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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303150A / <i>WWMCCS/Global Command and Control System</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	2.493	7.034	4.718	-	4.718	4.710	4.510	5.441	14.325	Continuing	Continuing
C86: <i>Army Global C2 System</i>	-	2.493	7.034	0.467	-	0.467	0.316	0.000	0.000	0.000	0.000	10.310
EA5: <i>Strategic and Joint Mission Command</i>	-	0.000	0.000	4.251	-	4.251	4.394	4.510	5.441	14.325	Continuing	Continuing

A. Mission Description and Budget Item Justification

Global Command and Control System-Army (GCCS-A): This project is the Army component system that directly supports the implementation of the Global Command and Control System Family of Systems. GCCS-A provides automated command and control tools for Army Strategic and Operational Theater Commanders to enhance warfighter capabilities throughout the spectrum of conflict during joint and combined operations in support of National Security. The GCCS-A developed software systems dramatically improves the Army's ability to analyze courses of action; develop and manage Army Forces; and ensure feasibility of war plans. In accordance with Army Command Post Computing Environment and Joint Command and Control objectives, GCCS-A will be re-architected away from a scalable process architecture based server - thick client architecture to a virtualized server - web client architecture hosted on Battle Command Common Services (BCCS)/ Tactical Server Infrastructure (TSI) and Mission Command Workstation by the end of Fiscal Year 2016. GCCS-A strategic tools for readiness reporting have been modernized and replaced with the Defense Readiness Reporting System - Army (DRRS-A), a suite of web based applications for Army Readiness, Force Registration and Force Projection.

Army Joint and Strategic Command and Control (AJaSC2) or "Ajax" is a modernization development effort for the Army's joint and strategic C2 capabilities. AJaSC2 provides the materiel solution in response to the Army Mission Command for Unified Action Capability Definition Package (AMCUA CDP). AJaSC2 enables Army operational headquarters to integrate with the Joint Force Commands and Unified Action Partners (UAP). AJaSC2 provides Army leaders: Joint Common Operating Picture (COP); Adaptive planning and execution capabilities for distributed, synchronous and asynchronous collaboration services to develop, revise, and execute their warfighting plans supported by theaterwide analytics; strategic Situational Awareness (SA) to coalition operations and other mission partners and Coordination and synchronization of Joint Execution Mission Management.

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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303150A / <i>WWMCCS/Global Command and Control System</i>
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B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	2.150	7.053	9.767	-	9.767
Current President's Budget	2.493	7.034	4.718	-	4.718
Total Adjustments	0.343	-0.019	-5.049	-	-5.049
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.343	-			
• SBIR/STTR Transfer	-	-0.019			
• Adjustments to Budget Years	-	-	-5.049	-	-5.049

Change Summary Explanation

FY2015 increase provided funding for DRRS-A.

FY2016 slight reduction for SBIR/STTR.

FY2017 reduction due to level of support required for Strategic and Joint Mission Command.

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) C86 / Army Global C2 System
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
C86: Army Global C2 System	-	2.493	7.034	0.467	-	0.467	0.316	0.000	0.000	0.000	0.000	10.310
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

Global Command and Control System-Army (GCCS-A): This project is the Army component of the Global Command and Control System (GCCS) Family of Systems (FoS). GCCS-A provides automated command and control tools, including Force readiness, planning and movement, and situational awareness, for Army Strategic and Operational Theater commanders to enhance warfighter capabilities throughout the spectrum of conflict during Joint and combined operations in support of National Security. GCCS-A dramatically improves the Army's ability to analyze courses of action, develop and manage Army forces and execute war plans. GCCS-A links the GCCS-Joint Common Operating Picture with the Army Mission Command systems. In accordance with Army Command Post Computing Environment and Joint Command and Control objectives, GCCS-A will be re-architected away from a scalable process architecture based server - thick client architecture to a virtualized server - web client architecture hosted on Battle Command Common Services (BCCS)/Tactical Server Infrastructure (TSI) and Mission Command Workstation by the end of Fiscal Year 2016. GCCS-A strategic tools for readiness reporting have been modernized and replaced with the Defense Readiness Reporting System - Army (DRRS-A), a suite of web based applications for Army Readiness, Force Registration and Force Projection.

