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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 0607134A / Long Range Precision Fires (LRPF)
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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	-	149.455	100.146	-	-	-	-	-	-	-	-	-
ES1: Long Range Precision Fires (LRPF)	-	149.455	100.146	-	-	-	-	-	-	-	-	-

Program MDAP/MAIS Code: 494

Note

Starting in Fiscal Year (FY) 2022 all funds for this program were restructured from PE 0607134A to PE 0605231A.. PE 0605231A is a continuation of the existing PrSM program.

A. Mission Description and Budget Item Justification

Precision Strike Missile (PrSM) is the Army's next generation surface-to-surface missile that replaces and improves upon Army Tactical Missile System (ATACMS) capabilities. The mission of the PrSM System is to attack/ neutralize/suppress/destroy targets using missile delivered indirect precision fires. PrSM will provide Joint Force Commanders with a 24/7, all-weather capability to attack critical and time sensitive area and point targets including threat air defense, missile launchers, command and control centers, assembly/staging areas and high payoff targets at all depths of the multi-domain battlefield. PrSM will counter the enemy's ability to conduct combat maneuver and air defense operations.

PrSM requirements include: max range of greater than 400 kilometers (km), specified lethality against the designated target set, a Launch Pod Missile Container (LPMC) that holds two missiles, survivability in a threat environment, and compatibility with the existing launcher platforms (M270A2 Multiple Launch Rocket System (MLRS) and M142 High Mobility Artillery Rocket System (HIMARS)). PrSM will meet cluster and insensitive munition requirements and is being designed with an open system architecture that provides the capability for future growth to counter new and emerging threats. Increment 2 of PrSM will include the ability to attack mobile or relocatable ground and maritime targets. Future PrSM increments will provide increased lethality against hardened targets and extend range capability to 650km. There is no funding for FY 2022.

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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 0607134A / <i>Long Range Precision Fires (LRPF)</i>
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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	156.682	122.733	145.681	-	145.681
Current President's Budget	149.455	100.146	0.000	-	0.000
Total Adjustments	-7.227	-22.587	-145.681	-	-145.681
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-18.108			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.781	-			
• SBIR/STTR Transfer	-6.446	-4.479			
• Adjustments to Budget Years	-	-	-145.681	-	-145.681

Change Summary Explanation

Starting in Fiscal Year (FY) 2022 all funds for this program were restructured from PE 0607134A to PE 0605231A.. PE 0605231A is a continuation of the existing PrSM program.

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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 0607134A / Long Range Precision Fires (LRPF)				Project (Number/Name) ES1 / Long Range Precision Fires (LRPF)			
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
ES1: Long Range Precision Fires (LRPF)	-	149.455	100.146	-	-	-	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

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

	FY 2020	FY 2021	FY 2022
Title: Enhanced Technology Maturation and Risk Reduction (E-TMRR)	149.455	32.276	-
Description: E-TMRR activities to develop the Army's next generation missile capability that doubles volume of fire, meets range requirements by exceeding 400km, provides required lethality for both point and area targets, ensures survivability, meets cluster munition policy requirements, and provides an open system architecture. PrSM provides field artillery units with a deep-strike capability while supporting Brigade, Division, Corps, Army, Theater, Joint and Coalition forces in full, limited or expeditionary operations.			
FY 2021 Plans: Complete execution of E-TMRR activities to include four (4) PrSM EDT missile flights. One of the flight tests will be a maximum range demonstration. Continue subsystem qualifications, HWIL, SWIL, 6 Degrees of Freedom (6DoF) analysis, and conduct			

