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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	782.109	105.895	39.200	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	927.204
MD98: <i>Directed Energy Demonstrator Development</i>	425.030	42.300	39.200	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	506.530
MD99: <i>Discrimination Sensor Demonstrator Development</i>	319.436	60.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	380.186
MC98: <i>Cyber Operations</i>	6.526	0.168	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.694
MD40: <i>Program Wide Support</i>	31.117	2.677	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	33.794

Program MDAP/MAIS Code: 362

Note

Decrease from FY 2022 to FY 2023 reflects the FY 2022 Congressional add for continued Diode Pumped Alkali Laser Demonstrator (DPAL) Development and Directed Energy efforts. No funding is requested in FY2023 for this program.

A. Mission Description and Budget Item Justification

Technology Maturation Initiatives (TMI) demonstrates the utility of directed energy for missile defense. The Missile Defense Agency's (MDA) directed energy plan incrementally demonstrates and improves the constituent components required to execute a directed energy kill chain; acquisition, tracking, and lethality. The efforts shaped future Missile Defense System (MDS) acquisition choices by advancing the technology readiness levels of emerging and developing technologies, while simultaneously assessing the performance and contributions to the MDS architecture. TMI included analysis, development, demonstration, systems engineering and test efforts to examine, develop, and improve directed energy systems, disruptive directed energy concepts, sensors, and future missile defense technologies.

Directed Energy Demonstrator Development (DEDD) addressed technology risk reduction and maturation for high powered strategic lasers, beam control, lethality, and related technologies. The efforts remain tightly coupled with OUSD(R&E) High Energy Laser Development Road Map, and are essential to mature strategic laser technology.

Discrimination Sensor Demonstrator Development (DSDD) included the development of an advanced sensor to discriminate lethal objects and integration of resulting technologies onto other MDS platforms in the future. The advanced sensor incorporated incrementally developed, integrated, and tested next-generation sensors and electronics to demonstrate Launch-on-Remote, Engage-on-Remote, discrimination and handover improvements for missile defense. These advanced sensors improved the probability of engagement success for stressing threats, expanded the MDS battle space and increased the ability to negate larger raid sizes. The sensor technologies also helped develop the associated concept of operations and provided the basis for a quick reaction precision tracking capability to augment radar. MDA may use the sensor technology to address emerging advanced threats.

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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>
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MDA collaborates with the Combatant Commands, Defense Advanced Research Projects Agency, Department of Energy, Joint Directed Energy Transition Office, Military Departments, National Laboratories and OUSD(R&E) in a systems engineering based strategy to research, analyze, develop and test directed energy weapons technology.

MDA requests no funding in this program element in FY 2022 and the out years.

B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	107.389	0.000	0.000	-	0.000
Current President's Budget	105.895	39.200	0.000	-	0.000
Total Adjustments	-1.494	39.200	0.000	-	0.000
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	39.200			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-1.494	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	0.000	0.000	0.000	-	0.000

Change Summary Explanation

Increase of \$39.2 million in FY 2022 provides the Congressional Plus-up for Directed Energy and Diode Pumped Alkali Laser Demonstrator (DPAL) Development.

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency										Date: April 2022		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>				Project (Number/Name) MD98 / <i>Directed Energy Demonstrator Development</i>			
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
MD98: <i>Directed Energy Demonstrator Development</i>	425.030	42.300	39.200	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	506.530
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Decrease from FY 2022 to FY 2023 reflects the FY 2022 Congressional add for continued Diode Pumped Alkali Laser Demonstrator (DPAL) Development and directed energy. No funding is requested in FY 2023 and the out years for this program.

A. Mission Description and Budget Item Justification

The Directed Energy Demonstrator Development (DEDD) project develops, integrates, and tests the component technologies required to scale electric lasers to hundreds of kilowatts. Laser scaling focused on maturing laser capability to levels sufficient to enter into the OUSD(R&E) High Energy Laser Road Map efforts. The DEDD project provided the necessary technology, test data, and operations familiarity to successfully transition to a higher power directed energy weapon.

