ferrous Armor, Steel and Aluminum Surfaces

(a) All ferrous armor plate (and structural steel equal to or greater than 0.187 inches thick that is in a hot rolled or rusty surface condition) shall be abrasive blasted to a 1.0 mil minimum surface profile prior to painting. The epoxy primer shall be applied within 4 hours of blasting. This period can be extended to 8 hr. provided the blasted material is protected in a low humidity environment and there is no visual surface oxidation. Material that no longer has the appearance of white metal after blasting shall receive a pretreatment prior to primer application.

(b) Ferrous metals less than 0.187 thickness and galvanized surfaces shall be cleaned and pretreated with a Type 1, microcrystalline zinc phosphate system per TT-C-490E. Ferrous armor can be zinc phosphated but in no case can this material be acid pickled prior to processing. Armor that has been severely cold formed/bent shall not be zinc phosphated. Hot rolled or rusty structural steel can be cleaned with mild acid cleaners such as citric or phosphoric rather than abrasive blasted prior to processing. Alternate pretreatment systems for ferrous substances must meet the performance tests specified in paragraphs 3.5.7, 3.5.8, 4.2.7, and 4.2.8 of TT-C-490E. Corrosion resistance tests on steel substrates will be conducted on a monthly basis (two test coupons) when solvent-borne primers are used and bi-monthly (two test coupons) when electrocoat primers are used. This test frequency shall begin once the process has been found to be in statistical control.

All TT-C-490E (Type I) zinc phosphate pretreatment systems must be documented and approved by the procuring activity prior to use. The procedure containing all the elements specified in paragraph 3.2 of TT-C-490E shall be available for review at the applicator's facility. The prime contractor shall notify the procuring activity no less than 45 days prior to start of pretreatment/painting that the procedure is available for review and approval. Qualification will consist of verification that the process with its controls can meet the performance requirements in the specification. Testing for qualification will be conducted at a government approved test laboratory.

Note: Zinc phosphate systems for galvanized surfaces require different controls than those for steel. Hot dipped galvanized surfaces are highly prone to chlorine/chloride contamination from the galvanizing flux process. This contaminant must be removed prior to pretreatment for the coating system to pass these performance tests. Test coupons for salt spray/ACT shall have a maximum primer dry film thickness of 1.5 mils. The test coupons must duplicate the production painting process as closely as possible. If production is force cured, test coupons shall be cured in an identical manner.

(c) Qualification and control of pretreatment systems for galvanized substrates shall be performed using Accelerated Corrosion Test protocol contained in GM 9540P rather than salt spray. This test shall be performed at three month intervals (two test coupons) to ensure that the process remains in control.

(d) Aluminum substrates require a chromate conversion coating per MIL-C-5541E (or alternate, see note below), If any other alternate pretreatment is considered, it must pass 120 cycles of GM9540P with a design of experiments test matrix approved by the procuring activity . After completion of the cyclic salt environment exposure, the panels shall be scraped as described above, and shall have no

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more than 0.5 mm paint loss (creep-back) from the scribe. In addition, there shall be no more than 5 blisters in the field with none larger than 1mm diameter. After completion of the 120 cycle corrosion resistance test evaluation, each test panel will be subjected to cross hatch tape test (ASTM D3359, minimum tape adhesion rating of 45 oz. per inch of width). The test pattern shall be 4 lines x 4 lines scribed to the metallic layer at 2mm intervals (approximate) and shall be done no closer than 12 mm from any panel edge or the scribe. The removal of two or more complete squares of primer shall constitute failure. Any alternate system must demonstrate its ability to pass both corrosion and adhesion tests on 5 consecutive days of production to be considered acceptable.

Note: The only alternative products which have demonstrated their ability to meet these requirements for 5000 and 6000 series aluminum alloys are Alodine 5200 and Alodine 5700. Documented process controls shall be established which comply with the manufacturer's technical bulletin. Spray-to-waste systems will require fewer process controls than an immersion process.

(e) The use of TT-C-490E Type III: Vinyl Wash Primer (DOD-P-15328) is prohibited due to its hexavalent chromium content and high VOC level. Bonderite 7400 (Henkel) can meet the performance requirements of TT-C-490 E, Type 1 and can be used as a wash primer replacement. The application and control process shall be documented. This product is subject to the same salt spray requirements as a zinc phosphated product. The number of process controls for this product is dependent upon its method of application. The specific controls shall be in agreement with the product manufacturer's technical bulletin to provide the level of performance required for zinc phosphated substrates. Spray-to-waste applications will require fewer process controls than an immersion process.

