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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2021 Missile Defense Agency **Date:** February 2020

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / <i>Land Based SM-3 (LBSM3)</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	1,162.851	25.200	38.352	56.628	-	56.628	43.742	29.073	31.507	27.908	Continuing	Continuing
MD68: <i>AEGIS Ashore</i>	1,120.168	20.840	33.741	51.764	-	51.764	41.043	26.652	28.638	25.129	Continuing	Continuing
MC68: <i>Cyber Operations</i>	2.724	2.901	2.980	2.615	-	2.615	0.963	1.252	1.257	1.257	Continuing	Continuing
MD40: <i>Program-Wide Support</i>	39.959	1.459	1.631	2.249	-	2.249	1.736	1.169	1.612	1.522	Continuing	Continuing

**Program MDAP/MAIS Code:** 362

**Note**

Increase from FY 2020 to FY 2021 provides additional hardware modernization upgrades at the Aegis Ashore Missile Defense Test Complex (AAMDTC), site activation requirements due to Poland construction delays, and initiates development of High-Altitude Electromagnetic Pulse (HEMP) Combat System hardening at the operational site in Romania.

**A. Mission Description and Budget Item Justification**

This program supports development of the Land-Based Standard Missile-3 (LBSM3) capability, Aegis Ashore. On 17 September 2009, the President announced an overarching plan to provide regional missile defense to U.S. deployed forces, allies, and partners in Europe called the European Phased Adaptive Approach (EPAA). The EPAA policy specifically defines a timeline to deploy a mix of afloat and land-based Ballistic Missile Defense (BMD) capabilities. Aegis Ashore represents one of these land-based capabilities. The U.S. can also build on current efforts to pursue Phased Adaptive Approaches (PAAs) in the Asia Pacific and the Middle East regions. The PAA tailors U.S. BMD capabilities to specific theater needs enhancing integrated regional missile defenses to protect defended assets against medium, intermediate, and ultimately intercontinental range ballistic missiles.

Aegis Ashore is a key component of EPAA Phases II (Romania) and III (Poland) and provides Aegis BMD capability against short to intermediate-range ballistic missiles in an ashore configuration. Aegis Ashore provides sophisticated engagement strategies and can adapt to threat updates while also being deployed/redeployed worldwide where needed to provide persistent coverage for the Geographic Combatant Commanders. Aegis Ashore re-hosts the required BMD components of a U.S. Navy Destroyer, including: SPY-1 Radio Direction and Ranging (Radar); Vertical Launch System (VLS), Computing Infrastructure; Command Control; Communications; Computers and Intelligence (C4I) Systems; and Operator Consoles.

This program element will continue to modernize, develop, and test Aegis Ashore capability improvements at the Aegis Ashore Missile Defense Test Complex (AAMDTC) in Hawaii for implementation at operational sites.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2021 Missile Defense Agency	<b>Date:</b> February 2020
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / <i>Land Based SM-3 (LBSM3)</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Previous President's Budget	27.692	38.352	36.348	-	36.348
Current President's Budget	25.200	38.352	56.628	-	56.628
Total Adjustments	-2.492	0.000	20.280	-	20.280
• 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	0.000	0.000			
• SBIR/STTR Transfer	-0.628	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	-1.864	0.000	20.280	-	20.280

**Change Summary Explanation**

Increase in FY 2021 provides additional hardware modernization upgrades at the Aegis Ashore Missile Defense Test Complex (AAMDTC), site activation requirements due to Poland construction delays, and initiates development of High-Altitude Electromagnetic Pulse (HEMP) Combat System hardening at the operational site in Romania

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Missile Defense Agency										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 0400 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)				<b>Project (Number/Name)</b> MD68 / AEGIS Ashore			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
MD68: AEGIS Ashore	1,120.168	20.840	33.741	51.764	-	51.764	41.043	26.652	28.638	25.129	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Increase from FY 2020 to FY 2021 provides additional hardware modernization upgrades at the Aegis Ashore Missile Defense Test Complex (AAMDTC), site activation requirements due to Poland construction delays, and initiates development of High-Altitude Electromagnetic Pulse (HEMP) Combat System hardening at the operational site in Romania.