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

	FY 2021	FY 2022	FY 2023
Title: Directed Energy Demonstrator Development	42.300	39.200	0.000
Articles:	-	-	-
Description: Laser scaling develops, integrates, and tests the component technologies required for scaling electric lasers while maintaining excellent size, weight, and power metrics and near diffraction limited beam quality.			
FY 2022 Plans:			
-Develop detailed design of ground-based laser for terminal phase defense.			
-Develop machine learning based algorithms for phase control, deformable mirror control, and turbulence characterization.			
-Research non-kinetic energy weapon system effectiveness and drive requirements for future system and technology development.			
-Initiate advanced microwave technology improvements, mature components and conduct threat representative assessments.			
-Develop and demonstrate a prototype, coherent beam combining scalable direct diode laser to prove that the direct diode concepts are practicable and achievable.			
-Develop a safe, domestic, battery-based power supply that can support all ground and ship directed energy systems.			
FY 2023 Plans:			
- No funding is requested in FY 2023 for this effort			
FY 2022 to FY 2023 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD98 / <i>Directed Energy Demonstrator Development</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023
Decrease from FY 2022 to FY 2023 reflects the Congressional add for Directed Energy and continued Diode Pumped Alkali Laser Demonstrator (DPAL) Development. No funding is requested in FY 2023 for this program.			
Accomplishments/Planned Programs Subtotals	42.300	39.200	0.000

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

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• 0604181C: <i>Hypersonic Defense</i>	267.589	287.796	225.477	-	225.477	108.540	110.220	287.535	449.590	Continuing	Continuing