(f) Acceptance of production painted parts is contingent upon the painted surface meeting the dry film thickness and cross hatch adhesion requirements. When a surface has been abrasive blasted, the dry film thickness requirement of the primer applies over the top of the surface profile. The use of multiple head cutters for acceptance testing is prohibited. The spacing of cuts for the cross hatch adhesion test (4 x 4 cuts) shall be 3.0 to 3.5 mm to compensate for variations in total paint film thickness. The CARC painted surface shall be free of any blisters, pores or coverage voids.[End of Clause]

E.14 Quality Records. All records of inspections, examinations, certifications, tests, supplier audits, and purchase orders shall be retained by the contractor for a period of 5 years after contract close-out. These records shall be made available (and copies provided) to the Government upon request. Additionally, where product or process deficiencies have occurred, the contractor's records shall provide documentation that fully describes the root cause of deficiencies and root cause corrective actions.

*Text Added/Changed by Modification P00024.

*** END OF NARRATIVE E0001 ***

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SECTION J - LIST OF ATTACHMENTS

<u>List of</u> <u>Addenda</u>	<u>Title</u>	<u>Date</u>	<u>Number</u> <u>of Pages</u>	<u>Transmitted By</u>
Exhibit AX	A052 LEVEL OF REPAIR ANALYSIS (LORA)	29-APR-2013	002	DATA
Attachment 0043	APPROVAL OF WAIVERS AND DEVIATIONS TO ATPD 2372	12-SEP-2012	036	EMAIL
Attachment 0047	LORA INPUT TEMPLATE CONTRACT ATTACHMENT	03-JUN-2013	001	EMAIL

CONTRACT DATA REQUIREMENTS LIST

Form Approval OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 440 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.: A052 B. EXHIBIT: AX
 C. CATEGORY: ANALYSIS D. SYSTEM/ITEM: MMPV Panther
 E. CONTRACT/PR NO.: W56HZV-08-D-0041 F. CONTRACTOR: BAE Systems, Land & Armaments L.P. (06085)

1. DATA ITEM NO. MP0005
2. TITLE OF DATA ITEM: LEVEL OF REPAIR ANALYSIS (LORA) REPORT
3. SUBTITLE: LORA
4. AUTHORITY: DI-SESS-81872 (T)
5. CONTRACT REFERENCE: C.9.3
6. REQUIRING OFFICE: AMSTA-LCC-MAM
7. DD250 REQ: LT
8. APP CODE: A
9. DIST. STATEMENT REQUIRED: SEE C.2
10. FREQUENCY: AS REQ
11. AS OF DATE: 0
12. DATE OF FIRST SUB: 30 DAC
13. DATE OF SUBS: SEE BLOCK 16

14. DISTRIBUTION/ A. ADDRESSEE	B. COPIES		
	PAPER	EMAIL	CD-ROM
DRAFT			
AMSTA-LCC-MAI	0	1	0
SFAE-CSS-MR-A	0	1	0
FINAL			
AMSTA-LCC-MAI	0	1	1
SFAE-CSS-MR-A	0	1	0
NOTICE OF DELIVERY			
AMSTA-LCC-MAI	0	1	0
SFAE-CSS-MR-A	0	1	0
CONTACTING	0	1	0
15. TOTAL:	0	7	1

16. REMARKS:

TAILORED: ADJUST PARA 2 THE REPORT IS IN CONTRACTOR FORMAT; SOURCE SUBMITTAL SHALL BE CAPABLE OF BEING LOADED INTO COMPASS, IN THE FORMAT AND CONTENT OF ATTACHMENT 0047.

BLK 7: DD 250 DUE WITH LAST SUBMISSION ONLY. ALL OTHERS SHALL BE SUBMITTED WITH A LETTER OF TRANSMITTAL. CONTRACTOR CAN ONLY INVOICE UPON FINAL GOVERNMENT ACCEPTANCE.

BLK 12: THE LORA SHALL BE DELIVERED SIXTY (60) DAYS DACA. THE FOLLOWING ON THE LISTS OF TASKS THAT WILL BE ACCOMPLISHED:

1. COMPARE CURRENT PROVISIONING DATABASE TO COMPASS INPUT FILES.
2. INCORPORATE NEW DATA.
3. CREATE MASTER LORA INPUT FILE. DELIVER TEN (10) DAYS AFTER DACA.
4. REMOVE HARDWARE FROM MASTER LORA INPUT FILE WITH DOLLAR FIGURE BELOW \$100.
5. SELECT OTHER PARTS OVER \$100 TO REMOVE. MUST BE CONFIRMED BY USG.
6. CREATE REDUCED LORA INPUT FILE. DELIVER TWENTY (20) DAYS AFTER DACA.
7. CONDUCT A REVIEW WITH USG. TWENTY (20) DAYS AFTER DACA.
8. ENTER ALL DATA IN COMPASS.
9. RUN REPORT/TROUBLESHOOTERRORS AND ANALYZE DATA.
10. DELIVER FINAL COMPASS REPORT AND SUMMARY REPORT FIFY FIVE DAYS (55) AFTER DACA.
11. CONDUCT FINAL BRIEF TO USG SIXTY (60) DAYSAFTER DACA.

BLK 10/13: THE CONTRACTOR SHALL SUBMIT THE FINAL LORA AND SOURCE FILES, TO INCLUDE ALL CHANGES AND DELETIONS. THE GOVERNMENT WILL PROVIDE COMMENTS WITHIN FOURTEEN (14) DAYS AFTER RECEIPT.

