

2. Amendment/Modification No. P00059	3. Effective Date 2004SEP27	4. Requisition/Purchase Req No. SEE SCHEDULE	5. Project No. (If applicable)
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6. Issued By TACOM WARREN AMSTA-AQ-ATBA JIM LEWIS (586)574-5225 WARREN, MICHIGAN 48397-5000 HTTP://CONTRACTING.TACOM.ARMY.MIL EMAIL: LEWISJA@TACOM.ARMY.MIL	Code	W56HZV	7. Administered By (If other than Item 6) DCMA INDIANAPOLIS EMMETT J. BEAN CENTER 8899 E. 56TH ST. INDIANAPOLIS, IN 46249-5701	Code	S1501A
			SCD C PAS NONE ADP PT HQ0337		

8. Name And Address Of Contractor (No., Street, City, County, State and Zip Code) AM GENERAL LLC 105 N NILES AVE SOUTH BEND, IN. 46617-7025 TYPE BUSINESS: Large Business Performing in U.S.	<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. DAAE07-99-C-S027
	<input type="checkbox"/>	10B. Dated (See Item 13) 1999SEP15
Code 0H3G6	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 THE 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

Contract Expiration Date: 2007SEP30

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) MARY K. REHM REHMMA@TACOM.ARMY.MIL (586)574-6553		
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 2004SEP27

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MOD/AMD P00059

Name of Offeror or Contractor: AM GENERAL LLC

SECTION A - SUPPLEMENTAL INFORMATION

1. The purpose of this modification is to extend the contract for an additional three years, add additional Level of Effort hours and include a new composite labor rate for each of the three years.
2. A total of 250,000 level of effort labor hours are being added to the contract, to be used over the next three years as needed. Work directives will be the mechanism used to award labor hours to the contract. New funding or transfer of funding will be used to implement the work directives. New funding will continue to be executed by contract modification. The contract is now extended to 30 Sep 2007. The breakout of labor hours for each of the three years is contained in Section B.
3. New CLINs are established for each of the three years. CLINs 0501, 0502, 0601, 0602, 0701 and 0702 have been created for years 2004-5, 2005-6 and 2006-7 respectively.
4. The following chart is a list of the CDRLs and DIDs in the contract. The chart depicts any changes made to the CDRLs and DIDs.

<u>Exhibits</u>	<u>Reference Location</u>	<u>Description/Title</u>	<u>Action</u>
A	C.1.4	Data Items Descriptions (DIDs)	NEW
A	C.1.4	Contract Data Requirements (CDRLs)	NEW

<u>CDRLs</u>	<u>CDRL No.</u>	<u>Description/Title</u>	<u>Reference Location</u>	<u>Action</u>
A001	DI-FNCL-80912	Performance and Cost Report	C.1.6	No Change
A002	DI-MISC-80508	Technical Report, Study/Services	C.2, C.6.2, C.2.7	No Change
A003	DI-DRPR-80651(T)	Engineering Drawings	C.2.7	No Change
A004	Reserved			Deleted DI-MISC-80508
A005	Reserved			Deleted DI-MISC-80508
A006	Reserved			Deleted DI-MISC-80508
A007	DI-CMAN-80639C	Engineering Change Proposals (ECPs)	C.2.11.1.2.1, C.2.11.1.2.2, C.2.11.1.2.8, C.2.11.1.2.9	Replaces DI-CMAN-81554(T)
A008	DI-CMAN-80642C	Notices of Revision	C.2.11.1.2.1	Replaces DI-CMAN-81551
A009	DI-DRPR-81000A	Product Drawings & Associates Lists	C.2.11.1.5	No Change
A010	DI-CMAN-80463C	Engineering Release Record (ERR)	C.2.11.1.3, C.2.11.1.3.1, C.2.11.1.3.3	Replaces DI-CMAN-81552
A011	DI-CMAN-81253A	Configuration Status Accounting Info	C.2.11.1.4.3	Replaces DI-OT-89-12345C(T)
A012	DI-SESS-81011B	Drawing Number Assignment Report	C.2.11.1.18, C.11.1.18.2	Replaces DI-DRPR-81011A(T)
A013	DI-PACK-80880A	Transportability Report	C.2.13	No Change
A014	DI-MISC-80048	Scientific & Technical Reports Summaries	C.2.13	No Change
A015	DI-SAFT-80970A	Safety Critical Items/Characteristics Report	C.3.3.6	No Change
A016	DI-DRPR-81000A	Product Drawings & Associates Lists	C.7.6.5	No Change
A017	DI-MISC-80526C	Parts Management Plan	C.2.10.3	No Change
A018	DI-SAFT-80102A	Safety Assessment Report	C.8.2.1	No Change
A019	Reserved			Deletes DI-PACK-80120A(AT)
A020	DI-PACK-80121B	Special Packing Instructions	C.9.3	Replaces DI-PACK-80121A(T)
A021	DI-PACK-81581	Equipment Preservation Sheet	C.9.6	Replaces OT-93-12270
A022	DI-PACK-80683A	Container Design Retrieval Sys Search Req	C.9.5	Replaces DI-PACK-80683(T)
A023	DI-PACK-80684A	Container Design Retrieval Sys Data Input	C.9.5	Replaces DI-PACK-80684(T)
A024	Reserved			Deletes DI-DRPR-81000A
A025	MIL-STD-40051-7	MAC Update	C.7.5.2	No Change
A026	MIL-STD-40051-5	PMCS Update	C.7.5.3	No Change
A027	DI-ALSS-81529	LMI Data Product(s), ATT B, C	C.9.2	No Change
A028	DI-ALSS-81530	LMI Summaries	C.7.6.1	No Change
TM01	MIL-STD-40051	Operator Manual, -10	C.7.7	No Change
TM02	MIL-STD-40051	Hand Receipt, -10HR	C.7.7	No Change
TM03	MIL-STD-40051	Unit, DS, GS Maintenance, -34	C.7.7	No Change
TM04	MIL-STD-40051	Unit, DS and GS RPSTL, -34P	C.7.7	No Change
TM05	MIL-STD-40051	SOMARPI	C.7.7	No Change
TM06	MIL-STD-40051	Interactive Electronic TM (new)	C.7.7	No Change
TM07	MIL-STD-40051	Interactive Electronic TM (Update)	C.7.7	No Change

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- 5. A revised Statement of Work (SOW) is included in Section C. Some items in the original SOW are obsolete. The paragraphs listed in the above chart have been changed to reflect changes to CDRs, DIDs, or current requirements.
- 6. Sections F.1 and H.6.1 have been modified to show the new expiration date of the contract and the dates for each of the options.
- 7. Attachment 002 has been revised to reflect the current List of Applicable Documents/Standards. Attachment 006 has been deleted. Attachment 008 has been replaced with the current ACMS Preparation and Delivery Requirements. Attachments 009 and 010 have been added to Section J. All other attachments not mentioned here remain in full force.

*** END OF NARRATIVE A 028 ***

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Name of Offeror or Contractor: AM GENERAL LLC

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0501	<p>SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS</p> <p><u>SERVICES LINE ITEM</u></p> <p>NOUN: SERVICE OPTION SECURITY CLASS: Unclassified</p> <p>5th Option Year</p> <p>Hourly Composite Rate:</p> <p>Estimated Cost: \$76.90 Fixed Fee: <u>6.11</u> Total: \$83.01</p> <p>Option Period: 01 Oct 04 through 30 Sep 05</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p>				

CONTINUATION SHEET

Reference No. of Document Being Continued
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Name of Offeror or Contractor: AM GENERAL LLC

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0502	<p><u>DATA ITEM</u></p> <p>NOUN: DATA ITEM SECURITY CLASS: Unclassified</p> <p>Technical Data for 5th Option Year</p> <p>Monthly Cost & Performance Report</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p>	1	LO	\$ ** NSP **	\$ ** NSP **

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Name of Offeror or Contractor: AM GENERAL LLC

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0601	<p><u>SERVICES LINE ITEM</u></p> <p>SECURITY CLASS: Unclassified</p> <p>6th Option Year</p> <p>Hourly Composite Rate:</p> <p>Estimated Cost: \$80.86 Fixed Fee: <u>6.42</u> Total \$87.28</p> <p>Option Period: 01 Oct 05 through 30 Sep 06</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p>				

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Name of Offeror or Contractor: AM GENERAL LLC

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0602	<p><u>DATA ITEM</u></p> <p>NOUN: DATA ITEM SECURITY CLASS: Unclassified</p> <p>Technical Data for 6th Option Year</p> <p>Monthly Cost & Performance Report</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p>	1	LO	\$ ** NSP **	\$ ** NSP **

CONTINUATION SHEET

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Name of Offeror or Contractor: AM GENERAL LLC

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0701	<p><u>SERVICES LINE ITEM</u></p> <p>NOUN: SERVICE OPTION SECURITY CLASS: Unclassified</p> <p>7th Option Year</p> <p>Hourly Composite Rate:</p> <p>Estimated Cost: \$84.44 Fixed Fee: <u> 6.70</u> Total: \$91.14</p> <p>Option Period: 01 Oct 06 through 30 Sep 07</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p>				

CONTINUATION SHEET

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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0702	<p><u>DATA ITEM</u></p> <p>NOUN: DATA ITEM SECURITY CLASS: Unclassified</p> <p>Technical Data for 7th Option Year</p> <p>Monthly Cost & Performance Report</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p>	1	LO	\$ ** NSP **	\$ ** NSP **

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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

SECTION C

DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV)
FAMILY OF VEHICLES (FOV)
SYSTEM TECHNICAL SUPPORT (STS)
SCOPE OF WORK (SOW)

C.1 GENERAL.

C.1.1 The contractor shall provide engineering, logistics and related technical support functions for all vehicles in the HMMWV family of vehicles (FOV). This effort applies to all phases of the vehicle life cycle. The Contractor shall be required to undertake one or more of the activities specified herein, via approved work directives. As an independent Contractor, and not as an agent of the U.S. Government, the Contractor shall furnish the supplies and services necessary to accomplish the efforts required herein. The Contractor's responsibilities shall include maintaining control of subcontractor and/or vendor efforts to ensure Government requirements are met.

C.1.2 Government Furnished Information (GFI)/Government Furnished Equipment (GFE). The GFI/GFE being provided to the contractor for use under this contract are identified at Attachment 1.

C.1.3 Applicable Documents. Documents shall be applicable only to the extent required within the scope of work of this contract. The list of documents that are required during the performance of this effort, and not provided as GFI, are identified at Attachment 2.

C.1.4 Reports and Data.

C.1.4.1 The contractor shall prepare technical data in the format and scope specified in the applicable Data Item Descriptions (DIDs) (DD Form 1664) included in Exhibit A. This information shall be furnished in accordance with the requirements, quantities, and schedules set forth in the Contract Data Requirements List (CDRL) (DD Form 1423) also in Exhibit A. Data shall be submitted in an electronic format compatible with Microsoft programs (such as Word, Access, Excel, Power Point, etc.) unless otherwise specified in the SOW or CDRL. All data deliverables required under this contract that are updates to previously existing documents shall have change bars in the margin where revisions/updates were made by the contractor.