**A. Mission Description and Budget Item Justification**

Deployed sites, referred to as Aegis Ashore Missile Defense Systems (AAMDS), will be modified to support future computer programs and missile variants in step with the U.S. Navy's Destroyer Modernization Plan. MDA is responsible for maintaining and modernizing the test center at the Pacific Missile Range Facility (PMRF), while the U.S. Navy is responsible for maintaining and modernizing all deployed Aegis Ashore sites. The initial AAMDS deployed to Romania in 2015 employing Aegis BMD 5.0 CU (Capabilities Upgrade) and SM-3 Block 1B. A second AAMDS will deploy to Poland and is scheduled to become operational in FY 2022. These sites provide an Aegis Ashore exo-atmospheric defense against short to intermediate-range ballistic missile threats in the later stages of flight. If the threat dictates, additional systems can be purchased and deployed globally.

Research and Development efforts include design of modifications to adapt the Aegis Weapon System for land-based use, modernization in pace with the U.S. Navy's Destroyer Modernization Plan, development and testing of Aegis Ashore capability improvements at the AAMDTC in Hawaii, and modifications, as required, to enhance co-existence with Broadband Wireless Access systems in the European theater.

In support of EPAA Phase III, Aegis Ashore integrates the Aegis BMD 5.1 and Standard Missile (SM-3) Block IIA capabilities into the Aegis Ashore sites. MDA will provide all upgrades to BMD capability, BMD specific mission equipment, and integration with existing Ballistic Missile Defense System (BMDS) nodes for all Aegis Ashore sites.

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Title:</b> Aegis Weapon System Development	16.010	19.869	27.889
<b>Articles:</b>	-	-	-
<b>Description:</b> Maintain and modernize the AAMDTC at the PMRF in Hawaii. Develop and test Aegis Ashore capability improvements prior to implementation at operational sites, and support SPY-1 Radar and Broadband Wireless Access (BWA) coexistence efforts at Aegis Ashore sites.			
<b>Recurring Accomplishments:</b>			
- Determine the minimum hardware refresh of element components and spares that are projected to be removed from the production to ensure the test capability at AAMDTC remains current with the U.S Navy's Destroyer Modernization efforts			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Missile Defense Agency		<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)	<b>Project (Number/Name)</b> MD68 / AEGIS Ashore		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<p>- Provide system engineering, technical, and logistics support for the AAMDS facility and tactical elements to ensure appropriate system adaptation, readiness, availability, and effectiveness</p> <p>- Modernize the AAMDTC Weapons System, C4I, VLS, and other equipment to align with the U.S. Navy's Destroyer Modernization Plan and ensure the test site configuration is ready to support BMDS testing</p> <p>- Maintain Aegis Ashore Technical Data Package with modernization implementation to include drawings and installation plans for U.S. Navy use in implementation at operational sites</p> <p>Specific and/or unique accomplishments to each FY are as follows:</p> <p><b>FY 2020 Plans:</b></p> <p>-Install hardware at AAMDTC to increase processing capabilities, network capacities, and update storage space</p> <p>-Provide Facilities, Sustainment, Restoration, and Modernization (FSRM) to initiate critical repairs and maintenance of infrastructure at AAMDTC</p> <p><b>FY 2021 Plans:</b></p> <p>- Procure hardware modernization upgrades at AAMDTC to align with the U.S. Navy's Destroyer Modernization Plan</p> <p>- Initiate development of High-Altitude Electromagnetic Pulse (HEMP) Combat System hardening of operational site in Romania</p> <p>- Enhance AAMDTC capabilities as test asset with protected space required to enable special testing initiatives required for Special Access Programs</p> <p><b>FY 2020 to FY 2021 Increase/Decrease Statement:</b></p> <p>Increase from FY 2020 to FY 2021 provides hardware modernization upgrades at AAMDTC and initiates development of HEMP Hardening in Romania</p>				
<p><b>Title:</b> Site Activation</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> Provide site design, unexploded ordnance clearing; spectrum analysis studies; security; temporary facilities; utilities; administrative communications equipment and services; infrastructure modifications; generator and commercial power; leased vehicles; material handling equipment; generator fuel; supplies, barriers; guard shacks; temporary lighting; transportation of materials and equipment; translators; and emerging requirements as site activation progresses and until sites are transferred to the Navy.</p> <p>Recurring Accomplishments include:</p> <p>- Provide temporary site activation facilities, base operations support, utilities, administrative communications, on-site material handling equipment services, and equipment installation</p> <p>- Fuel for facility commissioning activities, backup generators, and on-site vehicle support</p> <p>- Technical support to facilitate processing facility change proposals and construction modifications</p>		4.830	13.872	23.875
		-	-	-

