Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force												Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604932F / *Long Range Standoff Weapon*							
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
Total Program Element	2,852.150	921.891	911.406	623.491	0.000	623.491	601.584	288.272	76.487	77.997	0.000	6,353.278
657011: *LONG RANGE STAND-OFF*	2,852.150	921.891	911.406	623.491	0.000	623.491	601.584	288.272	76.487	77.997	0.000	6,353.278
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Program MDAP/MAIS Code: 489												

A. Mission Description and Budget Item Justification

The Long Range Stand-Off (LRSO) Cruise Missile is a long-range survivable stand-off weapon capable of delivering lethal nuclear effects on strategic targets. LRSO will replace the currently fielded Air Launched Cruise Missile (ALCM) and will be integrated on both legacy and future bomber aircraft. The LRSO weapon system will be capable of penetrating and surviving advanced Integrated Air Defense Systems (IADS) from significant stand-off range to prosecute strategic targets in support of the Air Force's global attack capability and strategic deterrence core function.

Funds may be used to address emerging or short-notice Diminishing Manufacturing Sources and Material Shortage (DMSMS) and supply chain issues.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23 $0.00M was expended for civilian pay expenses in this program element, and in FY24 $0.00M is forecasted for civilian pay expenses in this program element.

The program is conducting Engineering and Manufacturing Development (EMD) tasks to validate requirements to support Development and Operational Testing, and Production Readiness.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604932F / *Long Range Standoff Weapon*

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	928.850	911.406	704.911	0.000	704.911
Current President's Budget	921.891	911.406	623.491	0.000	623.491
Total Adjustments	-6.959	0.000	-81.420	0.000	-81.420
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	20.442	0.000			
• SBIR/STTR Transfer	-27.390	0.000			
• Other Adjustments	-0.011	0.000	-81.420	0.000	-81.420

Change Summary Explanation

FY 2023 adjustments are 20.442 million on FY23-28IR; Small Business Innovative Research (SBIR) totaling -27.390 million and minor administrative adjustments

FY 2025 adjustments account for a realignment of 81.4 million within the LRSO program

C. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Long Range Stand-Off (LRSO) Weapon Development	740.718	653.245	412.091
Description: Long Range Stand-off weapon development includes the Cruise Missile, payload and aircraft integration, logistics support systems, mission planning, and component and subsystem test and evaluation. ***FY 2024 Plans:*** The program will continue to design, develop, integrate and test the LRSO weapon system through the Engineering and Manufacturing Development contract. During FY24, The program plans to conduct B-52 flight envelope testing and begin Development Test and Evaluation program execution. Related FY24 Activities include, but are not limited to, the following: - continue reliability growth, manufacturability, and maintainability maturation activities in preparation for formal Development Test and Evaluation activities. - continue systems engineering activities focusing on design for reliability and design for manufacturing. - continue test activities, such as, but not limited to, continued envelope testing and weapon system flight tests. - continue planning for Production Readiness Reviews prior to the build of the Initial Operational Test & Evaluation (IOT&E) units. - continue qualification and nuclear hardness testing to verify the system operates in intended environments.			