C.1.4.2 Copies of standard DIDs called for under this contract and not contained in Exhibit A can be obtained from Naval Publications at the following address: Commander, Naval Publications and Forms Center, Code 3051, 5801 Tabot Avenue, Philadelphia, PA 19120.

C.1.4.3 Although a DID for this effort may make reference to a military standard or specification, that standard or specification is to be used by the contractor for guidance only in accordance with current Army policy. The only exception shall be for military specifications and standards specifically called out as required within this scope of work, and then only to the extent described.

C.1.5 Meetings.

C.1.5.1 The Contractor shall conduct informal project status meetings with the COTR and Functional Technical Representatives (FTRs) on a monthly basis unless otherwise directed by the COTR. The purpose of the meetings shall be to review status and progress of all projects. As a minimum, the contractor shall identify project numbers and titles, start of work date for each project, original and current scheduled completion date, rationale for change in project completion date, contractor's efforts during reporting period and other information deemed essential. Meeting location, time and attendance shall be coordinated with the COTR. The Contractor shall prepare written or visual presentations for such briefings or review meetings as requested by the COTR.

C.1.5.2 The Contractor shall provide support (to include contractor participation, supporting documentation, etc.) to PM LTV for selected Government briefings and presentations.

C.1.6 Financial Reports. The Contractor shall submit monthly Performance and Cost Reports in accordance with DI-FNCL-80912 and CDRL A001.

C.1.7 Project Requests/Work Directives. All work conducted under the STS effort shall be performed only as directed by the work directives issued and approved by the Contracting Officer. The Contracting Officer's Technical

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Representative (COTR) may direct work, however, that work must be contained within the Scope of Work of a Contracting Officer approved Work Directive. Failure to adhere to this requirement may result in non-payment of services provided. Contract requirements of the production contract (DAAE07-01-C-S001) are not to be accomplished via Work Directive or charged to this contract. Exceptions, if any, must be via a Work Directive; the Scope of Work must thoroughly document the reason for the effort/charging to this contract.

C.1.8 In performance of this contract, the Contractor may select on-line access to certain Government systems (reference C.2.11.1.4.1a and C.7.6.2). Prior to receiving access, however, the Contractor must ensure that the personnel assigned to these tasks have been cleared to have such access through a Government security investigation. The investigation must be completed prior to the assignment of individual(s) to the sensitive duty associated with these positions. The Contractor shall complete and forward their employee investigative information (SF 85P, Questionnaire for Positions of Public Trust, and two DD Forms 258 (Fingerprint Cards)) to: Defense Industrial Security Clearance Office (DISCO), Columbus, OH 43216-5006. Foreign nationals will not be granted authorization. Contractor access to the on-line systems will be revoked if actions of the personnel assigned to these tasks are found to be clearly in conflict with the interests of the Government.

C.1.9 At the completion of this contract, the Contractor shall take efforts necessary to ensure a smooth transition of the work to the follow-on contract.

C.2. SYSTEM ENGINEERING/TECHNICAL EFFORT DESCRIPTION. The contractor shall perform system engineering to assure that satisfactory solutions are provided to design problems, design improvement investigations and field problems. Satisfactory solutions are those which maintain compatibility of all physical, functional and technical interface with the established system design and definition. This shall be accomplished without degradation to the established system design and definition as defined in ATPD 2099 unless otherwise approved by the Government. The contractor shall integrate scientific and engineering investigations to ensure compatibility of all physical, functional and technical program interfaces with the established design and definition. Unless otherwise stated, reports, studies, engineering and/or logistic analyses, etc., shall be prepared in the Contractor's format in accordance with DI-MISC-80508 and CDRL A002.

C.2.1 The Contractor shall conduct failure analysis to identify root cause for failure of items identified by the Government, studies to correct known or potential deficiencies, to accomplish product improvements, to accomplish cost reductions, and/or to maintain current the contract item data for serviceability and intended use. Such studies may be required with respect to proposals for engineering changes and attendant processes and methods. All efforts shall consider logistics and any impact to maintainability/supportability. In performance of these efforts, the Contractor may be required to contact or coordinate with current HMMWV manufacturers/major vendors in order to resolve issues, ensure continued producibility, etc. Issues affecting these other companies must be considered and related risks weighed in the performance of this contract.

C.2.2 The Contractor shall prepare cost estimates, technical reports, calculations, layouts, drawings, sketches, schematics charts and other visual depictions (including photographs and videos) and purchase descriptions, and recommend engineering change proposals for current and future production versions of the contract item and modifications thereof.

C.2.3. The Contractor shall prepare and submit technical reports identifying the results of investigations or evaluations. Include recommendations for future course(s) of action as well as the supporting rationale and documentation. The supporting documentation shall include the items identified in paragraph C.2.2 to the extent necessary to support all conclusions made in the report. When the report recommends an Engineering Change Proposal (ECP), the report shall also address the potential impact on Integrated Logistics Support (ILS) (initial/follow-on provisioning, technical manuals, TMDE, tools, training, etc.) as well as any anticipated cost associated with the change.

C.2.4 The Contractor shall conduct trial installations of component part(s) and associated testing on the contract item, or modification thereof, and testing related to processes and methods that are required to evaluate the work. Provide parts, materials and supplies required to support and conduct engineering and/or logistic evaluations, maintenance, rebuild and restoration of the contract item or modification thereof for items undergoing such tests. To meet emergency requirements, the COTR may direct the Contractor to ship such parts by the most expeditious means available to specified destinations.

C.2.5 The Contractor shall modify existing engineering and test versions of the HMMWV and fabricate subsystems/components, prototypes and mock-ups of future production versions of the vehicle.

C.2.6 The Contractor shall maintain the original Technical Data Packages so they are kept current, legible and available for use as a basis for design evaluation, competitive acquisition, maintenance, modification, or engineering support of the HMMWV FOV.

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C.2.7 The Contractor shall provide legible brown lines and/or blue line prints of drawings only if requested by the COTR and in accordance with DI-DRPR-80651(T) and CDRL A003.

C.2.8 The Contractor shall provide engineering observer services relating to the contract item and data at Government-specified locations. Such services shall consist of observing and supporting Government tests, participating in technical meetings, and/or performing design or field review(s) of deficient or defective items.

C.2.9 The Contractor shall maintain GFE vehicles/items in their possession. Perform necessary repairs and maintenance to keep items in a serviceable condition suitable for intended efforts under this contract. Return vehicles to -10/-20 standards when directed.

C.2.10 Parts Standardization Plan

C.2.10.1 The contractor shall select parts and conduct a parts management program, in accordance with the contractor's standard procedures, which ensures the equipment (or system) meets the specification performance requirements with the greatest Improved Operational Effectiveness (described as function of performance, reliability, availability, and life cycle costs).

C.2.10.2 TACOM, AMSTA-TR-E/LTV, may conduct semiannual reviews of the parts program to assess conformance to the contractor's internal procedures, application of parts for meeting system Improved Operational Effectiveness, and parts problem areas.

C.2.10.3 Within 90 days after contract award, the contractor shall submit a copy of its Parts Management Plan, detailing the documented internal procedures. The Plan shall be submitted in accordance with DI-MISC-80526C, which lists the minimum coverage necessary for a Contractor's Parts Management Plan, and CDRL A017. The Plan shall include provisions for Government (AMSTA-TR-E/LTV) approval/disapproval for final disposition.

C.2.10.4 The Contractor may request parts selection and application advice from the Acquisition Activity and/or the Military Parts Control Advisory Group (MPCAG).

C.2.11 Configuration Management.

C.2.11.1 The Contractor shall maintain the original TDP current, legible and available for intended uses. These intended uses include: follow-on vehicle production, spare parts procurements, vehicle modification, system design and integration. The Contractor shall maintain a record of past and ongoing engineering changes and drawing revisions.

C.2.11.1.1 The Automated Configuration Management System (ACMS). The Contractor shall create, revise and deliver product data on-line using the ACMS in accordance with the requirements of this contract. The Contractor shall obtain a login and password as a Submitter to the ACMS for all contractor personnel responsible for preparing and delivering ECPs/VECPs and ERRs to the government. Contractor personnel who may have a need to search/view/print in ACMS should also obtain a login and password for Basic User permissions.

The Contractor shall coordinate with the Configuration Management (CM) representative assigned to Team PDM and the TACOM ETEC Team representative. The CM representative is: William Kendall, Phone (586) 573-2613, DSN: 786-2613, email: kendallw@tacom.army.mil <<mailto:kendallw@tacom.army.mil>>. The ETEC Representative will assist you in completing the forms to access the ACMS System. The Contractor shall first provide completed security investigation paperwork to the TACOM Intel and Security Division Bldg. 233, Attn: AMSTA-CM-SC (Gayle Bedwell), Ext. (586) 574-6262, DSN: 786-6262, e-mail: bedwell@tacom.army.mil <<mailto:bedwell@tacom.army.mil>>. The Contractor shall also provide accreditation/certification of the Contractors site to TACOM-Warren Information Assurance (IA) Team, Bldg. 230, Attn: AMSTA-CM-XD, Mail Stop 438, (Robert Long), Ext. (586) 574-4115, DSN: 786-4115, email: longbob@tacom.army.mil <<mailto:longbob@tacom.army.mil>> or (Kevin Hooks), AMSTA-CS-TEM, Mail Stop 402, Ext. (586) 786-8315, DSN: 786-8315, e-mail: hooksk@tacom.army.mil.

Requests for ACMS logins and passwords shall be obtained from the TACOM ETEC Web Site at: <http://etec.tacom.army.mil/default.htm>. Contractor personnel (other than Basic User) who require access to ACMS to use the ACMS workflow (i.e., CCB members, anyone submitting CM-related contract deliverables to the government, etc.) shall first coordinate with the TACOM Warren CM representative (William Kendall, Ext. (586) 573-2613, DSN: 786-2613, email: kendallw@tacom.army.mil <<mailto:kendallw@tacom.army.mil>>), who will determine the applicable access permission level based on the role(s) the individual will play within the workflow.

ACMS Training: The Contractors functional proponent sponsor can schedule for ACMS training by calling the ETEC Team, David Turner, e-mail: turnerd@tacom.army.mil <<mailto:turnerd@tacom.army.mil>>, Ext. (586) 574-7784, DSN:786-7784.

The Contractor shall notify the ACMS Helpdesk via e-mail message to: helpdesk_acms@tacom.army.mil

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mailto:helpdesk_acms@tacom.army.mil (unless otherwise directed by the TACOM CM representative) when changes or corrections to product data cannot be accomplished by the Contractor due to data being in a released state or due to software deficiencies or bugs. The Contractor shall courtesy copy the TACOM CM representative on all helpdesk requests.

