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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Missile Defense Agency **Date:** February 2018

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 0603913C / <i>Israeli Cooperative Programs</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	1,659.554	268.735	105.354	300.000	-	300.000	300.000	300.000	300.000	300.000	Continuing	Continuing
MD20: <i>Israeli Upper Tier</i>	468.805	84.893	56.861	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
MD26: <i>Israeli ARROW Program</i>	362.014	67.331	10.841	163.000	-	163.000	159.000	173.000	173.000	173.000	Continuing	Continuing
MD34: <i>Short Range Ballistic Missile Defense (SRBMD)</i>	828.735	116.511	37.652	137.000	-	137.000	141.000	127.000	127.000	127.000	Continuing	Continuing

Program MDAP/MAIS Code: 362

Note

Content supports expected contributions from Israel per international agreements.

A. Mission Description and Budget Item Justification

Since 1986, the United States and the State of Israel have cooperated on missile defense. Currently, Missile Defense Agency (MDA) has three major projects with Israel to develop and improve their indigenous capability to defend against short and medium range ballistic missiles. These include Upper Tier Interceptors (MD20), the Arrow Weapon System (MD26) and the Short-Range Ballistic Missile Defense, also known as the David's Sling Weapon System (MD34). Within these projects MDA develops and produces weapon systems, conducts tests, and exercises interoperability between U.S. Ballistic Missile Defense System (BMDS) and the Israeli Missile Defense Architecture.

The United States and State of Israel will enter a Memorandum of Understanding (MOU) in which 'Such funding, should over a ten year period beginning in FY 2019 and ending in FY 2028, be provided at a level of \$500 million per year.' These funds will be distributed between the Israeli Programs in RDT&E and Procurement Funds.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Missile Defense Agency	Date: February 2018
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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 0603913C / <i>Israeli Cooperative Programs</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	103.835	105.354	108.002	-	108.002
Current President's Budget	268.735	105.354	300.000	-	300.000
Total Adjustments	164.900	0.000	191.998	-	191.998
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	164.900	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• FY 2017 Request for Additional Appropriations	0.000	0.000	0.000	-	0.000
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	0.000	0.000	191.998	-	191.998

Change Summary Explanation

- Additional RDT&E funds were requested to be transferred from Procurement Funding to match the Israeli Programs continued development and production profiles for the FYDP. Funding for RDT&E and Procurement still remains within the \$500M defined in the MOU.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD20 / <i>Israeli Upper Tier</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
MD20: <i>Israeli Upper Tier</i>	468.805	84.893	56.861	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This project code encompasses the Missile Defense Agency's (MDA) U.S.-Israeli cooperative program for the Israeli Upper Tier Program.

A. Mission Description and Budget Item Justification

Israeli Upper Tier Interceptor (UTI) Project: The Upper Tier Program provides the Arrow-3 missile, increasing the system's capability against advanced medium range threats by providing approximately four times the current Arrow-2 battle space. The primary near term objective is to complete and demonstrate Upper Tier design, and continue Initial Lot Production (ILP) deliveries.

This project provides funding for the Upper Tier component of the Arrow Weapon System (AWS) development. The United States through the cooperative effort gains knowledge and experience of the Israeli Defense Forces operation of a multi-layered defense architecture. This project also includes the procurement of the Silver Sparrow Air-Launched Target which is necessary to validate the performance of the Arrow-3 Missile and related Block 5 spiral development activities.

The previous budget for UTI spiral development and UTI upgrades will be allocated as part of the Arrow Weapon System (MD26: Israeli ARROW Program). The UTI initial development and Low Rate Initial Production will be complete. Continued development will be at the AWS level and not interceptor only.

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

	FY 2017	FY 2018	FY 2019
Title: Upper Tier Interceptor	84.893	56.861	0.000
Articles:	-	-	-
<p>Description: The scope of the Upper Tier Program covers interceptor development, testing, material procurement to include initial lot production, and integration of spiral software development for Block 5 AWS.</p> <p>Recurring Accomplishments include:</p> <ul style="list-style-type: none"> - Conduct Testing of the Arrow-3 Interceptor - Conduct algorithm design reviews to verify requirements - Continue Interceptor Spiral Development - Procurement and Delivery of Initial Lot Production assets and Test Articles <p>Specific and/or unique accomplishments to each FY are as follows:</p>			
<p>FY 2018 Plans:</p> <p>-Testing of the Arrow-3 Interceptor as scheduled in the R4A.</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency		Date: February 2018		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD20 / <i>Israeli Upper Tier</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019
-Test Number #4 design review.				
FY 2019 Plans: N/A				
FY 2018 to FY 2019 Increase/Decrease Statement: -Development funds will be incorporated into Arrow Weapon System Development (MD 26) as part of the MOU. Additional RDT&E funds were requested to be transferred from Procurement Funding to match the Israeli Programs continued development and production profiles for the FYDP. Funding for RDT&E and Procurement still remains within the \$500M defined in the MOU.				
Accomplishments/Planned Programs Subtotals		84.893	56.861	0.000
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy The Upper-Tier Interceptor Project Agreement under the Research, Development, Test and Evaluation (RDT&E) Framework agreement between the U.S. and Israel creates a joint program office to manage this program. Missile Defense Agency (MDA) and the Israeli Ministry of Defense (IMoD) continue to implement best management practices that allow for the more effective use of program management tools to ensure risk is adequately managed to include Knowledge Points that assess Israel's development progress. The DoD U.S. Israeli Cooperative Program Office jointly manages the Upper Tier program with IMoD to ensure that all systems are delivered on time, on budget, and meet the needs of the warfighter. The program is equitably funded between the U.S. and Israel. A portion of the Israeli cost share comes from non-financial contributions such as previously completed work prior to joint program initiation. Contracts are awarded by IMoD or MDA dependent on what is most advantageous to the Joint Governments. In regard to the Upper Tier Interceptor, IMoD will contract with Israel Aerospace Industries (IAI). IAI subcontracts with Israeli companies, Boeing and other U.S. companies.				
E. Performance Metrics N/A				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Missile Defense Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / Israeli Cooperative Programs	Project (Number/Name) MD20 / Israeli Upper Tier
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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			
Upper Tier Interceptor - Upper Tier Interceptor	C/CPFF	Israel Aerospace Industries (IAI) : Israel	468.805	84.893	Dec 2016	56.861	Dec 2017	0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			468.805	84.893		56.861		0.000		-		0.000	Continuing	Continuing	N/A

Remarks
N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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			
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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			
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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			
Subtotal			-	-		-		-		-		-	-	-	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Missile Defense Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD20 / <i>Israeli Upper Tier</i>
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Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	468.805	84.893	56.861	0.000	-	0.000	Continuing	Continuing	N/A

Remarks
Contract cost reflect U.S. contribution only. Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Missile Defense Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD20 / <i>Israeli Upper Tier</i>
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	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023		
Israeli Cooperative Arrow 3 Intercept Test #2- FY 2018				◇	◇	◇															
Israeli Cooperative Arrow 3 Intercept Test #3 FY 2018				◇	◇	◇															

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Missile Defense Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD20 / <i>Israeli Upper Tier</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Israeli Cooperative Arrow 3 Intercept Test #2- FY 2018	1	2018	4	2018
Israeli Cooperative Arrow 3 Intercept Test #3 FY 2018	1	2018	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD26 / <i>Israeli ARROW Program</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
MD26: <i>Israeli ARROW Program</i>	362.014	67.331	10.841	163.000	-	163.000	159.000	173.000	173.000	173.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This project code encompasses the Missile Defense Agency's (MDA) U.S.-Israeli cooperative program for the Israeli Arrow Weapon System Program.

A. Mission Description and Budget Item Justification

Israeli Arrow Weapon System (AWS): This system includes block upgrades to the AWS components which enhances capabilities against evolving medium range threats by increasing the total defended area. AWS elements include the Arrow-2 missile and launcher, Citron Tree Battle Management Center (BMC), Green Pine (GP) and Super Green Pine (SGP) Radars, and the Hazelnut Tree Launcher Control Center (LCC). Also included is the integration of Block 5 assets which include the Arrow-3 missile and launcher.

Arrow Block 5 development will also incorporate a Long Range Detection Suite that consists of an unmanned aerial vehicle Airborne Early Warning System (ABEWS) and Sharp Eye Radar for increased sensor range, early detection and enhanced raid size capacity. The program also includes the continued development of Arrow's interoperability with U.S. BMDS.