Remarks

D. Acquisition Strategy

Employ various contracting strategies in a flexible manner to maximize the contribution to MDA. Execute through utilization of small businesses, leverage the Nation's engineering centers of excellence (FFRDCs and UARCs); generate cooperatives with other Government Agencies to provide concept modeling and assessment capability. This strategy uses agency and partner SMEs and government model-based assessments to inform Better Buying Power acquisition decisions.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Missile Defense Agency												Date: April 2022			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 4				PE 0604115C / Technology Maturation Initiatives				MD98 / Directed Energy Demonstrator Development							
Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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
Directed Energy Demonstrator Development - Adaptive Optics Effectiveness Demonstration	C/CPFF	Various : Various	0.000	0.000		9.000	Aug 2022	0.000		-		0.000	0.000	9.000	0.000
Directed Energy Demonstrator Development - Beam Control and Lethality Demonstration	C/CPFF	Multi : Multi	27.561	0.000		0.000		0.000		-		0.000	0.000	27.561	0.000
Directed Energy Demonstrator Development - Industry Laser Scaling and Technology Transfer	C/CPFF	Boeing : CA	18.412	0.000		0.000		0.000		-		0.000	0.000	18.412	0.000
Directed Energy Demonstrator Development - LPLD Preliminary Design A	C/CPFF	Lockheed Martin : CA	40.494	0.000		0.000		0.000		-		0.000	0.000	40.494	0.000
Directed Energy Demonstrator Development - LPLD Preliminary Design B	C/CPFF	General Atomics : CA	36.841	0.000		0.000		0.000		-		0.000	0.000	36.841	0.000
Directed Energy Demonstrator Development - LPLD Preliminary Design C	C/CPFF	Boeing : CA	36.361	0.000		0.000		0.000		-		0.000	0.000	36.361	0.000
Directed Energy Demonstrator Development - LPLD System Critical Design A (CPU)	C/CPFF	Lockheed Martin : CA	26.000	0.000		0.000		0.000		-		0.000	0.000	26.000	0.000
Directed Energy Demonstrator Development - LPLD	C/CPFF	General Atomics : CA	26.000	0.000		0.000		0.000		-		0.000	0.000	26.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD98 / <i>Directed Energy Demonstrator Development</i>
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Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
System Critical Design B (CPU)															
Directed Energy Demonstrator Development - LPLD System Critical Design C (CPU)	C/CPFF	Boeing : CA	26.000	0.000		0.000		0.000		-		0.000	0.000	26.000	0.000
Directed Energy Demonstrator Development - Laser Lethality Demonstration	C/CPFF	General Atomics, AFRL, Redstone Testing Center, White Sands Missile Range : CA, AL, NM	4.178	0.000		7.200	Jun 2022	0.000		-		0.000	0.000	11.378	0.000
Directed Energy Demonstrator Development - Laser Scaling	C/Various	MIT LL, LLNL : MA, CA	136.658	0.000		0.000		0.000		-		0.000	0.000	136.658	0.000
Directed Energy Demonstrator Development - Laser Scaling - Diode Pumped Alkali Laser (CPU)	Various	Multi, LLNL : Multi, CA	0.000	41.400	Feb 2021	6.000	Jun 2022	0.000		-		0.000	0.000	47.400	0.000
Directed Energy Demonstrator Development - Machine Learning Adaptive Optics	C/Various	Various : Various	0.000	0.000		2.500	Jul 2022	0.000		-		0.000	0.000	2.500	0.000
Directed Energy Demonstrator Development - Microwave Technology Assessment	C/CPFF	RAYTHEON : AZ	0.000	0.000		5.500	Jun 2022	0.000		-		0.000	0.000	5.500	0.000
Directed Energy Demonstrator Development - Performance Analysis	Various	MIT LL, Aviation and Missile Research Development and Engineering Center (AMRDEC), Combat Capabilities Development	12.469	0.000		0.000		0.000		-		0.000	0.000	12.469	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD98 / <i>Directed Energy Demonstrator Development</i>
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Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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				
		Command - Aviation and Missile Center (CCDC-AMC), AFRL, USAFA, Semquest : MA, AL, NM, CO														
Directed Energy Demonstrator Development - Short Pulsed Laser Lethality Assessment	MIPR	UNIVERSITY OF ROCHESTER : NY	0.000	0.000		9.000	Jul 2022	0.000				-	0.000	0.000	9.000	9.000
Directed Energy Demonstrator Development - Technology Transfer/Component Development	C/CPIF	Boeing : CA	16.209	0.000		0.000		0.000				-	0.000	0.000	16.209	0.000
Subtotal			407.183	41.400		39.200		0.000				-	0.000	0.000	487.783	N/A

Remarks
N/A

Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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				
Directed Energy Demonstrator Development - Advisory and Assistance Services	C/CPFF	MDA Multi : AL, NM	7.413	0.600	Jul 2021	0.000		0.000				-	0.000	0.000	8.013	0.000
Directed Energy Demonstrator Development - Engineering and Technical Services	MIPR	Aviation and Missile Research Development and Engineering Center (AMRDEC), Combat Capabilities Development	2.221	0.000		0.000		0.000				-	0.000	0.000	2.221	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD98 / <i>Directed Energy Demonstrator Development</i>
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Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
		Command - Aviation and Missile Center (CCDC-AMC) : AL													
Directed Energy Demonstrator Development - FFRDC	MIPR	Aerospace : AL, NM	3.317	0.000		0.000		0.000		-		0.000	0.000	3.317	0.000
Directed Energy Demonstrator Development - Facility Support	Various	377th ABW, Phoenix : NM	0.483	0.000		0.000		0.000		-		0.000	0.000	0.483	0.000
Directed Energy Demonstrator Development - Facility Sustainment	C/CPFF	Multi : AL, NM	1.281	0.000		0.000		0.000		-		0.000	0.000	1.281	0.000
Directed Energy Demonstrator Development - Information Technology	C/CPFF	Northrop Grumman, Jacobs Technology : CO	2.982	0.300	Aug 2021	0.000		0.000		-		0.000	0.000	3.282	0.000
Directed Energy Demonstrator Development - Travel	Allot	MDA Multi : AL, NM	0.150	0.000		0.000		0.000		-		0.000	0.000	0.150	0.000
Subtotal			17.847	0.900		0.000		0.000		-		0.000	0.000	18.747	N/A