C.2.11.1.2 Engineering Change Proposals (ECPs). The contractor shall be capable of submitting ECP data electronically via the Multi-User ECP Automated Review System (MEARS). All ECP submittals shall be delivered as electronic data. MIL-HDBK-61A and Electronic Industries Association EIA-649 may be used for additional guidance. MIL-STD-973 may be used for reference only.

a. Final Delivery Formats. Text Files shall be provided as SGML-tagged ASCII files, which may contain references to CCITT Group IV graphic files. Each raster graphic file shall include a MIL-STD-1840 CALS raster data file header record, which, together with the image data, forms a CALS raster image. Graphic density for A-D size drawings shall be delivered as 300 dpi. For larger drawings, 200 dpi shall be used. The total size of decompressed image shall not exceed 10 megabytes.

b. The MEARS input shall be SGML format in accordance with the MEARS DTD. Drawings and illustrations shall be in standard web graphic formats, CALS, RASTER, JPEG, and GIF. Adobe .pdf is allowed. The output from the MEARS normalization process will be a HTML document. The contractor shall adhere to the requirements of the MEARS Create application. A hands-on class for MEARS Create and MEARS Review applications will be available to contractor personnel who require MEARS training.

c. Client Hardware/Software. Minimum requirement for client hardware are a Pentium II personal computer (PC) running Microsoft Windows 95/98/NT with a minimum of 128 MB RAM, although 256 MB RAM is recommended. The minimum screen resolution is SuperVGA(800 by 600). Software requirements are a web browser that supports frames and Java 1.1 (such as Internet Explorer 5.x or Netscape Navigator 5.x) loaded on each users workstation. Server Hardware/Software: The MEARS web server will be located in the MEARS Office (AMCOM), Huntsville, AL. The MEARS Office at AMCOM will also provide system administration and technical support.

d. The contractor is responsible for insuring that MEARS SGML files are correctly tagged and graphic files are properly represented prior to delivering the electronic ECP package to the government (AMCOM/TACOM). The government (AMCOM/TACOM) reserves the rights to reject MEARS files containing errors and/or files that are non-compliant with the MEARS DTD.

e. Final Delivery Media. The Contractor shall notify the government CM representative by e-mail that the MEARS ECP has been submitted to the MEARS server at AMCOM.

f. The Government is in the process of converting its ECP process from MEARS to ACMS. Upon implementation of the ACMS ECP Workflow, the Contractor shall submit ECPs for review and approval to the ACMS Workflow in accordance with Method 3 of the ACMS Preparation and Delivery Requirements for ECP/VECPs, Attachment 8, and Method 3 shall replace Method 2 throughout this contract.

C.2.11.1.2.1 The Contractor shall prepare all Class I and Class II ECPs in accordance with DI-CMAN-80639C, CDRL A007 and the Data Delivery Description (DDD) for ECPs and VECPs in Attachment 9. Proposed changes to specifications and engineering documents will be described using Notices of Revision (NORs) prepared in accordance with DI-CMAN-80642C, CDRL A008 and the Data Delivery Description (DDD) for NORs in Attachment 10. See section 6.2 and 6.4 of MIL-HDBK-61A for additional guidance.

C.2.11.1.2.2 All Class I ECPs that affect transportability, safety, technical manuals, packaging, integrated logistics support and/or MANPRINT shall be listed in the ECP. All related documentation changes required to support these subject items shall be included as part of the ECP in accordance with DI-CMAN-80639C, CDRL A007.

C.2.11.1.2.3 Value Engineering Change Proposals (VECPs). The cost associated with the preparation of the VECP shall be incorporated into the VECP and are not allowable under this contract.

C.2.11.1.2.4 ECP Block Numbers. The Contractor shall request blocks of ECP numbers via e-mail to kendallw@tacom.army.mil <mailto:kendallw@tacom.army.mil> or as otherwise directed by the government. The Contractor shall utilize these numbers on an individual basis as a control identifier for ECPs and related Engineering Release Records (ERRs). Once an ECP number is assigned to the first submission of a change proposal, that number shall be retained for all subsequent submissions of that change proposal. The Contractor shall maintain records of where and when each ECP number was used.

C.2.11.1.2.5 ECP Numbers. The ECP number shall consist of the Contractor three or four character alpha prefix assigned by TACOM, followed by the Contractor assigned TACOM ECP five-digit alpha/numeric number.

C.2.11.1.2.6 ECP Co-User Requirements

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a. When the Contractor prepares a Class I ECP that affects two or more configuration items, the Contractor shall provide a complete reproducible ECP package to the co-user(s) requesting comments on the change. Additionally, when the Contractor is not the custodian of the document, the contractor shall provide an ECP package to both the custodian contractor and Government co-user(s) CM representative requesting comments and approval of the change to their document(s). If the Contractor cannot identify the Co-user(s) or custodian the Contractor shall notify the HMMWV CM Representative at TACOM, AMSRD-TAR-E/PDM, and request assistance. The Contractor must complete coordination with the custodian/co-user(s) before submitting the ECP package for formal review. When all comments have been received, the Contractor shall submit the ECP package, including all solicited comments, for processing. The Contractor shall include documentation in the ECP package indicating which item(s) are co-used, who is custodian of the co-used document(s), and include applicable co-user points of contact. The Government will notify the respective Contractor(s) when the disposition of the ECP has been made and, if approved, the custodian(s) will be directed to incorporate the document change and prepare an Engineering Release Record (ERR). Following the preparation of the ERR, the custodian of documents under this contract shall post the ERR and the revised drawings to ACMS for review and approval by the HMMWV Configuration Data Manager (CDM). Upon ERR approval, the CDM will release the revised documents to the ACMS or retrieval and use by the applicable co-user(s).

b. ECP Review by Custodial Contractor. When a second party/co-user of a HMMWV drawing/document proposes an engineering change, the custodian of the document shall prepare a response to the proposed change and submit it for TACOM review, along with a copy of the initiator's ECP, to the CM representative for HMMWV, within 20 days of receipt. The CM Representative will staff the proposed change to the CCB Chair and additional CCB members, as necessary. The custodial Contractor shall return the Government/custodian-coordinated ECP package to the ECP originator for further disposition. If TACOM agrees to accept the ECP for formal review, the ECP originator (second party, co-user, etc.) will resubmit the complete ECP package, including all solicited comments, to TACOM, AMSRD-TAR-E/PDM, for formal evaluation by the HMMWV Configuration Control Board (CCB).

C.2.11.1.2.7 Reserved

C.2.11.1.2.8 ECP Spare and Repair Parts Data The Contractor shall include an ECP Spare and Repair Parts Data Statement as part of the electronic ECP package in accordance with DI-CMAN-80639C (CDRL A007) when interchangeability is affected and/or when there is a put and take of parts.

C.2.11.1.2.9 ECP Enclosure List The Contractor shall identify/list all documents contained in the ECP package and submit as part of the ECP in accordance with DI-CMAN-80639C and CDRL A007. In addition, the Contractor shall identify all end items affected - what specific elements will be affected, what other ECPs are pending against the documents listed and what NSN, if any, will be impacted by any part number change reference in the ECP.

C.2.11.1.3 Engineering Release Record Preparation (ERR): All ERR submittals shall be delivered as electronic data to the ACMS Workflow in accordance with DI-CMAN-80463C, CDRL A010, and Method 2 of the ACMS Preparation and Delivery Requirements for ERRs, Attachment 8. Upon implementation of the ACMS ECP process the Contractor shall submit ERRs in accordance with Method 3 of the ACMS Preparation and Delivery Requirements for ERRs, and Method 3 will replace Method 2 throughout this contract.

C.2.11.1.3.1 The Contractor shall prepare an Engineering Release Record (ERR) for each approved ECP, initial or direct release of a configuration item (CI) and/or Technical Data Package (TDP) in accordance with DI-CMAN-80463C and CDRL A010. ERR documentation shall include, but is not limited to:

- a. ERR number
- b. Date
- c. Sheet number of total sheets
- d. Baseline established or changed
- e. Type of release (initial or change)
- f. ECP Number and ECP approval date
- g. Functional Assembly/Nomenclature
- h. System or Configuration item nomenclature (all end item affected by model number)
- i. Remarks/Miscellaneous
- j. Drawing Data Information:
 1. CAGE code
 2. Doc Type
 3. Drawing size/Drawing number
 4. Sheet of sheets
 5. Revision letter
 6. Revision date
 7. Release (Initial or New Application) or Change (Change or Chg Application)
 8. Distribution (as applicable)
- k. Name and address of submitting office

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1. Government approval block

C.2.11.1.3.2 The Contractor may use his own form and format for preparing this ERR. The following are additional instructions that the contractor shall comply with:

a. ERR Package Content - The ERR Package submitted by the Contractor shall consist of one(1) ERR for each approved ECP. Electronic drawings/documents prepared in accordance with the requirements of this contract shall accompany the ERR that is submitted to the Government. The Contractor shall include the ERR form, engineering drawings and associated documents, and the new and/or updated ACMS product structure configuration baseline(s) for product data being released by the ERR in accordance with Method 2 of the ACMS Preparation and Delivery Requirements for ERRs, Attachment 8. Multiple ECP releases under one ERR will not be allowed unless specifically approved by the Government.

b. When there is multiple vehicle/end item application, additional ERR sheets will be used for clarification of end-item applicability.

c. Supplemental ERRs - Supplemental/incremental ERRs may only be used for the initial release of major item vehicles and/or components.

d. ERR Package Submittal - The Contractor shall submit ERR packages within 90 days of ECP approval to the ACMS Workflow in accordance with DI-CMAN-80463C, CDRL A010, and Method 2 of the ACMS Preparation and Delivery Requirements for ERRs, Attachment 8. The ACMS Workflow is the automation of a business process in whole or in part, during which document, information, or tasks are passed from one participant to another for action, according to a set of procedural rules. A Workflow instance coordinates user and system participants together with appropriate data resources to achieve defined objectives by set deadlines. The Contractor shall notify the government CM representative by e-mail when conditions exist in the ACMS that prevent the Contractor from creating and/or submitting ACMS ERRs. The Contractor shall electronically submit a separate letter of transmittal to kendallw@tacom.army.mil <<mailto:kendallw@tacom.army.mil>> indicating the ERR package has been submitted to the ACMS workflow and include a list of enclosures for each ERR.

C.2.11.1.4 Configuration Status Accounting and Engineering Records (CSAER)/Product Data:

C.2.11.1.4.1 The Contractor shall submit new and revised CSAER and product data to the ACMS in accordance with the ECP and ERR requirements of this contract and Method 2 of the ACMS Preparation and Delivery Requirements for ECPs & ERRs, Attachment 8. Submittal of CSAER/product data to institute and maintain a complete and permanent audit trail/history of Product Baseline drawings/documents and product structure, including subsequent changes to that baseline shall be the responsibility of the Contractor.

