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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0604873C I Long Range Discrimination Radar (LRDR)							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	363.561	370.516	166.543	136.423	-	136.423	122.877	99.920	88.203	64.569	Continuing	Continuing
MD96: Long Range Discrim Radar (LRDR)	339.765	354.735	158.597	131.446	-	131.446	114.141	94.952	83.729	60.987	Continuing	Continuing
MC96: Cyber Operations	-	0.000	0.000	0.000	-	0.000	3.245	0.000	0.000	0.000	0.000	3.245
MD40: Program Wide Support	23.796	15.781	7.946	4.977	-	4.977	5.491	4.968	4.474	3.582	Continuing	Continuing
Program MDAP/MAIS Code: 362												
Note Decrease from FY 2019 to FY 2020 reflects completion of development and manufacturing of radar hardware and transition to on site radar assembly and integration.												
A. Mission Description and Budget Item Justification The mission of the Long Range Discrimination Radar (LRDR) program is to design, develop, integrate, deliver, field, and sustain the LRDR as an element of the Ballistic Missile Defense System (BMDS) Increment 6b Homeland Defense (HLD) Capability. This capability is representative of LRDR Configuration 1. Initial fielding of the LRDR is planned for 2020 leading to an Operational Capability Declaration in FY 2022. The LRDR is comprised of a LRDR Equipment Shelter (LES), housing two radar array faces, a Mission Control Facility (MCF) which supports radar operations, and supporting facilities and infrastructure. The Secretary of the Air Force approved Clear Air Force Station, Alaska as the LRDR site. The Air Force Space Command (AFSPC) is the designated Lead Major Command (MAJCOM). The LRDR operates in the S-band frequency, features scalable and open systems architecture to mitigate evolving threats, and integrates into the BMDS through the Command and Control, Battle Management, and Communications (C2BMC) system. This Program Element includes BMDS threat discrimination improvements to enhance BMDS effectiveness against the evolving threat. The result will be a BMDS architecture more capable of discriminating and intercepting re-entry vehicles with a higher degree of confidence to improve Warfighter shot doctrine, and conserve Ground-Based Defense (GMD) interceptor inventory. LRDR also supports additional mission areas including Space Situational Awareness.												

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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Missile Defense Agency				Date: March 2019	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)		PE 0604873C I Long Range Discrimination Radar (LRDR)			
B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	357.659	164.562	91.603	-	91.603
Current President's Budget	370.516	166.543	136.423	-	136.423
Total Adjustments	12.857	1.981	44.820	-	44.820
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	12.500	0.000			
• Congressional Directed Transfers	0.000	1.981			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-8.357	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	8.714	0.000	44.820	-	44.820
Change Summary Explanation					
Increase in FY 2018 from PB19 to PB20 reflects the enacted congressional adjustment for Ballistic Missile Early Warning Radar System (BMEWS) removal.					
Increase in FY 2019 from PB19 to PB20 reflects the enacted congressional adjustment for Facility Restoration Sustainment and Maintenance (FSRM).					
Increase in FY 2020 from PB19 to PB20 provides pre-transition and transfer logistics activities, data collection events to support system acceptance, and prime contract costs.					

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)				Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
MD96: Long Range Discrim Radar (LRDR)	339.765	354.735	158.597	131.446	-	131.446	114.141	94.952	83.729	60.987	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Decrease from FY 2019 to FY 2020 reflects completion of development and manufacturing of radar hardware and transition to on site radar assembly and integration.