Remarks
N/A

	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	425.030	42.300	39.200	0.000	-	0.000	0.000	506.530	N/A

Remarks
N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD98 / <i>Directed Energy Demonstrator Development</i>
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	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 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027							
Industry Laser Scaling Technology Design Review - Phase II (LM)	▲																
Laser Scaling Development - Fiber Combined Laser (FCL)	◆																
Laser Scaling Development - Diode Pumped Alkali Laser (DPAL)	◆																
Laser Scaling Development - FCL			◆ ◆ ◆														
Laser Scaling Development - DPAL			◇ ◇ ◇	◇ ◇ ◇													
Laser Scaling FCL Beam Quality and Power Demonstration				▲													
Laser Scaling Development – DPAL 60 kW-Class Lab Demo				◇	◇ ◇ ◇ ◇												
Laser Scaling Development – DPAL 60 kW-Class Lab Demo with Beam Quality measurement					◇ ◇ ◇												

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD98 / <i>Directed Energy Demonstrator Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Industry Laser Scaling Technology Design Review - Phase II (LM)	1	2021	1	2021
Laser Scaling Development - Fiber Combined Laser (FCL)	1	2021	1	2021
Laser Scaling Development - Diode Pumped Alkali Laser (DPAL)	1	2021	1	2021
Laser Scaling Development - FCL	2	2021	4	2021
Laser Scaling Development - DPAL	2	2021	3	2022
Laser Scaling FCL Beam Quality and Power Demonstration	4	2021	4	2021
Laser Scaling Development DPAL 60 kW-Class Lab Demo	4	2021	4	2022
Laser Scaling Development DPAL 60 kW-Class Lab Demo with Beam Quality measurement	2	2022	4	2022

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency										Date: April 2022		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>					Project (Number/Name) MD99 / <i>Discrimination Sensor Demonstrator Development</i>		
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
MD99: <i>Discrimination Sensor Demonstrator Development</i>	319.436	60.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	380.186
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

Note

Due to a shift in Department of Defense priorities, the development of the Technology Maturation Initiatives Program has been cancelled beginning in FY 2022. No funding is requested in FY 2022 and the out years.

A. Mission Description and Budget Item Justification

Areas of concentration include tracking lasers, advanced detectors, infrared sensors, and precision tracking and discrimination algorithms. Discrimination Sensor Demonstrator Development (DSDD) demonstrates precision track of advanced threats at extended ranges, simple scene discrimination through ground demonstrations, and complex scene discrimination through flight and space demonstrations.

Develops and tests high-precision advanced sensors that improve incoming threat identification, acquisition, tracking, and discrimination. DSDD activities and software maturation enhances the MDS capability to discriminate lethal objects in a threat cluster, and track and hand over the threat object with Aegis Launch on Remote and Engage on Remote precision. The increased kinematics envelope of the SM-3 Block IIA, when combined with Engage on Remote capability, will expand battlespace and increase the number of threats engaged.

This effort includes the development of next-generation General Atomics' advanced sensor systems to include tracking lasers, specialized detectors, unique processors and the corollary ground, airborne and space subsystems. These advanced sensors operate at strategic ranges required to augment the MDS radar, improve the MDS discrimination capability and provide precision track of large raids. Potential development includes tracking multiple targets simultaneously, substantially reducing the number of sensor assets required for large raids.

The program leverages technology demonstrated from the ground and air to develop Massachusetts Institute of Technology/Lincoln Laboratory's (MIT/LL) compact ruggedized advanced sensor technology. This effort includes cost-effective focal plane arrays and advanced sensor components to inform future MDS layer decisions for persistent tracking and discrimination. MIT/LL develops and tests sensors to advance technology and assesses system performance from the ground.

