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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203614F / <i>JSpOC Mission System</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	95.158	43.108	89.760	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
67A030: <i>Infrastructure</i>	20.478	4.659	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	25.137
67A031: <i>Mission Applications</i>	23.792	6.825	1.999	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	32.616
67A035: <i>Enterprise Space BMC2</i>	50.888	31.624	87.761	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Program MDAP/MAIS Code: N82

Note

In FY 2019, Projects 67A030 and 67A031, Joint Space Operations Mission System (JMS) Infrastructure and Mission Applications, were completed.

A. Mission Description and Budget Item Justification

In FY2021, PE1203614F, Joint Space Operations Center (JSpOC) Mission System, Project 67A035, Enterprise Space BMC2 efforts were transferred to Appropriation 3620, Research, Development, Test & Evaluation, Space Force, Budget Activity 08, PE 1208248SF, Space C2 from Appropriation 3600, Budget Activity 07 due to the creation of a new Appropriation for Space Force and a new Budget Activity for Software and Digital Technology Pilot Programs.

The Air Force is developing a Space Command and Control (Space C2) and Space Situational Awareness (SSA) capability for the Joint Force Space Component Commander (JFSCC). The enterprise-wide system will provide a common government infrastructure and standards for rapid prototyping of dynamic SSA and Battle Management Command and Control (BMC2) applications to address the evolving and dynamic threat. The system will provide a collaborative environment that will enhance and modernize SSA and BMC2 capabilities; create decision-relevant views of the space environment; rapidly detect, track and characterize objects of interest; identify / exploit traditional and non-traditional sources; perform space threat analysis; and enable efficient distribution of data across the Space Surveillance Network (SSN). Funding includes technical studies, development, experimentation, integration and related support costs.

Space acquisition must respond with speed and agility to emerging adversary threats. Space & Missile Systems Center (SMC) is transforming the organization and implementation of space acquisition to an enterprise approach, maximizing innovation and resiliency, leveraging international, commercial, and mission partnerships, and managing program/project priorities according to an integrated unclassified/classified enterprise space architecture. Expanding the appropriate acquisition authorities and contract mechanisms to deliver capability sooner, SMC will strategically execute experimentation, prototyping, risk reduction, and other efforts to develop new or repurpose capabilities.

This Program Element may include necessary civilian pay expenses required to manage, execute, and deliver Space C2 weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in Program Elements 1206392F and 1206398F.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203614F / <i>JSpOC Mission System</i>
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This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	70.383	72.762	103.870	0.000	103.870
Current President's Budget	43.108	89.760	0.000	0.000	0.000
Total Adjustments	-27.275	16.998	-103.870	0.000	-103.870
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	-2.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	5.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-25.000	0.000			
• SBIR/STTR Transfer	-2.275	0.000			
• Other Adjustments	0.000	13.998	-103.870	0.000	-103.870

Change Summary Explanation

FY 2019: \$25.000M decrease due to higher Air Force priorities

FY 2020: Received Congressional marks that included +\$5M increase for commercial capability and a -\$2M reduction for prior year unobligated balances. The FY 2020 total in this document is incorrect. The correct total for FY 2020 should be \$75.761M.

FY 2021: -\$103.870M; funds starting in FY 2021 were transferred from RDT&E, Air Force to RDT&E, Space Force.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force										Date: February 2020		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A030 / Infrastructure			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
67A030: Infrastructure	20.478	4.659	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	25.137
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY 2019, Project 67A030, JMS Infrastructure, was completed.

A. Mission Description and Budget Item Justification

Infrastructure provides a Service Oriented Architecture (SOA), net-centric collaborative information environment at the Unclassified, Secret, and Top Secret / Sensitive Compartmented Information (TS/SCI) levels. Efforts incorporate net-centric enterprise services and integrating incremental space mission applications services. Priority is migration off the legacy SPADOC hardware and services into a sustainable infrastructure. Effort integrates components of SSA mission applications and C2 capabilities into the JSpOC to create timely, actionable knowledge necessary for maintaining space superiority and exercising command and control of space forces.

