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<b>Exhibit R-2, RDT&amp;E Budget Item Justification: FY 2018 Navy</b>											<b>Date: May 2017</b>	
<b>Appropriation/Budget Activity</b> 1319: Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development					<b>R-1 Program Element (Number/Name)</b> PE 0207163N / AMRAAM							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018 Base</b>	<b>FY 2018 OCO</b>	<b>FY 2018 Total</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	129.014	30.240	40.350	25.364	-	25.364	32.358	32.738	33.405	24.069	49.446	396.984
0981: AMRAAM	129.014	30.240	40.350	25.364	-	25.364	32.358	32.738	33.405	24.069	49.446	396.984
<b>Program MDAP/MAIS Code:</b>												
<b>Project MDAP/MAIS Code(s): 185</b>												
<b>A. Mission Description and Budget Item Justification</b>												
<p>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.</p> <p>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.</p>												
<b>B. Program Change Summary (\$ in Millions)</b>				<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018 Base</b>	<b>FY 2018 OCO</b>	<b>FY 2018 Total</b>				
Previous President's Budget				32.172	40.350	46.349	-	46.349				
Current President's Budget				30.240	40.350	25.364	-	25.364				
Total Adjustments				-1.932	0.000	-20.985	-	-20.985				
• Congressional General Reductions				-	-							
• Congressional Directed Reductions				-	-							
• Congressional Rescissions				-	-							
• Congressional Adds				-	-							
• Congressional Directed Transfers				-	-							
• Reprogrammings				-0.975	0.000							
• SBIR/STTR Transfer				-0.957	0.000							
• Program Adjustments				0.000	0.000	-21.000	-	-21.000				
• Rate/Misc Adjustments				0.000	0.000	0.015	-	0.015				
<b>Change Summary Explanation</b>												
FY 2018 includes funding for improved missile performance at longer range, increased survivability, improved lethality, and continues Advanced AIM-120C7 & AIM-120D Electronic Protection Improvement Program efforts through software development, simulation and test efforts.												
Schedule - Test and Evaluation events have been added to the schedule.												