A. Mission Description and Budget Item Justification

This project provides for the development and initial fielding of a Long Range Discrimination Radar (LRDR) by 2020 leading to an Operational Capability Declaration in FY 2022. This provides an improved persistent midcourse BMDS discrimination capability in the Pacific sensor architecture. The LRDR will also increase the defensive capacity of the Ground-Based Midcourse Defense (GMD) interceptor inventory and address evolving threats. MDA's request includes funding for the design and development of the LRDR, delivery of spares for initial fielding, system engineering, software development, software Independent Verification and Validation (IV&V), hardware manufacturing, qualification testing, developmental testing support and Modeling and Simulation (M&S) efforts. M&S includes development of LRDR digital simulations and their integration into the BMDS, M&S architecture, and Verification, Validation, and Accreditation (VV&A) of LRDR models. The United States Air Force (USAF) will leverage the LRDR inherent capabilities to augment ancillary missions including Space Object Identification and Space Situational Awareness.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2018	FY 2019	FY 2020
Title: Long Range Discrimination Radar (LRDR)	354.735	158.597	131.446
Articles:	-	-	-
<p>Description: The LRDR program includes requirement development activities associated with systems engineering, software development, discrimination improvements, design reviews, testing, and M&S efforts for radar development. Efforts include LRDR site activation and preparation of site infrastructure for construction activities. The program will develop and integrate C2BMC systems for LRDR functionality. The program will develop, maintain, and deliver radar software Build 1 and establish the Independent Verification and Validation (IV&V) lab for testing of operational software. The program includes purchase, manufacture, integration and test of radar materials. This program will also establish the operational baseline, initiate radar operations and communication, and initiate sustainment operations. The program also includes logistics management; reliability, availability, maintainability (RAM) efforts; data management; and operations support for the LRDR program office.</p> <p>Specific and/or unique accomplishments to each FY are as follows:</p> <p>FY 2019 Plans: Radar Assembly and Integration -- Complete receipt of hardware, manufacturing and assembly of Array #1 and #2</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)	Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020
<div>-- Complete Factory Acceptance Testing (FAT) on Array #1 and #2</div> <div>-- Continue Front End Electronics Integration into Array #1 and #2 Panels</div> <div>-- Initiate packaging, shipment, emplacement, and installation of Arrays on-site at Clear Air Force Station (CAFS), AK</div> <div>-- Initiate Mission Control Facility (MCF) / LRDR Equipment Shelter (LES) site Integration with MILCON and C2BMC</div> <div>-- Initiate execution of the Transition & Transfer (T2) checklist items including facility walk-throughs and open storage certification</div> <div>-- Initiate Space Missile Defense Command Warfighter training of C2BMC for LRDR functionality in preparation for operational radar</div> <div>-- Initiate Logistics Business Case Analysis and Depot Maintenance Planning</div> <div>-- Complete qualification and subsystem testing</div> <div>-- Complete final SAS assemblies</div> <div>-- Software</div> <div>-- Complete and deliver software Build 1.1, integrate into government IV&V lab</div> <div>-- Complete software Build 1.1 Formal Qualification Testing (FQT)</div> <div>-- Complete delivery of hardware-in-the-loop (HWIL) components to government ground test lab</div> <div>-- Initiate HWIL pairwise /cycle 2 Testing with C2BMC</div> <div>-- Initiate participation in BMDS ground and flight tests in accordance with the BMDS Integrated Master Test Plan (IMTP)</div> <div>-- Complete final SAS and FEE assembly</div> <div>FY 2020 Plans:</div> <div>Radar Assembly and Integration</div> <div>-- Complete shipment and installation of Arrays on-site at Clear Air Force Station (CAFS), AK</div> <div>-- Complete Mission Control Facility (MCF) / LRDR Equipment Shelter (LES) site integration with MILCON and C2BMC</div> <div>-- Continue execution of the Transition & Transfer (T2) checklist items</div> <div>-- Complete Space Missile Defense Command Warfighter training of C2BMC for LRDR functionality</div> <div>-- Complete Logistics Business Case Analysis and Depot Maintenance Planning</div> <div>-- Continue Independent Validation & Verification (IV&V) of tactical software on Hardware-in-the-Loop equipment</div> <div>-- Continue C2BMC pairwise testing and cyber security testing</div> <div>FY 2019 to FY 2020 Increase/Decrease Statement:</div> <div>Decrease from FY 2019 to FY 2020 reflects completion of development and manufacturing of radar hardware and transition to on site radar assembly and integration.</div>				
Accomplishments/Planned Programs Subtotals		354.735	158.597	131.446