GOVERNMENT RECEIPT OF DOCUMENTATION DOES NOT CONSTITUTE ACCEPTANCE. AMSTA-LCC-MAM WILL PROVIDE NOTICE OF ACCEPTANCE FOR DOCUMENTATION THROUGH THE PCO TO CONTRACTOR WITHIN THE ESTABLISHED TIME FRAME AND GUIDELINES CALLED OUT IN THE SCOPE OF WORK AND APPLICABLE CDRLS.

17. PRICE GROUP:

18. ESTIMATED TOTAL PRICE:

G. PREPARED BY: BRANDON KACZMAREK
ILS MANAGER
SFAE-CSS-MR-A

I. APPROVED BY: SHAWN MARTIN
TEAM Supervisor
AMSTA-LCC-MAM

H. DATE: 31 May 2013

J. DATE: 31 May 2013

ATTACHMENT 0043

APPROVAL OF WAIVERS AND DEVIATIONS TO ATPD 2372

1. The following waivers to ATPD 2372 are incorporated as Attachment 43 (Modification P00019):
 - a. Waiver to ATPD 2372 (01May2009), section 3.18.2 Chemical Biological Radiological and Nuclear (CBRN) Collective Protection dated 24 May 2012.
 - b. Waiver to ATPD 2372 (01May2009), section 3.5.2 Electrical System Capacity dated 22 Feb 2012.
 - c. Waiver to ATPD 2372 (01May2009), section 3.6.2 Blackout Lights dated 9 May 2012.
 - d. Waiver to ATPD 2372 (01May2009), section 3.16.6 and 3.18.1 Electromagnetic Environmental Effects (E3) requirements. and Electromagnetic Radiation Hazards (EMRADHAZ) dated 22 Feb 2012.
 - e. Waiver to ATPD 2372 (01May2009), section 3.17.5 Repairability dated 22 Feb 2012.
 - f. Waiver to ATPD 2372 (01May2009), section 3.12.5 Storage. (FOUO) dated 22 Feb 2012.
 - g. Waiver 0041-D-001, DO 008-05 to ATPD 2372 (01May2009), section 3.13.2.9 Turning performance dated 9 May 2012.
 - h. Waiver 0041-D-001, DO 008-04-A to ATPD 2372 (01May2009), section 3.14.4 Rail Transportability dated 22 Feb 2012.
 - i. Waiver 0041-D-001, DO 008-04-B to ATPD 2372 (01May2009), section 3.14 Transportability dated 24 May 2012.
2. The following waivers to ATPD 2372 are incorporated as Attachment 43 (Modification P00021):
 - a. Deviation to ATPD 2372 (01May2009), Vinyl Wash (Paint) Primer Requirements, section 3.2.6 Finish dated 3 December 2012.
 - b. Waiver to ATPD 2372 (01May2009), section 3.16.3 Rain dated 2 October 2012.
3. The following waiver and deviations to ATPD 2372 are incorporated as Attachment 43 (Modification P00022):
 - a. Waiver to MIL-STD-38999 Rev L, "Connectors on Wiring Harnesses," dated 5 Oct 2012.
 - b. Deviation to MMPV EOD Crew Capsule 4292709-114-PE2, "EOD Conversion - Capsule Deviation," dated 24 Sep 2012.
 - c. Deviation to MMPV EOD HVAC AC Evaporator Drain 12539142 "EOD Conversion - HVAC Evaporator Drain Configuration," dated 24 Sep 2012.
 - d. Deviation to MMPV EOD Personal Heater Deviation 12519434 "EOD Conversion - Personal Heater Deviation dated 24 Sep 2012.
 - e. Deviation to MMPV EOD Roof Armor Plate 1258396 "EOD Conversion - Roof Armor Deviation," dated 24 Sep 2012.
4. The following deviations to ATPD 2372 are incorporated as Attachment 0043 (Modification P00023):
 - a. Deviation D0041-DO08-025 "Corrosion and Paint" to Section E-8 "52.211-4030 BASIC APPLICATION AND TESTING REQUIREMENTS FOR CHEMICAL AGENT RESISTANT COATINGS (CARC) ON METALLIC SURFACES" and E.13 "CARC Paint-Pretreatment Requirements for Ferrous Armor, Steel and Aluminum Surfaces" dated 13 March 2013.
 - b. Deviation 0041-D-001,DO 008-3 Rev 1 section C.17 "azardous Material" dated 19 March 2013.
- *5. The following deviation to ATPD 2372 is incorporated as Attachment 0043 (Modification P00024):
 - a. Approved Deviation D0041-DO08-026 A-Pillar Reinforcement Addition dated 5 April 2013.

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MOD/AMD P00024
ATT/EXH ID Attachment 0047
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LORA INPUT TEMPLATE CONTRACT ATTACHMENT
DATED 03 June 2013
INCORPORATED BY REFERENCE