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604932F / *Long Range Standoff Weapon*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
- continue planning and development of the logistics support systems. - develop and build associated carriage and launcher equipment, trainers, test equipment and support equipment. - continue to plan, develop, and mature support systems to include Common Support Equipment/Peculiar Support Equipment and transportation equipment. - continue planning for the use of Model Based System Engineering tools during Operations and Sustainment phase in order to transform supply chain management. - continue to mature the weapon system by conducting trade studies, system engineering, test activities, and system modeling and simulation. - continue to further develop analytical, information technology, and data management capabilities. - continue to implement information systems and information technology design to support program execution. - continue to expand and mature the analytical, information technology, test, and data management capabilities to ensure access to weapon system design information is properly controlled and securely transmitted between government and contractors. - continue to modify, modernize, and expand the analytic environment and labs to support EMD activities to enable full execution of the program's capability to own the technical baseline throughout the program life cycle. This involves establishing a digital engineering system including a supporting environment/infrastructure to perform digital activities, collaborate with and communicate across stakeholders. - continue to plan and execute critical software risk reduction activities. - continue to plan and execute payload and aircraft integration efforts. - continue to, through best program practices, ensure the following are met: requirements flow down, requirement allocation to hardware and software, and the requirements compliance matrix.			
FY 2025 Plans: The program will continue to design, develop, integrate and test the LRSO weapon system through the Engineering and Manufacturing Development (EMD) contract. During FY25, The program plans to continue Development Test and Evaluation program execution on B-52. Related FY25 Activities include, but are not limited to, the following: - continue reliability growth, manufacturability, and maintainability maturation activities in preparation for formal Development Test and Evaluation activities. - continue systems engineering activities focusing on design for reliability and design for manufacturing. - continue test activities, such as, but not limited to, continued envelope testing and weapon system flight tests. - continue planning for Production Readiness Reviews prior to the build of the Initial Operational Test & Evaluation (IOT&E) units. - continue qualification and nuclear hardness testing to verify the system operates in intended environments. - continue planning and development of the logistics support systems. - develop and build associated carriage and launcher equipment, trainers, test equipment and support equipment.			

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604932F / *Long Range Standoff Weapon*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
- continue to plan, develop, and mature support systems to include Common Support Equipment/Peculiar Support Equipment and transportation equipment. - continue planning for the use of Model Based System Engineering tools during Operations and Sustainment phase in order to transform supply chain management. - continue to mature the weapon system by conducting trade studies, system engineering, test activities, and system modeling and simulation. - continue to further develop analytical, information technology, and data management capabilities. - continue to implement information systems and information technology design to support EMD execution. - continue to expand and mature the analytical, information technology, test, and data management capabilities to ensure access to weapon system design information is properly controlled and securely transmitted between the Government and contractors. - continue to modify, modernize, and expand the analytic environment and labs to support EMD activities to enable full execution of the program's capability to own the technical baseline throughout the program life cycle. This involves establishing a digital engineering system including a supporting environment/infrastructure to perform digital activities, collaborate with and communicate across stakeholders. - continue to plan and execute critical software risk reduction activities. - continue to plan and execute payload and aircraft integration efforts. - continue to, through best program practices, ensure the following are met: requirements flow down, requirement allocation to hardware and software, and the requirements compliance matrix. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decreased due to design efforts ramping down post System Critical Design Review (CDR).			
Title: All-Up-Round ***Description:*** All-Up-Round activities include payload integration and platform integration. Further, these efforts include activities and assets related to weapon design compatibility and qualification, and other nuclear certification activities with both threshold and objective aircraft. ***FY 2024 Plans:*** During FY24, The program plans to continue joint LRSO and warhead testing and begin Development Test and Evaluation program execution. Related FY24 Activities include, but are not limited to, the following: - continue through program practices to ensure the following are met: requirements flow down, requirement allocation to hardware and software, requirements compliance matrix, system performance, reliability, maintainability, product assurance, testability, producibility and supportability.	125.186	176.791	137.670

