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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy	Date: February 2015
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Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0207163N / AMRAAM
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COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	116.619	2.575	10.210	32.172	-	32.172	44.094	46.007	32.156	32.828	139.573	456.234
0981: AMRAAM	116.619	2.575	10.210	32.172	-	32.172	44.094	46.007	32.156	32.828	139.573	456.234

Program MDAP/MAIS Code: 185

A. Mission Description and Budget Item Justification

This joint Navy/Air Force program is structured in response to the Joint Service Operational Requirement and Mission Element Need Statement to develop an air superiority air-to-air missile with significant improvements in operational utility and combat effectiveness. This program supports the integration of the Advanced Medium Range Air-to-Air Missile (AMRAAM) into Navy aircraft with analysis of Navy unique applications, aircraft missile integration tasks, product improvement efforts including missile software upgrade development and procurement of hardware to support Navy test and evaluation tasks.

This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate funding in the current or subsequent fiscal year.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016 Base</u>	<u>FY 2016 OCO</u>	<u>FY 2016 Total</u>
Previous President's Budget	2.613	10.210	32.549	-	32.549
Current President's Budget	2.575	10.210	32.172	-	32.172
Total Adjustments	-0.038	-	-0.377	-	-0.377
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.038	-			
• Program Adjustments	-	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.377	-	-0.377

Change Summary Explanation

The FY 2016 funding request was reduced by \$0.100 million to account for the availability of prior year execution balances.

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Technical: FY16 includes funding for improved missile performance at longer range and increased survivability and lethality, and continues Basic and Advanced AIM-120C7 & AIM-120D Electronic Protection Improvement Program efforts to upgrade missile capability through software development, simulation and test efforts. Schedule: Schedule growth for Advanced Electronic Protection Improvement Program (EPIP) IOC Tapes 1 & 2 for AIM-120C7 is due to additional scope and test execution anomalies.		

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0207163N / AMRAAM				Project (Number/Name) 0981 / AMRAAM			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
0981: AMRAAM	116.619	2.575	10.210	32.172	-	32.172	44.094	46.007	32.156	32.828	139.573	456.234
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This joint Navy/Air Force program is structured in response to the Joint Service Operational Requirement and Mission Element Need Statement to develop an air superiority air-to-air missile with significant improvements in operational utility and combat effectiveness. This program supports the integration of the Advanced Medium Range Air-to-Air Missile (AMRAAM) into Navy aircraft with analysis of Navy unique applications, aircraft missile integration tasks, product improvement efforts including missile software upgrade development and procurement of hardware to support Navy test and evaluation tasks. Funding in FY15 through FY20 supports Navy unique Test & Evaluation for Navy fielding of the AIM-120C7 and AIM-120D Electronic Protection Improvement Program (EPIP) capability.

The Cost To Complete should be \$139.443M vice \$139.573M.

The Total Cost should be \$456.104M vice \$456.234M.