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

	FY 2021	FY 2022	FY 2023
Title: Discrimination Sensor Demonstrator Development	45.753	0.000	0.000
Articles:	-	-	-

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD99 / <i>Discrimination Sensor Demonstrator Development</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023
<p>Description: Discrimination Sensor Demonstrator Development (DSDD) project developed an advanced sensor technology demonstration system (tracking laser, advanced detector, infrared sensor, and precision tracking and discrimination algorithms) for data collection and characterization relevant conditions and relevant ranges.</p> <p>FY 2022 Plans: - No funding is requested in FY 2022 for this effort</p> <p>FY 2023 Plans: - No funding is requested in FY 2023 for this effort</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: N/A</p>			
<p>Title: Program Operations</p> <p align="right">Articles:</p>	14.997 -	0.000 -	0.000 -
<p>Description: Program Operations provides strategic planning, program integration, acquisition, contracting, engineering, financial management, internal reviews and audits, and program assessments for the Technology Maturation Initiatives Program.</p> <p>FY 2022 Plans: - No funding is requested in FY 2022 for this effort</p> <p>FY 2023 Plans: - No funding is requested in FY 2023 for this effort</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: N/A</p>			
Accomplishments/Planned Programs Subtotals	60.750	0.000	0.000

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• 0603176C: <i>Advanced Concepts and Performance Assessment</i>	49.069	40.000	16.737	-	16.737	17.265	17.693	18.109	18.477	Continuing	Continuing
• 0603180C: <i>Advanced Research</i>	29.621	47.966	22.023	-	22.023	22.758	23.296	23.851	24.335	Continuing	Continuing
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	259.605	254.962	231.134	-	231.134	250.028	274.705	276.254	257.575	Continuing	Continuing

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Appropriation/Budget Activity 0400 / 4				R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>				Project (Number/Name) MD99 / <i>Discrimination Sensor Demonstrator Development</i>			

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

Line Item	FY 2021	FY 2022	FY 2023	FY 2023	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	Cost To	
			Base	OCO	Total					Complete	Total Cost
• 0603890C: <i>BMD Enabling Programs</i>	607.167	623.644	591.847	-	591.847	613.589	625.761	635.633	640.374	Continuing	Continuing
• 0603896C: <i>Ballistic Missile Defense Command and Control, Battle Management & Communication</i>	639.027	564.946	589.374	-	589.374	575.883	588.824	612.853	605.801	Continuing	Continuing
• 1206895C: <i>Ballistic Missile Defense System Space Programs</i>	161.267	292.811	129.957	-	129.957	120.392	124.652	48.055	49.029	Continuing	Continuing

Remarks

D. Acquisition Strategy

The acquisition strategy for DSDD consists of a contract(s) to industry via the Advanced Technology Innovation Broad Agency Announcement and competitive procurements and agreements with Federally Funded Research and Development Centers to develop and demonstrate an advanced sensor system in realistic test environments. MDA will leverage agency partner subject matter experts and use government model based assessments for better acquisition decisions.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD99 / <i>Discrimination Sensor Demonstrator Development</i>
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Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
Discrimination Sensor Demonstrator Development - Advanced Sensor - FFRDC	MIPR	Aerospace : CA	0.000	2.000	Nov 2020	0.000		0.000		-		0.000	0.000	2.000	0.000
Discrimination Sensor Demonstrator Development - Advanced Sensor Flight Demonstrator	Various	Various : CA, MA, TBD	109.037	22.671	Nov 2020	0.000		0.000		-		0.000	0.000	131.708	0.000
Discrimination Sensor Demonstrator Development - Advanced Sensor Ground Test	MIPR	Navy China Lake : CA	33.622	0.000		0.000		0.000		-		0.000	0.000	33.622	0.000
Discrimination Sensor Demonstrator Development - Advanced Sensor Performance Analysis Aegis Engage on Remote Hardware in the Loop (HWIL), and Analysis	MIPR	MIT LL, Aviation and Missile Research, Development, Engineering Center (AMRDEC), and Combat Capabilities Development Command - Aviation and Missile Center (CCDC-AMC), USAF : MA, AL, VA	23.970	4.980	Dec 2020	0.000		0.000		-		0.000	0.000	28.950	0.000
Discrimination Sensor Demonstrator Development - Compact Ruggedized Advanced Sensor	Various	MIT LL, L3 : MA, NM	44.532	16.102	Nov 2020	0.000		0.000		-		0.000	0.000	60.634	0.000
Discrimination Sensor Demonstrator Development - EO/IR Flight Tests	C/CPFF	General Atomics : CA	48.503	0.000		0.000		0.000		-		0.000	0.000	48.503	0.000
Subtotal			259.664	45.753		0.000		0.000		-		0.000	0.000	305.417	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD99 / <i>Discrimination Sensor Demonstrator Development</i>
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Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			