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604932F / *Long Range Standoff Weapon*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
- continue facility and security infrastructure upgrades to enable secure connectivity and communication between Department of Defense (DoD), Department of Energy (DOE), and industry. - continue efforts to conduct parallel development, design, and test activities with the Department of Energy (DOE) to ensure the LRSO adequately integrates the DOE designed warhead into the system. - conduct safety studies and nuclear certification activities. - continue to perform aircraft integration efforts including activities associated with integration on threshold aircraft and aircraft mission planning system upgrades to accommodate the new weapon. - conduct joint DoD and DOE ground and flight activities to verify the missile to warhead interface and demonstrate the system meets performance specifications. - continue to collaborate with the National Nuclear Security Administration (NNSA) to ensure seamless integration of DOE warhead assets into the cruise missile. - continue to execute and improve the unified certification strategy which meets nuclear surety, cyber security, and nuclear safety requirements. - continue other activities necessary for All-Up-Round integration. These efforts include: developing mission planning upgrade needs, Operational Flight Program (OFP) development and integration to deliver the OFP test tapes, planning activities necessary to integrate the LRSO with aircraft, and ensuring the logical, electrical, and physical interfaces of the LRSO as defined in the Interface Control Document (ICD).			
FY 2025 Plans: During FY25, The program plans to continue Development Test and Evaluation program execution on B-52. Related FY25 Activities include, but are not limited to, the following: - continue through program practices to ensure the following are met: requirements flow down, requirement allocation to hardware and software, requirements compliance matrix, system performance, reliability, maintainability, product assurance, testability, producibility and supportability. - continue facility and security infrastructure upgrades to enable secure connectivity and communication between Department of Defense (DoD), Department of Energy (DOE), and industry. - continue efforts to conduct parallel development, design, and test activities with the DOE to ensure the LRSO adequately integrates the DOE designed warhead into the system. - conduct safety studies and nuclear certification activities. - continue to perform aircraft integration efforts including activities associated with integration on threshold aircraft and aircraft mission planning system upgrades to accommodate the new weapon. - conduct joint DoD and DOE ground and flight activities to verify the missile to warhead interface and demonstrate the system meets performance specifications. - continue to collaborate with the NNSA to ensure seamless integration of DOE warhead assets into the cruise missile.			

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604932F / *Long Range Standoff Weapon*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
- continue to execute and improve the unified certification strategy which meets nuclear surety, cyber security, and nuclear safety requirements. - continue other activities necessary for All-Up-Round integration. These efforts include: developing mission planning upgrade needs, Operational Flight Program (OFP) development and integration to deliver the OFP test tapes, planning activities necessary to integrate LRSO with aircraft, and ensuring the logical, electrical, and physical interfaces of the LRSO as defined in the Interface Control Document (ICD). ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decreased due to B-52 integration design activities ramping down post CDR.			
Title: Test Support ***Description:*** Conduct Test Support activities to support weapon development ***FY 2024 Plans:*** The Government formally arranges and funds the use of Government flight test support for ground and flight test activities. During FY24, the program plans to conduct B-52 flight envelope testing and begin Development Test and Evaluation program execution. Related FY24 Activities include, but are not limited to, the following: - continue to perform design validation, verification, test, nuclear certification activities (to include design and operational certification) and system qualification activities. - continue test planning and execution activities to support the LRSO weapon development, All-Up-Round technical integration, warhead integration and aircraft integration. - continue coordination with external test agencies in preparation for operational and post-production flight testing. ***FY 2025 Plans:*** The Government formally arranges and funds the use of Government flight test support for ground and flight test activities. During FY25, the program plans to continue Development Test and Evaluation program execution on B-52. Related FY25 Activities include, but are not limited to, the following: - continue to perform design validation, verification, test, nuclear certification activities (to include design and operational certification) and system qualification activities. - continue test planning and execution activities to support the LRSO weapon development, All-Up-Round technical integration, warhead integration and aircraft integration. - continue coordination with external test agencies in preparation for operational and post-production flight testing. ***FY 2024 to FY 2025 Increase/Decrease Statement:***	55.987	81.370	73.730

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604932F / *Long Range Standoff Weapon*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Funding decrease due to testing progress in FY24, resulting in fewer test activities in FY25.			
Accomplishments/Planned Programs Subtotals	921.891	911.406	623.491

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• MPAF 02 MLRSO1: *Long Range Stand-Off Weapon*	31.454	66.816	210.335	-	210.335	295.523	1,074.934	1,685.006	2,210.506	4,051.604	9,626.178

