PRECISION STRIKE MISSILE (PRSM)

December 2021 Selected Acquisition Report (SAR)

December 31, 2021

Department of The Army

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Executive Summary

Program Highlights Since Last Report (Congress): This is the initial SAR submission for the Precision Strike Missile (PrSM) program.

The PrSM requirements are stable and funding is adequate to meet cost, schedule, and performance objectives established in the Acquisition Program Baseline.

On August 20, 2021, the Army Acquisition Executive (AAE) approved PrSM utilization of the Urgent Capability Acquisition (UCA) Pathway to procure up to 30 Early Operational Capability-1 (EOC-1) missiles.

The EOC-1 contract (26 missiles) was awarded on September 10, 2021.

On September 27, 2021, the AAE approved Milestone B for PrSM and authorized entry into the Engineering and Manufacturing Development (EMD) phase.

The EMD contract was awarded on September 30, 2021.

The program conducted three (3) successful system level prototype missile flight tests: December 12, 2019, March 12, 2020 and April 30, 2020.

The program has conducted three (3) successful system level Engineering Development missile flight tests: May 12, 2021, October 13, 2021 and November 9, 2021.

There are no significant software-related issues with this program at this time.

History of Significant Developments Since Program Initiation:

Date	Description
Nov-2013	The Under Secretary of Defense for Acquisition, Technology and Logistics (USD-ATL) approves Long Range Precision Fires (LRPF) Materiel Development Decision and signs associated Acquisition Decision Memorandum.
Mar-2017	LRPF Milestone A ADM was signed by the USD-ATL.
Nov-2017	Reversion of Milestone Decision Authority. This ADM reverts Milestone Decision Authority from the USD-ATL to the Secretary of the Army.
Apr-2020	Army Acquisition Executive (AAE) ADM concurs with PrSM program acceleration and a single vendor approach.
Jan-2021	ADM with AAE approval for release of the PrSM Developmental Request for Proposal to support the Engineering and Manufacturing Development (EMD) contract and authority to execute contract line items for long lead EMD test hardware up to $20M prior to Milestone B.
Feb-2021	Directed Requirement for initial quantities of Early Operational Capability (EOC) missiles, signed by Commander, Army Futures Command.
Jun-2021	Joint Requirement Oversight Council Memorandum approves PrSM Increment 1 Capability Development Document.

Aug-2021	AAE approval ADM for Urgent Capability Acquisition (UCA) Pathway to procure EOC missiles.
Sep-2021	PrSM Milestone B approval ADM signed by the AAE.
Nov-2021	Conducted PrSM System Critical Design Review.

Schedule

Schedule Events

Event Title (or Header)	Current Objective	Current Threshold	Current Estimate/Actual Date	Deviation ?
Milestone A	Mar-2017	Mar-2017	Mar-2017	
Milestone B	Sep-2021	Sep-2021	Sep-2021	
Critical Design Review	Sep-2021	Mar-2022	Nov-2021	
Initial Operational Test and Evaluation Start	Nov-2024	May-2025	Nov-2024	
Initial Operational Test and Evaluation Finish	Feb-2025	Aug-2025	Feb-2025	
Combined Milestone C and Full Rate Production Decision	Apr-2025	Oct-2025	Apr-2025	
Initial Operational Capability	Aug-2025	Feb-2026	Aug-2025	

Schedule Notes:	*Schedule Deviation Explanations:*

Significant Schedule Risks

Event	Date	Description
Current	12/6/2021	#1131: Limited Environmental Testing Prior to Qualification
Current	12/6/2021	#1129: Lockheed Martin Missiles and Fire Control (LM MFC) Deferral of Cybersecurity Requirements Allocation
Current	12/6/2021	#1346: Early Operational Capability -1 (EOC-1) Availability in 4th Quarter FY 2023

Performance

Does Classified Data Exist for this Data Section?