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

	FY 2017	FY 2018	FY 2019
Title: Arrow System Improvement Program	60.969	4.479	156.638
Articles:	-	-	-
Description: The Arrow Weapon System (AWS) continues development of Block 4 and Block 5 spiral development. Included is the integration of Block 5 assets which consists of the Arrow-3 missile, launcher and the Long Range Detection Suite (LRDS). Specific and/or unique accomplishments to each FY are as follows:			
FY 2018 Plans: -SEE ABOVE.			
FY 2019 Plans: -Conduct Block 4 Flight Test proving improved system performance -Continued system spiral development for Block 5 -Continue proven Interoperability with U.S. Assets -Continued enhancements to existing AWS System Components			
FY 2018 to FY 2019 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency		Date: February 2018		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD26 / <i>Israeli ARROW Program</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019
Development funds will be incorporated from the Upper Tier Interceptor Budget (MD20) as part of the MOU. Additional RDT&E funds were requested to be transferred from Procurement Funding to match the Israeli Programs continued development and production profiles for the FYDP. Funding for RDT&E and Procurement still remains within the \$500M defined in the MOU. Procurement was lowered from \$392M in FY19 to \$200M.				
Title: Israeli Test Bed (ITB)		3.535	3.535	3.535
Articles:		-	-	-
Description: The Israeli Test Bed (ITB) provides experiments to evaluate Human Machine Interface (HMI) battle management and integration of Block 5 Arrow Weapon System Techniques Tactics and Procedures (TTPs) and CONOPs. Specific and/or unique accomplishments to each FY are as follows:				
FY 2018 Plans: -SEE ABOVE.				
FY 2019 Plans: -SEE ABOVE.				
FY 2018 to FY 2019 Increase/Decrease Statement: N/A				
Title: Israeli Systems Architecture and Integration (ISA&I)		2.827	2.827	2.827
Articles:		-	-	-
Description: Israeli Systems Architecture and Integration conducts studies to assess Israel's future 2025 Missile Defense Architecture. This identifies the preferred missile defense architecture and reference threat for 10-15 year future epoch and interoperability special studies on regional threats and growth path options. Specific and/or unique accomplishments to each FY are as follows:				
FY 2018 Plans: -SEE ABOVE.				
FY 2019 Plans: -SEE ABOVE.				
FY 2018 to FY 2019 Increase/Decrease Statement: N/A				
Accomplishments/Planned Programs Subtotals		67.331	10.841	163.000

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD26 / <i>Israeli ARROW Program</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy The DoD U.S. Israeli Cooperative Program Office jointly manages the Arrow Program with Israel Ministry of Defense (IMoD) to ensure that all systems are delivered with quality on time, on budget, and meet the needs of the warfighter. The program funding is equitably funded between the U.S. and Israel with Israel providing matching contributions. However, a portion of the Israeli cost share comes from non-financial contributions such as previously completed work prior to joint program initiation. Contracts are awarded by IMoD or MDA dependent on what is most advantageous to the Joint Governments. In regard to AWS, IMoD contracts on behalf of U.S. government with Israel Aerospace Industries (IAI). IAI subcontracts with Israeli and U.S. companies. For the Israeli Test Bed, the Missile Defense Agency (MDA) contracts directly with Elbit Systems, Ltd. while IMoD provides an equitable share of the funding to the U.S. Finally, MDA provides funding and contracts directly with WALES, Ltd for the Israeli System Architecture and Integration program.		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Missile Defense Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD26 / <i>Israeli ARROW Program</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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			
Arrow System Improvement Program - Arrow System Improvement Program (ASIP)	C/CPFF	Israel Aerospace Industries (IAI) : Israel	313.848	60.969	Dec 2016	4.479	Dec 2017	156.638	Dec 2018	-		156.638	Continuing	Continuing	Continuing
Israeli Test Bed (ITB) - Israeli Test Bed	C/FFP	Elbit Systems : Israel	28.280	3.535	Dec 2016	3.535	Dec 2017	3.535	Nov 2018	-		3.535	Continuing	Continuing	Continuing
Israeli Systems Architecture and Integration (ISA&I) - ISA&I	C/FFP	Wales LTD : Israel	19.886	2.827	Dec 2016	2.827	Dec 2017	2.827	Oct 2018	-		2.827	Continuing	Continuing	Continuing
Subtotal			362.014	67.331		10.841		163.000		-		163.000	Continuing	Continuing	N/A

Remarks
N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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			
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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			
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Missile Defense Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD26 / <i>Israeli ARROW Program</i>
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Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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			
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	362.014	67.331	10.841	163.000	-	163.000	Continuing	Continuing	N/A