C.2.11.1.4.2 When the Contractor CSAER/product data input is found to have excessive errors, the Government may require the Contractor to make the corrections.

C.2.11.1.4.3 The Contractor shall submit a Configuration Status Accounting Report (CSAR) in accordance with DI-CMAN-81253A, CRDL A011 for changes affecting the HMMWV family of vehicles (FOV) which provides a detail description of ECPs and ERRs in process/completed/canceled. Contractor format is acceptable.

C.2.11.1.5 Engineering Drawings and Drawing Submittal. All new drawings and drawing revisions shall be delivered as electronic data in accordance with DI-DRPR-81000A and CDRL A009.

C.2.11.1.6 The Contractor shall provide Product Design Drawings as required by work directive. These drawings shall comply with MIL-STD- 100F, AMSE Y14.100M-199X, and AMSE Y.14.24M, as well as the ordering data outlined in C.2.11.1.10. Detail, subassembly and assembly drawings shall delineate, either directly or by reference to other documents, engineering requirements and characteristics such as materials, dimensions, tolerance, form and finish, etc. Where applicable, geometric dimensioning and tolerancing methods shall be utilized per ASME 14.5M-1994. Quality Assurance Provisions (QAPs) shall be prepared in accordance with paragraph C.4.3.5.

C.2.11.1.7 The Contractor shall ensure that engineering drawings and associated lists provide sufficient design, engineering, manufacturing, and quality assurance information, etc., to facilitate competitive procurement and manufacture of an item that can duplicate the physical and performance characteristics of the original prototype/design. Detail assembly drawings for welded components and other inseparable assemblies are acceptable when each piece is detailed thereon and none of the individual pieces are provisioned as spare or repair parts.

C.2.11.1.8 The Contractor shall prepare Source Control Drawings (SCDs) only as authorized by TACOM. Authorized SCDs shall have a minimum of two sources and shall conform to the requirements of MIL-STD-100F. Parts Control shall be maintained in accordance with C.2.10.

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C.2.11.1.9 The Contractor shall provide dressed component drawings for the engine, transmission, axles and transfer case as required by work directive. A dressed component is a properly manufactured, assembled and tested set of parts, subsystems and/or assemblies that are complete for installation on the vehicle. Dressed component drawings shall identify all sprockets, pulleys, mounts and other add-ons that adapt the component for vehicle installation. The dressed component drawings shall be complete in assembly and detail in order to permit competitive procurement of the dressed component, and the add-on adapter parts separately.

C.2.11.1.10 Engineering Ordering Data. The Contractor shall prepare Product Drawings in accordance with MIL-STD-100F, which is tailored as indicated in Attachment 5.

C.2.11.1.10.1 Delivery Format of Engineering Drawings.

a. Raster files (.c4 or adobe .pdf). All drawings and associated documents being released by the ERR shall be in Computer-Aided Acquisition and Logistic Support (CALS), type one (1) raster images. These files may be legible .C4 or .pdf and shall be loaded to ACMS as primary files in accordance with Method 2 of the ACMS Preparation and Delivery Requirements for ERRs, Attachment 8.

b. Native CAD - Any format native to the contractor's CAD system is acceptable in 2D AND/OR 3D.c. Neutral - CAD models in the International Graphics Exchange Specification (IGES).

C.2.11.1.10.1.1 A final decision of file formats delivered shall be made by the requiring office prior to delivery. Larger drawings (J-K sizes) shall not have multiple plot files or frames. C.2.11.1.10.1.2 CAD generated 2D/3D files shall be loaded to ACMS as secondary files in accordance with Method 2 of the ACMS Preparation and Delivery Requirements for ERRs, Attachment 8.

C.2.11.1.11 Delivery Media Requirements: Electronic data via ACMS unless otherwise directed by the Government. At the Governments request, the Contractor shall provide electronic data via e-mail or CD.

C.2.11.1.12 Geometry Creation Guidelines for 2-D and 3-D Models are in Attachment 7.

C.2.11.1.13 Unless otherwise directed, all new drawings shall be submitted as raster images (.c4 or adobe .pdf). The applicable work directive may specify additional delivery of one or more of the following drawing formats:

Native 2-D or 3-D solid CAD model.

A copy of the CAD model in the International Graphics Exchange Specification (IGES) version 5.2 format.

C.2.11.1.14 EXISTING CAD drawings which are revised via ECP action shall be submitted according to work directive and shall include one or more of the following: Revised native CAD 2D and/or 3D model, revised neutral CAD model in the International Graphics Exchange Specification (IGES) version 5.2 format or raster images (.c4 or adobe .pdf).

C.2.11.1.15 Existing NON-CAD drawings, which are revised via ECP action, shall be submitted as raster images.

C.2.11.1.16 Where existing drawings are to be extensively revised or redrawn via ECP action, the Contractor's project engineer shall notify the COTR or his designated representative for the project. The COTR or his designated representative and the Contractor's project engineer will decide whether or not it would be beneficial, and if project priorities allow, the drawing to be redone in the 2-D or 3-D solid CAD format as part of the ECP.

C.2.11.1.17 The Contractor shall convert existing HMMWV drawings into 2-D or 3-D solid CAD models when directed.

C.2.11.1.18 Drawing Number Assignment/Report - The Contractor shall assign Government-issued drawing part numbers to all product drawings, including package content and kit drawings produced and released under this contract. An initial block of drawing numbers will be provided by the Government at the Start of Work meeting. The Contractor shall request additional blocks of drawing numbers on an as needed basis via e-mail to kendallw@acom.army.mil. The allocation of these numbers shall be reported in accordance with DI-SESS-81011B and CDRL A012, submitted electronically, and shall include the Contractor's name, address and contract number.

C.2.11.1.18.1 Drawing Part Numbers for Privately Developed Items - The Contractor is prohibited from assigning drawing/part numbers to privately developed items prior to our approval. If an item is approved for incorporation into the design, the Contractor shall assign a Government-issued drawing number to the item as referenced in C.2.11.1.18.

C.2.11.1.18.2 Drawing Custodianship - The Contractor is responsible for all original documents in its possession. As drawing custodian, the Contractor shall make any changes authorized by TACOM to the original documents, and provide AMSRD-TAR-E/PDM with CALS compliant documents as part of the ERR package in accordance with C.2.11.1.3 and C.2.11.1.5 through C.2.11.1.17. The Contractor shall distribute additional copies of changed documents to co-users and other recipients as described in the SOW & CDRL. Upon request, the Contractor shall provide copies of documents

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to TACOM, AMSRD-TAR-E/PDM, within 10 calendar days of request. The Contractor shall not transfer any Government drawings to vendors or subcontractors without written approval from the COTR.

C.2.11.1.18.2.1 Drawing Custodianship List - The Contractor shall maintain a drawing custodianship list and submit updates to the Government consisting of supplemental records. This list shall be prepared in accordance with DI-SESS-81011B and CDRL A012. It shall be submitted electronically via E-mail to kendallw@tacom.army.mil or on a CD, 3 1/2" "floppy disk" or zip disk, and shall contain the following information: a. Initial Record: This initial report will be furnished by the Government and shall contain a record (list) of all original drawings pertaining to the contract. b. Supplemental Records: The Contractor shall maintain an electronic record (list) of all drawings pertaining to the contract. The Contractor shall prepare an electronic record for each new drawing, each drawing revised or when an addition and/or correction, pertaining to the status of the Contractor drawings, has been made since the last submission. In the event that there are no additions, deletions or corrections to be issued on the monthly supplement, only an e-mail notification will be forwarded with a statement stating as follows: "No additions, deletions or corrections have been made to the record of drawings controlled by this activity; therefore, the previously issued supplement (specify supplement date) remains in effect."

C.2.11.1.18.3 Media: Electronic Record Format: All electronic records are to be formatted as follows: Drawing Type Alpha or Alpha-numeric Document Number Numeric or Alpha-numeric Revision Letter Alpha Revision Date Numeric Custodian Alpha Number of Sheets Numeric

C.2.11.1.19 Procedures for Transferring Original Drawings. The Contractor shall comply with the following sequential procedures at the completion of this contract:

C.2.11.1.19.1 At 90 days before end of contract:

. Provide an overall electronic list of all drawings in the Contractor custody to TACOM, AMSRD-TAR-E/PDM for record verification.

. Identify and provide TACOM (AMSRD-TAR-E/PDM) a separate electronic list of approved, but open ECPs (i.e., where no ERR/drawing updates have occurred) and cross-reference to drawings affected by these ECPs. Inventory the approved, open ECPs and ship/transmit according to Government direction.

C.2.11.1.19.2 At 60 days before end of contract:

a. Provide electronic lists of the following information to TACOM,AMSRD-TAR-E/PDM:

- (1) Obsolete and superseded drawings
- (2) Unreleased drawings
- (3) Supplementary Quality Assurance Provisions (SQAPs) and Packaging Documents (PDs).

Complete the following audit preparations

- (4) Inventory and separate obsolete drawings.
- (5) Inventory and separate active drawings and (if paper/Mylar, etc.) stack according to size.
- (6) Inventory and separate unreleased drawings.
- (7) Inventory and separate PDs.

C.2.11.1.19.3 At 30 days before end of contract, the Contractor shall transfer EDI documents as directed by the Government. For paper/Mylar or other hard copy drawings, documents will be packaged for shipment in separate containers and organized as follows:

- a. A & B size drawings (laying flat)
- b. C & D size drawings (laying flat)
- c. E through K size drawings (rolled)
- d. Supplementary Quality Assurance Provisions (SQAPs) and Final Inspection Records (FIRs)
- e. PDs may be enclosed with drawings, but must be organized and identified separately.

Enclose an inventory list identifying each drawing and each document in each container. Attach a copy to the exterior of the container.

C.2.11.1.19.4 The Contractor shall document the transfer of data by using letters of transmittal - one for obsolete drawings and a separate one for all other drawings and documents. The Contractor shall attach related inventory lists to each transmittal letter and submit to the COTR. The COTR will verify receipt by signing his acknowledgment on the transmittal letters and returning a copy to the Contractor.

C.2.12 Environmental Management. The contractor shall consider pollution prevention in its efforts to eliminate (or reduce, if elimination is not feasible) the use of hazardous substances and environmentally unacceptable materials,

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including but not limited to stratosphere ozone depleting substances, such as chlorofluorocarbons and halon. The contractor shall identify the source of environmental pollution throughout STS. The contractor shall use appropriate procedures for handling and disposing of hazardous materials, parts and industrial by-products resulting from the efforts under this contract. The contractor shall certify that it is in compliance with federal, state, and local laws, and regulations that deal with hazardous substances and environmentally unacceptable materials. The contractor shall identify and accomplish the tasks necessary to eliminate or reduce known hazardous substances and environmentally unacceptable materials, and wastes as identified in the applicable federal, state, local laws, and regulations.