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

	FY 2019	FY 2020	FY 2021
Title: Increment 2	4.659	0.000	0.000
Description: Pursues and integrates a collaborative net-centric, SOA information environment.			
FY 2020 Plans: N/A			
FY 2021 Plans: N/A			
FY 2020 to FY 2021 Increase/Decrease Statement: N/A			
Accomplishments/Planned Programs Subtotals	4.659	0.000	0.000

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

Line Item	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
• SPAF 01 SPCMOD: Space Mods	20.366	11.368	-	-	-	-	-	-	-	31.734	63.468

Remarks

Replaces JMS components and provides an operational, sustainable environment to maintain capabilities that fuse data from space intelligence, surveillance, reconnaissance, and environmental sources. This modification will procure commercial hardware, software licenses, and warranties to upgrade the operational environment enclaves (2 Secret / 2 TS/SCI), as well as keep up to date development/operational testing locations.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / <i>JSpOC Mission System</i>	Project (Number/Name) 67A030 / <i>Infrastructure</i>
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D. Acquisition Strategy

The JMS overarching Acquisition Strategy, approved by the Milestone Decision Authority on April 15, 2012, provided for a multi-increment program to develop, integrate, test, and deliver JMS capability. The acquisition strategy reflected new principles that addressed the speed, agility, and adaptability required for successful Information Technology (IT) acquisition resulting in a tailored incremental acquisition approach to deliver early and often by leveraging mature industry capabilities and taking advantage of previous Government investments in Federally Funded Research and Development Center (FFRDC) and Government lab prototyping efforts.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A030 / Infrastructure
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
JMS Enterprise SEI	Various	Various : Various	19.305	2.067	Nov 2018	-		-		-		-	0.000	21.372	43.165
Subtotal			19.305	2.067		-		-		-		-	0.000	21.372	N/A

Remarks
 Cost table amounts in FY2019 are incorrect in PRCP. The FY2019 reprogramming reduction reduced Project 67A030 by \$6.880M, Project 67A031 by \$2.924M and Project 67A035 by \$15.196M.

Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
A&AS	Various	Various : Various	1.173	2.592	Nov 2018	-		-		-		-	0.000	3.765	3.656
Subtotal			1.173	2.592		-		-		-		-	0.000	3.765	N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	20.478	4.659	0.000	-	-	-	0.000	25.137	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A030 / Infrastructure
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FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
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

JMS Infrastructure	
Service Pack 9 Limited Ops Acceptance	

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / <i>JSpOC Mission System</i>	Project (Number/Name) 67A030 / <i>Infrastructure</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>JMS Infrastructure</i>				
Service Pack 9 Limited Ops Acceptance	1	2019	1	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force										Date: February 2020		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A031 / Mission Applications			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
67A031: Mission Applications	23.792	6.825	1.999	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	32.616
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY 2019, Project 67A031, Mission Applications, was completed. The \$0.001M entry in FY 2020 is the result of a database error.

A. Mission Description and Budget Item Justification

This effort ends in FY 2019.

Mission applications provides space services to enhance the accuracy, sustainability, and responsiveness of space surveillance capabilities by providing the knowledge environment necessary to enable the Joint Force Space Component Commander to make rapid, responsive decisions for the protection of space assets from proliferating threats (adversary as well as orbiting debris). The system provides a high accuracy space catalog (knowledge of space objects), increased observation verification and capabilities, and improved event processing. Research, development, and system design provides SSA space catalog applications, services, space surveillance observation processing, and sensor tasking. Funding includes technical studies, development, and integration.