Remarks
N/A

Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
Discrimination Sensor Demonstrator Development - Advisory and Assistance Services	C/CPFF	Various : NM, AL	13.620	0.000		0.000		0.000		-		0.000	0.000	13.620	0.000
Discrimination Sensor Demonstrator Development - Civilian Salaries and Travel	Allot	MDA Multi : AL, NM	26.618	0.000		0.000		0.000		-		0.000	0.000	26.618	0.000
Discrimination Sensor Demonstrator Development - Engineering and Technical Services	MIPR	Aviation and Missile Research, Development, and Engineering Center (AMRDEC), Combat Capabilities Development Command - Aviation and Missile Center (CCDC-AMC), Aerospace : AL, CA	4.304	0.000		0.000		0.000		-		0.000	0.000	4.304	0.000
Discrimination Sensor Demonstrator Development - Facility Support	MIPR	377th ABW : NM	0.311	0.000		0.000		0.000		-		0.000	0.000	0.311	0.000
Discrimination Sensor Demonstrator Development - Facility Sustainment	MIPR	377th ABW : NM	0.665	0.000		0.000		0.000		-		0.000	0.000	0.665	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Missile Defense Agency												Date: April 2022			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 4				PE 0604115C / Technology Maturation Initiatives				MD99 / Discrimination Sensor Demonstrator Development							
Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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
Discrimination Sensor Demonstrator Development - Information Management and Technology	C/CPAF	Northrop Grumman, Jacobs Technology : CO	14.254	0.000		0.000		0.000		-		0.000	0.000	14.254	0.000
Program Operations - Advisory and Assistance Services	C/CPFF	Various : NM, AL	0.000	4.920	Nov 2020	0.000		0.000		-		0.000	0.000	4.920	0.000
Program Operations - Civilian Salaries and Travel	Allot	MDA Multi : NM, AL	0.000	5.582	Nov 2020	0.000		0.000		-		0.000	0.000	5.582	0.000
Program Operations - Communications	MIPR	Various : NM, AL	0.000	0.626	Nov 2020	0.000		0.000		-		0.000	0.000	0.626	0.000
Program Operations - Facility Support	MIPR	377th ABW : NM	0.000	0.157	Nov 2020	0.000		0.000		-		0.000	0.000	0.157	0.000
Program Operations - Facility Sustainment (FSRM)	MIPR	377th ABW : NM	0.000	0.310	Oct 2020	0.000		0.000		-		0.000	0.000	0.310	0.000
Program Operations - Information Management and Technology	C/CPAF	Northrop Grumman, Jacobs Technology : CO	0.000	3.402	Oct 2020	0.000		0.000		-		0.000	0.000	3.402	0.000
Subtotal			59.772	14.997		0.000		0.000		-		0.000	0.000	74.769	N/A
Remarks															
N/A															
			Prior Years	FY 2021	FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			319.436	60.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	380.186	N/A	
Remarks															
N/A															