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

	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Aircraft integration	0.832	3.644	4.617	-	4.617
Articles:	-	-	-	-	-
Description: Aircraft integration activities and test and evaluation for Navy unique requirements.					
FY 2014 Accomplishments: Continue aircraft integration activities and test and evaluation for Navy unique requirements.					
FY 2015 Plans: Continue aircraft integration activities and test and evaluation for Navy unique requirements. Additional FY15 resources are required to begin AIM-120C7 Test & Evaluation of the EPIP capability for Navy fielding.					
FY 2016 Base Plans: Continue aircraft integration activities and test and evaluation for Navy unique requirements. Additional FY16 resources are required to begin software improvement efforts and continue AIM-120C7 and AIM-120D Test & Evaluation of EPIP capability for Navy fielding.					
FY 2016 OCO Plans: N/A					
Title: Identify potential improvements	0.426	0.436	0.444	-	0.444
Articles:	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy				Date: February 2015		
Appropriation/Budget Activity 1319 / 7		R-1 Program Element (Number/Name) PE 0207163N / AMRAAM		Project (Number/Name) 0981 / AMRAAM		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Description: Engineering support of AMRAAM, including investigation and analysis of technologies that offer potential improvements in AMRAAM lethality/performance and compatibility with related weapons systems. FY 2014 Accomplishments: Continue engineering support of AMRAAM, including investigation and analysis of technologies that offer potential improvements in AMRAAM lethality/performance and compatibility with related weapons systems. Conduct Operational Flight Profile efforts. FY 2015 Plans: Continue engineering support of AMRAAM, including investigation and analysis of technologies that offer potential improvements in AMRAAM lethality/performance and compatibility with related weapons systems. Conduct Operational Flight Profile efforts. FY 2016 Base Plans: Continue engineering support of AMRAAM, including investigation and analysis of technologies that offer potential improvements in AMRAAM lethality/performance and compatibility with related weapons systems. Conduct Operational Flight Profile efforts. FY 2016 OCO Plans: N/A						
Title: System Improvement Program (SIP) efforts Articles: Description: System engineering and test activities in AMRAAM missiles which includes aircraft integration/ aircraft Operational Flight Profile efforts and Phase 4 test/equipment tasks. System engineering/aircraft integration activities for SIP with emphasis on Navy unique compatibility requirements and Navy aircraft integration/compatibility requirements. FY 2014 Accomplishments: Continue system engineering/aircraft integration activities for SIP with emphasis on Navy unique compatibility requirements and Navy aircraft integration/compatibility requirements. FY 2015 Plans:		1.317 -	6.130 -	27.111 -	- -	27.111 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continue system engineering/aircraft integration activities for SIP with emphasis on Navy unique compatibility requirements and Navy aircraft integration/compatibility requirements. Additional FY15 resources support the EPIP to improve AIM-120C7 performance to counter evolving Electronic Attack threats.					
<i>FY 2016 Base Plans:</i> Continue system engineering/aircraft integration activities for SIP with emphasis on Navy unique compatibility requirements and Navy aircraft integration/compatibility requirements. FY16 resources support EPIP to improve AIM-120C7 & AIM-120D performance to counter evolving Electronic Attack threats and software upgrades to improve missile performance at longer range and increase survivability and lethality. Additional details are held at a higher classification.					
<i>FY 2016 OCO Plans:</i> N/A					
Accomplishments/Planned Programs Subtotals	2.575	10.210	32.172	-	32.172

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

<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016 Base</u>	<u>FY 2016 OCO</u>	<u>FY 2016 Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• WPN/ 220600: AMRAAM	82.529	2.165	192.873	-	192.873	207.280	265.491	275.970	272.424	1,413.535	4,768.796
• MPAF/3479: AMRAAM	318.415	329.600	390.112	-	390.112	373.798	451.265	486.862	475.166	1,524.000	12,419.588
• RDTE,AF/673777: AMRAAM	68.564	82.195	46.160	-	46.160	55.444	61.612	65.733	66.910	86.000	843.943

Remarks

D. Acquisition Strategy

AMRAAM production procurements will continue across the FYDP with periodic pre-planned technical design refreshes and Value Engineering Change Proposals. The Air Dominance Division has implemented a multiple year production contract strategy (basic contract with 2 priced options).

E. Performance Metrics

Meeting cost, schedule, performance, funding and life cycle sustainment requirements in accordance with the Acquisition Program Baseline.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy										Date: February 2015	
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0207163N / AMRAAM			Project (Number/Name) 0981 / AMRAAM			

Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Primary Hdw Development (EGLIN)	SS/CPAF	RAYTHEON COMPANY : Tucson AZ	44.520	0.546	Jan 2014	4.660	Jan 2015	22.519	Jan 2016	-		22.519	212.717	284.962	284.962
Award Fees (EGLIN)	SS/CPAF	RAYTHEON COMPANY : Tucson AZ	6.360	0.096	Jan 2014	0.822	Jan 2015	3.974	Jan 2016	-		3.974	37.539	48.791	48.791
Primary Hdw Development (DAHLGREN)	WR	NSWC DAHLGREN D C XDM1 : Dahlgren VA	0.143	0.026	Nov 2013	0.028	Nov 2014	0.029	Nov 2015	-		0.029	0.254	0.480	-
Primary Hdw Development (NAWCAD)	WR	NAWCAD : Patuxent River MD	1.988	0.469	Nov 2013	0.447	Nov 2014	0.422	Nov 2015	-		0.422	3.229	6.555	-
Primary Hdw Development (NAWCWD)	WR	NAWCWD : China Lake CA	0.905	0.088	Dec 2013	0.088	Dec 2014	0.084	Dec 2015	-		0.084	0.592	1.757	-
Prior Years Dev Cost no longer funded in the FYDP	Various	Various : Various	22.670	-		-		-		-		-	-	22.670	-
Subtotal			76.586	1.225		6.045		27.028		-		27.028	254.331	365.215	-

Remarks

Remarks: Percentage of award fees actually awarded in past award fee periods is 14.3%.

Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Development Support (NSMA)	WR	NAVY SYST MGT ACT : Arlington VA	3.434	0.212	Jan 2014	0.217	Jan 2015	0.223	Jan 2016	-		0.223	1.952	6.038	-
Studies & Analyses - JHU/APL	SS/FFP	NAVSEASYS COM : Washington DC	1.661	0.214	May 2014	0.219	May 2015	0.221	May 2016	-		0.221	1.935	4.250	4.250
Prior Years Support costs no longer funded in the FYDP	Various	Various : Various	17.420	-		-		-		-		-	-	17.420	-
Subtotal			22.515	0.426		0.436		0.444		-		0.444	3.887	27.708	-

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Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Dev Test & Eval (NAWCWD)	WR	NAWCWD : China Lake CA	10.453	0.832	Nov 2013	3.644	Nov 2014	4.617	Nov 2015	-		4.617	35.724	55.270	-
Subtotal			10.453	0.832		3.644		4.617		-		4.617	35.724	55.270	-
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Travel	MIPR	PMA-259 : Eglin AFB FL	3.063	0.092	Oct 2013	0.085	Oct 2014	0.083	Oct 2015	-		0.083	0.586	3.909	-
Prior Years Mgmt Costs no longer funded in the FYDP	Various	Various : Various	4.002	-		-		-		-		-	-	4.002	-
Subtotal			7.065	0.092		0.085		0.083		-		0.083	0.586	7.911	-
			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			116.619	2.575		10.210		32.172		-		32.172	294.528	456.104	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy

Date: February 2015

Appropriation/Budget Activity

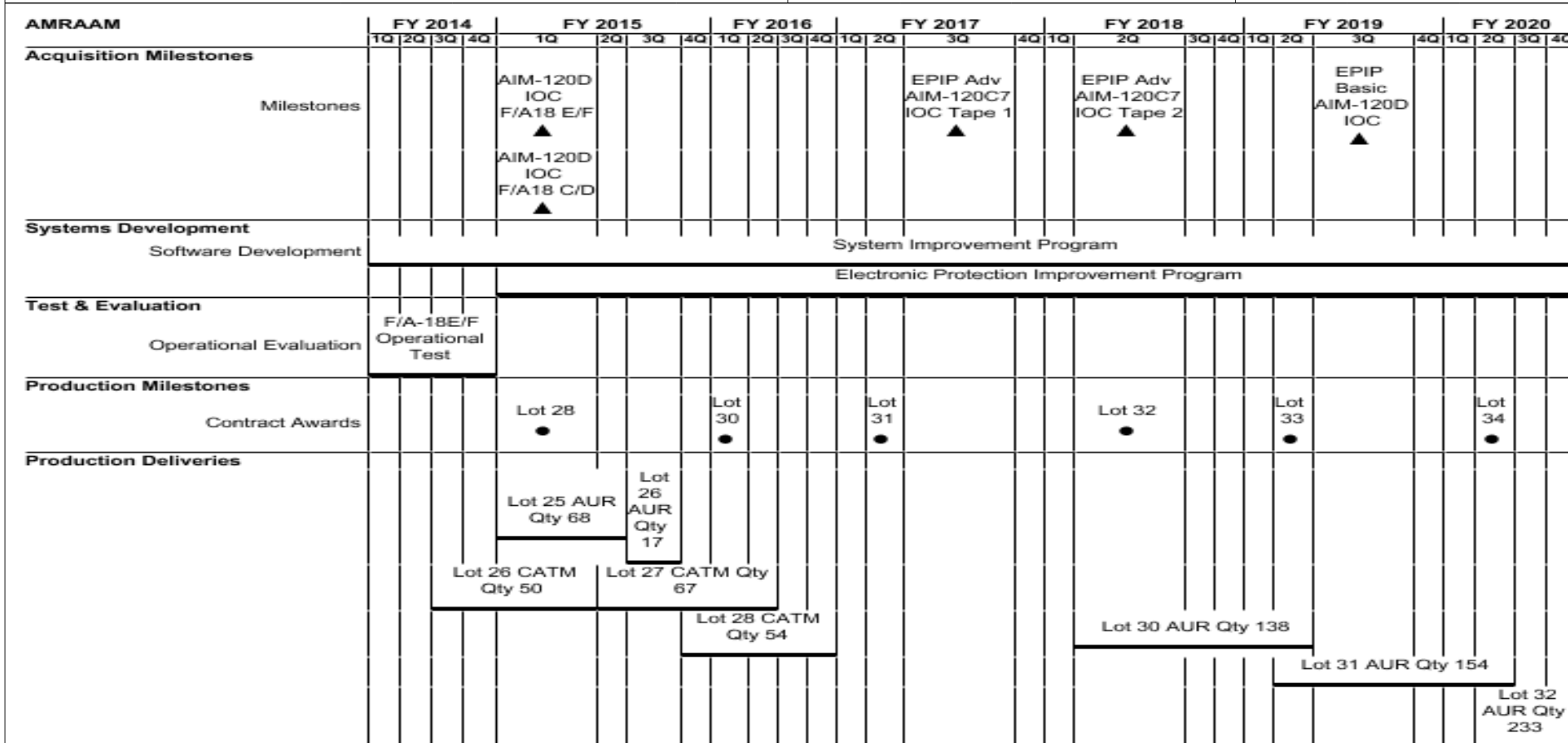
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R-1 Program Element (Number/Name)

PE 0207163N / AMRAAM

Project (Number/Name)

0981 / AMRAAM



2016PB - 0207163N - 0981

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0207163N / AMRAAM	Project (Number/Name) 0981 / AMRAAM	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
AMRAAM				
Acquisition Milestones: Milestones: EPIP Basic AIM-120D IOC	3	2019	3	2019
Acquisition Milestones: Milestones: EPIP Advanced AIM-120C7 IOC Tape 1	3	2017	3	2017
Acquisition Milestones: Milestones: EPIP Advanced AIM-120C7 IOC Tape 2	2	2018	2	2018
Acquisition Milestones: Milestones: AIM-120D IOC F/A18 E/F (Threshold)	1	2015	1	2015
Acquisition Milestones: Milestones: AIM-120D IOC F/A18 C/D	1	2015	1	2015
Systems Development: Software Development: System Improvement Program Start (P3I Follow-On)	1	2014	4	2020
Systems Development: Software Development: Electronic Protection Improvement Program	1	2015	4	2020
Test & Evaluation: Operational Evaluation: Phase 4 F/A-18E/F Operational Test	1	2014	4	2014
Production Milestones: Contract Awards: Production Lot 28 Contract Award	1	2015	1	2015
Production Milestones: Contract Awards: Production Lot 30 Contract Award	1	2016	1	2016
Production Milestones: Contract Awards: Production Lot 31 Contract Award	2	2017	2	2017
Production Milestones: Contract Awards: Production Lot 32 Contract Award	2	2018	2	2018
Production Milestones: Contract Awards: Production Lot 33 Contract Award	2	2019	2	2019
Production Milestones: Contract Awards: Production Lot 34 Contract Award	2	2020	2	2020
Production Deliveries: Production Lot 25 AUR Qty 68	1	2015	2	2015
Production Deliveries: Production Lot 26 AUR Qty 17	3	2015	3	2015
Production Deliveries: Production Lot 26 CATM Qty 50	3	2014	1	2015
Production Deliveries: Production Lot 27 CATM Qty 67	2	2015	2	2016
Production Deliveries: Production Lot 28 CATM Qty 54	4	2015	4	2016
Production Deliveries: Production Lot 30 CATM Qty 29	4	2017	4	2018

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy			Date: February 2015		
Appropriation/Budget Activity 1319 / 7		R-1 Program Element (Number/Name) PE 0207163N / AMRAAM		Project (Number/Name) 0981 / AMRAAM	
		Start		End	
Events by Sub Project		Quarter	Year	Quarter	Year
Production Deliveries: Production Lot 30 AUR Qty 138		2	2018	2	2019
Production Deliveries: Production Lot 31 AUR Qty 154		2	2019	2	2020
Production Deliveries: Production Lot 31 AUR Qty 233		2	2020	4	2020