Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army											Date: February 2015	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305208A / *Distributed Common Ground/Surface Systems*							
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	-	27.607	20.155	25.592	-	25.592	25.777	26.218	30.498	31.064	Continuing	Continuing
956: *Distributed Common Ground System (MIP)*	-	27.607	9.270	8.923	-	8.923	-	-	-	-	Continuing	Continuing
D07: *DCGS-A Common Modules (MIP)*	-	-	10.885	16.669	-	16.669	25.777	26.218	30.498	31.064	Continuing	Continuing

Note

Project 956 (DCGS-A Increment 1) is a designated Major Automation Information System (MAIS) program.

Project D07 (Increment 2) was created to clearly delineate between the DCGS-A Project 956 (Increment 1) development efforts beginning in FY15.

A. Mission Description and Budget Item Justification

Distributed Common Ground System - Army (DCGS-A) is the Intelligence, Surveillance and Reconnaissance (ISR) System of Systems (SoS) for Joint, Interagency, Allied, Coalition, and National data analysis, sharing and collaboration. The core functions of DCGS-A are: the vertical and horizontal synchronization of ISR Processing, Exploitation and Dissemination (PED) efforts; operations in a networked environment at multiple security levels; the control of select Army and joint sensor systems; the fusion of all acquired data and information, and distribution of relevant red (threat), gray (non-aligned), and environmental (weather and terrain) information; and providing the Warfighters' early warning, targeting, and sensor ground station capabilities. DCGS-A provides a single integrated ISR ground processing system composed of common components that are interoperable with sensors, other information sources, all Warfighting Functions, and the Defense Information & Intelligence Enterprise (DI2E) and Intelligence Community Information Technology Enterprise (ICITE). DCGS-A is fielded in Fixed, Mobile, and embedded configurations emphasizing the use of reach and split based operations by improving accessibility of data in order to reduce forward deployed footprint. As enhanced capabilities are developed and tested, a continuing series of software releases will be integrated into Army Common/commodity hardware and fielded to units IAW the Dynamic Army Resourcing Priority List (DARPL) process.

The Army Acquisition Executive designated PEO IEW&S and DCGS-A as the Command Post Computing Environment (CPCE) Lead. As such, DCGS-A is defining the architecture to fit within the Common Operating Environment (COE) as described by the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA(ALT)) COE Implementation Plan. This is in accordance with the G-3/5/7 priority to align all Army networks, procurements, and enhancements under one COE and one vision leveraging intelligence community investments.

DCGS-A consolidated, enhanced, and modernized the Tasking, Processing, Exploitation, and Dissemination (TPED) capabilities formerly found in nine Army intelligence programs of record (Common Ground Station (CGS), Guardrail Common Sensor (GRCS), Counterintelligence & Interrogation Operations Workstation (CI&I OPS WS), All Source Analysis System (ASAS), Enhanced TrackWolf (ETW), Digital Topographic Support System (DTSS), Integrated Meteorological System (IMETS), Tactical Exploitation System (TES), and Prophet Control) and two Quick Reaction Capabilities (Joint Intelligence Operations Center – Iraq (JIOC-I) and Imagery Work Station(IWS)). DCGS-A provides these technologically advanced PED capabilities in tailored and scalable mobile, fixed, and embedded configurations in all maneuver

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army	Date: February 2015
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305208A *I Distributed Common Ground/Surface Systems*

and maneuver support units from Company Intelligence Support Team to Army Service Component Command, and in select maneuver sustainment units battalion and above. The program develops software packages to be embedded in mission command and other select systems to provide required ISR/analytic capabilities. DCGS-A is one of the Army's top modernization priorities.

DCGS-A software is tailored by echelon and scalable to each unit's mission. DCGS-A provides commanders and staffs the ability to maintain an accurate and up to date understanding of the operational environment. The DCGS-A contribution to commanders' visualization and situational awareness, rapid planning, and the synchronization of all warfighting functions, enable Army units to operate within the enemy's decision cycle. This capability enhances tactical and operational maneuver and the conduct of full spectrum operations across the range of military operations from humanitarian to major combat operations and campaigns through all phases of the Joint Continuum of Military Operations.

The DCGS-A configurations range from laptops to systems integrated in tactical shelters and mounted on tactical vehicles to large commodity servers operating in a sanctuary based processing environment. The fundamental intent and tenet of this approach is to reduce forward deployed equipment/footprint by co-locating the advanced analytics capabilities within the DCGS-A baseline with the regional data centers, where the data is stored. This infrastructure consolidation simultaneously reduces processor and communications requirements in tactical units by limiting the number of large data files transported across tactical communications systems. Following a successful operational assessment and Milestone C in 2QFY12/Full Deployment Decision in 1QFY13, the program is deploying DCGS-A Increment 1 Release 1 Software Baseline capability throughout the Army.