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Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)				Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)			
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost	
• 0603882C: Ballistic Missile Defense Midcourse Defense Segment	1,153.263	803.359	1,156.506	-	1,156.506	829.451	766.237	834.533	776.671	Continuing	Continuing	
• 0603884C: Ballistic Missile Defense Sensors	290.289	385.375	283.487	-	283.487	296.098	263.681	276.092	351.607	Continuing	Continuing	
• 0603884C: SENSORS MILCON	0.000	174.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	174.000	
• 0603896C: Ballistic Missile Defense Command and Control, Battle Management & Communication	449.985	507.817	564.206	-	564.206	534.988	502.581	525.742	535.636	Continuing	Continuing	
• 0603904C: Missile Defense Integration and Operations Center (MDIOC)	51.905	58.125	56.161	-	56.161	57.446	58.574	61.144	62.339	Continuing	Continuing	
• 0603907C: Sea Based X-Band Radar (SBX)	173.988	136.715	128.156	-	128.156	119.452	132.826	127.504	139.909	Continuing	Continuing	
• 0604879C: Ballistic Missile Defense Sensor Test	88.840	77.405	105.530	-	105.530	114.698	99.088	112.943	96.526	Continuing	Continuing	
• 31299903: MILCON PLANNING and DESIGN	0.000	6.184	35.472	-	35.472	20.848	30.185	42.000	19.543	0.000	154.232	
Remarks												
D. Acquisition Strategy												
The LRDR acquisition strategy, which was approved on January 7, 2015, incorporates robust acquisition practices to ensure delivery of a best value solution that meets mission performance requirements and reduces lifecycle costs. MDA awarded a fixed-price incentive contract to Lockheed Martin Corporation of Moorestown, New Jersey, on October 21, 2015 to design, develop, manufacture, integrate & test, and field the LRDR prime mission equipment. The prime contract included other fixed-price and cost-reimbursable line items and options in order to properly balance acquisition costs and risks. Performance and cost incentives were included to motivate contractor performance. The radar prime contractor will deliver a full technical data package, which will enable the government to effectively and affordably sustain the system. MDA will synchronize the radar development contract efforts with a simultaneous MILCON effort which will be executed through the US Army Corps of Engineers. The LRDR is expected to complete development and initial fielding in 2020 for BMDS integration and testing.												
E. Performance Metrics												
N/A												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)				Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Long Range Discrimination Radar (LRDR) - BMEWS Remediation and Removal	MIPR	USACE : AL, AK	12.610	12.500		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Communications Integration	C/TBD	Lockheed Martin : Moorestown, NJ	13.719	10.000	May 2018	4.000	May 2019	6.418	May 2020	-		6.418	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - IV&V	MIPR	AMRDEC : Huntsville, AL	5.529	3.100	Nov 2017	3.400	Nov 2018	3.400	Nov 2019	-		3.400	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Long Range Discrimination Radar (LRDR)- FFRDC/ UARC	MIPR	JHU/APL GSA : AL, MA, IL	0.000	0.000		3.216	Oct 2018	3.274	Oct 2019	-		3.274	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Long Range Discrimination Radar (LRDR)- CiviliansTravel	Allot	MDA : AL	0.000	0.000		2.859	Oct 2018	3.203	Oct 2019	-		3.203	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Long Range Discrimination Radar (LRDR)-Contract Support Services	Various	Various : Various	0.000	0.000		4.197	Oct 2018	4.197	Oct 2019	-		4.197	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Long Range Discrimination Radar (LRDR)-Hybrid Program Office	MIPR	Various : Various	0.000	0.000		0.000		2.947	Oct 2019	-		2.947	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Prime Contractor	C/FPIF	Lockheed Martin : Moorestown, NJ	243.211	310.578	Nov 2017	114.053	Nov 2018	86.920	Nov 2019	-		86.920	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Program Office	Various	MDA, JHU/APL, GSA : AL, MA, IL	10.616	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)				Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Long Range Discrimination Radar (LRDR) - Site Activation & Studies	C/TBD	MDA : AL	54.080	18.557	Feb 2018	23.412	Feb 2019	17.058	Feb 2020	-		17.058	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Transition & Transfer	C/TBD	MDA : AL	0.000	0.000		3.460	Jan 2019	4.029	Jan 2020	-		4.029	Continuing	Continuing	Continuing
Subtotal			339.765	354.735		158.597		131.446		-		131.446	Continuing	Continuing	N/A
Remarks Increase in Program Office costs from FY 2019 to FY 2020 provides for the staffing of the joint MDA-U.S. Air Force Hybrid Program Office															
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			339.765	354.735		158.597		131.446		-		131.446	Continuing	Continuing	N/A
Remarks Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency																	Date: March 2019												
Appropriation/Budget Activity 0400 / 4										R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)										Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)									
Significant Event Complete ▲ Significant Event Planned △					Milestone Decision Complete ★ Milestone Decision Planned ☆					Element Test Complete ◆ Element Test Planned ◇					System Level Test Complete ● System Level Test Planned ○					Complete Activity ◆ Planned Activity ◇									
										FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024							
Long Range Discrimination Radar Capability										◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇				
Build 1.0 Software Delivery												△																	
Build 1.1 Software Delivery													△																
Initial Fielding																		△											
Technical Capability Declaration (TCD)																			△										
FTX-26 (OT) (SN, OT Target Only Flight Test)																			△										
Operational Capability Declaration (OCD)																				△									