Performance Attributes					
Current Objective	**Current Threshold**	**Current Estimate**	**Deviation?**	**Demonstrated Performance**	**Date**
Attribute Title:	System Survivability: Cyber Survivability			KPP	
(U) The PrSM system shall be compliant to the approved Secure Technical Implementation Guide (STIG). Verification and validation activities (e.g., software code scans, static analysis, code reviews, software qualification tests) shall confirm that the system is compliant. Category (CAT) 1 and CAT 2 vulnerability shall be mitigated. The system must maintain the approved Confidentiality, Integrity, and Availability when connecting to and from other systems. It must be capable of **authenticating** with FA Launchers (M142 HIMARS and M270A2 MLRS and designated variants thereof)	(U) The PrSM system shall be compliant to the approved Secure Technical Implementation Guide (STIG). Verification and validation activities (e.g., software code scans, static analysis, code reviews, software qualification tests) shall confirm that the system is compliant. CAT 1 and CAT 2 vulnerability shall be mitigated. The system must maintain the approved Confidentiality, Integrity, and Availability when connecting to and from other systems. It must be capable of **identification ** with FA Launchers (M142	(U) The PrSM system shall be compliant to the approved Secure Technical Implementation Guide (STIG). Verification and validation activities (e.g., software code scans, static analysis, code reviews, software qualification tests) shall confirm that the system is compliant. CAT 1 and CAT 2 vulnerability shall be mitigated. The system must maintain the approved Confidentiality, Integrity, and Availability when connecting to and from other systems. It must be capable of **identification ** with FA Launchers (M142			

within the capabilities of the current launcher fleet. It must be capable of maintaining mission effectiveness (resiliency) during cybersecurity testing (i.e., table top [National Defense Authorization Act {NDAA} 1647], Cooperative Vulnerability Identification (CVI), Adversary Cybersecurity DT&E, Cooperative Vulnerability and Penetration Assessment [CVPA], Adversarial Assessment, Command Post Exercises and Army Interoperability Certification [AIC] testing). It will be survivable to novice skill level cybersecurity threats from the insider, nearsider and outsider attack perspectives. In accordance with the Cyber Survivability Endorsement Guide, the overall Cyber Survivability	HIMARS and M270A2 MLRS and designated variants thereof) within the capabilities of the current launcher fleet. It must be capable of maintaining mission effectiveness (resiliency) during cybersecurity testing (i.e. table top [National Defense Authorization Act {NDAA} 1647], Cooperative Vulnerability Identification (CVI), Adversary Cybersecurity DT&E, Cooperative Vulnerability and Penetration Assessment [CVPA], Adversarial Assessment, Command Post Exercises and Army Interoperability Certification [AIC] testing). It will be survivable to novice skill level cybersecurity threats from the insider,	HIMARS and M270A2 MLRS and designated variants thereof) within the capabilities of the current launcher fleet. It must be capable of maintaining mission effectiveness (resiliency) during cybersecurity testing (i.e. table top [National Defense Authorization Act {NDAA} 1647], Cooperative Vulnerability Identification (CVI), Adversary Cybersecurity DT&E, Cooperative Vulnerability and Penetration Assessment [CVPA], Adversarial Assessment, Command Post Exercises and Army Interoperability Certification [AIC] testing). It will be survivable to novice skill level cybersecurity threats from the insider,			

Risk Category is CSRC 3.	nearsider and outsider attack perspectives. In accordance with the Cyber Survivability Endorsement Guide, the overall Cyber Survivability Risk Category is CSRC 3.	nearsider and outsider attack perspectives. In accordance with the Cyber Survivability Endorsement Guide, the overall Cyber Survivability Risk Category is CSRC 3.			
Attribute Title:	System Survivability: Chemical, Biological, Radiological, or Nuclear (CBRN) Survivability			KPP	
(U) The PrSM shall remain fully mission capable without requiring a system restart after a High Altitude Electromagnetic Pulse (HEMP) or INWE event.	(U) Chemical, Biological, Radiological, or Nuclear (CBRN) Survivability. The PrSM is designated CBRN survivability mission critical IAW DoDI 3150.09. The Launch Pod Missile Container (LPMC) must meet the contamination and survivability requirements and be capable of withstanding the materiel damaging effects of contaminants, decontaminati on, and field procedures required to decontaminate down to negligible risk levels IAW	(U) Chemical, Biological, Radiological, or Nuclear (CBRN) Survivability. The PrSM is designated CBRN survivability mission critical IAW DoDI 3150.09. The Launch Pod Missile Container (LPMC) must meet the contamination and survivability requirements and be capable of withstanding the materiel damaging effects of contaminants, decontaminati on, and field procedures required to decontaminate down to negligible risk levels IAW			