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Technical - FY 2018 System Improvement Program (SIP) funding was reduced as a result of capability upgrades shifting to the out years to better align with AMRAAM production.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy									Date: May 2017			
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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
0981: AMRAAM	129.014	30.240	40.350	25.364	-	25.364	32.358	32.738	33.405	24.069	49.446	396.984
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Project 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. Funding in FY 2016 through FY 2022 supports Navy unique Test & Evaluation for Navy fielding of the AIM-120C7 and AIM-120D Electronic Protection Improvement Program (EPIP) capability.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Test and Evaluation  <div>Articles:</div>  <div>Description: Test and Evaluation (T&amp;E) and associated governmental support required to ensure AIM-120 missile integration with threshold US Navy aircraft platforms (F/A-18 C/D/E/F and Joint Strike Fighter).</div>  <div>FY 2016 Accomplishments:</div> Completed AIM-120C7 EPIP Advanced Tape 1 DT, complete a DT/OT transition report and the AIM-120C7 EPIP Advanced Tape 1 Operational Test Readiness Review (OTRR). Fielded the AIM-120C3 through 6 EPIP Basic capability. Continued building test infrastructure to support SIP-1 test events and large force exercises. Provided test resources and test assets for EPIP Advanced Tape 2 DT. Completed AIM-120D SIP-1 IT/OT test events, supplied inputs to the OT test report and generated the fielding decision for SIP-1 on F/A-18 aircraft.  <div>FY 2017 Plans:</div> Continue to provide test asset and support for AIM-120D SIP-2, AIM-120C7 EPIP Advanced Tape 1 and 2 activities. Provide test and evaluation inputs to the EPIP Advanced Tape 2 and SIP-2 designs and support the respective Critical Design Reviews. Provide necessary documentation and provide test results for SIP-2 DT and EPIP Advanced Tape 2 test events. Conduct OTRR for SIP-2 and EPIP Advanced Tape 2. Certify and field EPIP Advanced Tape 1 on F/A-18.  <div>FY 2018 Base Plans:</div>								8.420	5.485	4.062	0.000	4.062
								-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy				Date: May 2017		
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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Complete EPIP Advanced Tape 2 test events, supply inputs to OT test report and generate the fielding decision for EPIP Advanced Tape 2 fielding decision for F/A-18 aircraft. Complete AIM-120D SIP-2 IT/OT test events, supply inputs to the OT test report and generate the fielding decision for SIP-2 on F/A-18 aircraft in 1QFY 2019. Provide test and evaluation inputs to SIP-3 design and support Critical Design Review. Provide necessary documentation and provide test results for SIP-3 DT events.  <b>FY 2018 OCO Plans:</b> N/A						
<b>Title:</b> Identify potential improvements  <b>Articles:</b>  <b>Description:</b> Engineering support of AMRAAM, including investigation and analysis of technologies that offer potential improvements in AMRAAM lethality/performance and compatibility with related weapons systems.  <b>FY 2016 Accomplishments:</b> Continued engineering support of AMRAAM, to include investigation and analysis of technologies that offer potential improvements in AMRAAM lethality/performance and compatibility with related weapons systems.  <b>FY 2017 Plans:</b> Continue engineering support of AMRAAM, to include investigation and analysis of technologies that offer potential improvements in AMRAAM lethality/performance and compatibility with related weapons systems.  <b>FY 2018 Base Plans:</b> Continue engineering support of AMRAAM, to include investigation and analysis of technologies that offer potential improvements in AMRAAM lethality/performance and compatibility with related weapons systems.  <b>FY 2018 OCO Plans:</b> N/A		0.456 -	0.227 -	0.230 -	0.000 -	0.230 -
<b>Title:</b> System Improvement Program (SIP) Efforts  <b>Articles:</b>  <b>Description:</b> Continuation of System Improvement Program (SIP)/Technical Maturity and Risk Reduction (TMRR) efforts for the AMRAAM weapon system. These include systems engineering, program management, missile software and/or hardware upgrades to increase capability, survivability, lethality, as well as aircraft Operational Flight Profile updates on a recurring basis. EPIP Advanced Tape 1 and Tape 2 capability improvements on the C7 missile variant will be incorporated with AIM-120D SIP-2 and 3 software updates.		21.364 -	34.638 -	21.072 -	0.000 -	21.072 -

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> FY 2018 Navy			<b>Date:</b> May 2017
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207163N / AMRAAM	<b>Project (Number/Name)</b> 0981 / AMRAAM	

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

	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018 Base</b>	<b>FY 2018 OCO</b>	<b>FY 2018 Total</b>
<p><b><i>FY 2016 Accomplishments:</i></b> Continued infrastructure investments to support AIM-120D SIP-1, 2, 3 and AIM-120C EPIP activities. Developed an AMRAAM Data Recorder (ADR) to replace the Inflight Data Acquisition Pod (IDAP), which has become unreliable and obsolete, along with additional test equipment to meet SIP-2 and SIP-3 requirements. Completed SIP-1 OT and deployed the first AIM-120D improvement software increment to the Navy AMRAAM inventory. Continued SIP-2 EMD acquisition activities and conducted a critical design review. Awarded SIP-3 TMRR and began EMD contracting efforts.</p> <p><b><i>FY 2017 Plans:</i></b> Complete EPIP Advanced Tape 1 OT events and field in the C7 missile variant. Complete AIM-120C7 EPIP Advanced Tape 2 DT efforts and enter into OT. Continue AIM-120D SIP-2 EMD DT flight testing and conduct Functional Configuration Audit/Test Readiness Board and OTRR. Award SIP-3 EMD contract.</p> <p><b><i>FY 2018 Base Plans:</i></b> Complete SIP-2 OT events required for 1QFY 2019 fielding decision for the AIM-120D software improvement. Complete AIM-120C7 EPIP Advanced Tape 2 OT efforts and field Tape 2 in the AIM-120C7 variant. Continue AIM-120D SIP-3 design and conduct Critical Design Review.</p> <p><b><i>FY 2018 OCO Plans:</i></b> N/A</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	30.240	40.350	25.364	0.000	25.364