Remarks
Contract cost reflect U.S. contribution only.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Missile Defense Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD26 / <i>Israeli ARROW Program</i>
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Israeli Test Bed Experiments FY 2017	◆	◆	◆	◆																								
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2017	◆	◆	◆	◆																								
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2018					◇	◇	◇	◇																				
Israeli Test Bed Experiments FY 2018					◇	◇	◇	◇																				
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2019									◇	◇	◇	◇																
Israeli Test Bed Experiments FY 2019									◇	◇	◇	◇																
Arrow Weapon System Flight Test FY 2019									◇	◇	◇	◇																
Israeli Test Bed Experiments FY 2020													◇	◇	◇	◇												
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2020													◇	◇	◇	◇												
Arrow Weapon System Flight Test FY 2020													◇	◇	◇	◇												
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2021																	◇	◇	◇	◇								
Israeli Test Bed Experiments FY 2021																	◇	◇	◇	◇								
Arrow Weapon System Flight Test FY 2021																	◇	◇	◇	◇								
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2022																					◇	◇	◇	◇				
Israeli Test Bed Experiments FY 2022																					◇	◇	◇	◇				
Arrow Weapon System Flight Test FY 2022																					◇	◇	◇	◇				
Israeli Test Bed Experiments FY 2023																									◇	◇	◇	◇
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2023																									◇	◇	◇	◇
Arrow Weapon System Flight Test FY 2023																									◇	◇	◇	◇

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Missile Defense Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD26 / <i>Israeli ARROW Program</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Israeli Test Bed Experiments FY 2017	1	2017	4	2017
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2017	1	2017	4	2017
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2018	1	2018	4	2018
Israeli Test Bed Experiments FY 2018	1	2018	4	2018
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2019	1	2019	4	2019
Israeli Test Bed Experiments FY 2019	1	2019	4	2019
Arrow Weapon System Flight Test FY 2019	1	2019	4	2019
Israeli Test Bed Experiments FY 2020	1	2020	4	2020
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2020	1	2020	4	2020
Arrow Weapon System Flight Test FY 2020	1	2020	4	2020
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2021	1	2021	4	2021
Israeli Test Bed Experiments FY 2021	1	2021	4	2021
Arrow Weapon System Flight Test FY 2021	1	2021	4	2021
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2022	1	2022	4	2022
Israeli Test Bed Experiments FY 2022	1	2022	4	2022
Arrow Weapon System Flight Test FY 2022	1	2022	4	2022
Israeli Test Bed Experiments FY 2023	1	2023	4	2023
Israeli Test Bed Exercise to include Ground Test (GT) Support FY 2023	1	2023	4	2023
Arrow Weapon System Flight Test FY 2023	1	2023	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603913C / Israeli Cooperative Programs				Project (Number/Name) MD34 / Short Range Ballistic Missile Defense (SRBMD)			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
MD34: Short Range Ballistic Missile Defense (SRBMD)	828.735	116.511	37.652	137.000	-	137.000	141.000	127.000	127.000	127.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This project code encompasses the Missile Defense Agency's (MDA) U.S.-Israeli cooperative program for the Israeli David's Sling Weapon System Program.

A. Mission Description and Budget Item Justification

Short Range Ballistic Missile Defense (SRBMD): SRBMD, also known as the David's Sling Weapon System (DSWS), is designed to counter short range rockets, cruise missiles, and tactical ballistic missiles and will be integrated into the Israeli Missile Defense Architecture adding another layer of defense to the current Arrow System. The David's Sling Weapon System (DSWS) includes the Stunner Interceptor, Missile Firing Unit (MFU), Multi-Mission Radar (MMR), Launch Site Controller (LSC), Data Link (DL), Elevated Sensor (ES), and the Golden Almond Battle Management Center (BMC).