	MIL-STD 3056. Employment must be compatible with Soldiers in Mission Oriented Protective Posture IV. Mission essential functions shall be survivable in storage, while in transport, and on the launcher against the Initial Nuclear Weapons Effects (INWE) of blast, thermal and initial nuclear radiation to the same level as the launchers as defined in MIS-30225 Nuclear Environment Criteria for MLRS. Mission essential electronics shall be survivable against high altitude electromagneti c pulse (HEMP) environments described in MIL-STD 2169C or the current MIL STD as released while	MIL-STD 3056. Employment must be compatible with Soldiers in Mission Oriented Protective Posture IV. Mission essential functions shall be survivable in storage, while in transport, and on the launcher against the Initial Nuclear Weapons Effects (INWE) of blast, thermal and initial nuclear radiation to the same level as the launchers as defined in MIS-30225 Nuclear Environment Criteria for MLRS. Mission essential electronics shall be survivable against high altitude electromagneti c pulse (HEMP) environments described in MIL-STD 2169C or the current MIL STD as released while			

	in storage, while in transport, and on the launcher. The PrSM shall be restored to fully mission capable within 10 minutes with no more than one system restart after a HEMP or INWE event.	in storage, while in transport, and on the launcher. The PrSM shall be restored to fully mission capable within 10 minutes with no more than one system restart after a HEMP or INWE event.			
Attribute Title:	System Survivability: Electro-Magnetic Spectrum Survivability			KPP	
(U) PrSM must be capable of functioning in an electromagnetic countermeasure environment during flight as defined in the PrSM VOLT.	(U) Electromagnetic Spectrum Survivability Must be capable of down loading targeting data from the launcher and acquiring access to a trusted positioning, navigation and timing (PNT) source (e.g., Military GPS signal).	(U) Electromagnetic Spectrum Survivability Must be capable of down loading targeting data from the launcher and acquiring access to a trusted positioning, navigation and timing (PNT) source (e.g., Military GPS signal).			
Attribute Title:	Maximum Range			KPP	
(U) Max range 650 km	(U) Max range 400 km	>500km		499.4km	

Performance Notes:	*Performance Deviation Explanations:*
Capability Development Document for Precision Strike Missile (PrSM) Increment 1, dated July 29, 2021 Acronyms: AIC - Army Interoperability Certification CAT - Category	

CBRN - Chemical, Biological, Radiological, or Nuclear CVI - Cooperative Vulnerability Identification CVPA - Cooperative Vulnerability and Penetration Assessment DoDI - Department of Defense Instruction DT&E - Developmental Test and Evaluation FA - Field Artillery HEMP - High Altitude Electromagnetic Pulse HIMARS - High Mobility Artillery Rocket System IAW - in accordance with INWE - Initial Nuclear Weapons Effects km - Kilometer LPMC - Launch Pod Missile Container Max - Maximum MIL-STD - Military Standard MLRS - Multiple Launch Rocket System NDAA - National Defense Authorization Act VOLT - Validated Online Lifecycle Threat	

Acquisition Budget Estimate

Total Acquisition Cost

Budget Year: 2023 Base Year: 2021

Appropriation Category ($Millions)	Objective Base Year (Current APB)	Threshold Base Year (Current APB)	Budget Estimate Base Year	Budget Estimate Then Year	Deviation?
RDT&E	$ 1,048.2	$ 1,153.0	$ 1,042.3	$ 1,064.3	
Procurement	$ 5,542.2	$ 6,096.4	$ 5,412.0	$ 6,894.1	
MILCON	$ 53.0	$ 58.3	$ 51.9	$ 62.3	
Acq O&M	$ 41.9	$ 46.1	$ 40.6	$ 50.6	
Total Acquisition	$ 6,685.30		$ 6,546.7	$ 8,071.4	
PAUC	$ 1.663	$ 1.829	$ 1.628	$ 2.007	
APUC	$ 1.390	$ 1.529	$ 1.358	$ 1.730	

Total End Item Quantity

Quantity	Current APB	Current Estimate
Development Qty	35	35
Procurement Qty	3,986	3,986

Budget Notes:

Army Acquisition Executive approved Current APB, September 24, 2021.