FY16 Base funding in the amount of $8.923 million for project 956, will be used for the continued development and testing of the DCGS-A Increment 1 Software Release 2 as well as the continued development and testing of the Command Post Computing Environment (CPCE) as it fits into the Army's overarching Common Operating Environment (COE) construct. The COE has been directed as a priority effort to align all Army networks, procurements, and enhancements under one COE vision. Funds used for efforts associated with the development of the CPCE/COE will include the continued merger/collapse of capabilities across multiple Battlefield Functional Areas (BFAs) and the consolidation of hardware used across the BFAs. Funds used for efforts associated with the development of the software will include continued advancements in the Standard Sharable Geospatial Foundation to support the Tactical Common Operating Picture, as well as further investment into capabilities and widget development supporting All Source Intelligence, Signals Intelligence (SIGINT), Geospatial Intelligence (GEOINT), emerging architectural and infrastructure enhancements, and software integration efforts. The FY16 funding will be used for integration of commercial technologies to the latest version(s) and changes due to Information Assurance updates. Testing activities requiring these funds will include participation in Network Integration Evaluation and Exercises such as: Empire Challenge, ULCHI Freedom Guardian, and Joint Interoperability Certification test(s) for each software release.

FY16 Base funding in the amount of $16.669 million for D07, will continue the iterative DCGS-A software releases that will increase the Processing, Exploitation, and Dissemination capability our Army requires. Increment 2 of the DCGS-A program will continue critical updates to the Army's ISR PED and multi-intelligence planning, analysis, and production capabilities through the exploitation of Cloud Computing and advanced analytics capabilities. This approach will achieve Information Technology efficiencies through alignment with the Intelligence Community Information Technology Environment, while developing the incremental software updates required to remain current.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army					Date: February 2015
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 7: *Operational Systems Development*			R-1 Program Element (Number/Name) PE 0305208A / *Distributed Common Ground/Surface Systems*		
B. Program Change Summary ($ in Millions)	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**
Previous President's Budget	27.607	20.155	25.710	-	25.710
Current President's Budget	27.607	20.155	25.592	-	25.592
Total Adjustments	-	-	-0.118	-	-0.118
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-0.118	-	-0.118

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army											Date: February 2015	
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305208A / *Distributed Common Ground/Surface Systems*				Project (Number/Name) 956 / *Distributed Common Ground System (MIP)*			
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
956: *Distributed Common Ground System (MIP)*	-	27.607	9.270	8.923	-	8.923	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Project 956 (DCGS-A Increment 1) is a designated Major Automation Information System (MAIS) program.

Beginning in FY16, a portion of the Project 956 funding was shifted to Project D07 (Increment 2) in order to clearly delineate between DCGS-A Increment 1 and Increment 2 development efforts. DCGS-A development efforts continue on project line (D07) within the same program element.

A. Mission Description and Budget Item Justification

Distributed Common Ground System - Army (DCGS-A) is the Intelligence, Surveillance and Reconnaissance (ISR) System of Systems (SoS) for Joint, Interagency, Allied, Coalition, and National data analysis, sharing and collaboration. The core functions of DCGS-A are: the vertical and horizontal synchronization of ISR Processing, Exploitation and Dissemination (PED) efforts; operations in a networked environment at multiple security levels; the control of select Army and joint sensor systems; the fusion of all acquired data and information, and distribution of relevant red (threat), gray (non-aligned), and environmental (weather and terrain) information; and providing the Warfighters' early warning, targeting, and sensor ground station capabilities. DCGS-A provides a single integrated ISR ground processing system composed of common components that are interoperable with sensors, other information sources, and all Warfighting Functions. DCGS-A is fielded in Fixed, Mobile, and embedded configurations emphasizing the use of reach and split based operations by improving accessibility of data in order to reduce forward deployed footprint. As enhanced capabilities are developed and tested, a continuing series of software releases will be integrated into Army common/commodity hardware and fielded to units in accordance with the Dynamic Army Resourcing Priority List (DARPL) process.

The Army Acquisition Executive designated PEO IEW&S and DCGS-A as the Command Post Computing Environment (CPCE) Lead. As such, DCGS-A is defining the architecture to fit within the Common Operating Environment (COE) as described by the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA(ALT)) COE Implementation Plan. This is in accordance with the G-3/5/7 priority to align all Army networks, procurements, and enhancements under one COE and one vision leveraging intelligence community investments.

DCGS-A consolidated, enhanced, and modernized the Tasking, Processing, Exploitation, and Dissemination (TPED) capabilities formerly found in nine Army intelligence programs of records (Common Ground Station (CGS), Guardrail Common Sensor (GRCS), Counterintelligence & Interrogation Operations Workstation (CI&I OPS WS), All Source Analysis System (ASAS), Enhanced TrackWolf (ETW), Digital Topographic Support System (DTSS), Integrated Meteorological System (IMETS), Tactical Exploitation System (TES), and Prophet Control) and two Quick Reaction Capabilities (Joint Intelligence Operations Center – Iraq (JIOC-I) and Imagery Work Station(IWS)). DCGS-A provides these technologically advanced PED capabilities in tailored and scalable mobile, fixed, and embedded configurations in all maneuver and maneuver support units from Company Intelligence Support Team to Army Service Component Command, and in select maneuver sustainment units battalion and

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305208A / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 956 / *Distributed Common Ground System (MIP)*

above. The program also develops software packages to be embedded in mission command and other select systems to provide required ISR/analytic capabilities. DCGS-A is one of the Army's top modernization priorities.