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<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)	<b>Project (Number/Name)</b> MD68 / AEGIS Ashore

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
- Post-award technical services (structural, mechanical, and electrical) to ensure quality standards and construction schedule is met - Provide High-Altitude Electromagnetic Pulse (HEMP) validation and verification testing of the Aegis Ashore facilities			
<b>FY 2020 Plans:</b> - SEE ABOVE.			
<b>FY 2021 Plans:</b> - SEE ABOVE.			
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> - Increase from FY 2020 to FY 2021 provides additional site activation requirements due to Poland construction delays.			
<b>Accomplishments/Planned Programs Subtotals</b>	20.840	33.741	51.764

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0208866C MD09: <i>Aegis BMD O&amp;M</i>	77.756	75.237	85.830	-	85.830	77.612	81.977	84.899	85.610	Continuing	Continuing
• 0208866C MD09: <i>Aegis BMD Procurement</i>	706.366	697.768	620.096	-	620.096	498.016	541.099	890.056	815.708	Continuing	Continuing
• 0208866C MD73: <i>Aegis Ashore Phase III Procurement</i>	15.000	25.659	12.000	-	12.000	1.520	3.896	2.403	0.981	Continuing	Continuing
• 0208866C MD90: <i>Aegis BMD Hardware and Software</i>	91.181	124.986	104.372	-	104.372	109.374	103.328	126.109	124.604	Continuing	Continuing
• 0603892C: <i>AEGIS BMD</i>	724.731	737.269	814.936	-	814.936	674.825	553.402	478.000	449.145	Continuing	Continuing
• 0604878C: <i>Aegis BMD Test</i>	92.160	169.822	170.880	-	170.880	191.744	163.103	179.877	217.735	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

The Aegis Ashore Engineering Agent (AAEA) is responsible for the design, development, integration and test of the Aegis Weapons System capability into a reconstitutable deckhouse. The AAEA will also support Aegis Ashore deployment to Romania.