Quantity Notes:

Cost Deviation Explanations:

Risk and Sensitivity Analysis

Current Procurement Risks:

Unit Cost

Current Baseline Compared with Current Estimate

Current Baseline Base Year: 2021

Category ($ Millions)	Current Baseline	Current Estimate	% Change	Breach? Significant or Critical
Program Acquisition Unit Cost				
Acquisition Cost	$ 6,685.3	$ 6,546.7		
Program Quantity	4,021	4,021		
PAUC	$ 1.663	$ 1.628	-2.07%	None
Average Procurement Unit Cost				
Procurement Cost	$ 5,542.2	$ 5,412.0		
Procurement Quantity	3,986	3,986		
APUC	$ 1.390	$ 1.358	-2.35%	None

Original Baseline Compared with Current Estimate

Original Baseline Base Year: 2021

Category ($ Millions)	Original Baseline	Current Estimate	% Change	Breach? Significant or Critical
Program Acquisition Unit Cost				
Acquisition Cost	$ 6,685.3	$ 6,546.7		
Program Quantity	4,021	4,021		
PAUC	$ 1.663	$ 1.628	-2.07%	None
Average Procurement Unit Cost				
Procurement Cost	$ 5,542.2	$ 5,412.0		
Procurement Quantity	3,986	3,986		
APUC	$ 1.390	$ 1.358	-2.35%	None
Impacts of Schedule Changes on Unit Cost:				
Unit Cost Notes:				
Army Acquisition Executive approved Current APB, September 24, 2021 aligns with BES23 submission.				

Contracts

Contract Number:	W31P4Q-21-C-0042	**Order Number:**		**Contract Title:**	PrSM Engineering and Manufacturing Development (EMD) & Early Operational Capability-1 (EOC-1)
CAGE Code	64059	City	Grand Prairie	Contracting Office	ACC-RSA
CAGE Legal Name	Lockheed Martin Missiles and Fire Control	State/Province	TX	Contract Strategy	FAR 15: Negotiated Contracts
Effort Number					
Supportive Phase	Development	Latest Modification Number	P0007	Definitization Date	3/31/2022
Contract Type	Multiple Types	Latest Modification Date	12/1/2021	Work Start Date	4/29/2021
Technical Data Rights	Limited Rights to Technical Data--Non-Commercial Items Only	Notes	January 2021 Developmental Request for Proposal Decision Review ADM provided authority for undefinitized award up to $20M of long lead hardware to maintain EMD testing schedule prior to milestone B decision. As noted above, this long lead CLIN was awarded on April 29, 2021. Upon Milestone B ADM approval, the undefinitized award was modified to award the remaining CLINs on September 30,		

			2021. The Government is pursuing Government Purpose Rights on the contract.				
Contract/Effort Price, Quantity and Performance ($M)							
Initial Target Price		Current Target Price		Contractor's EAC			
Initial Ceiling Price		Current Ceiling Price		PM's EAC			
Initial Quantity		BAC		BCWP		Work Completed	0.00%
Current Quantity		ACWP		BCWS		Cost Variance	
Delivered Quantity						Schedule Variance	
Factors Contributing to Cost Variance and Projected Effects on Program Costs:				Factors Contributing to Schedule Variance and Projected Effects on Program Schedule:			

