Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

1319: Research, Development, Test & Evaluation, Navy I BA 7: Operational

PE 0207163N / AMRAAM

Systems Development

COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO [#]	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	113.950	2.669	2.613	10.210	-	10.210	32.549	44.312	46.208	32.348	15.275	300.134
0981: <i>AMRAAM</i>	113.950	2.669	2.613	10.210	-	10.210	32.549	44.312	46.208	32.348	15.275	300.134

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.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	2.857	2.613	2.818	-	2.818
Current President's Budget	2.669	2.613	10.210	-	10.210
Total Adjustments	-0.188	-	7.392	-	7.392
Congressional General Reductions	-	-			
Congressional Directed Reductions	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-0.034	-			
 Program Adjustments 	-	-	7.700	-	7.700
 Rate/Misc Adjustments 	-	-	-0.308	-	-0.308
Congressional General Reductions Adjustments	-0.154	-	-	-	-

Change Summary Explanation

Technical: FY15 funding increase supports Electronic Protection Improvement Program (EPIP) efforts.

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^{*}The FY 2015 OCO Request will be submitted at a later date.

o.		
Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0207163N <i>I AMRAAM</i>	
Schedule: The F/A-18E/F Operational Test (OT) schedule growth was were the result of sequestration, furlough, target aircraft grounding and shifted consistent with the delay in the completion of OT. Advanced E improvements against advanced electronic attack threats as soon as proposal in mid February 2014. Schedule growth for Basic and Advar	d the government shutdown. Forecast Initial Operation PIP AIM-120C7 is being divided into two software releases possible. Updated to reflect estimate of contract restru	anal Capability (IOC) dates were eases to permit fielding of incremental acture dates pending receipt of

PE 0207163N: AMRAAM Navy

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Exhibit R-2A, RDT&E Project J	ustification:	PB 2015 N	lavy							Date: Marc	ch 2014	
Appropriation/Budget Activity 1319 / 7					_	am Elemen 33N / AMRA	•	Name)	Project (N 0981 / AMI		ne)	
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
0981: <i>AMRAAM</i>	113.950	2.669	2.613	10.210	-	10.210	32.549	44.312	46.208	32.348	15.275	300.134
Quantity of RDT&E Articles	0.000	-	-	-	-	_	-	-	-	-		

^{*} The FY 2015 OCO Request will be submitted at a later date.

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 increases in FY15 through FY19 support Navy unique Test & Evaluation for Navy fielding of the AIM-120C7 and AIM-120D Electronic Protection Improvement Program (EPIP) capability. Funding increases in FY16 through FY19 are for System Improvement Program.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Aircraft integration	0.850	0.870	3.644
Articles:	-	-	-
Description: Aircraft integration activities and test and evaluation for Navy unique requirements.			
FY 2013 Accomplishments:			
Continued aircraft integration activities and test and evaluation for Navy unique requirements.			
FY 2014 Plans:			
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.			
Title: Identify potential improvements	0.402	0.426	0.436
Articles:	-	-	-
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 2013 Accomplishments:			
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				UNCLAS							
Exhibit R-2A, RDT&E Project Just	ification: PB	2015 Navy							Date: M	arch 2014	
Appropriation/Budget Activity 1319 / 7					r <mark>ogram Ele</mark> r 07163N / <i>Al</i>	ment (Numb <i>NRAAM</i>	er/Name)		t (Number/N AMRAAM	ame)	
B. Accomplishments/Planned Pro	grams (\$ in I	Millions, Art	icle Quantit	ies in Each)				FY 2013	FY 2014	FY 2015
Continued engineering support of Al in AMRAAM lethality/performance a											
FY 2014 Plans: Continue engineering support of AM in AMRAAM lethality/performance a											
FY 2015 Plans: Continue engineering support of AM in AMRAAM lethality/performance a											
Title: System Improvement Program	n (SIP) efforts						_		1.417	1.317	6.13
								rticles:	-	-	-
Description: System engineering at Flight Profile efforts and Phase 4 tes Navy unique compatibility requirement	st/equipment t	asks. Syste	em engineeri	ng/aircraft in	tegration ac						
FY 2013 Accomplishments: Continued system engineering/aircra Navy aircraft integration/compatibilit	•		r SIP with en	nphasis on N	lavy unique	compatibility	requirement	ts and			
FY 2014 Plans: Continue system engineering/aircraft Navy aircraft integration/compatibilit	•		SIP with emp	phasis on Na	avy unique c	ompatibility r	equirements	and			
FY 2015 Plans: Continue system engineering/aircraft and Navy aircraft integration/compare performance to counter evolving Ele	tibility require	ments. Addit									
				Accor	nplishment	s/Planned P	rograms Su	btotals	2.669	2.613	10.21
C. Other Program Funding Summa	ary (\$ in Milli	ons)									
Line Item • WPN/ 220600: AMRAAM • MPAF/3479: AMRAAM	FY 2013 86.883 201.370	FY 2014 82.529 323.015	FY 2015 Base 32.165 329.600	FY 2015 OCO - -	FY 2015 Total 32.165 329.600	FY 2016 194.767 367.944	FY 2017 210.749 402.093	FY 201 269.20 455.14	315.95	Cost To Complete 1 1,695.381 2 2,078.842	Total Cos 4,923.514