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

	FY 2017	FY 2018	FY 2019
Title: SRBMD Program	116.511	37.652	137.000
Articles:	-	-	-
<p>Description: The scope of the David's Sling Weapon System covers system development, testing, material procurement to include initial lot production, and integration of spiral software development for Blocks 1-3. Block 1 capability will enhance the short range rocket and missile defense capability. Block 2 will add capability to defend against medium range and cruise missiles. Block 3 will provide robust defense capability and add significant detection capability to the Israeli Air Defense Architecture. Recurring Accomplishments include:</p> <ul style="list-style-type: none"> - Conduct Testing of the DSWS <p>Specific and/or unique accomplishments to each FY are as follows:</p> <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> -Block 2 System Intercept Test to demonstrate initial cruise missile defense performance <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> -Conduct Block 2 System Intercept Test to demonstrate cruise missile defense performance -Continue Block 2 development for full cruise missile capability -Establish Interoperability with Israeli Air Missile Defense Network -Finalize Elevated Sensor development <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency		Date: February 2018		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD34 / <i>Short Range Ballistic Missile Defense (SRBMD)</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019
Additional Funding required to fully fund RDT&E to the levels associated with the MOU. Additional RDT&E funds were requested to be transferred from Procurement Funding to match the Israeli Programs continued development and production profiles for the FYDP. Funding for RDT&E and Procurement still remains within the \$500M defined in the MOU.				
Accomplishments/Planned Programs Subtotals		116.511	37.652	137.000
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy The Short Range Ballistic Missile Defense (SRBMD), also known as the David's Sling Weapon System (DSWS) Project Agreement under the Research, Development, Test and Evaluation (RDT&E) Framework agreement between the U.S. and Israel creates a joint program office to manage this program. Missile Defense Agency (MDA) and the Israeli Ministry of Defense (IMoD) continue to implement management practices that allow for the more effective use of program management tools to ensure risk is adequately managed to include Knowledge Points that assess Israel's development progress. The DoD U.S. Israeli Cooperative Program Office jointly manages the SRBMD/DSWS program with IMoD to ensure that all systems are delivered in an effective manner, and meet the needs of the warfighter. The program is equitably funded between the U.S. and Israel. A portion of the Israeli cost share comes from non-financial contributions such as previously completed work prior to joint program initiation. Contracts are awarded by IMoD or MDA dependent on what is most advantageous to the Joint Governments. For the Stunner Interceptor, Rafael Advanced Systems (an Israeli company), subcontracts to Raytheon Missile Systems for Stunner interceptor components.				
E. Performance Metrics N/A				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Missile Defense Agency												Date: February 2018			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 4				PE 0603913C / Israeli Cooperative Programs				MD34 / Short Range Ballistic Missile Defense (SRBMD)							
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
SRBMD Program - SRBMD Program	C/CPFF	Rafael : Israel	828.735	116.511	Dec 2016	37.652	Dec 2017	137.000	Dec 2018	-		137.000	Continuing	Continuing	Continuing
Subtotal			828.735	116.511		37.652		137.000		-		137.000	Continuing	Continuing	N/A
Remarks															
N/A															
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Subtotal			-	-		-		-		-		-	-	-	N/A
Remarks															
N/A															
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Subtotal			-	-		-		-		-		-	-	-	N/A
Remarks															
N/A															
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Subtotal			-	-		-		-		-		-	-	-	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Missile Defense Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD34 / <i>Short Range Ballistic Missile Defense (SRBMD)</i>
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Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	828.735	116.511	37.652	137.000	-	137.000	Continuing	Continuing	N/A

Remarks
Contract cost reflect U.S. contribution only.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Missile Defense Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD34 / <i>Short Range Ballistic Missile Defense (SRBMD)</i>
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	◆	◆	◆	◆																								
System Flight Test #5 FY 2017	◆	◆	◆	◆																								
System Flight Test #6 FY 2018									◇	◇	◇	◇																
System Flight Test #7 FY 2019									◇	◇	◇	◇																
System Flight Test #8 FY 2020													◇	◇	◇	◇												
System Flight Test #9 FY 2021																	◇	◇	◇	◇								
System Flight Test #10 FY 2022																					◇	◇	◇	◇				
System Flight Test #11 FY 2023																									◇	◇	◇	◇

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Missile Defense Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603913C / <i>Israeli Cooperative Programs</i>	Project (Number/Name) MD34 / <i>Short Range Ballistic Missile Defense (SRBMD)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
System Flight Test #5 FY 2017	1	2017	4	2017
System Flight Test #6 FY 2018	1	2019	4	2019
System Flight Test #7 FY 2019	1	2019	4	2019
System Flight Test #8 FY 2020	1	2020	4	2020
System Flight Test #9 FY 2021	1	2021	4	2021
System Flight Test #10 FY 2022	1	2022	4	2022
System Flight Test #11 FY 2023	1	2023	4	2023