C.2.13 Transportability Engineering. The Contractor shall prepare a Transportability Report in accordance with DI-PACK-80880A and CDRL A013 for modifications affecting the system's overall weight, dimensions, center of gravity or transportability capability/requirements. The Contractor shall perform transportability testing for design modifications affecting vehicle transportability. The Contractor shall prepare a Transportability Test Report in accordance with DI-MISC-80048 and CDRL A014.

C.3 CRITICAL SAFETY ITEMS (CSI)

C.3.3.1 The contractor shall identify Critical Safety Items (CSIs) within the Technical Data Package (TDP).

C.3.3.2 The following definitions apply:

C.3.3.2.1 Critical Safety Item. A part, assembly, installation, or production system with one or more critical characteristics that, if not conforming to the design data or quality requirements, would result in an unsafe condition. Unsafe conditions include conditions which would cause loss or serious damage to the end item or major components, loss of control, or serious injury to personnel.

C.3.3.2.2 Critical Safety Characteristics. Any feature (i.e., tolerance, finish, material composition, manufacturing, assembly or inspection process) of product, material, or process, which if nonconforming or missing would cause the failure or malfunction of the critical item.

C.3.3.3 Each CSI and assembly process shall be clearly identified as such on the part drawing and/or assembly drawing, drawing 12342929, and in all associated Quality Assurance documentation (i.e., Quality Assurance Requirements/Quality Assurance Provisions (QAR/QAP). The critical safety characteristic(s) for each CSI shall also be clearly identified as such on the engineering part and/or assembly drawing, and in all QARs/QAPs. Critical safety characteristics will require 100% inspection per the QAR/QAP. The specific method for marking drawings shall be as delineated in MIL-STD-100F.

C.3.3.4 Identification of CSIs shall be based wherever possible on the following data sources:

C.3.3.4.1 Sound engineering analysis and judgment.

C.3.3.4.2 Failure modes and effects, criticality analysis (MIL-STD-1629). NOTE: MIL-STD-1629 was prematurely cancelled. It can only be used by TACOM for this effort until ARP-5580 becomes available as the replacement (approximately May 1999).

C.3.3.4.3 Safety assessment/safety hazard analysis (MIL-STD-882D).

C.3.3.4.4 Development testing and/or operational testing results.

C.3.3.4.5 RAM engineering assessments.

C.3.3.4.6 Previous experience using like items or designs.

C.3.3.4.7 Logistics Management Information data.

C.3.3.4.8 Component qualification test results.

C.3.3.5 The requirements pertaining to CSIs must be validated to ensure that all critical safety aspects of the design are accurately reflected, parts/materials operate well below fatigue limits/stress levels, and the design allows for assessment by inspection and nondestructive inspection equipment. Validation must be based on engineering analysis of the critical safety item characteristics and should consider changes/deterioration through time or use, fatigue life, and operating conditions.

C.3.3.6 The CSI list drawing 12342929 shall be maintained and updated throughout the life of the contract. The CSIs shall also be referenced on the vehicle class and division drawing. This list shall be dynamic in nature with

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changes taking place as experience and knowledge is obtained and design changes incorporated. Reports shall be developed in accordance with DI-SAFT-80970C and CDRL A015. The Government shall be permitted access to the contractor's backup documentation whenever needed.

C.3.3.7 Components having a requirement for nuclear hardening must be included as part of the CSI effort and must be incorporated in the CSI list. The nuclear hardening requirement shall be highlighted as a critical safety characteristic in the TDP.

C.4 QUALITY ASSURANCE REQUIREMENTS.

C.4.1 The contractor shall implement and adhere to a quality assurance system acceptable to the Government (i.e., QS, ISO 9000, or any other industry-recognized/accepted quality model). The contractor's quality system shall ensure product quality throughout all contract requirements, to include management, design, fabrication, testing, processing, shipping, storage, site installation, etc. The Government reserves the right to perform all required audits and surveillance inspections to assure contractor compliance with contract requirements.

C.4.2 The contractor shall utilize the C.4.1 quality system for inspection, validation, control and inspection results of engineering drawings and Quality Assurance Technical Documentation (QATD) changes. This system shall also provide a means for incorporating data received from Test Incident Reports (TIRs) and/or Quality Deficiency Reports (QDRs). The contractor shall ensure that all drawings and documentation submitted within the Technical Data Package (TDP) are coordinated with all cognizant department elements within their organization and are adequate for the manufacture and acceptance of quality material and for competitive procurement. The Contractor shall ensure that data resulting from engineering efforts and/or any deficiency reports which may affect the adequacy and accuracy of the QATD being developed and/or maintained under the contract are coordinated with its product assurance office and included in all engineering drawing packages and QATD packages submitted for Government review.

C.4.3 Quality Engineering

C.4.3.1 The Contractor shall perform Quality Engineering Reviews to audit and assess the quality of its quality control system. The contractor shall perform quality engineering reviews of all TDP documentation affected by a work directive and recommend the amount and type of inspection and test controls required to achieve the requisite quality of the contract item throughout all production and operational phases.

C.4.3.2 Studies shall be undertaken at a point in time which will assure that the resulting recommended inspection controls are processed as part of any proposed Engineering Change Proposal (ECP).

C.4.3.3 The Contractor shall ensure that all sketches, contract part drawings and ordnance type drawings are provided in accordance with prescribed specifications and standards and contain sufficient dimensional, functional, protective finish and material deterioration prevention requirements with which to determine the acceptability of hardware manufactured against such drawings.

C.4.3.4 The Contractor shall conduct a technical review of each product engineering change action taken as a result of any Test Incident Report (TIR) made necessary as a result of Contractor and Government testing and incorporate all such necessary changes into the then existing Quality Assurance Technical Documentation (QATD).

C.4.3.5 Quality Assurance Provisions (QAPs). QAPS shall be developed or updated as necessary for all applicable items, components or assemblies affected by a work directive. Work Directives will define whether the QAPS are placed on a separate document or are placed directly on the drawing. For separate documents, the Contractor may use DRSTA-RP-702-155, titled "Preparation and Maintenance of Quality Assurance Provisions (QAPs)" (to be provided as GFI) and Attachment 3 of this contract as a guide when updating and developing QAPs. For QAPs placed directly on the drawing, the Contractor may use Attachment 3 of this contract titled "Requirements for Developing and Maintaining Quality Assurance Provisions (QAPs)" as a guide. Developing and updating of QAPs shall be based on the recommendations of the Quality Engineering review. When developing QAPs, the following considerations shall be made to achieve a cost-effective, quality product: limit the use of specialized test and inspection equipment to only when necessary, define test setups and test equipment only when necessary, limit use of Inspection Method Control Sheets (IMCS) to only when necessary. A determination whether the SQAP or QAR should be updated to a QAP or deleted as no longer valid or required shall be made during ECP actions or as required by a task. Deleted documents shall be maintained in a backup file for reference data. The Contractor shall maintain a database containing a numerical listing of SQAPs, QARs and QAPs in accordance with the cited pamphlet.

C.4.3.6 The Contractor shall develop and maintain the Quality Assurance Technical Documentation (QATD) at their facility until completion of contract, with copies to be furnished to the Government upon request.

C.4.3.7 The Contractor shall maintain/develop calculations, layouts, sketches, schematics, charts, design drawings, and other visual depictions and the master list of inspection equipment drawings.

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C.4.3.8 The Contractor shall prepare, as directed, draft instruction pamphlets and manuals required for the operation, maintenance, and calibration of the inspection equipment designed.

C.4.3.9 The Contractor shall prepare the quality assurance portion of overhaul or rebuild standards for the HMMWV in draft form. This will include recommendations for all on-site inspection and tests to be performed during overhaul or rebuild of the contract item to insure that the item fulfills the quality requirements of applicable specifications and standards.

C.4.3.10 The Contractor shall maintain/develop final inspection records (FIRs) for each model to the contract item. FIRs shall set forth the minimum inspection characteristics deemed necessary to assure conformance to end item specifications and drawings. The FIRs shall be updated as required to reflect all approved configuration changes.

C.4.3.11 The Contractor shall perform tests with respect to the contract item and modification thereof. Such tests shall be those required to evaluate the quality assurance requirements for the contract items.

C.4.3.12 The Contractor shall perform inspection engineering studies for the purpose of improving inspection and test methods and techniques.

C.5 MANPRINT.

C.5.1 MANPRINT is a process of integrating the full range of Manpower, Personnel, Training (MPT), Human Factors Engineering (HFE), Health Hazards, System Safety and Soldier Survivability throughout material development and acquisition phases. The contractor shall integrate these MANPRINT domains in the development and/or component selection process, as applicable, to ensure the greatest influence on final configuration. The primary goal of MANPRINT shall be to enhance soldier-system performance and optimize Soldier-Machine Interface (SMI) for ease of operation and maintenance by designated users under all required operational conditions. MANPRINT design related issues, accomplishment and crew performance validations/demonstrations shall be addressed during STS project status meetings, as appropriate.

C.5.2 Manpower, Personnel and Training. The Contractor shall maintain the manpower requirements for operation and maintenance of the HMMWVs within the current levels identified in the chart below. The Contractor shall avoid critical crew tasks that require upgrading the skill level of the target audience including cognitive and physical requirements. Training requirements for the HMMWV crews shall not require an increase over the course length for the target audience by Military Occupational Specialties (MOS). The target audience is indicated below. Man Hours Per Year Vehicle Model MOS Unit DS GS M998, M1038, M997, M1025, M1026, M996 44B 0 0 0 44E 0 0 0 63B 167.9 0 0 63G 0 0 0 63W 0 50.7 44.3 For M1097 and M1037, same as above except: 63W 0 50.7 38.6 For M1113, same as M1097 and M1037 above except: 63W 0 50.7 35.6 For M1114, same as M1113 above except add: 52C 5.0 7.0 6.97

C.5.3 Human Factors Engineering. Any changes or modifications to the existing vehicle (such as ECP actions) shall be analyzed to assure that these modifications do not adversely affect the soldier machine interface. If any area of this interface is impacted, appropriate actions will be taken to upgrade that area to previous levels as a minimum.

C.6 SYSTEM SUPPORT PACKAGES (SSP)

C.6.1 The SSP is a composite package of support resources, to include spare parts, special tools, etc. SSPs shall be provided as directed by appropriate work directive. Items not furnished in sufficient quantity shall be provided by the Contractor to the specified location within 24 hours after notification of the shortage. All items comprising an SSP shall be the same configuration and source as will be used on the HMMWV production vehicles.

C.6.2 The Contractor shall provide a list of the SSP items to the Government no later than 120 days prior to the date of need, unless otherwise agreed to by the parties, in accordance with DI-MISC-80508 and CDRL A002.

C.6.3 The Contractor shall assemble, furnish, package, pack and ship the SSP to the designated site(s). The SSP shall be coordinated with the Government and shall consist of some or all of the following:

C.6.3.1 Spare/repair parts and parts needed to meet the requirement arising from predicted failures, scheduled maintenance and anticipated wear out sufficient to support the test requirements described by work directives. The SSP to support Logistic Demonstrations shall consist of mandatory replacement items and items most likely to be consumed or broken during a disassembly/assembly process, such as seals and gaskets.