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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607134A / Long Range Precision Fires (LRPF)	Project (Number/Name) ES1 / Long Range Precision Fires (LRPF)		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
critical missile survivability assessments. Government will continue activities to support PrSM missile software integration with the HIMARS fire control system to include required interface with Advanced Field Artillery Tactical Data System (AFATDS). After the completion of Milestone B, the Product Office will award an EMD contract. FY 2021 to FY 2022 Increase/Decrease Statement: E-TMRR activities will be complete in FY21.				
Title: Engineering and Manufacturing Development (EMD) Description: EMD activities to develop the Army's next generation missile capability that doubles volume of fire, meets range requirements by exceeding 400km, provides required lethality for both point and area targets, ensures survivability, meets cluster munition policy requirements, and provides an open system architecture. PrSM provides field artillery units with a deep-strike capability while supporting Brigade, Division, Corps, Army, Theater, Joint and Coalition forces in full, limited or expeditionary operations. FY 2021 Plans: After the completion of Milestone B, the Army will award an EMD. The contractor will identify and implement required design changes informed by E-TMRR testing, begin any additional sub-assembly system qualification, finalize production planning in support of Manufacturing Readiness Assessments for UMR, and order long lead items for system safety testing and assembly of (12) Production Qualification Test (PQT) flight test articles. The Government will continue to assess the contractor's missile performance through modeling, simulation, and performance testing. The Army will continue tactical software integration on the HIMARS launcher, prioritize required qualification, safety and transportation hazard classification approvals necessary to meet UMR requirements. FY 2021 to FY 2022 Increase/Decrease Statement: Change reflects decrease from funding being moved from PE 0607134A to PE 0605231A.		-	49.870	-
Title: Increment 2 Description: Activities to procure long lead Increment 1 test hardware for PrSM Increment 2 for prototype development. FY 2021 Plans: Procure long lead Increment 1 test hardware for PrSM Increment 2 for prototype development. FY 2021 to FY 2022 Increase/Decrease Statement: Change reflects decrease from funding being moved from PE 0607134A to PE 0605231A.		-	18.000	-
Accomplishments/Planned Programs Subtotals		149.455	100.146	-

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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 0607134A / Long Range Precision Fires (LRPF)	Project (Number/Name) ES1 / Long Range Precision Fires (LRPF)

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

Line Item	FY 2020	FY 2021	FY 2022	FY 2022	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Cost To	
			Base	OCO	Total					Complete	Total Cost
• 0605231A: Precision Strike Missile (PrSM)	-	-	188.452	-	188.452	-	-	-	-	-	-
• C29600: PRECISION STRIKE MISSILE (PRSM)	-	49.941	166.130	-	166.130	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

PrSM follows the Major Capability Acquisition pathway. A 6 NOV 2013 Materiel Development Decision Acquisition Decision Memorandum designated PrSM as a Pre-Major Defense Acquisition Program. An AoA supporting the MS A decision was completed by U.S. Army Training and Doctrine Command (TRADOC) Analysis Center-White Sands Missile Range (TRAC-WSMR), with an Office of the Secretary of Defense (OSD) letter of sufficiency issued in September 2015. In 4Q FY 2016, the Army awarded 9 month risk reduction, trade study and initial design development agreements to two contractors. The effort resulted in development of initial baseline designs presented during final technical reviews that resulted in a seamless transition into the TMRR phase. Subsequent to MS A, on 31 March 2017, the Army awarded competitive Other Transaction Agreements to two contractors with planned down-select following the conclusion of system level prototype flight testing in FY 2020.

In FY 2018, the Army in response to immediate near-peer threats and the requirement to engage targets with a precision guided missile at ranges beyond 400km the Army directed acceleration of PrSM Early Operational Capability (EOC) with planned fielding in FY 2023. The PrSM acquisition approach was updated to include follow-on competitive TMRR effort, Enhanced TMRR (E-TMRR). A successful system level prototype flight test was the entry criteria for award of the E-TMRR agreement.

In FY 2019 both contractors completed a Preliminary Design Review (PDR), conducted component level Design Verification Testing (DVT) on PrSM sub-assemblies prior to system level prototype flight tests. During DVT, one PrSM contractor experienced a catastrophic rocket motor failure.