DCGS-A software is tailored by echelon and scalable to each unit's mission. DCGS-A provides commanders and staffs the ability to maintain an accurate and up to date understanding of the operational environment. The DCGS-A contribution to commanders' visualization and situational awareness, rapid planning, and the synchronization of all warfighting functions, enable Army units to operate within the enemy's decision cycle. This capability enhances tactical and operational maneuver and the conduct of full spectrum operations across the range of military operations from humanitarian to major combat operations and campaigns through all phases of the Joint Continuum of Military Operations.

The DCGS-A configurations range from laptops to systems integrated in tactical shelters and mounted on tactical vehicles to large commodity servers operating in a sanctuary based processing environment. The fundamental intent and tenet of this approach is to reduce forward deployed equipment/footprint by co-locating the advanced analytics capabilities within the DCGS-A baseline with the regional data centers, where the data is stored. This infrastructure consolidation simultaneously reduces processor and communications requirements in tactical units by limiting the number of large data files transported across tactical communications systems. Following a successful operational assessment and Milestone C in 2QFY12/Full Deployment Decision in 1QFY13, the program is deploying DCGS-A Increment 1 Release 1 Software Baseline capability throughout the Army.

FY16 Base funding in the amount of $8.923 million for 956, will be used for the continued development and testing of the DCGS-A Increment 1 Software Release 2; as well as the continued development and testing of the Command Post Computing Environment (CPCE) as it fits into the Army's overarching Common Operating Environment (COE) construct. The COE has been directed by the ASA(ALT) and concurred by the Army G3/5/7 as a priority effort to align all Army networks, procurements, and enhancements under one COE vision. Funds used for efforts associated with the development of the CPCE/COE will include the continued merger/ collapse of capabilities across multiple Battlefield Functional Areas (BFAs) and the consolidation of hardware used across the BFAs. Funds used for efforts associated with the development of the software will include continued advancements in the Standard Sharable Geospatial Foundation to support the Tactical Common Operating Picture, as well as further investment into capabilities and widget development supporting All Source Intelligence, Signals Intelligence (SIGINT), Geospatial Intelligence (GEOINT), emerging architectural and infrastructure enhancements, and software integration efforts. The FY16 funding will be used for integration of commercial technologies to the latest version(s) and changes due to Information Assurance updates. Testing activities requiring these funds will include participation in Network Integration Evaluation and Exercises such as: Empire Challenge, ULCHI Freedom Guardian, and Joint Interoperability Certification test(s) for each software release.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Design and Development of DCGS-A enterprise level net-centric architecture	13.964	-	4.530	-	4.530
Description: Continue design and development of DCGS-A enterprise level net-centric architecture to include: Development & Integration of DCGS-A Software; DT/OT, Mobile Basic Contract Deliverables, and Program Management support costs. Global Unified Data Environment (Cloud) - development - to create direct Data Ingest of varying intelligence data types and development of analytical tools to exploit single -INT data, further enhancing Cloud Enterprise Account Management load distribution of enterprise level complex					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305208A / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 956 / *Distributed Common Ground System (MIP)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
searches. Development of Cloud to Cloud Data Synchronization technologies and enhanced data management applications between Cloud and Edge nodes. ***FY 2014 Accomplishments:*** Continued to design and develop DCGS-A enterprise level net-centric architecture to include: Development & Integration of DCGS-A Software; DT/OT and Program Management support costs. Completed DT 1 and 2 and NIE 1. ***FY 2016 Base Plans:*** SW Fixes Rel 2, IA updates, Integration, CPCE, Sensor CE.					
Title: Matrix Support including SIL S/W Support ***Description:*** Matrix Support including SIL S/W Support ***FY 2014 Accomplishments:*** Matrix Support including SIL S/W Support ***FY 2015 Plans:*** Matrix Support including SIL S/W Support ***FY 2016 Base Plans:*** Matrix Support including SIL S/W Support	4.082	1.356	2.000	-	2.000
Title: Army and Joint Testing/Development/Operational Test Support/Software Fixes ***Description:*** Ongoing Army and Joint interoperability testing and evaluation to include Operational Assessment (Network Integration Evaluation (NIE) Operational Assessment), JITC, and Operational Test and Software Fixes ***FY 2014 Accomplishments:*** Conducted two developmental tests. ***FY 2015 Plans:*** Will support the LUT at NIE 15.2 and funds software fixes once the LUT is complete. ***FY 2016 Base Plans:*** Funds fix software issues identified during the LUT at NIE 15.2.	8.520	7.021	1.500	-	1.500
Title: Support Costs and Management Services	1.041	0.893	0.893	-	0.893

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305208A / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 956 / *Distributed Common Ground System (MIP)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Description: Funding is provided for the following effort/Project Management Support ***FY 2014 Accomplishments:*** Provide PMO support ***FY 2015 Plans:*** Provide PMO support. ***FY 2016 Base Plans:*** Provide PMO support					
Accomplishments/Planned Programs Subtotals	27.607	9.270	8.923	-	8.923

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• DCGS-A (MIP) Procurement: *BZ7316 - Procurement*	137.990	192.038	260.268	54.140	314.408	250.786	284.177	311.103	347.362	Continuing	Continuing
• DCGS-A Increment 2 RDTE: *0305208A / D07*	-	10.885	16.669	-	16.669	25.777	26.218	30.498	31.064	Continuing	Continuing
• Theater Net-Centric Geolocation TNG: *Theater Net-Centric Geolocation (TNG) RDTE*	0.050	0.350	0.166	-	0.166	0.166	0.410	0.606	-	-	1.748