C.6.3.2 Common and Special Tools and Test Measurement and Diagnostic Equipment (TMDE). Required common tools/tool kits, equipment and TMDE identified in the Army supply catalogs shall be identified on the SSP list, but need not be physically present in the SSP. The contractor shall identify and utilize existing Government tools and test equipment to the maximum extent feasible. Required tools and TMDE not found in the Army supply catalogs shall also

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be identified in the SSP list and be provided as part of the SSP. Tools and TMDE not found in the Army supply catalogs shall be designated as special tools and special TMDE.

C.6.3.3 Equipment Publications. The most recent version of each equipment publication shall be identified on the SSP list and shall be provided as part of the SSP. When updates are made to any publication during the course of Logistic Demonstrations or testing, those updates shall be forwarded to the appropriate site(s).

C.6.3.4 Basic Issue Items (BII) and Components of the End Item (COEI). BII as required by the specifications and COEI shall be identified in the SSP list. Additional BII and COEI need not be physically present in the SSP if complete BII and COEI packages are provided with the Logistic Demonstration and test vehicles.

C.6.3.5 Expendable Supplies. Expendable supplies such as petroleum, oils and lubricants, shall be identified in the SSP list. Only unique (not Military Standard) products shall be physically present in the SSP.

C.6.3.6 Personnel Requirements. The Military Operational Specialty (MOS) and skill level required to operate and maintain the vehicle system shall not be identified in the SSP list.

C.6.3.7 Support Equipment. Equipment already existing in the Army inventory to support the vehicle system, such as recovery vehicles and towing devices, shall be included in the SSP list, but not provided by the contractor as part of the SSP.

C.7 INTEGRATED LOGISTICS SUPPORT (ILS).

C.7.1 The Contractor is responsible for planning, managing, and ensuring ILS considerations are an integral part of the overall system. The Contractor shall accomplish/perform logistic technical support functions to the latest production configuration.

C.7.2 When notified of changes or updates, the Contractor shall consider the impact of any subcontractor/vendor changes/updates on HMMWV parts/components as part of the STS effort.

C.7.3 The Contractor shall provide for sufficient quantities of dedicated hardware (end items (i.e., GFE vehicles), components, repair parts, consumable supplies, tools and support equipment) to accomplish all ILS development, reviews, validations and verifications.

C.7.4 Logistics Management Support.

C.7.4.1 Changes in design, support, operational requirements, or those resulting from logistics demonstrations, technical manual reviews, test results, shall result in submission of updated data for provisioning and/or technical manual changes, as applicable.

C.7.4.2 Existing Government tools and TMDE shall be utilized to the maximum extent possible. Introduction of new special tools/TMDE will require COTR approval. The Government will use Contact Test Set (CTS) or Soldier's Portable On-System Repair Tool (SPORT) for interactive fault isolation and Interactive Electronic Technical Manuals (IETMs). The Contractor shall identify the new special tools/TMDE in accordance with DI-ALSS-81530 and CDRL A028.

C.7.4.3 As required, the Contractor shall select expendable or consumable items from the military supply system. If an item cannot be located, or the Army is not listed as a user, the Government shall be notified and shall direct if provisioning actions are required. The Contractor shall seek alternatives for any items that contain Class I and/or Class II Ozone Depleting Chemicals (ODC) or hazardous materials (HAZMATs) listed in EPA 17 of the Environmental Protection Agency's 33/50 Reduction Program.

C.7.5 Maintenance Planning.

C.7.5.1 The Contractor shall not degrade the current HMMWV maintenance plans documented by the Maintenance Allocation Chart (MAC) in TM 9-2320-280-20-3, dated Jan 96, and TM 9-2320-387-24-2, dated Sep 97, which will be provided as GFI. Additional maintenance planning necessitated from design changes/updates/ modification shall be based on a four level maintenance structure. Unit maintenance is the first level in the maintenance structure and combines operator and organizational maintenance tasks and has primary responsibility for sustaining vehicle readiness. The second level is Direct Support which is characterized by highly mobile forward orientation repair of items by replacement of unserviceable components. General Support is characterized as a fixed or semi-fixed facility which repairs Components by replacement of internal/external parts. The fourth level is Depot Maintenance which is oriented toward support of the supply system; overhauling components through production- line like facilities. The Contractor shall determine the most effective and efficient procedures for performing maintenance, identify the extent of maintenance action for each repairable item, and identify the maintenance level to perform maintenance tasks. Variables, such as

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repairable item price, down-parts price, failure rate of repairable item, labor costs, costs of special tools and TMDE, and test program costs shall be considered. In determining maintenance level, the contractor shall consider skill level, availability of tools at each level, and time (usually; 0 - 2 hours - unit, 2 - 4 hours - Direct Support, 2.1 - 8 hours - General Support).

C.7.5.2 The Contractor shall update the current HMMWV Maintenance Allocation Chart (MAC), as required, to include all maintenance levels. The MAC shall be updated in accordance with MIL-STD-40051-7 and CDRL A025.

C.7.5.3 The Contractor shall update HMMWV FOV Preventive Maintenance Checks and Services (PMCS) for operator/crew and unit maintenance in accordance with MIL-STD-40051-5 and CDRL A026. As changes to design are made, the Contractor shall analyze the reliability characteristics of the design to determine impact on scheduled maintenance and determine if scheduled maintenance will be effective in maintaining system reliability. The applicability will depend on the failure characteristics of an item and the consequences for each failure.

C.7.6 Provisioning

C.7.6.1 The contractor shall maintain provisioning data for the HMMWV FOV. The Contractor shall update data to include the most recent production configurations, Engineering Change Proposals (ECPs), and Government directed data element changes. The Contractor shall update the HMMWV FOV provisioning data as changes occur, in accordance with DI-ALSS-81529 and CDRL A027. Attachment 4 to the contract lists and describes the minimum required provisioning data elements. The Contractor shall submit its provisioning data in a format compatible with the Government's Commodity Command Standard System. The data shall be capable of being loaded into the Army's Provisioning Master Record (PMR) without data having to be modified. CCSS has four methods by which the Contractor can deliver provisioning data: a. On-line entry directly into the Provisioning On-Line System (POLs) b. MIL-STD-1388-2A, LSA 036 format 3. c. MIL-STD-1388-2B, LSA 036 format 4 d. MIL-STD-1552 The Contractor may choose any of the above methods. For all options except on-line access to the PMR, the data can be sent via e-mail or 3 1/2" floppy disk; the format needs to be in ASCII.

C.7.6.2 Contractor access to the Provisioning On-Line System (POLs) would allow the Contractor to use the Provisioning Suspense File (PSF) to make updates/corrections as an alternative to receiving validation reject reports from the Government and making corrections on a subsequent submittal. Upon receipt of authorization (reference C.1.8), the Contractor may request a user ID and password from the TACOM Logistics Systems Unit by writing to: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-IM-OEPS, Warren, MI 48397-5000; or calling (586) 574-6613. The request shall include supporting documentation that personnel have been investigated and granted authorization.

C.7.6.2.1 Once access permission is granted, other instructions concerning phone line numbers and IBM compatible key stroke to our TELEX terminal scan will be given to the Contractor. Additionally, the Government will provide POLS control key (access code) that corresponds to the Provisioning Contract Control Numbers (PCCNs) for which the Contractor is responsible. An additional control key may be provided to view (read only) the entire Provisioning Master Record (PMR), Pending Transaction File (TXN), and Provisioning Suspense File (PSF) for responsible PCCNs.

C.7.6.2.2 If the Contractor has on-line access to the Publications RPSTL on-line system, only the POLS access key(s) issued for PSF updates and PMR read only access are needed.

C.7.6.2.3 The Government will conduct training on these procedures, at the Contractor's request, and answer questions as necessary. The TACOM's Logistics Systems Unit may be contacted at (586) 574-6613.

C.7.6.3 The PCCN for the HMMWV FOV is "CHMMWV". The Government will provide the Contractor a copy of the CHMMWV Provisioning Master Record (PMR), or the Contractor may have direct on-line access to the Army's Provisioning On-Line System (POLs).

C.7.6.4 Provisioning conferences will be held on an as needed basis, usually when bulk changes are required.

C.7.6.5 The contractor's provisioning packages shall include supplementary provisioning technical documentation in accordance with DI-DRPR- 81000A and CDRL A016. The contractor shall ensure that documentation includes drawing support for each "P" coded item (items requiring an NSN), unless accompanied by a copy of the procurement screening documentation (i.e., AMDF, Parts Master List, or DLSC) which indicates that the item has a valid NSN already assigned. The contractor shall provide top assembly drawings ("XC" coded), if available, for the sub-assemblies being reviewed. Drawings, hard copies and in English, will accompany each submission. Approved vendor(s) CAGE will be typed, stamped, or written legibly, with an authorized signature and date, on all drawings. The contractor may substitute commercial catalogs or catalog description(s) for drawings, which will require Government approval.

C.7.6.6 The Contractor shall screen for standardization of all part numbers selected as repair parts. To accomplish the screening, the Contractor may elect to access the FEDLOG database to identify repair parts, tools, and components in the military supply system. To obtain access to FEDLOG, the Contractor shall submit a completed AMXCA

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Form 108, Authorization for Distribution of DCA Products to Government Contractor. The PCO will provide this form upon contractor request. The form shall be submitted to the PCO for signature/approval and further processing.

C.7.7 Publications

C.7.7.1 The contractor shall prepare and deliver TM Changes/Revisions for the HMMWV FOV as required. Changes shall be in the same style and format as the basic manual. Revision of a single TM shall be developed in the same style and format as the basic manual, unless otherwise directed in individual work directive. Revision of a complete TM series shall be developed in accordance with the requirements of MIL-STD-40051.

C.7.7.2 Applicable Changes/Revisions against TMs listed below may be procured under this contract in accordance with Exhibit Publication Number Title TM01 TM 9-2320-280-10 OPERATOR MANUAL TM01 TM 9-2320-387-10 OPERATOR MANUAL TM02 TM 9-2320-280-10-HR HAND RECEIPT TM02 TM 9-2320-387-10-HR HAND RECEIPT TM03 TM 9-2320-280-20 UNIT MAINTENANCE TM03 TM 9-2320-280-34 DS & GS MAINTENANCE TM03 TM 9-2320-387-24 UNIT/DS/GS MAINTENANCE TM03 TM 9-2815-237-34 DS & GS ENG MAINTENANCE TM04 TM 9-2320-280-24P UNIT/DS/GS/RPSTL TM04 TM 9-2320-387-24P DS & GS RPSTL TM04 TM 9-2815-237-34P DS & GS MAINTENANCE TM05 SMI 9-2320-280-14&P SUPPLEMENTAL OPERATION, MAINTENANCE, & REPAIR PARTS INFORMATION TM06 TM 9-2320-387-10, 24, 24P INTERACTIVE ELECTRONIC TECHNICAL MANUAL (IETM) TM07 TM 9-2320-280-20, 24P INTERACTIVE ELECTRONIC TECHNICAL MANUAL (ETM)

C.7.7.3 The contractor shall prepare and deliver operation and maintenance TM Changes/Revisions in accordance with TM01 through TM03.