Fiscal Year 2017 Base funding in the amount of \$0.467 million supports GCCS-A 4.3 software updates and Army Interoperability Certification (AIC) testing of the GCCS-A Bridge Effort in conjunction with Common Operating Environment. Certification testing ensures that GCCS-A Bridge Effort software is successfully configured as a virtual machine on BCCS/TSI and is interoperable with Army and Joint Mission Command Systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2015	FY 2016	FY 2017
Title: Software and System Engineering (Common Operating Environment (COE) System Engineering) Description: Software and System Engineering for GCCS-A and DRRS-A Modernization FY 2015 Accomplishments: Software and System Engineering for GCCS-A and DRRS-A Modernization FY 2016 Plans: Software and System Engineering for GCCS-A and DRRS-A Modernization FY 2017 Plans: Software and System Engineering modifications to existing GCCS-A version 4.3 baseline	0.669	3.044	0.180
Title: Synchronize with COE and Command Post Computing Environment (CP CE) and Joint C2 objective Architecture Description: Software enhancement efforts required to synchronize with COE/CPCE and Joint C2 objective Architecture	-	2.910	0.047

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) C86 / Army Global C2 System		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
FY 2016 Plans: Software enhancement efforts required to synchronize with COE/CPCE and Joint C2 objective Architecture				
FY 2017 Plans: Synchronize existing baseline with any COE standard modifications				
Title: Data Engineering (COE Data Engineering) Description: Data Engineering for GCCS-A and DRRS-A Modernization		0.678	-	-
FY 2015 Accomplishments: Data Engineering for GCCS-A and DRRS-A Modernization				
Title: Test and Evaluation Description: Test and Evaluation for GCCS-A		0.662	0.450	0.110
FY 2015 Accomplishments: Test and Evaluation for GCCS-A				
FY 2016 Plans: Test and Evaluation for GCCS-A. JITC/CTSF/SEC testing.				
FY 2017 Plans: Test and Evaluation for GCCS-A. CTSF and SEC testing/support.				
Title: Program Support and Management Description: Program management includes overall management of program execution, major events, reporting, funds execution, contract management, and logistical support. Includes participation in program planning meetings and IPTs		0.484	0.630	0.130
FY 2015 Accomplishments: Program Support and Management for GCCS-A and DRRS-A Modernization				
FY 2016 Plans: Program Support and Management for GCCS-A				
FY 2017 Plans: Program Support and Management for GCCS-A				
Accomplishments/Planned Programs Subtotals		2.493	7.034	0.467

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) C86 / Army Global C2 System

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>			<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• BA8250: BA8250 Army Global Cmd & Control Sys (AGCCS) - OPA	-	10.137	2.530	-	2.530	2.658	1.033	-	-	0	16.358

Remarks

D. Acquisition Strategy

GCCS-A is modernizing to meet the requirements defined in the Joint C2 Capability Development Document (CDD) and to align with the Joint and Army Enterprise architectures and Common Operating Environment (COE) standards.

In accordance with the Joint Requirements Oversight Committee (JROC) Memorandum (JROCM) 145-09 which states, "The JROC endorses efforts to develop and implement programmatic recommendations to support the "Do No Harm" Strategy", GCCS-A continues to synchronize and modernize along with the GCCS Family of Systems (FoS).

The GCCS-A Modernization Strategy will consist of two separate program efforts. (1) A Bridge effort, Acquisition Category (ACAT) III level and (2) a Modernization development effort for the Army's Joint and Strategic command and Control capabilities and Common Operating Environment (COE) infrastructure software products. The GCCS-A modernization development effort will be in compliance with Joint Command and Control Capability Development Document (JC2 CDD) and Army Mission Command for Unified Action Capability Definition Package (AMCUA CDP). DRRS-A developmental efforts will continue to satisfy readiness reporting requirements from Army Readiness Division (DAMO-ODR). The Bridge Effort's acquisition approach consists of a support agreement with CECOM LCMC SEC as the prime software developer utilizing a mix of government and contractor support.