Remarks

D. Acquisition Strategy

The Distributed Common Ground System-Army (DCGS-A) program was created in response to the Department of Defense (DoD) Distributed Common Ground/Surface System (DCGS) Mission Area Initial Capabilities Document (MA ICD) dated 13 Aug 2004, which captured the overarching requirements for an Intelligence, Surveillance, and Reconnaissance (ISR) Family of Systems (FoS) that will contribute to Joint and combined Warfighter needs. That ICD was updated as the Distributed Common Ground/Surface System (DCG/SS) Enterprise ICD, and approved by the Joint Requirements Oversight Council (JROC) 27 Feb 2009. The Army requirements were refined in the DCGS-A Capabilities Development Document (CDD), and approved by the JROC 31 Oct 2005. The DCGS-A program is currently in the Production and Deployment phase and was designated as a Major Automated Information System (MAIS) in OSD (AT&L) Memorandum, 29 Mar 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305208A / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 956 / *Distributed Common Ground System (MIP)*

DCGS-A is following an evolutionary acquisition approach to develop and field system capabilities over time to satisfy the requirements of the DCGS-A Capability Development Document (CDD). Following this approach, the first increment was defined and a Capability Production Document (CPD) was created with full consideration of all of the preceding supporting documents and analysis. As part of its initial staffing, a Cost Benefit Analysis was completed in support of the DCGS-A CPD. This analysis projected a significant cost avoidance/savings over the life cycle by not limiting the hardware configuration to a one size fits all unit types design but rather integrating the DCGS-A Software capabilities into common servers and other IT components fielded at that echelon. This approach was validated during the Milestone C and Full Deployment Decision process in FY2012 through the Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation (CAPE) approval of the Economic Analysis. This Economic Analysis validated the cost savings achieved utilizing the acquisition approach outlined above.

PM DCGS-A has been designated as the Command Post Computing Environment (CPCE) Lead for PEO IEW&S. As such, DCGS-A is currently aligning it's architecture to fit within the Common Operating Environment (COE) as described by the ASA(ALT) COE Implementation Plan. This alignment is in accordance with the G-3/5/7 priority to align all Army networks, procurements, and enhancements under one COE and one vision. Our acquisition strategy supports this initiative as we continue to collapse PORs and reduce footprint following our capability migration path and iterative development of software releases which continue to increase capabilities to satisfy the remaining CPD requirements beyond Initial Minimal Capability. As DCGS-A continues the path through Increment 1 and beyond, each release will focus on the COE and continually align the Command Post activities with POR migration activities. The program office expects to continue as the DCGS-A System Integrator for software development and hardware integration for Increment 1, and will continue to access multiple vendors by leveraging a variety of competitively awarded contracts.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / *Distributed Common Ground/Surface Systems*	Project (Number/Name) 956 / *Distributed Common Ground System (MIP)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management	Various	PM, DCGS-A : APG, MD	27.841	1.041		0.893		0.893	Dec 2015	-		0.893	Continuing	Continuing	Continuing
		Subtotal	27.841	1.041		0.893		0.893		-		0.893	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Metadata Catalog	Various	MITRE, : various	17.865	-		-		-		-		-	Continuing	Continuing	Continuing
Design & Develop DCGS-A Architecture	Various	Northrup Grumman, Various : Linthicum, MD, Various	247.877	-		-		-		-		-	-	247.877	-
Design & Develop DCGS-A Incr 1 Software	Various	Various : Various	0.000	13.964		-		-		-		-	Continuing	Continuing	-
Secure Common Data Link (SCDL)	Various	CUBIC : Orlando, Fla.	0.788	-		-		-		-		-	Continuing	Continuing	-
Global Unified Data Environment (Cloud) Development	Various	CERDEC/SEC : APG, MD	21.500	-		-		-		-		-	Continuing	Continuing	-
Software Fixes	C/TBD	Various : Various	0.000	-		-		2.530	May 2016	-		2.530	-	2.530	-
Design & Develop DCGS-A Architecture (CPCE & Sensor CE)	C/TBD	Various : Various	0.000	-		-		2.000	Mar 2016	-		2.000	-	2.000	-
		Subtotal	288.030	13.964		-		4.530		-		4.530	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support Government Test & Integration Lab	Various	CECOM : CECOM	18.734	4.082		1.356		2.000	Dec 2015	-		2.000	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / *Distributed Common Ground/Surface Systems*	Project (Number/Name) 956 / *Distributed Common Ground System (MIP)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	18.734	4.082		1.356		2.000		-		2.000	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test Support for DCGS-A Rel 2	Various	ATEC, OTC, Various : APG, MD, EPG, Various	9.245	6.904	Mar 2014	-		-		-		-	Continuing	Continuing	Continuing
Software Integration/Fixes	C/TBD	TBD : TBD	0.000	-		4.894		1.500		-		1.500	-	6.394	-
Developmental Testing for Sensor CE	Various	I2WD, Various : APG, MD, Various	0.000	-		2.127		-		-		-	-	2.127	-
NIE for Rel 2 and CPCE COE V2	Various	NIE : Ft. Bliss	10.287	0.800	Mar 2014	-		-		-		-	Continuing	Continuing	Continuing
Operational Assessments/ Joint Demo for Inc 1 and CPCE	Various	Empire Challenge, ULCHI Freedom Guardia, Unified Vision : AZ, KO, EU	1.800	0.300		-		-		-		-	-	2.100	-
Certification Test	Various	JITC/CTSF : ATEC	1.100	0.516	Mar 2014	-		-		-		-	-	1.616	-
		Subtotal	22.432	8.520		7.021		1.500		-		1.500	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	357.037	27.607		9.270		8.923		-		8.923	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305208A / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 956 / *Distributed Common Ground System (MIP)*

