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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Army **Date:** May 2021

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	-	-	1.328	0.926	-	0.926	-	-	-	-	-	-
BR6: <i>Small Unmanned Aircraft System (6.4)</i>	-	-	1.328	0.926	-	0.926	-	-	-	-	-	-

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 2022 Research, Development, Test, and Evaluation (RDT&E) Base funding of \$0.926 million to meet Capabilities Production Document (CPD) Increment II Block II related requirements. Specifically, to conduct advanced component development activities for SRR, and efforts to evaluate systems in high fidelity and realistic operating environments.

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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>
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B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	0.000	1.378	1.387	-	1.387
Current President's Budget	0.000	1.328	0.926	-	0.926
Total Adjustments	0.000	-0.050	-0.461	-	-0.461
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-0.050			
• Adjustments to Budget Years	-	-	-0.461	-	-0.461

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Army **Date:** May 2021

Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>				Project (Number/Name) BR6 / <i>Small Unmanned Aircraft System (6.4)</i>			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
BR6: <i>Small Unmanned Aircraft System (6.4)</i>	-	-	1.328	0.926	-	0.926	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Funding has been reprogrammed 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 2022 Research, Development, Test, and Evaluation (RDT&E) Base funding of \$0.926 million to meet Capabilities Production Document (CPD) Increment II Block II related requirements. Specifically, to conduct advanced component development activities for SRR prototype systems in high fidelity and realistic operating environments.

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

	FY 2020	FY 2021	FY 2022
Title: Component Development and Integration	-	0.542	0.400
Description: Engineering to develop advanced components for and integrate new components into SRR.			
FY 2021 Plans:			

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Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>	Project (Number/Name) BR6 / <i>Small Unmanned Aircraft System (6.4)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
Advanced component development efforts for SRR. FY 2022 Plans: Advanced component development efforts for SRR. FY 2021 to FY 2022 Increase/Decrease Statement: Anticipated increase in cost of radios, components for Tranche 2.			
Title: System Engineering Program Management Description: System Engineering Program Management support during development and integration of components for SRR air vehicles. FY 2021 Plans: System Engineering and Program Management support of advanced component development activities for SRR. FY 2022 Plans: System Engineering and Program Management support of advanced component development activities for SRR. FY 2021 to FY 2022 Increase/Decrease Statement: SEPM effort is transitioning to PE 0605205 (6.5)	-	0.136	0.069
Title: System Test and Evaluation Description: Testing to Evaluate components for the SRR air vehicle. FY 2021 Plans: Testing to evaluate efforts to develop and integrate components for SRR air vehicles. FY 2022 Plans: Testing to evaluate efforts and to develop and integrate components for SRR. FY 2021 to FY 2022 Increase/Decrease Statement: Components for SRR Tranche 2 are completing evaluation.	-	0.650	0.457
Accomplishments/Planned Programs Subtotals	-	1.328	0.926

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• RA7: RQ-11 Raven	3.218	-	-	-	-	-	-	-	-	-	-

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Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>	Project (Number/Name) BR6 / <i>Small Unmanned Aircraft System (6.4)</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• BR7: <i>Small Unmanned Aircraft System (6.5)</i>	-	5.780	2.275	-	2.275	-	-	-	-	-	-
• A00010: <i>SMALL UNMANNED AIRCRAFT SYSTEM</i>	21.420	16.551	16.005	-	16.005	-	-	-	-	-	-

Remarks

Funding has been reprogrammed 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 2022 Army												Date: May 2021			
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 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	Various	Various : Various	-	-		0.136		0.069		-		0.069	Continuing	Continuing	Continuing
Subtotal			-	-		0.136		0.069		-		0.069	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	Various	ACC Redstone : Redstone Arsenal	-	-		0.542	Jun 2021	0.400	Jun 2022	-		0.400	Continuing	Continuing	Continuing
Subtotal			-	-		0.542		0.400		-		0.400	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	Various	ACC Redstone : Redstone Arsenal	-	-		0.650	Aug 2021	0.457	Aug 2022	-		0.457	Continuing	Continuing	Continuing
Subtotal			-	-		0.650		0.457		-		0.457	Continuing	Continuing	N/A
Project Cost Totals			-	-		1.328		0.926		-		0.926	Continuing	Continuing	N/A
Remarks															


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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>	Project (Number/Name) BR6 / <i>Small Unmanned Aircraft System (6.4)</i>

Event Name	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026							
	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]																															
Test and Evaluation	[Blue bar]																															
SRR/HGCS Integration	[Blue bar]																															
SRR Tranche I End User Assessment																																
SRR Tranche I Full Rate Production (FRP) Decision																																
SRR Tranche II OTA Award																																
SRR Tranche II Prototyping																																
SRR Tranche II End User Assessment																																
SRR Tranche II FRP Decision																																
SRR Tranche III																																
LRR OTA Award (Component)																																
LRR Prototyping (System)																																
LRR/HGCS Integration																																

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army			Date: May 2021		
Appropriation/Budget Activity 2040 / 4		R-1 Program Element (Number/Name) PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>		Project (Number/Name) BR6 / <i>Small Unmanned Aircraft System (6.4)</i>	

Event Name	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	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 End User Assessment																									 LRR EUA			

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604101A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>	Project (Number/Name) 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	4	2020	4	2020
SRR Tranche I Full Rate Production (FRP) Decision	3	2021	3	2021
SRR Tranche II OTA Award	4	2021	4	2021
SRR Tranche II Prototyping	4	2021	4	2022
SRR Tranche II End User Assessment	4	2022	4	2022
SRR Tranche II FRP Decision	1	2023	1	2023
SRR Tranche III	1	2023	4	2024
LRR OTA Award (Component)	4	2023	4	2024
LRR Prototyping (System)	4	2024	1	2026
LRR/HGCS Integration	4	2024	4	2026
LRR End User Assessment	3	2026	3	2026
LRR FRP Decision	2	2027	2	2027

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