In FY 2020 The Army decided not to fund the contractor's additional cost growth and the contractor chose not to fund internally. The period of performance expired on this effort in March 20, 2020 leaving only one contractor to continue development activities. The remaining contractor conducted prototype flights in 1-3QFY2020 and was solely awarded E-TMRR in 12 JUN 2020.

During E-TMRR the contractor will finalize tactical designs, build additional missiles for system level EDT flight tests, begin subsystem qualification, and establish a production capability for EOC missiles. These risk reduction activities inform Milestone B decision and transition to EMD. EMD Phase begins 4Q FY 2021 following the MS B approval. The EMD phase will include assembly of PQT flight test articles in parallel with completion of ground and system qualification, tactical software integration on the HIMARS and M270A2 launchers and production planning efforts. Also, the program will refine critical missile survivability assessments to ensure the selected EMD design will successfully meet PrSM's kinetic, electro-magnetic spectrum, cyber, environmental, nuclear requirements. On 3 FEB 2021 Army Futures Command, Commanding General signed a Directed Requirement for initial quantities of PrSM EOC. FY21-24 MIPA funds will initially support an EOC and then transition to Full Rate Production and achieve Initial Operational Capability in FY 2025. EOC production begins in FY 2021 with fielding occurring in FY 2023. PrSM acquisition

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approach is incremental. The modular systems Improvements will occur via technology insertions that increase the capabilities of the base missile. During FY 2021 the program will procure Increment 1 long lead test hardware to support Increment 2 prototype development for integration with Science & Technology (S&T) developed hardware that will transition to the Program Office in FY 2022.

Development, integration, and testing of PrSM systems solutions, including test planning to support an annual PEO MS-led Multi-Domain Operations test/demonstration event beginning in FY23, to include biennial Survivability Resiliency/Cyber-Electromagnetic Activities exercises with an event planned in FY22.

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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 0607134A / Long Range Precision Fires (LRPF)	Project (Number/Name) ES1 / Long Range Precision Fires (LRPF)
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Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Government Program Management	MIPR	Various : RSA, AL	8.339	2.569	Nov 2019	5.169	Feb 2021	-		-		-	Continuing	Continuing	Continuing
Subtotal			8.339	2.569		5.169		-		-		-	Continuing	Continuing	N/A

Remarks
RSA - Redstone Arsenal, Alabama

Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
PrSM Increment 1 TMRR - 2 Vendors* (Raytheon and Lockheed Martin)	C/Various	LMMFCS / RMS : Grand Prairie, TX / Tucson, AZ	233.459	-		-		-		-		-	0.000	233.459	-
PrSM Increment 1 E-TMRR - 1 Vendor (Lockheed Martin)	C/CS	LMMFCS : Grand Prairie, TX	-	96.036	Nov 2019	12.210	Mar 2021	-		-		-	0.000	108.246	-
PrSM Increment 1 EMD - 1 Vendor (Lockheed Martin)	SS/FPIS	LMMFCS : Grand Prairie, TX	-	-		46.262	May 2021	-		-		-	Continuing	Continuing	Continuing
PrSM Increment 2 - 1 Vendor (Lockheed Martin)	TBD	LMMFCS : Grand Prairie, TX	-	-		18.000	Aug 2021	-		-		-	Continuing	Continuing	Continuing
Development Engineering Support	MIPR	AMCOM/CCDC AvMC/S3I : RSA, AL	14.731	2.008	Nov 2019	1.554	Jan 2021	-		-		-	Continuing	Continuing	Continuing
A-PNT	MIPR	CCDC AvMC : RSA, AL	-	7.000		-		-		-		-	0.000	7.000	-
Software Development	MIPR	S3I : RSA, AL	-	2.876	Nov 2019	2.805	Feb 2021	-		-		-	Continuing	Continuing	Continuing
FY20 Rescission	TBD	N/A : N/A	-	30.000	Jan 2021	-		-		-		-	0.000	30.000	-
Subtotal			248.190	137.920		80.831		-		-		-	Continuing	Continuing	N/A

Remarks
*Lockheed Martin awarded E-TMRR in 1QFY2020 after successful flight test.