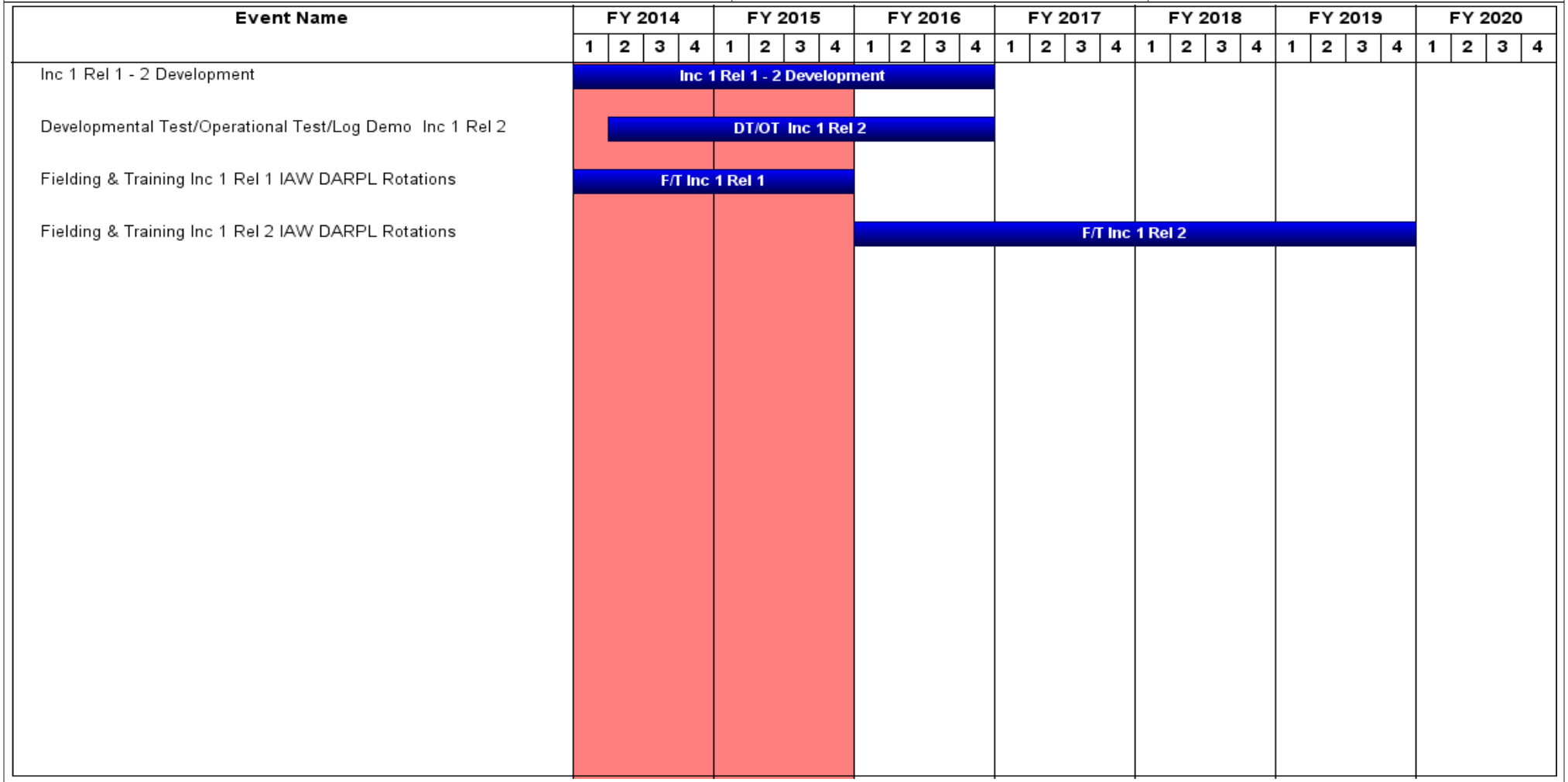

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305208A / *Distributed Common Ground/Surface Systems*	**Project (Number/Name)** 956 / *Distributed Common Ground System (MIP)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Inc 1 Rel 1 - 2 Development	1	2012	4	2016
Developmental Test/Operational Test/Log Demo Inc 1 Rel 2	2	2014	4	2016
Fielding & Training Inc 1 Rel 1 IAW DARPL Rotations	3	2013	4	2015
Fielding & Training Inc 1 Rel 2 IAW DARPL Rotations	1	2016	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / *Distributed Common Ground/Surface Systems*	Project (Number/Name) D07 / *DCGS-A Common Modules (MIP)*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
D07: *DCGS-A Common Modules (MIP)*	-	-	10.885	16.669	-	16.669	25.777	26.218	30.498	31.064	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Project D07 (Increment 2) was created to clearly delineate between the DCGS-A Project 956 (Increment 1) development efforts beginning in FY15.