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD99 / <i>Discrimination Sensor Demonstrator Development</i>
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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 2021		FY 2022		FY 2023		FY 2024		FY 2025		FY 2026		FY 2027		
Advanced Sensor Development		◆																	
Planned Advanced Sensor Development					◆	◆	◆	◆	◆										
Compact Ruggedized Advanced Sensor Development		◆																	
Planned Compact Ruggedized Advanced Sensor Development					◆	◆	◆	◆	◆										

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD99 / <i>Discrimination Sensor Demonstrator Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Advanced Sensor Development	1	2021	1	2021
Planned Advanced Sensor Development	2	2021	2	2022
Compact Ruggedized Advanced Sensor Development	1	2021	1	2021
Planned Compact Ruggedized Advanced Sensor Development	2	2021	2	2022

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MC98 / <i>Cyber Operations</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
MC98: <i>Cyber Operations</i>	6.526	0.168	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.694
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Due to a shift in Department of Defense priorities, the development of the Technology Maturation Initiatives Program has been cancelled beginning in FY 2022. No funding is requested in FY 2022 and the out years.

A. Mission Description and Budget Item Justification

Cyber Operations sustains the Missile Defense Agency DoD Risk Management Framework (RMF) and Controls Validation Testing activities, analysis of validation results, risk assessments and reviews of proposed Program Manager/Information Assurance Manager Plans of Action and Milestones (POAM) for all Technology Maturation Initiative (TMI) mission systems. It maintains Certification and Accreditation data repository, capturing DoD Information Assurance Certification and Accreditation Program documentation (artifacts, validation results, and Information Assurance Risk Assessment results, and Designated Approving Authority accreditation decisions) and Plans of Action and Milestones on all MDA information systems.

This project monitors and tracks cybersecurity mitigations detailed in information technology security POAM. Activities include preparation of Certification and Accreditation documentation and accreditation recommendations to MDA Senior Information Assurance Officer /Certification Authority and Designated Approving Authority. Independent Verification and Validation team actions ensure the availability, integrity, authentication, confidentiality and non-repudiation of MDA mission, test and administrative systems. Activities in the project are necessary to comply with the Federal Information Security Management Act.

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

	FY 2021	FY 2022	FY 2023
Title: Network / System Certification and Accreditation (C&A)	0.168	0.000	0.000
Articles:	-	-	-
Description: The Cyber Operations project sustains MDA DoD RMF certification and Controls Validation Testing activities for the TMI PE.			
FY 2022 Plans: - No funding is requested in FY 2022 for this effort			
FY 2023 Plans: - No funding is requested in FY 2023 for this effort			
FY 2022 to FY 2023 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MC98 / <i>Cyber Operations</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023
N/A			
Accomplishments/Planned Programs Subtotals	0.168	0.000	0.000

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

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• 0603176C: <i>Advanced Concepts and Performance Assessment</i>	49.069	40.000	16.737	-	16.737	17.265	17.693	18.109	18.477	Continuing	Continuing
• 0603180C: <i>Advanced Research</i>	29.621	47.966	22.023	-	22.023	22.758	23.296	23.851	24.335	Continuing	Continuing

Remarks

D. Acquisition Strategy

The acquisition strategy for Cyber Operations, consists of using MDA civilian employees and the existing competitively awarded contractor support services.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MC98 / <i>Cyber Operations</i>
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Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
Network / System Certification and Accreditation (C&A) - Cyber Development and Engineering	C/CPFF	Davidson Technologies, JHU, Raytheon : AL, MD, MA	5.000	0.000		0.000		0.000		-		0.000	0.000	5.000	0.000
Network / System Certification and Accreditation (C&A) - Cybersecurity Management and Computer Network Defense	C/CPFF	TEAMS : AL, NM	0.604	0.000		0.000		0.000		-		0.000	0.000	0.604	0.000
Network / System Certification and Accreditation (C&A) - Network / System Certification and Accreditation (C and A) - Agency Operations - Civilian Salaries and Travel	Allot	Missile Defense Agency : NM	0.591	0.168	Nov 2020	0.000		0.000		-		0.000	0.000	0.759	0.000
Network / System Certification and Accreditation (C&A) - Network / System Certification and Accreditation (C and A) - CDS Implementation	C/CPFF	Northrop Grumman : CO	0.331	0.000		0.000		0.000		-		0.000	0.000	0.331	0.000
Subtotal			6.526	0.168		0.000		0.000		-		0.000	0.000	6.694	N/A