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy			Date: March 2014
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0207163N / AMRAAM	, ,	umber/Name) RAAM
131977	PE 0207 103N TAMRAAM	0981 / AIVII	KAAW

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

-		•	FY 2015	FY 2015	FY 2015					Cost To	
Line Item	FY 2013	FY 2014	Base	000	<u>Total</u>	FY 2016	FY 2017	FY 2018	FY 2019	Complete	Total Cost

Remarks

D. Acquisition Strategy

AMRAAM production procurements will continue across the FYDP with periodic pre-planned product improvements and Value Engineering Change Proposals. The Air Dominance Division, previously the 328th Armanent Systems Group, will revisit instituting a Long Term Pricing Agreement upon Raytheon's ability to consistently achieve monthly deliveries of 30 - 35 AIM-120Ds.

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E. Performance Metrics

Meet 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 2015 Navy

Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name)

1319 / 7 PE 0207163N / AMRAAM 0981 / AMRAAM

Product Developmen	nt (\$ in Mi	illions)		FY 2	2013	FY 2	2014		2015 ise		2015 CO	FY 2015 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	43.911	0.609	Jan 2013	0.546	Jan 2014	4.660	Jan 2015	-		4.660	116.833	166.559	166.559
Award Fees (EGLIN)	SS/CPAF	RAYTHEON COMPANY : Tucson AZ	6.253	0.107	Jan 2013	0.096	Jan 2014	0.822	Jan 2015	-		0.822	20.618	27.896	27.896
Primary Hdw Development (DAHLGREN)	WR	NSWC DAHLGREN D C XDM1 : Dahlgren VA	0.117	0.026	Nov 2012	0.026	Nov 2013	0.028	Nov 2014	-		0.028	0.283	0.480	-
Primary Hdw Development (NAWCAD)	WR	NAWCAD : Patuxent River MD	1.521	0.467	Nov 2012	0.469	Nov 2013	0.447	Nov 2014	-		0.447	3.651	6.555	-
Primary Hdw Development (NAWCWD)	WR	NAWCWD : China Lake CA	0.816	0.089	Dec 2012	0.088	Dec 2013	0.088	Dec 2014	-		0.088	0.677	1.758	-
Prior Years Dev Cost no longer funded in the FYDP	Various	Various : Various	22.670	-		-		-		-		-	-	22.670	-
		Subtotal	75.288	1.298		1.225		6.045		-		6.045	142.062	225.918	-

Remarks

Remarks: Percentage of award fees actually awarded in past award fee periods is 14.2%.

Support (\$ in Millions	s)			FY 2	2013	FY 2	2014	FY 2 Ba	2015 se	FY 2	2015 CO	FY 2015 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	3.233	0.201	Mar 2013	0.212	Jan 2014	0.217	Jan 2015	-		0.217	2.156	6.019	-
Studies & Analyses - JHU/ APL	SS/FFP	NAVSEASYSCOM : Washington DC	1.460	0.201	May 2013	0.214	May 2014	0.219	May 2015	-		0.219	2.175	4.269	4.269
Prior Years Support costs no longer funded in the FYDP	Various	Various : Various	17.420	-		-		-		-		-	-	17.420	-
		Subtotal	22.113	0.402		0.426		0.436		-		0.436	4.331	27.708	-