The Facilities and Deployments (FD) program office is utilizing Naval Facilities Engineering Command (NAVFAC) and U. S. Corps of Engineers Europe District (Core of Engineers North Atlantic Union) CENAU to award and administer contracts for base operating support, commercial power, temporary site activation facilities, and integrated electronic security systems for Romania and Poland sites.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Missile Defense Agency												Date: February 2020			
Appropriation/Budget Activity						R-1 Program Element (Number/Name)				Project (Number/Name)					
0400 / 4						PE 0604880C / Land Based SM-3 (LBSM3)				MD68 / AEGIS Ashore					
Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Aegis Weapon System Development - AWS Development-NAVFAC	MIPR	NAVFAC : HI	3.338	1.881	Nov 2018	2.600	Nov 2019	3.408	Nov 2020	-		3.408	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-NAVSEA-MD68	MIPR	NAVSEA-LM/BAE, SPAWAR, NSWC CD : San Diego, CA; Baltimore, MD; Minneapolis, MN	8.886	2.984	Nov 2018	3.150	Nov 2019	5.990	Mar 2021	-		5.990	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-NSWC DD-MD68	MIPR	NSWC Dahlgren : Dahlgren, VA	46.830	1.905	Nov 2018	1.214	Nov 2019	1.591	Nov 2020	-		1.591	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-NSWC PHD-MD68	MIPR	NSWC PHD, NSWC, DOI, Aegis Techrep : CA, NJ, ID, MD, IN	40.582	2.449	Nov 2018	2.125	Nov 2019	2.785	Nov 2020	-		2.785	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-PMRF - MD68	MIPR	PMRF : Hawaii	15.356	1.448	Nov 2018	1.238	Nov 2019	1.609	Nov 2020	-		1.609	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-SPAWAR-MD68	MIPR	SSC PAC : San Diego, CA	48.977	0.047	Nov 2018	2.000	Nov 2019	2.621	Nov 2020	-		2.621	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-SSC PAC Pearl Harbor	MIPR	SSC PAC Pearl Harbor : HI	0.000	2.246	Nov 2018	2.090	Nov 2019	2.739	Nov 2020	-		2.739	Continuing	Continuing	Continuing
Aegis Weapon System Development - Aegis Weapon System Development - MD68-	SS/CPIF	MDA Lockheed Martin : Moorestown, NJ	30.194	3.050	Jan 2019	5.452	Nov 2019	7.146	Nov 2020	-		7.146	Continuing	Continuing	Continuing
Aegis Weapon System Development - Aegis Weapon System Development- AWS	Various	Various : AL, VA, CA, APO, HI, NJ	837.719	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Missile Defense Agency** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)	<b>Project (Number/Name)</b> MD68 / AEGIS Ashore
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<b>Product Development (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Development- Various MD68: No longer funding in the FYDP															
Aegis Weapon System Development - Aegis Weapon System Development- MD68	MIPR	MDA : Arlington	1.076	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Site Activation - DTRA support to construction in Romania and Poland	MIPR	DTRA : Ft. Belvoir, VA	1.550	2.750	Nov 2018	0.426	Nov 2019	0.551	Nov 2020	-		0.551	Continuing	Continuing	Continuing
Site Activation - Poland Admin Communication	MIPR	Northrop Grumman : Poland	1.768	0.437	Nov 2018	0.423	Nov 2019	0.467	Nov 2020	-		0.467	Continuing	Continuing	Continuing
Site Activation - Poland Base Operating Support	MIPR	NAVFAC : Poland	5.955	1.007	Nov 2018	7.763	Nov 2019	8.464	Nov 2020	-		8.464	Continuing	Continuing	Continuing
Site Activation - Poland Commerical and Temporary Utilities	MIPR	NAVFAC : Poland	0.545	0.000		2.223	Nov 2019	2.378	Nov 2020	-		2.378	Continuing	Continuing	Continuing
Site Activation - Poland Fuel	MIPR	DLA : Fort Belvoir, Virginia	0.089	0.000		0.247	Nov 2019	0.263	Nov 2020	-		0.263	Continuing	Continuing	Continuing
Site Activation - Romania/ Poland Security Guards / Escorts	C/FFP	Chenega Infinity : Chantilly, VA	0.829	0.000		0.252	Nov 2019	9.081	Nov 2020	-		9.081	Continuing	Continuing	Continuing
Site Activation - Site Activation - Transportation of Aegis Weapon System	MIPR	SDDC : Scotts AFB, IL	5.881	0.012	Nov 2018	0.012	Nov 2019	0.013	Nov 2020	-		0.013	Continuing	Continuing	Continuing
Site Activation - Site Activation- IESS Support	MIPR	USAF LCMC Wright Patterson AFB : OH	0.145	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Site Activation - Site Activation- Poland Admin Communications	MIPR	DISA : Scott AFB, IL	0.160	0.009	Nov 2018	0.125	Nov 2019	0.000		-		0.000	Continuing	Continuing	Continuing
Site Activation - Site Activation- Prior year no longer funded in the FYDP	Various	Various : Various	64.185	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Site Activation - Site Activation- Site Activation	MIPR	NAVFAC : Naples Italy	1.324	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Missile Defense Agency** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)	<b>Project (Number/Name)</b> MD68 / AEGIS Ashore
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<b>Product Development (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Poland Navy Leases/ Material Hnadling Services															
Site Activation - USACE in-house support in Poland	MIPR	CEHNC : Huntsville, AL	1.839	0.000		1.899	Nov 2019	1.568	Nov 2020	-		1.568	Continuing	Continuing	Continuing
Site Activation - USACE support in Poland	MIPR	CENAU : Poland	2.940	0.615	Nov 2018	0.502	Nov 2019	1.090	Nov 2020	-		1.090	Continuing	Continuing	Continuing
<b>Subtotal</b>			1,120.168	20.840		33.741		51.764		-		51.764	Continuing	Continuing	N/A

**Remarks**  
N/A

<b>Support (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
<b>Subtotal</b>			-	-		-		-		-		-	-	-	N/A

**Remarks**  
N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
<b>Subtotal</b>			-	-		-		-		-		-	-	-	N/A

**Remarks**  
N/A

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**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2021 Missile Defense Agency **Date:** February 2020

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)	<b>Project (Number/Name)</b> MD68 / AEGIS Ashore
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Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
<b>Subtotal</b>			-	-		-		-		-		-	-	-	N/A

