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

<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</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	-	0.000	0.000	1.378	-	1.378	1.387	1.392	1.753	1.786	Continuing	Continuing
BR6: <i>Small Unmanned Aircraft System (6.4)</i>	-	0.000	0.000	1.378	-	1.378	1.387	1.392	1.753	1.786	Continuing	Continuing

**Note**

Funding has been moved to Program Element (PE) 0604101A Small Unmanned Aerial Vehicle (SUAV) (6.4) from PE 0305232A Project RA7 RQ-11 UAV starting in FY 2021.

**A. Mission Description and Budget Item Justification**

The Rucksack Portable Unmanned Aircraft System (RPUAS) Family of Small Unmanned Aircraft System (FoSUAS) provides battalion and below ground maneuver elements with critical situational awareness and enhanced force protection. The system provides the small unit commander an organic and responsive reconnaissance and targeting capability with real-time Full Motion Video and sensor data. Other compatible receivers, such as the One System Remote Video Terminal and appropriately equipped manned platforms may also receive the FoSUAS products.

The RPUAS FoSUAS provides the battalion and below ground maneuver elements with an organic, on-demand, asset to develop situational awareness, enhance force protection, and secure routes, points, and areas. The system provides the small unit commander an organic and responsive reconnaissance and targeting capability with real-time Full Motion Video and sensor data. The RPUAS FoSUAS includes a combination of three separate hand-launched mission specific configurable aircraft that do not require an improved launch/recovery. The three separate mission specific configurable Unmanned Aircraft (UA) are the Short Range Reconnaissance (SRR), the Medium Range Reconnaissance (MRR), and the Long Range Reconnaissance (LRR). In addition to the aircraft, the system contains ground control equipment, which includes an interoperable handheld ground control station (H-GCS) which incorporates the Tactical Open Government Owned Architecture (TOGA). FoSUAS will utilize existing RQ-11 in a system of systems fielding concept, with SRR and LRR options under development.

Justification: FY 2021 Research, Development, Test, and Evaluation (RDT&E) Base funding of \$1.379 million for Program Management Engineering support and to meet Capabilities Production Document (CPD) Increment II Block II related requirements. Specifically, to conduct advanced component development activities for SRR and LRR and efforts to evaluate LRR prototype systems in high fidelity and realistic operating environments.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2021 Army	<b>Date:</b> February 2020
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<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	1.378	-	1.378
Total Adjustments	0.000	0.000	1.378	-	1.378
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	1.378	-	1.378

**Change Summary Explanation**

Funding has been moved to PE 0604101A Small Unmanned Aerial Vehicle (SUAV) (6.4) from PE 0305232A Project RA7 RQ-11 UAV starting in FY 2021.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Army										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 2040 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>				<b>Project (Number/Name)</b> BR6 / <i>Small Unmanned Aircraft System (6.4)</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
BR6: <i>Small Unmanned Aircraft System (6.4)</i>	-	0.000	0.000	1.378	-	1.378	1.387	1.392	1.753	1.786	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Funding has been moved to Program Element (PE) 0604101A Small Unmanned Aerial Vehicle (SUAV) (6.4) from PE 0305232A Project RA7 RQ-11 UAV starting in FY 2021.

**A. Mission Description and Budget Item Justification**

The Family of Small Unmanned Aircraft System (FoSUAS) provides battalion and below ground maneuver elements with critical situational awareness and enhanced force protection. The system provides the small unit commander an organic and responsive reconnaissance and targeting capability with real-time Full Motion Video and sensor data. Other compatible receivers, such as the One System Remote Video Terminal and appropriately equipped manned platforms may also receive the FoSUAS products.

The Rucksack Portable Unmanned Aircraft Systems (RPUAS) FoSUAS provides the battalion and below ground maneuver elements with an organic, on-demand, asset to develop situational awareness, enhance force protection, and secure routes, points, and areas. The system provides the small unit commander an organic and responsive reconnaissance and targeting capability with real-time Full Motion Video and sensor data. The RPUAS FoSUAS includes a combination of three separate hand-launched mission specific configurable aircraft that do not require an improved launch/recovery. The three separate mission specific configurable Unmanned Aircraft (UA) are the Short Range Reconnaissance (SRR), the Medium Range Reconnaissance (MRR), and the Long Range Reconnaissance (LRR). In addition to the aircraft, the system contains ground control equipment, which includes an interoperable handheld ground control station (H-GCS) which incorporates the Tactical Open Government Owned Architecture (TOGA). FoSUAS will utilize existing RQ-11 in a system of systems fielding concept, with SRR and LRR options under development.

Justification: FY 2021 Research, Development, Test, and Evaluation (RDT&E) Base funding of \$1.723 million for Program Management Engineering support and to meet Capabilities Production Document (CPD) Increment II Block II related requirements. Specifically, to conduct advanced component development activities for SRR and LRR and efforts to evaluate LRR prototype systems in high fidelity and realistic operating environments.