C.7.7.4 The contractor shall prepare and deliver Repair Parts and Special Tools List (RPSTL) Changes/Revisions in accordance with TM04.

C.7.7.5 The contractor shall create a new Interactive Electronic Technical Manual (IETM) for TM 9-2320-387-10/24/24P, covering the Operator and Unit through General Support level of maintenance including Repair Parts and Special Tools List for the HMMWV Expanded Capacity Vehicle (ECV), in accordance with TM06.

C.7.7.5.1 The IETM prepared shall be CALS compliant, Standard Generalized Markup Language (SGML)-based, and shall meet the requirements of MIL-PRF-87268 and MIL-PRF-87269. Illustrations shall meet requirements of MIL-PRF-28002C or MIL-PRF-28003A.

C.7.7.5.2 Content of the IETM shall meet the content requirements of MIL-STD-40051 as appropriate for electronic technical manuals.

C.7.7.5.3 If SGML tagging and Document Type Definitions (DTDs) from MIL-STD-2361 are used, tags must be mapped to appropriate tags for the software used to run the final IETM. If other SGML tagging and DTDs are used, requirements of MIL-PRF-28000A and MIL-PRF-28001C must be met.

C.7.7.5.4 IETM must run in Windows 95.

C.7.7.5.5 IETM shall contain Repair Parts and Special Tools List data in the latest ISO Standard Query Language (SQL) database.

C.7.7.5.6 IETM must be capable of displaying on both a color monitor and a monotone monitor. Wherever color is used, the same functionality must be present for users with a monotone display system (such as the Contact Test Set (CTS) or SPORT).

C.7.7.5.7 The IETM must display at a resolution of 800 x 600 (super VGA) and 256 colors (or 256 gray tones).

C.7.7.5.8 The IETM shall provide for a keyword data search capability. Users must be able to search for information by keyword, word phrase, numerical data, illustrations, videos, tables, and schematics. Search tool will permit the use of wildcards.

C.7.7.5.9 The IETM shall include the ability for users to post electronic notes.

C.7.7.5.10 The IETM shall maintain a history file consisting of a list of information accessed by the user during one session in which each list entry is a link which allows the user to return to that information.

C.7.7.5.11 The IETM shall provide users the capability to set bookmarks.

C.7.7.5.12 The IETM shall be linked to the extent specified below:

C.7.7.5.13 Associated troubleshooting, maintenance, and RPSTL information shall be linked.

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C.7.7.5.14 All references within the IETM shall be linked.

C.7.7.5.15 References to documents external to the IETM and included on the CD shall be linked.

C.7.7.5.16 Menu entries will serve as a "table of contents" and shall be linked. The main menu shall include all pertinent information in the IETM, to include general information, operation procedures, PMCS tasks, maintenance procedures, schematics, illustrations, videos, databases of expendables, repair parts, make-from items, bulk materials, toolkits, etc (content required by MIL-STD-40051).

C.7.7.5.17 Individual procedures that contain set-up information with references will include links to the referenced information.

C.7.7.5.18 Animations may be included in the IETM where helpful to show how something works, how an assembly fits together, or how an important procedure must be done.

C.7.7.5.19 The IETM may include user-rotateable 3D Graphics where needed for clarity.

C.7.7.5.20 The IETM shall be capable of covering multiple equipment models. The IETM will include all the information including differences of various models and provide the ability to allow the user to indicate the model being dealt with so the IETM will filter and display only information pertinent to that model

C.7.7.5.21 The IETM shall include information supporting several maintenance levels. The IETM will provide the ability of the user to indicate the maintenance level and the IETM will filter the data so as to display only information appropriate for that maintenance level.

C.7.7.5.22 The IETM will include more than one maintenance manual (vehicle, transmission, and engine for example) and provide filtering such that user can obtain only engine information or only transmission information.

C.7.7.5.23 The IETM shall provide a user-friendly method to connect to the US Army parts ordering system (Unit Level Logistics System (ULLS)) so that users can order repair parts from within the IETM.

C.7.7.5.24 The IETM shall provide a connection to Standard Army Management System (SAMS). Methods to input and extract information from SAMS shall be provided. This shall include information pertinent to digital DA Form 5988.

C.7.7.5.25 The IETM shall provide a connection to the Failure Analysis and Maintenance Planning System (FAMPS). Methods to input information to FAMPS shall be provided. Information should include: a. Mechanic identification and maintenance and troubleshooting actions; b. IETM update download or install actions; c. Parts ordering actions d. Environmental conditions recording actions

C.7.7.5.26 The IETM shall contain conventional help screens.

C.7.7.5.27 The IETM shall contain context-sensitive help screens so that the user receives help information related to the specific area currently being used.

C.7.7.5.28 The troubleshooting in this IETM shall be developed so that each screen provides a single decision and that decision dictates the next troubleshooting screen. At each screen, the reason for the action, a list of possible problems yet to be checked, and a history of what has been checked shall be available to the user.

C.7.7.5.29 The troubleshooting shall be hardware intrusive and interface with the CTS/SPORT; troubleshooting trees shall send, receive, and interpret data from vehicle data buses where appropriate and shall fully integrate these actions with the troubleshooting tree screens. The IETM shall interact with the following (as appropriate for the equipment covered): a. DCA data bus; b. SAE J1708 data bus; c. SAE J1939 data bus.

C.7.7.5.30 The IETM shall provide the user with the capability to print schematics.

C.7.7.5.31 The IETM shall provide the user with the capability to print operator, maintenance or troubleshooting procedures.

C.7.7.5.32 The IETM shall provide the user with the capability to print Repair Parts and Special Tools information.

C.7.7.6 The contractor shall prepare and deliver an updated IETM in accordance with TM07. The basic HMMWV IETM CD-ROM will be provided to the contractor as GFE.

C.7.7.7 The contractor shall also produce an Acrobat ETM file of each publication requested under individual work

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directive. Acrobat files are .PDF (portable document files) format files. These files shall contain bookmarks and links of all internal references, table of content entries, chapter index entries, and alphabetical index entries. Auto linking shall be accomplished using Alliant Infolinker (or equivalent) or manual linking shall be accomplished using Acrobat Exchange.

C.7.7.8 The contractor shall provide technical support during any verification of technical manuals. Technical support includes, but is not limited to, special tools, common tools, lubricants, parts which must be removed each time they are replaced, expendables, shop facilities and equipment, and technical personnel support.

C.7.7.9 The following shall be delivered, postage prepaid, to TACOM, AMSTA-IM-HLA, Warren, MI 48397-5000: a. Camera-ready (600 DPI laser print or equivalent) copy of each complete publication, with running sheets and folio markings, sized for 1 to 1 reproduction (no enlargement or reduction required by the printer). b. Complete SGML-tagged data for each publication and graphics files in the format specified in the 40051 and 2361 standards; c. Word-processing file of each publication (MS Word or equivalent). d. Acrobat .PDF file of each publication.

C.7.7.10 All digital files are to be delivered on ISO 9660 CD-ROM.

C.8 SYSTEM SAFETY

C.8.1 Safety Engineering. The contractor shall ensure that safety engineering is considered in all system design activities performed under this contract. The contractor shall not degrade HMMWV safety related design features. System design and/or operational procedures developed or updated by the contractor shall consider, but not be limited to, the following:

C.8.1.1 Identifying hazards associated with the system by conducting safety analyses and hazard evaluations. Analysis shall include both operational and maintenance aspects of the vehicle along with potential interface problems with planned subsystems.

C.8.1.2 Eliminating or reducing significant hazards by appropriate design or material selection.

C.8.1.3 Controlling or minimizing hazards to personnel which cannot be avoided or eliminated.

C.8.1.4 Locating equipment components and controls so that access to them by personnel during operation, maintenance or adjustments shall not require exposure to hazards such as high temperature, chemical burns, electrical shock, cutting edges, sharp points, or concentrations of toxic fumes above established threshold limit values. 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 be either enclosed or guarded. Protective devices shall not impair operational functions.

C.8.1.5 Ensuring that suitable warning and caution notes are included in instructions for operation, maintenance, assembly and repairs and distinct markings placed on hazardous components of equipment.

C.8.1.6 Ensuring that safety is considered for both operational and maintenance phases of the system.

C.8.1.7 Ensuring the system meets the Federal Motor Vehicle Safety Standards (FMVSS) and Federal Motor Carrier Safety Regulations (FMCSR).

C.8.2 Safety Assessment Report (SAR).

C.8.2.1 As a result of safety analyses, hazard evaluations, and independent contractor testing, the contractor shall prepare a SAR documenting the changes made to the system and the impact the changes have on the safe operation of the system. The SAR shall identify all vehicle safety features, discuss all potential safety and health related problem areas and shall establish special procedures and/or precautions to be observed by Government test agencies and system users. The SAR shall be prepared in accordance with DI-SAFT-80102A and CDRL A018.

C.8.2.2 A draft SAR shall be submitted 90 days prior to delivery of the hardware for Government test. The final SAR shall be submitted 30 days after Government review of draft. The final SAR is subject to approval by the Government.

C.8.2.3 In the event the system is modified or procedural changes made after the final SAR is submitted, the contractor shall update the SAR to reflect those modifications or changes.

C.8.3 Radioactive material shall not be utilized under this contract.

C.9.1 Packaging Development

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C.9.1.1. The Contractor shall develop and provide packaging data for all provisioned items pertaining to the HMMWV that are not common with other TACOM vehicle or end item systems, and maintain and update packaging data for each provisioned item. The contractor shall assess changes to engineering and logistic data for impact on packaging data, and shall provide packaging impact statements with ECPs. For each change, the contractor shall determine if additional items require packaging data and if existing packaging data requires revision. The Contractor shall provide new and revised packaging data. Contractor shall provide facilities, equipment, materials, and access to the provisioned items for packaging development. The Contractor shall include information for each of the items, which shall be provided concurrently with each packaging data submittal, so that we can determine the adequacy of the Contractor prepared packaging analysis and data submittal. This includes item drawings and data such as: Source, Maintenance, and Recoverability (SMR) codes, Unit of Issue codes, Unit of Measure and Measurement Quantity, and copies of any applicable Material Safety Data Sheets.

C.9.1.2. The contractor is responsible for packaging development status. This includes engineering and logistic changes showing the status of packaging development for these changes. The contractor shall make available the packaging development status of each provisioned item. The contractor shall provide the electronic data interface.