**Remarks**  
N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	1,120.168	20.840	33.741	51.764	-	51.764	Continuing	Continuing	N/A

**Remarks**  
Funding in the All Prior Years column represents a summary of Prior Years Total Costs for inactive contracts and MIPRs on the R-3. 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 2021 Missile Defense Agency** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / <i>Land Based SM-3 (LBSM3)</i>	<b>Project (Number/Name)</b> MD68 / <i>AEGLS Ashore</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 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
AAMDTC Upgrades	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
Integrated Master Test Plan (IMTP)	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
Poland Beneficial Occupancy Date (BOD)											◇																	
Facility Support for NAVEUR Exercise											◇																	
EPAA Phase III Technical Capability Declaration (TCD)															◇													
Poland Construction Complete															◇													

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2021 Missile Defense Agency **Date:** February 2020

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / <i>Land Based SM-3 (LBSM3)</i>	<b>Project (Number/Name)</b> MD68 / <i>AEGIS Ashore</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AAMDTC Upgrades	1	2019	4	2025
Integrated Master Test Plan (IMTP)	1	2019	4	2025
Poland Beneficial Occupancy Date (BOD)	2	2021	2	2021
Facility Support for NAVEUR Exercise	3	2021	3	2021
EPAA Phase III Technical Capability Declaration (TCD)	1	2022	1	2022
Poland Construction Complete	1	2022	1	2022

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Missile Defense Agency										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 0400 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)				<b>Project (Number/Name)</b> MC68 / Cyber Operations			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
MC68: <i>Cyber Operations</i>	2.724	2.901	2.980	2.615	-	2.615	0.963	1.252	1.257	1.257	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

N/A

**A. Mission Description and Budget Item Justification**

Sustain Missile Defense Agency (MDA) DoD Information Assurance Certification and Accreditation Program (DIACAP) and Controls Validation Testing (CVT) activities, analysis of validation results, risk assessments and reviews of proposed Program Manager/Information Assurance Manager (PM/IAM) Plans of Action and Milestones (POA&Ms) for MDA Aegis Ballistic Missile Defense (BMD) mission systems. It maintains the Certification and Accreditation (C&A) data repository, capturing the DIACAP documentation (artifacts, validation results, and Information Assurance Risk Assessment results, and Designated Approving Authority (DAA) accreditation decisions) on all MDA Information Systems.

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Title:</b> Network / System Certification and Accreditation (C&A)	2.901	2.980	2.615
<b>Articles:</b>	-	-	-
<p><b>Description:</b> Monitor and track cybersecurity mitigation detailed in Information Technology Security Guidance. Activities include preparation of C&amp;A documentation and accreditation recommendations to the MDA Senior Information Assurance Officer (SIAO)/ Certification Authority (CA) and DAA. Independent Verification and Validation (IV&amp;V) team actions ensure the availability, integrity, authentication, confidentiality and non-repudiation of the MDA mission, test and administrative systems. Activities in the Project are necessary to comply with the Federal Information Security Management Act (FISMA).</p> <p>Recurring Accomplishments:</p> <ul style="list-style-type: none"> <li>- Provide Cybersecurity engineering and architecture requirements planning for Aegis BMD systems</li> <li>- Coordinate the development and implementation of Aegis BMD Risk Management Framework (RMF) accreditation packages</li> <li>- Conduct regular Controls Validation Testing (CVT) of Aegis BMD systems and provide a Risk Assessment Report (RAR) to mitigate cybersecurity deficiencies</li> <li>- Conduct annual cybersecurity reviews on the Aegis BMD systems to assess compliance in implementing and maintaining RMF controls</li> <li>- Implement HW/SW to conduct continuous daily monitoring</li> <li>- Conduct monthly reviews of systems in eMass</li> <li>- Provide daily management of eMass</li> </ul> <p>Specific and/or unique accomplishments to each FY are as follows:</p>			
<b>FY 2020 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Missile Defense Agency	<b>Date:</b> February 2020
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<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)	<b>Project (Number/Name)</b> MC68 / Cyber Operations
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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	FY 2019	FY 2020	FY 2021
- SEE ABOVE.			
<b><i>FY 2021 Plans:</i></b> - SEE ABOVE.			
<b><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i></b> N/A			
<b>Accomplishments/Planned Programs Subtotals</b>	2.901	2.980	2.615