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / <i>Long Range Discrimination Radar (LRDR)</i>	Project (Number/Name) MD96 / <i>Long Range Discrim Radar (LRDR)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Long Range Discrimination Radar Capability	1	2018	4	2024
Build 1.0 Software Delivery	3	2018	3	2018
Build 1.1 Software Delivery	1	2019	1	2019
Initial Fielding	1	2021	1	2021
Technical Capability Declaration (TCD)	3	2021	3	2021
FTX-26 (OT) (SN, OT Target Only Flight Test)	3	2021	3	2021
Operational Capability Declaration (OCD)	1	2022	1	2022

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)				Project (Number/Name) MC96 / Cyber Operations			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
MC96: <i>Cyber Operations</i>	-	0.000	0.000	0.000	-	0.000	3.245	0.000	0.000	0.000	0.000	3.245
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note N/A												
A. Mission Description and Budget Item Justification Cyber Operations funds Sensors Directorate Information System Security Manager (ISSM) civilian salaries and cybersecurity engineering and architecture planning for program information technology systems. This project plans and tests the cybersecurity controls for the BMDS and maintains Sensors Risk Management Framework (RMF) authorizations for Sensors-managed information systems, conducts Controls Validation Testing (CVT)/ Security Controls Assessment (SCA) of sensors mission and support systems and provides and maintains Plans of Action and Milestones to mitigate cybersecurity deficiencies. Cyber Operations conducts annual cybersecurity program reviews on the LRDR enclaves to assess compliance in implementing and maintaining controls.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2018	FY 2019	FY 2020	
Title: Cyber Description: N/A FY 2019 Plans: N/A FY 2020 Plans: N/A FY 2019 to FY 2020 Increase/Decrease Statement: N/A									0.000	0.000	0.000	
									Articles: -	-	-	
Accomplishments/Planned Programs Subtotals									0.000	0.000	0.000	
C. Other Program Funding Summary (\$ in Millions) N/A Remarks 												

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / <i>Long Range Discrimination Radar (LRDR)</i>	Project (Number/Name) MC96 / <i>Cyber Operations</i>
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency													Date: March 2019		
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)						Project (Number/Name) MC96 / Cyber Operations			

Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-		-	-	-	N/A

Remarks N/A																	
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	Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		0.000		-		-		-	-	-	N/A