Remarks
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Missile Defense Agency										Date: April 2022			
Appropriation/Budget Activity 0400 / 4				R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>				Project (Number/Name) MC98 / <i>Cyber Operations</i>					
	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6.526	0.168		0.000		0.000		-		0.000	0.000	6.694	N/A

Remarks
N/A

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MC98 / <i>Cyber Operations</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Cyber Security Support	1	2021	1	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
MD40: <i>Program Wide Support</i>	31.117	2.677	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	33.794
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Program Wide Support (PWS) is allocated 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.

A. Mission Description and Budget Item Justification

PWS contains non-headquarters management costs in support of MDA functions and activities across the entire MDS. These functions include Government Civilians and Contract Support Services. This effort provides integrity and oversight of the MDS 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 worldwide. 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 across multiple geographic locations; commercial and ancillary facility services; management of all facility aspects regardless of lifecycle stage; supplies and maintenance; compliance with statutory environmental requirements; data and unified communications support; materiel and readiness and central property management of equipment; Facilities Sustainment, Restoration and Modernization (FSRM) 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 2021	FY 2022	FY 2023
Title: Program Wide Support	2.677	0.000	0.000
Articles:	-	-	-
Description: PWS contains non-headquarters management costs in support of MDA functions and activities across the entire MDS. These functions include Government Civilians and Contract Support Services. This effort provides integrity and oversight of the MDS 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 worldwide. 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 across multiple geographic locations; commercial and ancillary facility services; management of all facility aspects regardless of lifecycle stage; supplies and maintenance; compliance with statutory environmental requirements; data and unified communications support; materiel and readiness and central property management of equipment; Facilities Sustainment,			

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency		Date: April 2022		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2021	FY 2022	FY 2023
Restoration and Modernization (FSRM) 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.				
FY 2022 Plans: N/A				
FY 2023 Plans: N/A				
FY 2022 to FY 2023 Increase/Decrease Statement: N/A				
Accomplishments/Planned Programs Subtotals		2.677	0.000	0.000
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>
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Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
Program Wide Support - Agency Facilities and Maintenance	MIPR	Various : AL, CO, CA, VA	9.129	1.262	Nov 2020	0.000		0.000		-		0.000	0.000	10.391	0.000
Program Wide Support - Agency Operations Management	MIPR	Various : Multi: AL, VA	0.364	0.000		0.000		0.000		-		0.000	0.000	0.364	0.000
Program Wide Support - Agency Operations and Support Other Agency Services	MIPR	Various : Multi: AK, AL, CO, CA, HI, MD, VA	0.000	1.200	Nov 2020	0.000		0.000		-		0.000	0.000	1.200	0.000
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various : Multi: AK, AL, CA, CO, VA	21.624	0.000		0.000		0.000		-		0.000	0.000	21.624	0.000
Program Wide Support - Agency Operations, Sustainment and GPC	C/FFP	Various : Multi: AK, AL, CA, HI, NY, VA	0.000	0.215	Nov 2020	0.000		0.000		-		0.000	0.000	0.215	0.000
Subtotal			31.117	2.677		0.000		0.000		-		0.000	0.000	33.794	N/A

Remarks
N/A

	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	31.117	2.677	0.000	0.000	-	0.000	0.000	33.794	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 2023 Missile Defense Agency **Date:** April 2022

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>
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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 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
MD40 Program-Wide Support			◆◆◆◆						

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604115C / <i>Technology Maturation Initiatives</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2021	4	2021