Remarks

E. Acquisition Strategy

The acquisition strategy focuses on the development of the All-Up-Round Weapon System, integration with the nuclear warhead, executing aircraft integration activities, and conducting test and evaluation with a continued robust reliability and manufacturing approach. The program obtained a successful Milestone (MS) A decision in July 2016 and subsequently released a Request for Proposals. The program competitively selected two prime contractors in August 2017 to execute the Technology Maturation and Risk Reduction (TMRR) phase. The selected prime contractors executed the Cost-Plus-Fixed-Fee (CPFF) contracts during TMRR with activities focused on developing and maturing subsystem and system designs. In FY20, LRSO pivoted to a sole source TMRR contractor, enabling Development RFP (dRFP) release and MS B. MS B was approved via an Acquisition Decision Memorandum in June 2021 and a contract for Engineering and Manufacturing Development was awarded in July 2021.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 5	**R-1 Program Element (Number/Name)** PE 0604932F / *Long Range Standoff Weapon*	**Project (Number/Name)** 657011 / *LONG RANGE STAND-OFF*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Long Range Standoff Weapon Development	SS/CPFF	Various : TBD	2,275.348	710.351	Oct 2022	606.231	Oct 2023	362.763	Oct 2024	-		362.763	706.439	4,661.132	-
		Subtotal	2,275.348	710.351		606.231		362.763		-		362.763	706.439	4,661.132	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Aircraft Integration Planning	Various	Various : TBD	126.561	48.898	Oct 2022	60.670	Oct 2023	42.453	Oct 2024	-		42.453	0.000	278.582	-
All-Up-Round Activities	Various	Various : TBD	70.755	76.288	Oct 2022	116.120	Oct 2023	95.217	Oct 2024	-		95.217	158.077	516.457	-
		Subtotal	197.316	125.186		176.790		137.670		-		137.670	158.077	795.039	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support	Various	Various : TBD	180.276	55.987	Jan 2023	81.371	Jan 2024	73.730	Jan 2025	-		73.730	128.505	519.869	-
		Subtotal	180.276	55.987		81.371		73.730		-		73.730	128.505	519.869	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	Various	Various : TBD	199.210	30.367	Oct 2022	47.014	Oct 2023	49.328	Oct 2024	-		49.328	73.472	399.391	-
		Subtotal	199.210	30.367		47.014		49.328		-		49.328	73.472	399.391	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604932F / *Long Range Standoff Weapon*	Project (Number/Name) 657011 / *LONG RANGE STAND-OFF*	

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2,852.150	921.891		911.406		623.491		-		623.491	1,066.493	6,375.431	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 5	**R-1 Program Element (Number/Name)** PE 0604932F / *Long Range Standoff Weapon*	**Project (Number/Name)** 657011 / *LONG RANGE STAND-OFF*

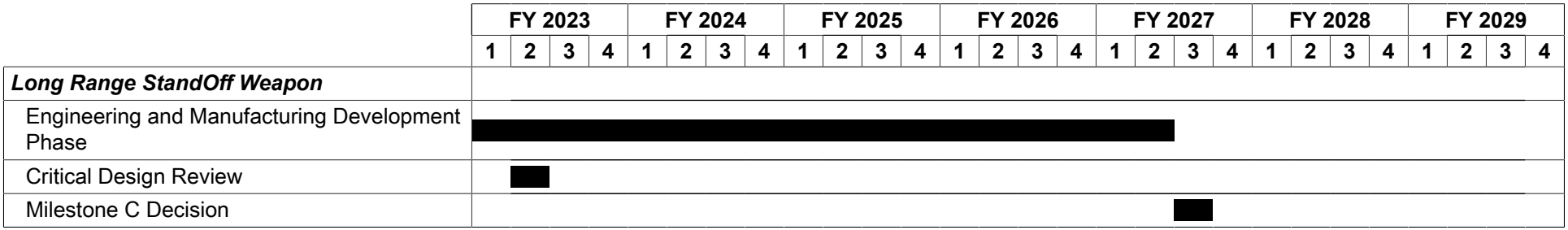

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 5	**R-1 Program Element (Number/Name)** PE 0604932F / *Long Range Standoff Weapon*	**Project (Number/Name)** 657011 / *LONG RANGE STAND-OFF*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Long Range StandOff Weapon				
Engineering and Manufacturing Development Phase	1	2023	2	2027
Critical Design Review	2	2023	2	2023
Milestone C Decision	3	2027	3	2027

Note

Engineering and Manufacturing Development Phase contract awarded July 2021.