In accordance with the Training and Doctrine Command (TRADOC) requirements document approved in 2011, entitled Net Enabled Mission Command (NeMC) Initial Capabilities Document (ICD), software capability will be developed in 3-year increments as capability sets designed to Collaborate, Collapse and Converge Mission Command products. The product development funded under this R-Form is an integral part of the Mission Command System of Systems, under a strategy designed to optimize opportunity for improved interoperability among the systems, to capture the benefits of competition where possible and to ensure the rapid integration of new capability into warfighter systems. This strategy is designed to reduce the physical footprint, logistics support requirements and increase operational efficiency through deployment as a virtualized server on Battle Command Common Services and web clients.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0303150A / WWMCCS/Global Command and Control System				C86 / Army Global C2 System							
Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Management	Various	Various : Various Locations	14.694	0.484	Nov 2014	0.630	Feb 2016	0.130	Jan 2017	-		0.130	0	15.938	15.805
Subtotal			14.694	0.484		0.630		0.130		-		0.130	0.000	15.938	15.805
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development (Completed Contracts)	Various	Lockheed Martin Corp (LMC) : Springfield, VA	156.206	-		-		-		-		-	0.000	156.206	156.206
GCCS-A and DRRS-A Bridge Effort Software Development (Completed Contract)	C/CPAF	Lockheed Martin Corp (LMC) : Springfield, VA	21.312	-		-		-		-		-	0	21.312	21.312
GCCS-A/DRRS-A Bridge Effort Software Development (Completed Contract)	Various	Software Engineering Center : Aberdeen Proving Ground, MD	15.069	-		-		-		-		-	0	15.069	16.304
Defense Readiness Reporting System-Army Bridge Effort Software Development (Completed Contract)	Various	Software Engineering Center : APG, MD	10.217	-		-		-		-		-	0	10.217	10.217
GCCS-A/DRRS-A Bridge Effort Software Development	MIPR	Software Engineering Center : APG, MD	11.237	0.669	Feb 2015	5.954	Feb 2016	0.227	Nov 2016	-		0.227	0	18.087	4.893
Subtotal			214.041	0.669		5.954		0.227		-		0.227	0.000	220.891	208.932

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) C86 / Army Global C2 System
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Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
Software Fielding and IA 4.2b (Procurement Funded)	Software Fielding 4.2B																											
GCCS-A Bridge Effort Software Development GCCS-A v4.3 (COE v2)	COE v2																											
Integration & Test GCCS-A v4.3 (COE v2)					Integration & Test																							
(1) Software Materiel Release GCCS-A v4.3 (COE v2)									GCCS-A 4.3 SMR																			
Software Fielding and IA GCCS-A v4.3 (COE v2) (Procurement Funded)													Software Fielding 4.3															
(2) Full Deployment GCCS-A v4.3 (COE v2)																	Full Deployment											
DRRS-A Modernization Effort					DRRS-A Modernization																							

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) C86 / Army Global C2 System

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Software Fielding and IA 4.2b (Procurement Funded)	4	2014	3	2016
GCCS-A Bridge Effort Software Development GCCS-A v4.3 (COE v2)	4	2014	4	2016
Integration & Test GCCS-A v4.3 (COE v2)	4	2015	4	2016
Software Materiel Release GCCS-A v4.3 (COE v2)	4	2016	4	2016
Software Fielding and IA GCCS-A v4.3 (COE v2) (Procurement Funded)	3	2017	2	2019
Full Deployment GCCS-A v4.3 (COE v2)	2	2019	2	2019
DRRS-A Modernization Effort	1	2014	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army										Date: February 2016		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System				Project (Number/Name) EA5 / Strategic and Joint Mission Command			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
EA5: Strategic and Joint Mission Command	-	0.000	0.000	4.251	-	4.251	4.394	4.510	5.441	14.325	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This is a new start Army program in support of the Joint Command and Control community's way ahead for modernizing the Global Command and Control family of systems.

A. Mission Description and Budget Item Justification

Army Joint and Strategic Command and Control (AJaSC2) or "Ajax" is a modernization development effort for the Army's joint and strategic C2 capabilities. AJaSC2 provides the materiel solution in response to the Army Mission Command for Unified Action Capability Definition Package (AMCUA CDP). AJaSC2 enables Army operational headquarters to integrate with the Joint Force Commands and Unified Action Partners (UAP). AJaSC2 provides Army leaders: Joint Common Operating Picture (COP); Adaptive planning and execution capabilities for distributed, synchronous and asynchronous collaboration services to develop, revise, and execute their warfighting plans supported by theaterwide analytics; strategic Situational Awareness (SA) to coalition operations and other mission partners and Coordination and synchronization of Joint Execution Mission Management.