Remarks N/A																	
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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency										Date: March 2019																			
Appropriation/Budget Activity 0400 / 4										R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)										Project (Number/Name) MC96 / Cyber Operations									
Significant Event Complete ▲					Milestone Decision Complete ★					Element Test Complete ◆					System Level Test Complete ●					Complete Activity ◆									
Significant Event Planned △					Milestone Decision Planned ☆					Element Test Planned ◇					System Level Test Planned ○					Planned Activity ◇									
										FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024							
Integrated Cyber Security Service Provider																													

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / <i>Long Range Discrimination Radar (LRDR)</i>	Project (Number/Name) MC96 / <i>Cyber Operations</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Integrated Cyber Security Service Provider	1	2021	1	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)				Project (Number/Name) MD40 / Program Wide Support			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
MD40: Program Wide Support	23.796	15.781	7.946	4.977	-	4.977	5.491	4.968	4.474	3.582	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Program Wide Support (PWS) is allocated on a pro-rata basis across multiple Agency PEs each fiscal year based on the total Agency budget, and therefore fluctuates per PE by fiscal year.

A. Mission Description and Budget Item Justification

PWS contains non-headquarters management costs in support of MDA functions and activities across the entire BMDS. It Includes Government Civilians and Contract Support Services. This provides integrity and oversight of the BMDS as well as supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes personnel to support global deployments performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs include: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; Facilities Sustainment, Restoration and Modernization (SRM) program, (formerly Real Property Maintenance) to keep the Department's inventory of facilities in good working order; and similar operating expenses. PWS is allocated on a pro-rata basis across most Agency PEs and therefore fluctuates per PE by fiscal year based on the total Agency budget in that fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2018	FY 2019	FY 2020
Title: Program Wide Support	15.781	7.946	4.977
Articles:	-	-	-
Description: PWS contains non-headquarters management costs in support of MDA functions and activities across the entire BMDS. It Includes Government Civilians and Contract Support Services. This provides integrity and oversight of the BMDS as well as supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes personnel to support global deployments performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs include: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; Facilities Sustainment, Restoration and Modernization (SRM) program, (formerly Real Property Maintenance) to keep the Department's inventory of facilities in good working order; and similar operating expenses. PWS is allocated on a pro-rata basis across most Agency PEs and therefore fluctuates per PE by fiscal year based on the total Agency budget in that fiscal year.			

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / <i>Long Range Discrimination Radar (LRDR)</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019
<i>FY 2019 Plans:</i> - SEE ABOVE. <i>FY 2020 Plans:</i> - SEE ABOVE. <i>FY 2019 to FY 2020 Increase/Decrease Statement:</i> Decrease from FY 2019 to FY 2020 reflects the PWS allocation on a pro-rata basis across multiple Agency PE's each fiscal year based on the total Agency budget, and therefore fluctuates per PE by fiscal year.			
Accomplishments/Planned Programs Subtotals		15.781	7.946
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A E. Performance Metrics N/A			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)				Project (Number/Name) MD40 / Program Wide Support					
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Program Wide Support - Agency Facilities and Maintenance SRM (MIPR)	MIPR	Various : Multi: AL, VA, Aust, Japan	11.582	8.418	Nov 2017	4.395	Mar 2019	0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Management	Allot	Various : Multi: AL, CA, CO, VA	0.460	0.000		0.090	Jul 2019	0.075	Jul 2020	-		0.075	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Sustainment and GPC	Allot	Various : Multi: AL, CA, CO, VA etc.	0.000	0.735		1.592	Mar 2019	0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Civilian Salaries, Travel, Training	Allot	Various : MDA Multi: AL, CO, CA, VA	5.126	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various : Multi: AL, VA	6.628	6.628	Jul 2018	1.869	Jun 2019	4.902	Jul 2020	-		4.902	Continuing	Continuing	Continuing
Subtotal			23.796	15.781		7.946		4.977		-		4.977	Continuing	Continuing	N/A
Remarks N/A															
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			23.796	15.781		7.946		4.977		-		4.977	Continuing	Continuing	N/A
Remarks Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency														Date: March 2019																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)	Project (Number/Name) MD40 / Program Wide Support	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2018	4	2024