Contract Number:	DOTC-19-01-INIT0170	**Order Number:**	N/A	**Contract Title:**	PrSM Enhanced Technology Maturation and Risk Reduction (E-TMRR)
CAGE Code	64059	City	Grand Prarie	Contracting Office	
CAGE Legal Name	Lockheed Martin Missiles and Fire Control	State/Province	TX	Contract Strategy	
Effort Number	1				
Supportive Phase	Development	Latest Modification Number	P0014	Definitization Date	12/1/2020
Contract Type	Cost-Sharing	Latest Modification Date	10/19/2021	Work Start Date	4/8/2020
Technical Data Rights	Limited Rights to Technical Data--Non-Commercial Items Only	Notes	Pursuing Government Purpose Rights		

Contract/Effort Price, Quantity and Performance ($M)							
Initial Target Price		Current Target Price		Contractor's EAC	$ 175.04		
Initial Ceiling Price	$ 179.95	Current Ceiling Price	$ 180.37	PM's EAC	$ 176.64		
Initial Quantity		BAC	$ 174.79	BCWP	$ 147.38	Work Completed	84.32%

Current Quantity		ACWP	$ 148.62	BCWS	$ 155.78	Cost Variance	-$ 1.24
Delivered Quantity						Schedule Variance	-$ 8.40
Factors Contributing to Cost Variance and Projected Effects on Program Costs:				Factors Contributing to Schedule Variance and Projected Effects on Program Schedule:			

Technologies and Systems Engineering

Significant Technical Risks

Event	Date	Description
Current	12/6/2021	Inability of Advanced Field Artillery Tactical Data System (AFATDS) to support PrSM Limited User Test (LUT), 3rd Quarter FY 2023
Current	12/6/2021	Early Operational Capability-1 (EOC-1) Availability in 4th Quarter FY 2023

Deliveries and Expenditures

CUI:

Quantities	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	7	7	35	20.00%
Procurement			3,986	0.00%
Total	7	7	4,021	0.17%

Years Appropriated to date	7	Total Years Appropriated Funding (Current Baseline):	32	Percent Years Appropriated:	21.88%

CUI:

Appropriation Category ($Millions)	Then Year Appropriated Amount	Then Year Expended Amount
RDT&E	539.80	428.80
Procurement	105.99	65.20
MILCON		

Acq O&M	5.30	5.30
Total Appropriated/Expended	1,140.10	434.37
Percent Appropriated/Expended	13.89%	61.27%

Delivery and Expenditure Notes:

Then Year Appropriated Amount equal sum of FY 2016-FY 2021 RDTE + FY 2022 CRA funds released to date. Missile Procurement, Army (MIPA) is for FY 2021 only. Acq O&M based on FY 2019-FY 2021.
Then Year Expended Amount equal sum of FY 2016-FY 2020 RDTE + FY 2021 to date. MIPA is FY 2021 to date. Acq O&M based on FY 2019-FY 2021.

Deliveries and Expenditures as of March 31, 2022.

Low-Rate Initial Production

	Initial Decision LRIP	Current Total LRIP
Approval Date	N/A	N/A
Approval LRIP Quantity	N/A	N/A
Approval Document Title	N/A	N/A
Start Year	N/A	N/A
End Year	N/A	N/A

Rationale if quantity exceeds 10% of the total number of articles to be produced: CUI: ____

There is no LRIP for this program.

Quantity Note: CUI: ____

Operating and Support (O&S) Cost

Total Program O&S Costs Compared with Baseline

	Current Base Year Objective	Current Base Year Threshold	Current Base Year Estimate	Current Then Year Estimate	Deviation?
Total O&S ($Millions)	$ 220.10	$ 242.10	$ 215.17	$ 308.59	

Deviation Explanation:

Operating and Support Cost Breakdown

Category (Base Year $Millions)	System Name: PrSM	System Name:
Unit-Level Manpower	$ 2.6	
Unit Operations	$ 0.0	
Maintenance	$ 40.6	
Sustaining Support	$ 98.1	
Continued System Improvements	$ 72.7	
Other	$ 1.20	
Total O&S	$ 215.2	

Cost Estimate Source

Type: Component Cost Position

Approval Authority and Date: Assistant Secretary of the Army, (Financial Management and Comptroller) (ASA(FM&C)); September 17, 2021

Note:

O&S Notes: