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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0605626A: Aerial Common Sensor - SDD							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	31.435	47.426	10.382	-	10.382	36.102	23.244	0.133	0.135	Continuing	Continuing
AC5: Enhanced Medium Alt Recon Surv Sys (EMARSS) (MIP)	-	31.435	47.426	10.382	-	10.382	36.102	23.244	0.133	0.135	Continuing	Continuing
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
FY14 - Budget Year Adjustment of \$10.258 million additional												
FY15 - ARL funding has been placed in the EMARSS RDTE line in the amount of \$28.225 million until new RDTE line can be established.												
FY16 - ARL funding has been placed in the EMARSS RDTE line in the amount of \$17.946 million until new RDTE line can be established.												
A. Mission Description and Budget Item Justification												
The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's next generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. EMARSS provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS aircraft will be assigned to the U.S. Army Intelligence and Security Command's (INSCOM) Aerial Exploitation Battalions (AEB). EMARSS is an improvement over the existing Medium Altitude Reconnaissance and Surveillance System Quick Reaction Capability (MARSS QRC) in that it hosts an on board Distributed Common Ground System - Army (DCGS-A) capability, improved satellite communications, improved aircraft performance, and life cycle logistics sustainment capability.												
EMARSS will consist of a commercial derivative aircraft equipped with an Electro-optical/Infrared (EO/IR) sensor with Full Motion Video (FMV), a Communications Intelligence (COMINT) collection system, an Aerial Precision Geolocation (APG) system, tactical line-of-site (LOS) and beyond line-of-site (BLOS) communications suite, two DCGS-A enabled operator workstations and a self-protection suite. EMARSS is built to allow future capabilities to be integrated on platform with the addition of a third carry-on workstation.												
EMARSS will operate as a single platform in direct support of tactical missions. EMARSS, integrating elements of the DCGS-A, will provide efficient response to Combat Forces with Intelligence, Surveillance and Reconnaissance (ISR) tasking. EMARSS' flexibility, endurance, sensor capability, communications architecture, and Processing, Exploitation & Dissemination (PED) support is relevant to the entire Find, Fix, Finish, Exploit, Analyze, and Disseminate (F3EAD) cycle.												

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>
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FY14 Base funding in the amount of \$10.382 million funds final Engineering and Manufacturing Development (EMD) activities to include delta testing and corrective actions resulting from Limited User Test (LUT). These funds also provide partial funding for an Interim Contractor Logistics Support (ICLS) capability. Results will support a Milestone C decision.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014 Base</u>	<u>FY 2014 OCO</u>	<u>FY 2014 Total</u>
Previous President's Budget	31.435	47.426	0.124	-	0.124
Current President's Budget	31.435	47.426	10.382	-	10.382
Total Adjustments	0.000	0.000	10.258	-	10.258
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	10.258	-	10.258

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0605626A: Aerial Common Sensor - SDD				PROJECT AC5: Enhanced Medium Alt Recon Surv Sys (EMARSS) (MIP)			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
AC5: Enhanced Medium Alt Recon Surv Sys (EMARSS) (MIP)	-	31.435	47.426	10.382	-	10.382	36.102	23.244	0.133	0.135	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
FY15-FY16 - As Airborne Reconnaissance Low (ARL) does not have an RDTE line, funding has been placed in the EMARSS RDTE line in FY15 (\$28.225 million) and FY16 (\$17.946 million) until a new RDTE line can be established.												
A. Mission Description and Budget Item Justification												
The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's next generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. EMARSS provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS aircraft will be assigned to the U.S. Army Intelligence and Security Command's (INSCOM) Aerial Exploitation Battalions (AEB). EMARSS is an improvement over the existing Medium Altitude Reconnaissance and Surveillance System Quick Reaction Capability (MARSS QRC) in that it hosts an on board Distributed Common Ground System - Army (DCGS-A) capability, improved satellite communications, improved aircraft performance, and life cycle logistics sustainment capability.												
EMARSS will consist of a commercial derivative aircraft equipped with an Electro-optical/Infrared (EO/IR) sensor with Full Motion Video (FMV), a Communications Intelligence (COMINT) collection system, an Aerial Precision Geolocation (APG) system, tactical line-of-site (LOS) and beyond line-of-site (BLOS) communications suite, two DCGS-A enabled operator workstations and a self-protection suite. EMARSS is built to allow future capabilities to be integrated on platform with the addition of a third carry-on workstation.												
EMARSS will operate as a single platform in direct support of tactical missions. EMARSS, integrating elements of the DCGS-A, will provide efficient response to Combat Forces with Intelligence, Surveillance and Reconnaissance (ISR) tasking. EMARSS' flexibility, endurance, sensor capability, communications architecture, and Processing, Exploitation & Dissemination (PED) support is relevant to the entire Find, Fix, Finish, Exploit, Analyze, and Disseminate (F3EAD) cycle.												
FY14 Base funding in the amount of \$10.382 million funds final Engineering and Manufacturing Development (EMD) activities to include delta testing and corrective actions resulting from Limited User Test (LUT). These funds also provide partial funding for an Interim Contractor Logistics Support (ICLS) capability. Results will support a Milestone C decision.												

