

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2022 Missile Defense Agency **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0603294C / <i>Common Kill Vehicle Technology</i>
---	---

COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	312.220	13.319	11.058	0.000	-	0.000	-	-	-	-	-	-
MD85: <i>Common Kill Vehicle Technology</i>	303.217	10.660	10.619	0.000	-	0.000	-	-	-	-	-	-
MD40: <i>Program Wide Support</i>	9.003	2.659	0.439	0.000	-	0.000	-	-	-	-	-	-

**Program MDAP/MAIS Code:** 362

**Note**

Decrease from FY 2021 to FY 2022 reflects a shift in Department of Defense priorities. The Department is cancelling the development of Common Kill Vehicle Technologies (CKV) beginning in FY 2022. Weapon systems technology efforts are available for the Next Generation Interceptor (NGI) program and some of those technologies were transitioned to the winning NGI contractors. These technologies remain available for potential application to other future interceptor programs. CKV technology research efforts included maturation of advanced weapon technologies for current weapon systems concepts (e.g., Aegis, Terminal High Altitude Area Defense (THAAD), Ground Based Midcourse, Defense (GMD)) and advance concepts and designs to mature technology for end-to-end weapon systems and components up to prototypes.

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

The weapon systems technology maturation efforts under the Common Kill Vehicle program element are complete.

The Missile Defense Agency (MDA) pursued multiple component risk reduction efforts for weapon technologies that will enable advanced concepts and designs to mature technology for end-to-end weapon systems and components up to prototypes.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	13.600	11.058	10.996	-	10.996
Current President's Budget	13.319	11.058	0.000	-	0.000
Total Adjustments	-0.281	0.000	-10.996	-	-10.996
• 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	-0.281	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2022 Missile Defense Agency	<b>Date:</b> May 2021
---	-----------------------

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0603294C / <i>Common Kill Vehicle Technology</i>
---	---

<ul style="list-style-type: none"><li>• Other Adjustment</li></ul>	0.000	0.000	-10.996	-	-10.996
--	-------	-------	---------	---	---------

**Change Summary Explanation**

Decrease in FY 2022 reflects a shift in Department of Defense priorities. The Department is cancelling the development of Common Kill Vehicle Technologies beginning in FY 2022.

**UNCLASSIFIED**

**Exhibit R-2A, RDT&E Project Justification:** PB 2022 Missile Defense Agency **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 3					<b>R-1 Program Element (Number/Name)</b> PE 0603294C / <i>Common Kill Vehicle Technology</i>				<b>Project (Number/Name)</b> MD85 / <i>Common Kill Vehicle Technology</i>			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
<i>MD85: Common Kill Vehicle Technology</i>	303.217	10.660	10.619	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Decrease from FY 2021 to FY 2022 reflects a shift in Department of Defense priorities. The Department is cancelling the development of Common Kill Vehicle Technologies beginning in FY 2022.

The weapon systems technology efforts will transfer to industry with potential application to the Next Generation Interceptor program as well as future interceptor programs.

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

The Common Kill Vehicle (CKV) program enhanced weapon system performance to enable the Warfighter to counter numerous and complex threats by establishing the technological foundation for improving current and future systems. The Missile Defense Agency developed next generation kill vehicle concepts and technology based on a modular open systems architecture designed to common interfaces and standards making upgrades easier and enabling a more competitive, broader supplier industrial base.

CKV technology research efforts included maturation of advanced weapon technologies for current weapon systems concepts (e.g., Aegis, Terminal High Altitude Area Defense (THAAD), Ground Based Midcourse, Defense (GMD)) and advance concepts and designs to mature technology for end-to-end weapon systems and components up to prototypes. The CKV program efforts were well integrated with the Missile Defense System (MDS) architecture.

The weapon systems technology maturation efforts under the CKV program element are complete.

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

	FY 2020	FY 2021	FY 2022
<b>Title:</b> Common Kill Vehicle	10.660	10.619	0.000
<b>Articles:</b>	-	-	-
<b>Description:</b> CKV research efforts included maturation of advanced weapon technologies for current weapon systems concepts including Aegis, THAAD, Ground based Missile Defense, and advance concepts and designs to mature technology for end-to-end weapon systems and components up to concept prototypes.			
Specific and/or unique accomplishments to each FY are as follows:			
<b>FY 2021 Plans:</b>			

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Missile Defense Agency		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603294C / <i>Common Kill Vehicle Technology</i>	<b>Project (Number/Name)</b> MD85 / <i>Common Kill Vehicle Technology</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Develop weapon system concepts, identify key technology gaps, and develop and test technologies necessary to the successful requirements validation and technology risk reduction of advanced MDS weapon systems.			
<b><i>FY 2022 Plans:</i></b> No funding is requested in FY 2022 for this effort.			
<b><i>FY 2021 to FY 2022 Increase/Decrease Statement:</i></b> The decrease from FY 2021 to FY 2022 reflects a shift in Department of Defense priorities. The Department is cancelling the development of Common Kill Vehicle Technologies beginning in FY 2022.			
<b>Accomplishments/Planned Programs Subtotals</b>	10.660	10.619	0.000

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

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603176C: <i>Advanced Concepts and Performance Assessment</i>	45.852	49.410	15.800	-	15.800	-	-	-	-	-	-
• 0603180C: <i>Advanced Research</i>	27.166	35.024	21.466	-	21.466	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

The full acquisition strategy consisted of three focus areas. First, through competition with industry, develop weapon system architectures and interfaces with competitive design for improvements to current and future weapon systems. Second, conduct risk reduction activities to identify and mature the technology necessary to increase the reliability and performance of our weapon systems using the Advanced Technology Innovation Broad Agency Announcement and competitive development. Make investments that mitigate the component technology gaps for current and future weapon systems that enhance the competitive environment. Third, leverage the technical expertise of Federally Funded Research and Development Centers, University Applied Research Centers, and Universities and government laboratories to independently develop reference concepts using proven modeling and analysis techniques.

**UNCLASSIFIED**

**Exhibit R-2A, RDT&E Project Justification:** PB 2022 Missile Defense Agency **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603294C / <i>Common Kill Vehicle Technology</i>	<b>Project (Number/Name)</b> MD40 / <i>Program Wide Support</i>
--	---	--

COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
MD40: <i>Program Wide Support</i>	9.003	2.659	0.439	0.000	-	0.000	-	-	-	-	-	-
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. No funding is requested for Program Wide Support in the Common Kill Vehicle Technology Program Element beginning in FY 2022.

**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 2020	FY 2021	FY 2022
<b>Title:</b> Program Wide Support	2.659	0.439	0.000
<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,			

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Missile Defense Agency		<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603294C / <i>Common Kill Vehicle Technology</i>	<b>Project (Number/Name)</b> MD40 / <i>Program Wide Support</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<p>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.</p> <p><b>FY 2021 Plans:</b> - SEE ABOVE.</p> <p><b>FY 2022 Plans:</b> No funding is requested for Program Wide Support in the Common Kill Vehicle Technology Program Element beginning in FY 2022.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease from FY 2021 to FY 2022 reflects elimination of the Common Kill Vehicle program element funding.</p>				
<b>Accomplishments/Planned Programs Subtotals</b>		2.659	0.439	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b>				
N/A				
<b>Remarks</b>				
<b>D. Acquisition Strategy</b>				
N/A				