A. Mission Description and Budget Item Justification

Distributed Common Ground System - Army (DCGS-A) is the Intelligence, Surveillance and Reconnaissance (ISR) System of Systems (SoS) for Joint, Interagency, Allied, Coalition, and National data analysis, sharing and collaboration. The core functions of DCGS-A are: the vertical and horizontal synchronization of ISR Processing, Exploitation and Dissemination (PED) efforts; operations in a networked environment at multiple security levels; the control of select Army and joint sensor systems; the fusion of all acquired data and information, and distribution of relevant red (threat), gray (non-aligned), and environmental (weather and terrain) information; and providing the Warfighters' early warning, targeting, and sensor ground station capabilities. DCGS-A provides a single integrated ISR ground processing system composed of common components that are interoperable with sensors, other information sources, all Warfighting Functions, compliant with standards providing the Defense Information & Intelligence Enterprise (DI2E) and Intelligence Community Information Technology Enterprise (ICITE). DCGS-A is fielded in Fixed, Mobile, and embedded configurations emphasizing the use of reach and split based operations by improving accessibility of data in order to reduce forward deployed footprint. As enhanced capabilities are developed and tested, a continuing series of software releases will be integrated into Army Common/commodity hardware and fielded to units IAW the Army Force Generation (ARFORGEN) process.

The Army Acquisition Executive designated PEO IEW&S and DCGS-A as the Command Post Computing Environment (CPCE) Lead. As such, DCGS-A is defining the architecture to fit within the Common Operating Environment (COE) as described by the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA(ALT)) COE Implementation Plan. This is in accordance with the G-3/5/7 priority to align all Army networks, procurements, and enhancements under one COE and one vision leveraging intelligence community investments.

DCGS-A provides technologically advanced Processing, Exploitation, and Dissemination (PED) capabilities through iterative software releases delivered in tailored and scalable mobile, fixed, and embedded configurations in all maneuver and maneuver support units from Company Intelligence Support Team to Army Service Component Command, and in select maneuver sustainment units battalion and above. The program develops software packages to be embedded in mission command and other select systems to provide required ISR/analytic capabilities. DCGS-A is one of the Army's top ten modernization priorities.

FY16 Base funding in the amount of $16.669 million will continue the iterative DCGS-A software releases that will increase the Processing, Exploitation, and Dissemination capability our Army requires. Increment 2 of the DCGS-A program will continue critical updates to the Army's ISR PED and multi-intelligence planning, analysis, and production capabilities through the exploitation of Cloud Computing and advanced analytics capabilities. This approach will achieve Information

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Technology efficiencies through alignment with the Intelligence Community Information Technology Environment, while developing the incremental software updates required to remain current.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Design & Develop DCGS-A Inc 2 Software	-	1.836	10.085	-	10.085
Description: Start efforts to design & develop DCGS-A Inc 2 software. Increment 2 expands on the capabilities provided by Increment 1 by adding capabilities at the Army and below echelons while developing new, enhanced, and leap-ahead Intelligence, Surveillance, and Reconnaissance (ISR) and Standard and Shareable Geospatial Foundation (SSGF) enterprise capabilities to align with the Intelligence Community (IC) and Army's Common Operating Environment (COE) and transformation objectives. Increment 2 will include capabilities from, and eventually displace, the Space Operations System (SOS) and the Guardrail Ground Baseline (GGB). Increment 2 and beyond will build upon emerging technologies such as an artificial intelligence system capability, cognitive computing, additional exploitation tools, and capabilities on the explosive growth in unstructured data (social networks and smart devices (both user borne and unattended)), fusion of data collected through Tactical Mesh Sensors and disconnected processing, giant leaps in "Cloud" capability, interoperability with the Army's Joint Tactical Ground Station (JTAGS), the Theater Net-centric Geolocation (TNG) system, and On The Move (OTM) capabilities. These requirements will be defined in future RDP and CD as necessary to ensure DCGS-A provides the data, information, intelligence, situation awareness, and interoperability needed to support the Warfighter. ***FY 2015 Plans:*** Continue to design & develop DCGS-A Inc 2 software. ***FY 2016 Base Plans:*** Continue to design & develop DCGS-A Inc 2 software.					
Title: System reconfiguration/redesign	-	3.020	2.300	-	2.300
Description: System Reconfiguration to enhance the systems to deliver higher performance to leverage industry enhancements in Cloud Technology and Solid State hardware. ***FY 2015 Plans:*** System Reconfiguration to enhance the systems to deliver higher performance to leverage industry enhancements in Cloud Technology and Solid State hardware. ***FY 2016 Base Plans:***					