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

N/A

**Remarks**

**D. Acquisition Strategy**

The Program Management Office utilizes the U.S. Navy Centers of Excellence to administer contracts for cyber operations, assessments, and mitigations.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Missile Defense Agency** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)	<b>Project (Number/Name)</b> MC68 / Cyber Operations
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<b>Product Development (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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 Operations	MIPR	PMRF : HI	0.000	0.000		0.252	Nov 2019	0.332	Nov 2020	-		0.332	Continuing	Continuing	Continuing
Network / System Certification and Accreditation (C&A) - Lockheed Martin	C/CPFF	Lockheed Martin : Moorestown, NJ	0.000	0.048	Aug 2019	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Network / System Certification and Accreditation (C&A) - NAVSEA	MIPR	NAVSEA : Washington, DC	0.000	1.843	Mar 2019	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Network / System Certification and Accreditation (C&A) - NSWC Corona	MIPR	NSWC Corona : CA	0.000	0.250	Nov 2018	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Network / System Certification and Accreditation (C&A) - NSWC Philadelphia	MIPR	Pennsylvania, PA : NSWC Philadelphia	0.942	0.465	Nov 2018	0.133	Nov 2019	0.173	Nov 2020	-		0.173	Continuing	Continuing	Continuing
Network / System Certification and Accreditation (C&A) - SPAWAR	MIPR	SPAWAR : CA	1.782	0.295	Nov 2018	2.595	Nov 2019	2.110	Nov 2020	-		2.110	Continuing	Continuing	Continuing
<b>Subtotal</b>			2.724	2.901		2.980		2.615		-		2.615	Continuing	Continuing	N/A

**Remarks**  
N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	2.724	2.901	2.980	2.615	-	2.615	Continuing	Continuing	N/A

**Remarks**  
Award Dates reflect date of first obligation. Additional obligations may incrementally occur throughout the year.



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**Exhibit R-4A, RDT&E Schedule Details:** PB 2021 Missile Defense Agency **Date:** February 2020

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / <i>Land Based SM-3 (LBSM3)</i>	<b>Project (Number/Name)</b> MC68 / <i>Cyber Operations</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Cyber Operations	1	2019	4	2025

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Missile Defense Agency										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 0400 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)				<b>Project (Number/Name)</b> MD40 / Program-Wide Support			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
MD40: <i>Program-Wide Support</i>	39.959	1.459	1.631	2.249	-	2.249	1.736	1.169	1.612	1.522	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 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)**

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Title:</b> Program Wide Support	1.459	1.631	2.249
<b>Articles:</b>	-	-	-
<b>Description:</b> 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			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Missile Defense Agency	<b>Date:</b> February 2020
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<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)	<b>Project (Number/Name)</b> MD40 / Program-Wide Support
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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
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><i>FY 2020 Plans:</i></b> - SEE ABOVE.			
<b><i>FY 2021 Plans:</i></b> - SEE ABOVE.			
<b><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i></b> Increase from FY 2020 to FY 2021 reflects the PWS allocation 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.			
<b>Accomplishments/Planned Programs Subtotals</b>	1.459	1.631	2.249

**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 2021 Missile Defense Agency **Date:** February 2020

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)	<b>Project (Number/Name)</b> MD40 / Program-Wide Support
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Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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 Operations Management	Various	Various: Multi : AL, CA, CO, VA	2.119	0.076	Jul 2019	0.024	Jul 2020	0.067	Jul 2021	-		0.067	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various : Multi: AL, CA, CO, VA	21.912	1.383	Mar 2019	1.607	Jul 2020	2.182	Jul 2021	-		2.182	9.005	36.089	0.000
Program Wide Support - Prior year no longer funded in the FYDP	Various	Various : Various	15.928	0.000		0.000		0.000		-		0.000	0.000	15.928	0.000
<b>Subtotal</b>			39.959	1.459		1.631		2.249		-		2.249	Continuing	Continuing	N/A

**Remarks**  
N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	39.959	1.459	1.631	2.249	-	2.249	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-4A, RDT&E Schedule Details:** PB 2021 Missile Defense Agency **Date:** February 2020

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / <i>Land Based SM-3 (LBSM3)</i>	<b>Project (Number/Name)</b> MD40 / <i>Program-Wide Support</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2019	4	2025