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

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV
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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	-	3.218	-	-	-	-	-	-	-	-	-	-
RA7: RQ-11 Raven	-	3.218	-	-	-	-	-	-	-	-	-	-

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 Short Range Reconnaissance (SRR) and Long Range Reconnaissance (LRR) options under development.

B. Program Change Summary (\$ in Millions)

	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022 Base</u>	<u>FY 2022 OCO</u>	<u>FY 2022 Total</u>
Previous President's Budget	3.218	0.000	0.000	-	0.000
Current President's Budget	3.218	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

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

Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV				Project (Number/Name) RA7 / RQ-11 Raven			
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
RA7: RQ-11 Raven	-	3.218	-	-	-	-	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

FY 2021 funding has been reprogrammed from Program Element (PE) 0305232A RQ-11 UAV (6.7) Project RA7 to PEs 0604101A Small Unmanned Aerial Vehicle (SUAV) (6.4) Project BR6 Soldier Unmanned Aircraft System and 0605205A SUAV (6.5) Project BR7 Small Unmanned Aircraft System.

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 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 Short Range Reconnaissance (SRR) and Long Range Reconnaissance (LRR) options under development.

FY 2021 funding has been reprogrammed from Program Element (PE) 0305232A RQ-11 UAV (6.7) to PEs 0604101A Soldier Unmanned Aerial Vehicle (SUAV) (6.4) Project BR6 Soldier Unmanned Aircraft System and 0605205A SUAV (6.5) Project BR7 Soldier Unmanned Aircraft System.

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

	FY 2020	FY 2021	FY 2022
Title: Systems Engineering/Program Management (SEPM)	0.244	-	-
Description: Systems Engineering and Program Management Support during SRR engineering, integration and preparation of documentation for FRP decision.			
Title: SRR Developmental Engineering	0.974	-	-
Description: SRR Developmental Engineering and integration with H-GCS.			
Title: LRR Requirements Decomposition/Systems Engineering/Component Level Projects/Market Research	0.750	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Army	Date: May 2021
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV	Project (Number/Name) RA7 / RQ-11 Raven
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
Description: Funding provided to initiate the Long Range Reconnaissance prototype materiel baseline			
Title: SRR Test and Evaluation	1.250	-	-
Description: Test and Evaluation of the SRR.			
Accomplishments/Planned Programs Subtotals	3.218	-	-

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>
• A00010: <i>SMALL UNMANNED AIRCRAFT SYSTEM</i>	21.420	16.551	16.005	-	16.005	-	-	-	-	-	-
• 0604101A: <i>Small Unmanned Aerial Vehicle (SUAV) (6.4)</i>	-	1.328	0.926	-	0.926	-	-	-	-	-	-
• 0605205A: <i>Small Unmanned Aerial Vehicle (SUAV) (6.5)</i>	-	5.780	2.275	-	2.275	-	-	-	-	-	-

Remarks
FY 2020 - 2025 funding procures the original SRR AAO of 2589 systems. RDT&E funding reprogrammed to PEs 604101A and 605205A starting in FY2021.

D. Acquisition Strategy
The Product Office will contract utilizing full and open competition via an Other Transaction Agreement (OTA) or a traditional contracting method to host a fly-off and down select. The Government will make contract award based upon competitive source selection criteria.

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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 / 7				PE 0305232A / RQ-11 UAV				RA7 / RQ-11 Raven								
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	
Systems Engineering/ Program Management (SEPM)	RO	PM-TUAS/ AMRDEC : Redstone Arsenal, AL	3.085	0.244		-		-		-		-	0.000	3.329	-	
Subtotal			3.085	0.244		-		-		-		-	0.000	3.329	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	
Developmental Engineering 1	C/IDIQ	Various : Various	9.824	-		-		-		-		-	0.000	9.824	-	
Developmental Engineering 2	C/IDIQ	AMRDEC : Redstone Arsenal, AL	1.935	-		-		-		-		-	0.000	1.935	-	
SRR Prototype Developmental Engineering	TBD	Various : Various	10.650	0.974		-		-		-		-	0.000	11.624	-	
LRR Requirements Decomposition/Systems Engineering/Component Level Projects/Market Research	TBD	Various : Various	5.000	0.750		-		-		-		-	0.000	5.750	-	
Subtotal			27.409	1.724		-		-		-		-	0.000	29.133	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	
Test and Evaluation 1	MIPR	Various : Various	1.046	-		-		-		-		-	0.000	1.046	-	
Test and Evaluation 2	MIPR	Various : Various	0.300	-		-		-		-		-	0.000	0.300	-	
SRR Test and Evaluation	TBD	Various : Various	1.826	1.250		-		-		-		-	0.000	3.076	-	
Subtotal			3.172	1.250		-		-		-		-	0.000	4.422	N/A	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army **Date: May 2021**

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV	Project (Number/Name) RA7 / RQ-11 Raven
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	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	33.666	3.218	0.000	-	-	-	0.000	36.884	N/A

Remarks
All funding has been removed from this PE starting in FY 2021 and can be found on PEs 644101A BR6 and 655205A BR7.

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army **Date: May 2021**

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV	Project (Number/Name) RA7 / RQ-11 Raven
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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)																																
SRR Tranche I Prototyping																																
Test and Evaluation																																
SRR/HGCS Integration																																
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)																																


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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army **Date: May 2021**

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV	Project (Number/Name) RA7 / RQ-11 Raven
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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/HGCS Integration																												
LRR End User Assessment																												

LRR/HGCS Int


 LRR EUA

Note
Schedule data beyond FY 2020 is for informational purposes. Funding reprogrammed to APEs 644101A and 655205A starting in FY 2021.

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army **Date:** May 2021

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV	Project (Number/Name) RA7 / RQ-11 Raven
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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 EngineeringProgram Management (SEPM)	2	2018	4	2024
SRR Tranche I OTA Award	3	2019	3	2019
SRR Tranche I Prototyping	3	2019	4	2020
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	2	2021	2	2021
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	2023	3	2024
LRR Prototyping (System)	4	2024	1	2026
LRR/HGCS Integration	4	2024	4	2026
LRR End User Assessment	3	2026	3	2026
LRR Full Rate Production (FRP) Decision	2	2027	2	2027

Note

All funding after FY 2020 has been removed from this PE and can be found on PEs 0604101A BR6 and 0605205A BR7. Scheduling detail after FY 2020 is for information purposes only.