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Navy

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	2015 Navy	,								Date:	March 20	14	
Appropriation/Budge 1319 / 7	t Activity	1					o gram Ele 7163N / <i>A</i>	•	lumber/Na I	ame)		(Numbe			
Test and Evaluation	(\$ in Milli	ons)		FY 2	2013	FY 2	2014		2015 ase		2015 CO	FY 2015 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	9.603	0.850	Nov 2012	0.870	Nov 2013	3.644	Nov 2014	-		3.644	23.630	38.597	-
		Subtotal	9.603	0.850		0.870		3.644		-		3.644	23.630	38.597	-
Management Service	es (\$ in M	illions)		FY 2	2013	FY 2	2014		2015 ase		2015 CO	FY 2015 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	2.944	0.119	Oct 2012	0.092	Oct 2013	0.085	Oct 2014	-		0.085	0.669	3.909	-
Prior Years Mgmt Costs no longer funded in the FYDP	Various	Various : Various	4.002	-		-		-		-		-	-	4.002	-
		Subtotal	6.946	0.119		0.092		0.085		-		0.085	0.669	7.911	-
			Prior Years	FY 2	2013	FY 2	2014		2015 ase		2015 CO	FY 2015 Total	Cost To	Total Cost	Target Value of Contract
		Project Cost Totals	113.950	2.669		2.613		10.210		-		10.210	170.692	300.134	-

Remarks

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Navy

xhibit R-4, RDT&E Schedule Pro	file:	РВ	201	15 Na	avy																		Date	: Ma	arch	2014	
ppropriation/Budget Activity 319 / 7															lement (N AMRAAM		ber	/Na		Proj 098					ame)	
AMRAAM		FY 2	013	-	FY	20	14	F	Y 20	15	١		FY	20	16		ı	FY 2	2017	-	FY	201	8		F١	2019	•
	1Q	2Q 3	3Q	1010	2 20	3Q	4Q	1Q	2Q	3Q	4Q	1Q 2	Q 30	2	4Q	1Q	2Q	3Q	4Q	10	20	30	40	10	2Q	3Q	4Q
Pre-Planned Product Improvement (P3I)																											
SIP/SWUP	L													SI	P/SWUP												
																	E	PIP	•								
EPIP Basic IOC																										AIM-12	ор
EPIP Advanced IOC														Α	IM-120C7 Tape 1				AIM-1200 Tape 2								
Phase 4 System OT	F	/A-1	8E/	- Ope	eratio	onal	Test				ĺ	İ	ĺ							ĺ							
AIM-120D IOC							F/A18 E/F	F/A18 C/D	3.																		
Production Milestones	\dagger		\dashv	十	†	⇈				П	\dashv	十	一	╁		Н				一	┪	\dagger	 	İТ			$\dashv \dashv$
Contract Awards		2	.ot 27		Lot 28				Lot 29			3	ot 80				Lot 31				Lo 32				Lot 33		
2015PB - 0207163N - 0981	'	' '				'				' '				'				•	'		'	'	'	' '	' '		' '

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Navy			Date: March 2014
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
1319 / 7	PE 0207163N / AMRAAM	0981 <i>I AMI</i>	RAAM

Schedule Details

		Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year	
AMRAAM					
Pre-Planned Product Improvement (P3I): SIP/SWUP: SIP/SWUP Start (P3I Follow-0n)	1	2013	4	2019	
Pre-Planned Product Improvement (P3I): SIP/SWUP: EPIP	1	2015	4	2019	
Pre-Planned Product Improvement (P3I): EPIP Basic IOC: AIM-120D IOC	3	2019	3	2019	
Pre-Planned Product Improvement (P3I): EPIP Advanced IOC: AIM-120C7 IOC Tape 1	4	2016	4	2016	
Pre-Planned Product Improvement (P3I): EPIP Advanced IOC: AIM-120C7 IOC Tape 2	4	2017	4	2017	
Pre-Planned Product Improvement (P3I): Phase 4 System OT: F/A-18E/F Operational Test	1	2013	4	2014	
Pre-Planned Product Improvement (P3I): AIM-120D IOC: IOC F/A18 E/F (Threshold)	4	2014	4	2014	
Pre-Planned Product Improvement (P3I): AIM-120D IOC: IOC F/A18 C/D	1	2015	1	2015	
Production Milestones: Contract Awards: Production Lot 27 Contract Award	3	2013	3	2013	
Production Milestones: Contract Awards: Production Lot 28 Contract Award	2	2014	2	2014	
Production Milestones: Contract Awards: Production Lot 29 Contract Award	2	2015	2	2015	
Production Milestones: Contract Awards: Production Lot 30 Contract Award	2	2016	2	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	

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