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
System Reconfiguration to enhance the systems to deliver higher performance to leverage industry enhancements in Cloud Technology and Solid State hardware.					
Title: Matrix Support Government Test & Integration Lab ***Description:*** Matrix Support Government Test & Integration Lab support for software integration to the target platforms. ***FY 2015 Plans:*** Matrix Support Government Test & Integration Lab support for software integration to the target platforms. ***FY 2016 Base Plans:*** Matrix Support Government Test & Integration Lab support for software integration to the target platforms.	-	1.657	2.148	-	2.148
Title: Project Management ***Description:*** Project Management support to manage the cost, schedule, and performance metrics for the program. ***FY 2015 Plans:*** Project Management support. ***FY 2016 Base Plans:*** Project Management support.	-	1.054	1.136	-	1.136
Title: Army and Joint Testing/Development/Operational Test Support ***Description:*** Development and Testing of Increment 2 ***FY 2016 Base Plans:*** Will begin development and testing of Increment 2	-	-	1.000	-	1.000
Title: Milestone preparation; Activities; AoA ***Description:*** Milestone preparation; Activities; Analyze, define, and document the acquisition approach and achieve a successful Materiel Development Decision for the Increment 2 program. ***FY 2015 Plans:***	-	3.318	-	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Analyze, define, and document the acquisition approach and achieve a successful Materiel Development Decision for the Increment 2 program.					
Accomplishments/Planned Programs Subtotals	-	10.885	16.669	-	16.669

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• 956: *DCGS-A (MIP) 0305208A/956*	27.607	9.270	8.923	-	8.923	-	-	-	-	Continuing	Continuing
• BZ7316 - DCGS-A Procurement: *BZ7316 - DCGS-A (MIP)*	137.990	192.038	260.268	54.140	314.408	250.786	284.177	311.103	347.362	Continuing	Continuing
• Theater Net-Centric Geolocation TNG: *Theater Net-Centric Geolocation (TNG) RDTE*	0.050	0.350	0.166	-	0.166	0.166	0.410	0.606	-	-	1.748

Remarks

D. Acquisition Strategy

The Distributed Common Ground System-Army (DCGS-A) program was created in response to the Department of Defense (DoD) Distributed Common Ground/Surface System (DCGS) Mission Area Initial Capabilities Document (MA ICD) dated 13 Aug 2004, which captured the overarching requirements for an Intelligence, Surveillance, and Reconnaissance (ISR) Family of Systems (FoS) that will contribute to Joint and combined Warfighter needs. That ICD was updated as the Distributed Common Ground/Surface System (DCG/SS) Enterprise ICD, and approved by the Joint Requirements Oversight Council (JROC) 27 Feb 2009. The Army requirements were refined in the DCGS-A Capabilities Development Document (CDD), and approved by the JROC 31 Oct 2005. The DCGS-A program is currently in the Production and Deployment phase and was designated as a Major Automated Information System (MAIS) in OSD (AT&L) Memorandum, 29 Mar 2010. The Information Systems Capability Development Document (ISCDD), currently in staffing, is an update to the 2005 CDD.

DCGS-A is following an evolutionary acquisition approach to develop and field system capabilities over time to satisfy the requirements of the DCGS-A Capability Development Document (CDD). Following this approach, the first increment was defined and a Capability Production Document (CPD) was created with full consideration of all of the preceding supporting documents and analysis. As part of its initial staffing, a Cost Benefit Analysis was completed in support of the DCGS-A CPD. This analysis projected a significant cost avoidance/savings over the life cycle by not limiting the hardware configuration to a one size fits all unit types design but rather integrating the DCGS-A Software capabilities into common servers and other IT components fielded at that echelon. This approach was validated during the Milestone C and Full Deployment Decision process in FY2012 through the Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation (CAPE) approval of the Economic Analysis. This Economic Analysis validated the cost savings achieved utilizing the acquisition approach outlined above.

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The DCGS-A Increment 2 Acquisition Strategy will be a competitive contract award for managing the development, integration, documentation, and test for the Increment 2 Releases. Anticipate RFP release in 1QFY16 and contract award in 3QFY16.