Fiscal Year 2017 Base funding in the amount of \$4.251 million supports initial development of Capability Packages.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2015	FY 2016	FY 2017
Title: Software Development and Systems Engineering	-	-	3.341
Description: Software Development and Systems Engineering of Capability Packages (Common Operating Environment (COE) System Engineering)			
FY 2017 Plans: Supports initial software development and engineering support of Capability Packages.			
Title: Synchronization with COE and Command Post Computing Environment (CP CE) and Joint C2 objective Architecture	-	-	0.510
Description: Software enhancement efforts required to sync with COE/CPCE and Joint C2 objective architecture			
FY 2017 Plans: Software enhancement efforts required to synchronize with COE/CPCE and Joint C2 objective Architecture			
Title: Program Support and Management	-	-	0.400

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017
Description: Program management includes overall management of program execution, major events, reporting, funds execution, contract management, and logistical support. Includes participation in program planning meetings and IPTs			
FY 2017 Plans: Program Support and Management for AJaSC2			
Accomplishments/Planned Programs Subtotals	-	-	4.251

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• BA8250A: BA8250 Army Global Cmd & Control Sys (AGCCS) - OPA	-	-	-	-	-	-	1.610	4.688	12.592	0.000	18.890

Remarks

D. Acquisition Strategy

In accordance with the Army Mission Command for Unified Action (AMCUA) CDP approved December of 2014. The AMCUA CDP provides an overarching structure for future Army Mission Command systems, to include the successor of GCCS-A. The AMCUA initiative will meet the requirements to enable planning and share situational awareness within an interdependent enterprise services network comprised of Unified Action Partners (UAP) and sister service components to achieve integrated mission operations. The AMCUA CDP defines the Land Component-unique Mission Command (MC) capabilities that the Army will develop to enable unified action through integration with existing and future Joint and Service command and control applications. MC capability contributions will enable Joint Forces Land Component Command (JFLCC) Commanders to gain and maintain Situational Awareness (SA), make decisions, and exercise authority and direction via a flexible, distributive and seamless system.

The acquisition strategy for AJaSC2 consists of the development, testing and fielding of Capability Packages implemented over time and synchronized with Command Post Computing Environment infrastructure. AJaSC2 will utilize the "Information Technology (IT) Box" construct. As such, evolutionary development of the software will continue as defined Capability Packages to meet emerging requirements that fall within the bounds of the approved IT Box. AJaSC2 strategy will consist of agile application development which will utilize and leverage existing and emerging technologies from Programs of Record and Common Operating Environment (COE) infrastructure. The product development under this R-Form will be accomplished in part under a Project Manager, Mission Command engineering services contract approach which will consist of multiple prime contractors competitively bidding on development efforts.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army												Date: February 2016			
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System					Project (Number/Name) EA5 / Strategic and Joint Mission Command						
Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Management	Various	APG, MD : APG, MD	0.000	-		-		0.400	Jan 2017	-		0.400	0	0.400	0
Subtotal			0.000	-		-		0.400		-		0.400	0.000	0.400	0.000
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development and Systems Engineering	TBD	TBD : TBD	0.000	-		-		3.341	Jan 2017	-		3.341	0	3.341	0
Synchronization with COE, CP CE, and Joint C2	TBD	TBD : TBD	0.000	-		-		0.510	Jan 2017	-		0.510	0	0.510	0
Subtotal			0.000	-		-		3.851		-		3.851	0.000	3.851	0.000
Project Cost Totals			0.000	-		0.000		4.251		-		4.251	0.000	4.251	0.000
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) EA5 / Strategic and Joint Mission Command
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Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
(1) AJaSC2 MDD					<div style="text-align: center;">▲ AJaSC2 MDD</div>																							
(2) Build Decision Milestone B																												
AJaSC2 Development (CPs #1-6)																												
Test and Integration (CPs #1-6)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) EA5 / Strategic and Joint Mission Command

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AJaSC2 MDD	4	2016	4	2016
Build Decision Milestone B	1	2017	1	2017
AJaSC2 Development (CPs #1-6)	2	2017	4	2021
Test and Integration (CPs #1-6)	1	2018	4	2021