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

	FY 2019	FY 2020	FY 2021
Title: Increment 2	6.825	1.999	0.000
Description: Services/mission applications to conduct space control/situational awareness.			
FY 2020 Plans: Effort completes in FY 2019. \$1.999M erroneous database entry.			
FY 2021 Plans: N/A			
FY 2020 to FY 2021 Increase/Decrease Statement: N/A			
Accomplishments/Planned Programs Subtotals	6.825	1.999	0.000

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

Line Item	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
• SPAF 01 SPCMOD: Space Mods	20.366	11.368	-	-	-	-	-	-	-	0.000	31.734

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / <i>JSpOC Mission System</i>	Project (Number/Name) 67A031 / <i>Mission Applications</i>
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D. Acquisition Strategy

The JMS overarching Acquisition Strategy, approved by the Milestone Decision Authority on April 15, 2012, provided for a multi-increment program to develop, integrate, test, and deliver JMS capability. The acquisition strategy reflected new principles that addressed the speed, agility, and adaptability required for successful IT acquisition resulting in a tailored incremental acquisition approach to deliver early and often by leveraging mature industry capabilities and taking advantage of previous Government investments in Federally Funded Research and Development Center (FFRDC) and Government lab prototyping efforts.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A031 / Mission Applications
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
JMS Enterprise SEI	Various	Various : Various	3.384	-		-		-		-		-	0.000	3.384	5.583
JMS Technical Mission Analysis (WS)	Various	Various : Various	0.358	0.182	Dec 2018	-		-		-		-	0.000	0.540	1.475
JMS COTS hardware, software purchase and engineering support	Various	Various : Various	17.450	1.980	Nov 2018	-		-		-		-	0.000	19.430	13.710
Subtotal			21.192	2.162		-		-		-		-	0.000	23.354	N/A

Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Combined Developmental Test / Operational Test	Various	Various : Various	0.551	0.923	Feb 2019	-		-		-		-	0.000	1.474	2.016
Combined Test Facility	Various	Various : Various	1.135	0.560	Dec 2018	-		-		-		-	0.000	1.695	1.820
Subtotal			1.686	1.483		-		-		-		-	0.000	3.169	N/A

Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
A&AS	Various	Various : Various	0.000	0.030	Nov 2018	-		-		-		-	0.000	0.030	1.788
FFRDC	Various	Various : Various	0.798	2.395	Nov 2018	-		-		-		-	0.000	3.193	1.598
Other Support	Various	Various : Various	0.116	0.755	Oct 2018	-		-		-		-	0.000	0.871	0.175
(Incorrect database entry)	Various	Various : Various	0.000	-		1.999	Jan 2020	-		-		-	0.000	1.999	-
Subtotal			0.914	3.180		1.999		-		-		-	0.000	6.093	N/A

			Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			23.792	6.825	1.999	-	-	-	0.000	32.616	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force	Date: February 2020
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A031 / Mission Applications
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	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
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<u>Remarks</u>	
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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A031 / Mission Applications
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FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
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

JMS Mission Applications	
Service Pack 9 Limited Operational Acceptance	[REDACTED]

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / <i>JSpOC Mission System</i>	Project (Number/Name) 67A031 / <i>Mission Applications</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>JMS Mission Applications</i>				
Service Pack 9 Limited Operational Acceptance	1	2019	1	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force										Date: February 2020		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A035 / Enterprise Space BMC2			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
67A035: Enterprise Space BMC2	50.888	31.624	87.761	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Enterprise provides a SSA & BMC2 System that allows JFSCC to meet dynamic and emerging threats. Continuously develop capabilities that include, but are not limited to, SSA, battle space awareness, dynamic planning and tasking, create an interactive modeling and simulation environment to support training and exercises, collaborative data sharing, and Course of Action (COA) development and assessment. Funding includes technical studies, development, experimentation, systems engineering, integration and related support costs.