PM DCGS-A has been designated as the Command Post Computing Environment (CPCE) Lead for PEO IEW&S. As such, DCGS-A is currently aligning its architecture to fit within the Common Operating Environment (COE) as described by the ASA(ALT) COE Implementation Plan. This alignment is in accordance with the G-3/5/7 priority to align all Army networks, procurements, and enhancements under one COE and one vision. Our acquisition strategy supports this initiative as we continue to collapse PORs and reduce footprint following our capability migration path and iterative development of software releases which continue to increase capabilities to satisfy the remaining CPD requirements beyond Initial Minimal Capability. As DCGS-A continues the path through Increment 2, each release will focus on the COE and continually align the Command Post activities with the DCGS-A platforms. The program office expects to award a competitive contract for software development and hardware integration.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management	C/TBD	Various : Various	0.000	-		1.054		1.136	Jan 2016	-		1.136	-	2.190	-
Milestone preparation; Activities; Trade Space Analysis (TSA)	C/TBD	Various : Various	0.000	-		3.318		-		-		-	-	3.318	-
		Subtotal	0.000	-		4.372		1.136		-		1.136	-	5.508	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Design & Develop DCGS-A Inc 2 software	C/TBD	Various : Various	0.000	-		1.836	May 2015	10.085	May 2016	-		10.085	Continuing	Continuing	Continuing
System reconfiguration/ redesign	C/TBD	Various : Various	0.000	-		3.020		2.300	May 2016	-		2.300	-	5.320	-
		Subtotal	0.000	-		4.856		12.385		-		12.385	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	C/TBD	Various : Various	0.000	-		1.657		2.148	Dec 2015	-		2.148	-	3.805	-
		Subtotal	0.000	-		1.657		2.148		-		2.148	-	3.805	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Test & Integration Lab	C/TBD	Various : Various	0.000	-		-		1.000	Jan 2016	-		1.000	-	1.000	-
		Subtotal	0.000	-		-		1.000		-		1.000	-	1.000	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		10.885		16.669		-		16.669	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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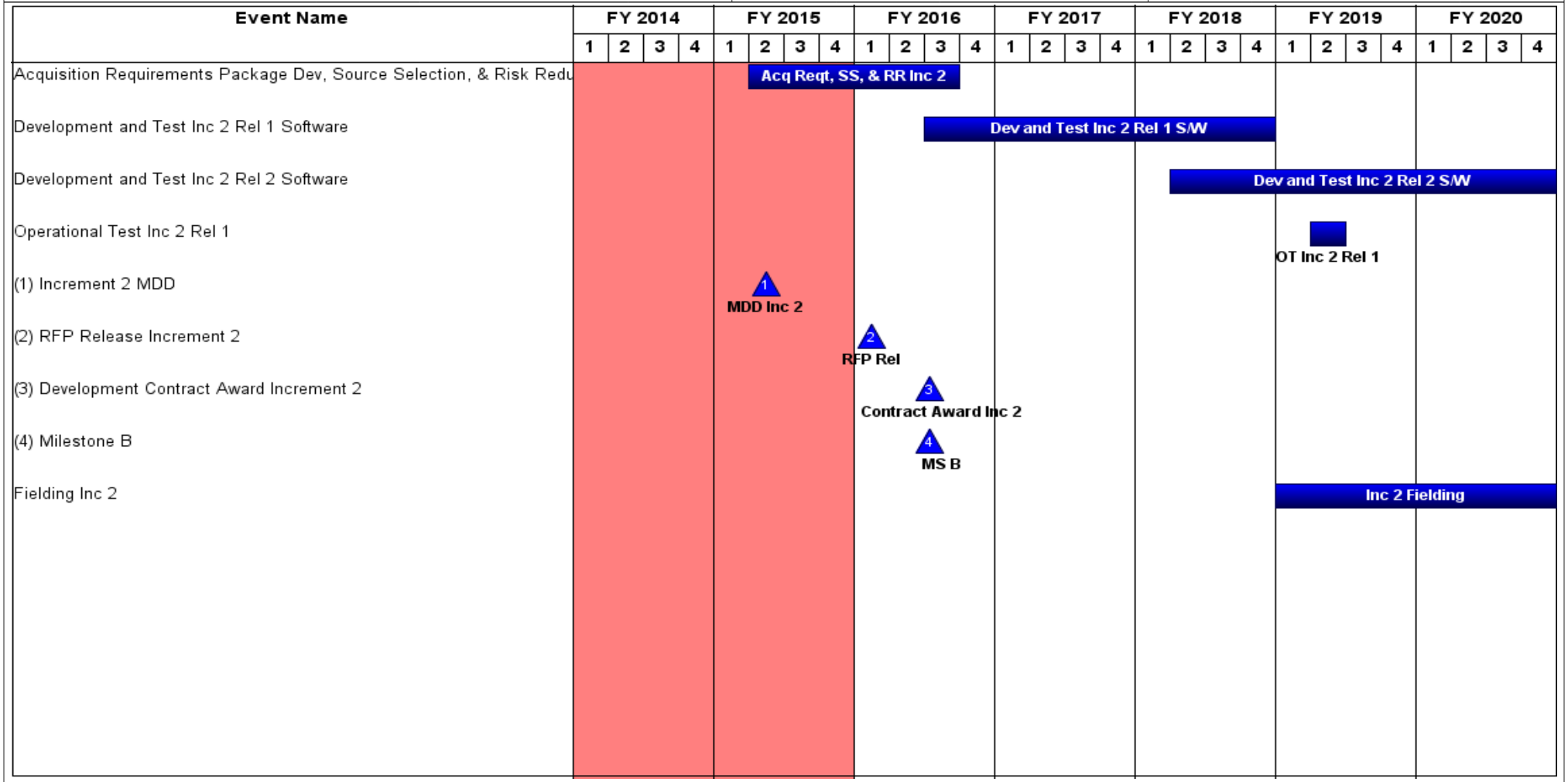

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Acquisition Requirements Package Dev, Source Selection, & Risk Reduction Inc 2	2	2015	3	2016
Development and Test Inc 2 Rel 1 Software	3	2016	4	2018
Development and Test Inc 2 Rel 2 Software	2	2018	4	2020
Operational Test Inc 2 Rel 1	2	2019	2	2019
Increment 2 MDD	2	2015	2	2015
RFP Release Increment 2	1	2016	1	2016
Development Contract Award Increment 2	3	2016	3	2016
Milestone B	3	2016	3	2016
Fielding Inc 2	1	2019	4	2020