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Title: Product Development Description: Funding is provided for the following efforts: FY 2012 Accomplishments: Funded integration of prime mission equipment, software integration, and risk mitigation effort. FY 2013 Plans: Continues integration of prime mission equipment, software integration, and risk mitigation effort. FY 2014 Plans: Finalizes integration of prime mission equipment, software integration, and risk mitigation efforts. Partially funds an ICLS capability to support testing.		Articles: 21.729 0	17.426 0	7.182
Title: Support Costs Description: Support costs for matrix government, matrix contractor and PM Fixed Wing. FY 2012 Accomplishments: Funded support costs for matrix government, matrix contractor and PM Fixed Wing. FY 2013 Plans: Support costs for matrix government, matrix contractor and PM Fixed Wing. FY 2014 Plans: Support costs for matrix government, matrix contractor and PM Fixed Wing.		Articles: 2.231 0	4.800 0	0.400
Title: Test and Evaluation Description: Funding is provided for the following effort: FY 2012 Accomplishments: Funded Government DT/OT, LUT, Test Flight Ranges, and Joint Test Integration Facility (JTIF). FY 2013 Plans: Government DT/OT, LUT, FOA, Reliability Growth Testing (RGT), and JTIF. FY 2014 Plans:		Articles: 5.335 0	19.300 0	2.170

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2012	FY 2013	FY 2014		
Delta testing and corrective actions resulting from LUT.											
Title: Program Management Support							Articles:	2.140 0	5.900 0	0.630	
Description: Funding is provided for the following effort:											
FY 2012 Accomplishments: Funded Program Management Office (PMO) support and travel, Systems Engineering and Technical Assistance (SETA) and MITRE support.											
FY 2013 Plans: Continues Program Management Office (PMO) support and travel, Systems Engineering and Technical Assistance (SETA) and MITRE support.											
FY 2014 Plans: Continues Program Management Office (PMO) support and travel, Systems Engineering and Technical Assistance (SETA) and MITRE support.											
Accomplishments/Planned Programs Subtotals							31.435	47.426	10.382		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• Aerial Common Sensor (ACS): A02005			142.050		142.050	103.780	5.000	5.000	5.000	0.000	260.830
Remarks											
ACS - A02005 - FY14 Base procurement dollars in the amount of \$142.050 million supports purchasing four (4) Low Rate Initial Production (LRIP) systems including Government Furnished Equipment (GFE), training support, and initial spares. In addition, it brings four (4) EMARSS Engineering & Manufacturing Development (EMD) systems and a EMARSS Maintenance Vehicle (EMV) to production configuration.											
D. Acquisition Strategy											
The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is a Program of Record based on an Army G-3/5/7 Directed Requirement (DR) signed 11 December 2009. The program entered the acquisition process in the Engineering and Manufacturing Development (EMD) phase with a 1QFY11 contract award that was competitively awarded to a single contractor. Program completed System Design Review in 1QFY12 and begun modification and integration of the aircraft in 2QFY12. Following a Contractor Test / Development Test and Limited User Test, the Army will be positioned to inform a Milestone C Decision. A Forward Operational Assessment may be conducted if necessary to demonstrate the system against real world threats.											