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

	FY 2019	FY 2020	FY 2021
Title: Enterprise Space BMC2	31.624	87.761	0.000
<p>Description: This program delivers a robust and responsive Space Situational Awareness (SSA) and Battle Management Command and Control (BMC2) capability to meet emerging threats. The program will deliver capability for decision makers trying to prevent a conflict from extending to space, or winning it if it does. Capabilities and associated infrastructure include, but are not limited to, SSA, Indications & Warning (I&W), Transmit/Receive, Space Control, Tactical Operations and Common Platforms and Infrastructure, Cyber and Threat Warning. Other activities include dedicated Systems Engineering & Integration (SE&I), Test & Evaluation (T&E), Model Based Systems Engineering (MBSE) and prototype Validation & Verification to support these efforts.</p> <p>FY 2020 Plans: Plan and develop architecture which is Open Mission Standard (OMS) and Unmanned Aerospace Systems Command and Control (C2) Standards Initiative (UCI) compliant to support both the SSA and Battle Management Command and Control (BMC2) missions to meet dynamic emerging threats. The architecture and infrastructure will modernize and deliver new capabilities in the National Space Defense Center, Combined Space Operations Center and other operations centers supporting SSA and BMC2. In addition to the OMS and UCI architectural efforts, SMC will continue developmental, system engineering and contracting efforts to integrate best in breed commercial, contractor and government applications for the OMS and UCI based ESBMC2 foundational architecture through the release of multiple incremental software capability drops throughout FY 2021. Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, experimentation, prototyping, etc.</p> <p>NOTE: FY 2020 includes a \$12M database error; correct total is \$75.761M.</p> <p>FY 2021 Plans:</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force	Date: February 2020
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A035 / Enterprise Space BMC2
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
NA			
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i>			
NA			
Accomplishments/Planned Programs Subtotals	31.624	87.761	0.000

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• SPAF 01 SPCMOD: <i>Space Mods</i>	20.366	11.368	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	31.734

Remarks

D. Acquisition Strategy

The Air Force is employing agile software development practices such as flexible requirements, frequent user interaction, and rapid delivery and deficiency retirement. This strategy focuses on rapidly delivering capability to warfighters, leveraging commercial, industry and government partners. Currently there are multiple competitive contractors and no prime contractor, a prime contractor is to be determined.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A035 / Enterprise Space BMC2
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
ESBMC2 Tools	Various	Various : Various	4.286	6.409	Dec 2018	-		0.000		-		0.000	0.000	10.695	-
ESBMC2 Government Capability Development	Various	Various : Various	22.666	7.573	Oct 2018	-		0.000		-		0.000	0.000	30.239	-
ESBMC2 Enterprise Systems Engineering & Integration	Various	Various : Various	9.015	9.660	Nov 2018	12.400	Dec 2019	0.000		-		0.000	0.000	31.075	-
ESBMC2 Technical Mission Analysis (WS)	MIPR	Various : Various	1.668	0.832	Oct 2018	1.271	Nov 2019	0.000		-		0.000	0.000	3.771	-
Catalyst Campus/PaaS	C/TBD	Not specified. : TBD	0.000	-		20.820	Jan 2020	0.000		-		0.000	0.000	20.820	-
Commercial Capability	C/Various	Not specified. : TBD	0.000	-		9.778	Dec 2019	0.000		-		0.000	0.000	9.778	-
Dynamic SSA Integration	C/TBD	Not specified. : TBD	0.000	-		5.000	Nov 2019	0.000		-		0.000	0.000	5.000	-
Weapon System Integration	C/TBD	Not specified. : TBD	0.000	-		5.303	Feb 2020	0.000		-		0.000	0.000	5.303	-
Subtotal			37.635	24.474		54.572		0.000		-		0.000	0.000	116.681	N/A

Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Civilian Reimbursable Budget Authority	Various	SMC : El Segundo, CA	0.000	0.176	Jan 2019	0.352	Jan 2020	0.000		-		0.000	0.000	0.528	-
Database error	C/CPAF	Not specified. : TBD	0.000	-		12.000		-		-		-	0.000	12.000	-
Subtotal			0.000	0.176		12.352		0.000		-		0.000	0.000	12.528	N/A

Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test	Various	Various : Various	0.000	-		1.300	Mar 2020	0.000		-		0.000	0.000	1.300	-
Subtotal			0.000	-		1.300		0.000		-		0.000	0.000	1.300	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A035 / Enterprise Space BMC2
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	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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
ESBMC2																												
Platform/Infrastructure																												
Program Increment 4-7																												
Program Increment 8-11																												
Data Management																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A035 / Enterprise Space BMC2

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
ESBMC2				
Platform/Infrastructure	1	2019	4	2020
Program Increment 4-7	3	2019	4	2020
Program Increment 8-11	4	2020	4	2020
Data Management	1	2019	4	2020