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Title:</b> Component Development and Integration	-	-	0.542
<b>Description:</b> Engineering to develop and integrate new components into SRR and engineering to develop new components for LRR.			
<b>FY 2021 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>	<b>Project (Number/Name)</b> BR6 / <i>Small Unmanned Aircraft System (6.4)</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
Advanced component development efforts for LRR and SRR. <b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Funding has been moved to PE 0604101A Small Unmanned Aerial Vehicle (SUAV) (6.4) from PE 0305232A Project RA7 RQ-11 UAV starting in FY 2021.			
<b>Title:</b> System Engineering Program Management <b>Description:</b> System Engineering Program Management support during development and integration of components for SRR air vehicles and engineering to develop new components for LRR.. <b>FY 2021 Plans:</b> System Engineering and Program Management support of advanced component development activities for LRR and SRR. <b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Funding has been moved to PE 0604101A Small Unmanned Aerial Vehicle (SUAV) (6.4) from PE 0305232A Project RA7 RQ-11 UAV starting in FY 2021.	-	-	0.136
<b>Title:</b> System Test and Evaluation <b>Description:</b> Testing to Evaluate components for the LRR and SRR air vehicles. <b>FY 2021 Plans:</b> Testing to evaluate efforts to develop and integrate components for LRR and SRR air vehicles. <b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Funding has been moved to PE 0604101A Small Unmanned Aerial Vehicle (SUAV) (6.4) from PE 0305232A Project RA7 RQ-11 UAV starting in FY 2021.	-	-	0.700
<b>Accomplishments/Planned Programs Subtotals</b>	-	-	1.378

<b>C. Other Program Funding Summary (\$ in Millions)</b>												
<b>Line Item</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2021</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To</b>	<b>Total Cost</b>	
			<b>Base</b>	<b>OCO</b>	<b>Total</b>					<b>Complete</b>		
• RA7: RQ-11 Raven (MIP)	6.180	3.218	0.000	-	0.000	-	-	-	-	-	Continuing	Continuing
• BR7: Small Unmanned Aircraft System (6.5)	-	-	5.999	-	5.999	2.407	6.382	9.009	3.018	-	Continuing	Continuing
• A00010: RQ-11 (RAVEN)	46.438	21.420	20.851	-	20.851	16.397	16.581	21.342	21.560	-	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>	<b>Project (Number/Name)</b> BR6 / <i>Small Unmanned Aircraft System (6.4)</i>

**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>
<b>Remarks</b>	Funding has been moved to PE 0604101A Small Unmanned Aerial Vehicle (SUAV) (6.4) from PE 0305232A Project RA7 RQ-11 UAV starting in FY 2021.										

**D. Acquisition Strategy**

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Army												Date: February 2020			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 4				PE 0604101A / Small Unmanned Aerial Vehicle (SUAV) (6.4)				BR6 / Small Unmanned Aircraft System (6.4)							
Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
System Engineering Program Management	TBD	To Be Determined : To Be Determined	-	-		-		0.136		-		0.136	Continuing	Continuing	Continuing
<b>Subtotal</b>			-	-		-		0.136		-		0.136	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Component development and Integration	TBD	To Be Determined : To Be Determined	-	-		-		0.542	Jun 2021	-		0.542	Continuing	Continuing	Continuing
<b>Subtotal</b>			-	-		-		0.542		-		0.542	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
System Test and Evaluation	TBD	To Be Determined : To Be Determined	-	-		-		0.700	Aug 2021	-		0.700	Continuing	Continuing	Continuing
<b>Subtotal</b>			-	-		-		0.700		-		0.700	Continuing	Continuing	N/A
<b>Project Cost Totals</b>			-	-		0.000		1.378		-		1.378	Continuing	Continuing	N/A
<b>Remarks</b>															

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>	<b>Project (Number/Name)</b> BR6 / <i>Small Unmanned Aircraft System (6.4)</i>

Event Name	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		
Systems Engineering Program Management (SEPM)	[Blue bar]																													
SRR Tranche I OTA Award	▲ 1 SRR Tranche I OTA																													
SRR Tranche I Prototyping	[Blue bar]																													
Test and Evaluation	[Blue bar]																													
SRR/HGCS Integration	[Blue bar]																													
SRR Tranche I End User Assessment					▲ 2 SRR Tranche I EUA																									
SRR Tranche I Full Rate Production (FRP) Decision					▲ 3 SRR Tranche I MS-C FRP																									
SRR Tranche II OTA Award									▲ 4 SRR Tranche II OTA																					
SRR Tranche II Prototyping									[Blue bar]																					
SRR Tranche II End User Assessment													▲ 5 SRR Tranche II EUA																	
SRR Tranche II FRP Decision																	▲ 6 SRR Tranche II FRP													
SRR Tranche III																	[Blue bar]													
LRR OTA Award (Component)									[Blue bar]																					

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>	<b>Project (Number/Name)</b> BR6 / <i>Small Unmanned Aircraft System (6.4)</i>

Event Name	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				
LRR Prototyping (System)																	LRR Prototypes															
LRR/HGCS Integration																	LRR/HGCS Int															
LRR End User Assessment																									7 LRR EUA							
LRR FRP Decision																													8 LRR MS-C FRP			

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>	<b>Project (Number/Name)</b> BR6 / <i>Small Unmanned Aircraft System (6.4)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Tactical Open Government Owned Architecture Development	4	2014	4	2014
Tactical Open Government Architecture Test Event 2	3	2015	3	2015
Systems Engineering Program Management (SEPM)	2	2018	4	2024
SRR Tranche I OTA Award	3	2019	3	2019
SRR Tranche I Prototyping	3	2018	4	2019
Test and Evaluation	4	2018	4	2024
SRR/HGCS Integration	2	2018	4	2020
SRR Tranche I End User Assessment	3	2020	3	2020
SRR Tranche I Full Rate Production (FRP) Decision	4	2020	4	2020
SRR Tranche II OTA Award	3	2021	3	2021
SRR Tranche II Prototyping	3	2021	3	2022
SRR Tranche II End User Assessment	2	2022	2	2022
SRR Tranche II FRP Decision	3	2022	3	2022
SRR Tranche III	3	2022	2	2024
LRR OTA Award (Component)	3	2021	3	2022
LRR Prototyping (System)	3	2022	1	2025
LRR/HGCS Integration	3	2022	3	2024
LRR End User Assessment	3	2024	3	2024
LRR FRP Decision	2	2025	2	2025

**Note**  
Funding has been moved to this PE 0305232A Project RA7 RQ-11 UAV starting in FY 2021.