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The schedule slip is due to a cost overrun indentified by Boeing on 1 Oct 12. The government negotiated a cost share agreement, signed on 26 Oct 12, that allows the program to synchronize the MS C decision with procurement funding in FY14.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>						PROJECT AC5: <i>Enhanced Medium Alt Recon Surv Sys (EMARSS) (MIP)</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO	Various	PM ARES:Aberdeen Proving Ground, MD	5.220	1.518		3.300		0.230		-		0.230	0.000	10.268	0.000
SETA Support	C/CPFF	PM ARES:Aberdeen Proving Ground, MD	3.045	0.415		1.600		0.200		-		0.200	0.000	5.260	0.000
MITRE	C/CPFF	PM ARES:Aberdeen Proving Ground, MD	2.326	0.207		1.000		0.200		-		0.200	0.000	3.733	0.000
Subtotal			10.591	2.140		5.900		0.630		0.000		0.630	0.000	19.261	0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EMARSS EMD	C/CPIF	Boeing Company:Ridley Park, PA	42.989	12.749		-		-		-		-	0.000	55.738	0.000
Other GFE to include COMSEC Equipment, Airborne Precision Geo Location (APG), and Vortex Data Links	Various	L3 COMM/ NSA:Warner Robins AFB	3.463	0.440		-		-		-		-	0.000	3.903	0.000
Request for Equitable Adjustment (REA)	C/FP	Boeing Company:Ridley Park, PA	7.085	-		-		-		-		-	0.000	7.085	0.000
Prime Contractor Systems Support	C/CPFF	Boeing Company:Ridley Park, PA	0.000	8.000		5.535		7.182		-		7.182	0.000	20.717	0.000
Engineering Change Proposals (ECP)	C/CPIF	Boeing Company:Ridley Park, PA	0.000	-		11.891		-		-		-	0.000	11.891	0.000
DCGS-A & Orion S/W processing on board	Various	Various:Various	6.200	0.540		-		-		-		-	0.000	6.740	0.000
ARL RDTE Placeholder	C/TBD	TBD:TBD	0.000	-		-		-		-		-	28.225	28.225	0.000

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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			59.737	21.729		17.426		7.182		0.000		7.182	28.225	134.299	0.000
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Government	MIPR	Various:Various	9.405	2.103		3.679		0.200		-		0.200	0.000	15.387	0.000
Matrix Contractor Support	Various	Various:Various	1.864	0.128		1.121		0.200		-		0.200	0.000	3.313	0.000
Subtotal			11.269	2.231		4.800		0.400		0.000		0.400	0.000	18.700	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government DT/OT, LUT	Various	Various:Various	6.383	1.207		-		2.170		-		2.170	0.000	9.760	0.000
Test Flight Ranges	Various	Various:Various	6.391	1.126		-		-		-		-	0.000	7.517	0.000
Live Fire Test & Evaluation (LFTE)	MIPR	Various:Various	0.000	-		5.000		-		-		-	0.000	5.000	0.000
Forward Operational Assessment (FOA)	MIPR	Various:Various	0.000	0.124		7.000		-		-		-	0.000	7.124	0.000
Initial Operational Test and Evaluation (IOT&E)	MIPR	Various:Various	0.000	-		1.000		-		-		-	0.000	1.000	0.000
Reliability Growth Testing (RGT)	MIPR	Various:Various	0.000	-		3.500		-		-		-	0.000	3.500	0.000
Joint Test & Integration Facility (JTIF)	Various	Various:various	6.800	2.878		2.800		-		-		-	0.000	12.478	0.000
Subtotal			19.574	5.335		19.300		2.170		0.000		2.170	0.000	46.379	0.000

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	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	101.171	31.435		47.426		10.382		0.000		10.382	28.225	218.639	0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army												DATE: April 2013					
APPROPRIATION/BUDGET ACTIVITY								R-1 ITEM NOMENCLATURE						PROJECT			
2040: Research, Development, Test & Evaluation, Army								PE 0605626A: Aerial Common Sensor -						AC5: Enhanced Medium Alt Recon Surv Sys			
BA 5: System Development & Demonstration (SDD)								SDD						(EMARSS) (MIP)			

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
CT/DT																												
LUT / FOA																												
MS C																												
LRIP																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CT/DT	4	2013	1	2014
LUT / FOA	2	2014	3	2014
MS C	3	2014	3	2014
LRIP	3	2014	1	2017