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

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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			

AMCOM - Aviation and Missile Command; A-PNT - Assured-Position, Navigation and Timing; CCDC AvMC - Combat Capabilities Development Center Aviation & Missile Command; DOTC - DoD Ordnance Technology Consortium; LMMFCS - Lockheed Martin Missiles and Fire Control System; OTA - Other Transaction Agreements; RMS - Raytheon Missile Systems; RSA - Redstone Arsenal, Alabama; S3I - Systems Simulation, Software and Integration; TX - Texas

Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Quality, Safety, SETA Support, and Analysis	SS/T&M	Various; S3 / Pending Competitor in Aug 2021 : RSA, AL	4.320	3.549	Nov 2019	4.028	Feb 2021	-		-		-	Continuing	Continuing	Continuing
Subtotal			4.320	3.549		4.028		-		-		-	Continuing	Continuing	N/A

Remarks
RSA - Redstone Arsenal, AL; S3 Inc - System Studies & Simulation Inc.; SETA - Systems Engineering and Technical Support

Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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 Support	MIPR	WSMR; RTC : WSMR,NM; RSA, AL	8.736	5.417	Nov 2019	10.118	Feb 2021	-		-		-	Continuing	Continuing	Continuing
Subtotal			8.736	5.417		10.118		-		-		-	Continuing	Continuing	N/A

Remarks
RTC - Redstone Test Center; RSA - Redstone Arsenal, Alabama; WSMR, NM - White Sands Missile Range, New Mexico

	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	269.585	149.455	100.146	-	-	-	Continuing	Continuing	N/A

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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 0607134A / Long Range Precision Fires (LRPF)	Project (Number/Name) ES1 / Long Range Precision Fires (LRPF)

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
Technology Maturation and Risk Reduction (TMRR) Phase	██████████				██████████																							
TMRR Vendor #1 Contract (DOTC OTA)	██████████				██████████																							
TMRR Vendor #2 Contract (DOTC OTA)	██████																											
Prototype Flight Tests	██████																											
Engineering Development Test (EDT) Component Qualification / Ground Test	██████████				██████████																							
EDT Flight Tests									██████████																			
CDR									▲ 1																			
Milestone B									▲ 2																			
Engineering and Manufacturing Development (EMD) Phase									██████																			

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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 0607134A / Long Range Precision Fires (LRPF)	Project (Number/Name) ES1 / Long Range Precision Fires (LRPF)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AoA	2	2015	3	2015
Materiel Solution Analysis (MSA)	1	2014	3	2017
MSA Vendor #1 Contract (DOTC OTA)	3	2016	3	2017
MSA Vendor #2 Contract (DOTC OTA)	3	2016	3	2017
Milestone A	2	2017	2	2017
Technology Maturation and Risk Reduction (TMRR) Phase	2	2017	4	2021
TMRR Vendor #1 Contract (DOTC OTA)	3	2017	4	2021
TMRR Vendor #2 Contract (DOTC OTA)	3	2017	2	2020
System Requirements Review (SRR)	4	2017	4	2017
System Functional Review (SFR)	1	2018	1	2018
Preliminary Design Review (PDR)	1	2019	1	2019
Prototype Flight Tests	1	2020	3	2020
Engineering Development Test (EDT) Component Qualification / Ground Testing	3	2020	4	2021
EDT Flight Tests	3	2021	1	2022
CDR	3	2021	3	2021
Milestone B	3	2021	3	2021
Engineering and Manufacturing Development (EMD) Phase	4	2021	4	2021

Note

Funding for FY22 and out moved from PE 0607134A to PE 0605231A