C.9.2 Packaging/Logistics Data Entry. The Contractor shall develop, maintain and update packaging data in accordance with DI-ALSS-81529, and provide for the entry of information to the computer data base known as the TACOM Packaging Data File. See Attachments B and C for the format and content of Packaging Data entry. For consumable type items which do not meet the criteria for a Special Group item and which appropriately fit in the category for a Selective Group item, the fields in Attachment C with asterisks noted are the only required fields. The TACOM approved Packaging Data Entry shall be electronically submitted to AMSTA-LC-LEAP (e-mail address to be provided) in an ASCII delimited text format using commas as delimiters. Quotation marks may be used as text qualifiers but are not required. Details regarding the entry of the information will be discussed at Start of Work Meeting.

C.9.2.1 Item Classification. To determine packaging requirements, items shall be classified as either selective or special group items.

C.9.2.1.1 Selective Group Items. Items that do not require a drawing, sketch, illustration, narrative type instructions, and do not exceed 40 pounds, have any one dimension which exceeds 40 inches, or have a length and girth of over 84 inches. These items can be considered Selective Group items if appropriate packaging can be defined by the codes in MIL-STD-2073-1D.

C.9.2.1.2 Special Group Items. Items shall be considered Special Group Items if:

- a. Narrative instructions or figures are needed to describe packaging requirements.
- b. Kits, sets, and items consisting of separate parts.
- c. Items that require disassembly for packaging.
- d. Items requiring special handling or condemnation procedures.
- e. Items considered Hazardous for Transport.
- f. Items considered to have a shelf-life.
- g. Items reparable at Direct or General Support Maintenance.
- h. Items designated as reparable and have a National Maintenance Work Requirement. (NMWR).
- i. Items excluded from the Selective Group

C.9.3. Special Packaging Instructions - The Contractor shall develop, maintain and update the Special Packaging Instruction for each special group item. Packaging processes and materials shall be described for cleaning, drying, preserving, packing, marking, and unitization. Figures and narrative data shall be developed to describe the form, fit, and function of packaging in sufficient detail for production. The format and content of Special Packaging Instructions shall be in accordance with Data Item DI-PACK-80121B, CDRL A020.

C.9.4. Validation Testing of Preservation Processing And Packaging.

The Contractor shall validate packaging for Special group items in accordance with Appendix F of Standard Practice for Military Packaging MIL-STD-2073-1D. The test report shall be provided concurrently with the packaging data submittal, and shall include photographic records of package and testing.

C.9.5 Container Design Retrieval System (CDRS) Search Request - (DI-PACK-80683A - CDRL A022). This is a management system program to provide a DOD centralized automated data base system for storing, retrieving, and analyzing existing container designs and test information concerning specialized containers. The contractor shall use this system when making search requests for any specialized reusable container designs.

Guidelines for determining when a reusable container may be desirable include, but are not limited to:

1. The container can serve multiple purposes; e.g., as a shipping and storage container or as a protective case while the item is in use
2. The need for periodic inspection or exercising the contained item justifies a reusable container.

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3. Item fragility dictates shock absorbing system.
4. Economics of package and shipping costs vs damage costs for each of several different package designs

C.9.5.1. The contractor shall provide assessment data to determine if existing container designs are suitable. The contractor shall assess the fit and function of existing containers and compare costs of modifications and alternate new designs. Assessment data shall include analysis justifying the need for a new or modified container. The contractor shall, based on his assessment data, identify to TACOM items which are candidates for specialized reusable containers. For those items identified to TACOM (or identified to the contractor by TACOM) and approved by TACOM as specialized reusable container candidates, the contractor shall make Search Requests for all specialized reusable container designs. The purpose of the CDRS is to avoid duplication in container designs, minimize the number of new container designs being developed and promote reuse of existing DoD reusable containers for new item development and procurement.

C.9.5.2 Reusable Container Development As identified by the Government, the contractor shall make a reusable container proposal for TACOM approved or identified specialized container candidate items. The proposal shall include a cost breakout of development/design, validation, completion of the technical data package for competitive procurement, container life cycle, and container production cost (100 each). A life cycle cost analysis will be made and compared with a container that protects the item from damage and deterioration when exposed to the standard storage and distribution requirements defined in ASTM D4169, distribution cycle 18, assurance level I, criterion 3.

C.9.5.3 Validation Testing of Preservation Processing And Packaging Upon approval of the validation testing proposals, the contractor shall validate Reusable Container designs. Notice of validation testing will be provided at least 30 days prior to the proposed test date. Validation testing of containers will establish the capability of the containers to protect the integrity and serviceability of the items for which the containers are designed. Instrumentation for shock and vibration may be required to establish the capability of the container to protect the integrity and serviceability of the item for which the container is designed. Containers of this type frequently incorporate energy absorbing systems, dehumidification systems, quick release latching mechanisms, and other special features to provide protection for the item. Containers can be repaired and/or retrofitted to prolong its life or modified to adapt it for shipment of items other than that for which it was originally intended. A Government representative will verify validation.

a. The contractor shall provide validation testing reports and photographic records for the container tests. The report shall contain, as appropriate, a description of the tests performed, results, shock and vibration recordings, static and dynamic clearances within the container, and conclusions.

C.9.5.4 Container Technical Data Package Upon receiving Government approval, the contractor shall complete a Technical Data Package (TDP) for the item(s) designated. The technical data package shall be in accordance with MIL-T-31000 and shall include production drawings and associated lists sufficient to describe form, fit, and function of the LLR container and permit competitive procurement of the specialized reusable container. Engineering drawings and associated lists shall be in accordance with ASME-Y14.100, ASME-Y14.24, ASME-Y14.35M, AND ASME-14.34M. The contractor shall provide entry of drawing images and data to the TACOM ACMS. The Contractor shall submit Specialized Reusable Container data to the Container Design Retrieval System (CDRS) IAW DI-PACK-80684A, CDRL A023.

C.9.6 Equipment Preservation Data Sheet. (DI-PACK-81581, CDRL A021)

a. The contractor shall develop and submit Shipment and Storage Instructions processing as described in MIL-STD-3003. The contractor shall consider disassembly procedures to meet clearance requirements for land, air, and sea shipment and to assure economical transportation. Packaging requirements for Basic Issue Items (BII) and Components of the End Item (COEI) shall be developed by the contractor. BII shall be packed separate from COEI. The contractor shall designate stowage locations and securement provisions. Stowage provisions shall not interfere with lifting, tie down or other transportation handling. To maintain the Equipment Preservation Data Sheet (EPDS), the contractor shall provide revision(s) for each approved design change affecting shipment configuration, weight, and/or transportability. Also, to maintain the EPDS, the contractor shall provide revision (s) for each logistic change (e.g., Packaging of Basic Issue Items (BII) or Components of the End Item (COEI)). The format and content of the EPDS shall be in accordance with DI-PACK-81581.

b. The contractor shall validate the Level B procedures in the EPDS and shall submit a cost proposal to validate the Level A procedures. Validation for EPDS procedures shall verify the adequacy of the preservation, packaging, packing and stowage of BII/COEI, the preservation procedures for shipment and storage, and the exercising requirements for vehicles in long term storage. Government Representative will verify and witness the contractor validation.

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Name of Offeror or Contractor: AM GENERAL LLC

SECTION F - DELIVERIES OR PERFORMANCE

DELIVERIES OR PERFORMANCE

F.1 Period of Performance. The work required under this contract shall be exercised during the period commencing from the date of contract award through 30 September 2007. The period of performance is based on the Government continuing to exercise LOE hours through Work Directives. In the event, the Government chooses not to exercise additional LOE hours, the contract will end when the last Work Directive is completed.

F.2 Delivery of Hardware. All deliverable hardware shall be shipped FOB Destination unless otherwise directed by the Government, and in accordance with the applicable work directive.

F.2 Delivery of Data.

F.2.1 All data required by this contract shall be delivered FOB Destination, and in accordance with the applicable work directive and CDRL.

F.2.2 All drawings and other technical data required by this contract shall be submitted to the Government upon completion or termination of this contract if not previously delivered in accordance with the CDRL and applicable work directives.

*** END OF NARRATIVE F 001 ***

Name of Offeror or Contractor: AM GENERAL LLC

SECTION H - SPECIAL CONTRACT REQUIREMENTS

SPECIAL CONTRACT REQUIREMENTS

H.6 OPTION FOR ADDITIONAL LEVEL OF EFFORT - SYSTEM TECHNICAL SUPPORT (STS)

*H.6.1 The Government shall have the option to increase the level of STS effort by up to a maximum of 690,000 level of effort hours. The PCO may exercise this option at any time up to thirty (30) days prior to contract completion. The option will be exercised via issuance of a contract modification obligating funds and upon issuance of work directives. The option may be exercised in one or more increments, but in any event, the total level of effort hours added to the contract shall not exceed 690,000. There is no limit to the number of hours that can be exercised in any given year. The only limitation is that no more than 690,000 hours may be exercised over the four option years. If the option is exercised in increments, the estimated cost and fixed fee for the level of effort hours called up shall be proportionate to the estimated cost and fixed fee set forth below. The CPFF rate used for WDs will be the rate that is awarded within the time period stated below for each option year.

Option Year	Estimated Cost	Fixed Fee	Total CPFF	CPFF Rate Effective Upon WDs/Modifications Issued:
1st	\$56.62	\$3.73	\$60.35	16 Sep 00 - 15 Sep 01
2nd	\$56.61	\$3.83	\$60.44	16 Sep 01 - 15 Sep 02
3rd	\$58.30	\$3.93	\$62.23	16 Sep 02 - 15 Sep 03
4th	\$60.38	\$4.03	\$64.41	16 Sep 03 - 30 Sep 04
5th	\$76.90	\$6.11	\$83.01	01 Oct 04 - 30 Sep 05
6th	\$80.86	\$6.42	\$87.28	01 Oct 05 - 30 Sep 06
7th	\$84.44	\$6.70	\$91.14	01 Oct 06 - 30 Sep 07

* Changed by Modification P00059

*** END OF NARRATIVE H 001 ***

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Name of Offeror or Contractor: AM GENERAL LLC

SECTION J - LIST OF ATTACHMENTS

<u>List of Addenda</u>	<u>Title</u>	<u>Date</u>	<u>Number of Pages</u>	<u>Transmitted By</u>
Exhibit A	CONTRACT DATA REQUIREMENTS LIST (CDRL) AND DATA ITEM DESCRIPTIONS (DIDS)	31-AUG-2004	010	
Attachment 002	LIST OF APPLICABLE DOCUMENTS/STANDARDS (NOT PROVIDED AS GFI)	31-AUG-2004	001	
Attachment 006	***DELETED***			
Attachment 008	ACMS PREPARATION & DELIVERY REQUIREMENTS FOR ECPS, VECPS, & ERRS	27-AUG-2004	006	
Attachment 009	DATA DELIVERY DESCRIPTION - ECPS	21-JUN-2004	015	
Attachment 010	DATA DELIVERY DESCRIPTION - NOTICE OF REVISION	21-JUN-2004	002	