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

<b>Line Item</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018 Base</b>	<b>FY 2018 OCO</b>	<b>FY 2018 Total</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• WPN/ 2206: AMRAAM	202.773	204.697	197.109	-	197.109	284.679	288.445	299.484	302.831	644.555	4,565.796
• MPAF/3479: AMRAAM	362.028	350.144	303.720	-	303.720	470.016	430.962	468.452	443.452	942.460	12,483.219
• RDTE,AF/673777: AMRAAM	46.160	61.044	61.612	-	61.612	65.733	66.910	68.115	68.830	43.000	943.488

**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).

AMRAAM's Acquisition Program Baseline (APB) was updated on 28 Oct 2015.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0207163N / AMRAAM	Project (Number/Name) 0981 / AMRAAM

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: FY 2018 Navy												Date: May 2017			
Appropriation/Budget Activity 1319 / 7						R-1 Program Element (Number/Name) PE 0207163N / AMRAAM					Project (Number/Name) 0981 / AMRAAM				
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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	46.164	15.083	Jan 2016	29.001	Jan 2017	17.462	Jan 2018	-		17.462	119.691	227.401	227.401
Award Fees (EGLIN)	SS/CPAF	RAYTHEON COMPANY : Tucson AZ	6.650	2.662	Jan 2016	5.123	Jan 2017	3.082	Jan 2018	-		3.082	21.122	38.639	38.639
Primary Hdw Development (NAWCAD)	WR	NAWCAD : Patuxent River MD	3.042	0.535	Nov 2015	0.437	Nov 2016	0.460	Nov 2017	-		0.460	2.813	7.287	-
Primary Hdw Development (NAWCWD)	WR	NAWCWD : China Lake CA	1.081	0.585	Dec 2015	0.000		0.000		-		0.000	0.000	1.666	-
Primary Hardware Development (NSMA)	C/FFP	NAVY SYST MGT ACT : Arlington VA	0.000	2.416	May 2016	0.000		0.000		-		0.000	0.000	2.416	-
Prior Years Dev Cost no longer funded in the FYDP	Various	Various : Various	22.839	0.000		0.000		0.000		-		0.000	0.000	22.839	-
Subtotal			79.776	21.281		34.561		21.004		-		21.004	143.626	300.248	-
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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	3.817	0.456	Jan 2016	0.227	Jan 2017	0.230	Jan 2018	-		0.230	1.475	6.205	-
Prior Years Support costs no longer funded in the FYDP	Various	Various : Various	19.295	0.000		0.000		0.000		-		0.000	0.000	19.295	-
Subtotal			23.112	0.456		0.227		0.230		-		0.230	1.475	25.500	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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	18.884	7.825	Feb 2016	5.485	Nov 2016	3.452	Nov 2017	-		3.452	22.607	58.253	-

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: FY 2018 Navy</b>													<b>Date: May 2017</b>		
<b>Appropriation/Budget Activity</b> 1319 / 7						<b>R-1 Program Element (Number/Name)</b> PE 0207163N / AMRAAM				<b>Project (Number/Name)</b> 0981 / AMRAAM					
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Oper Test & Eval	WR	COMOPTEVFOR : Norfolk, VA	0.000	0.595	Jul 2016	0.000		0.610	Mar 2018	-		0.610	3.911	5.116	-
<b>Subtotal</b>			18.884	8.420		5.485		4.062		-		4.062	26.518	63.369	-
<b>Management Services (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Travel	MIPR	PMA-259 : Eglin AFB FL	3.240	0.083	Oct 2015	0.077	Oct 2016	0.068	Oct 2017	-		0.068	0.398	3.866	-
Prior Years Mgmt Costs no longer funded in the FYDP	Various	Various : Various	4.002	0.000		0.000		0.000		-		0.000	0.000	4.002	-
<b>Subtotal</b>			7.242	0.083		0.077		0.068		-		0.068	0.398	7.868	-
			<b>Prior Years</b>	<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			129.014	30.240		40.350		25.364		-		25.364	172.017	396.985	-
<b>Remarks</b>															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Navy

Date: May 2017

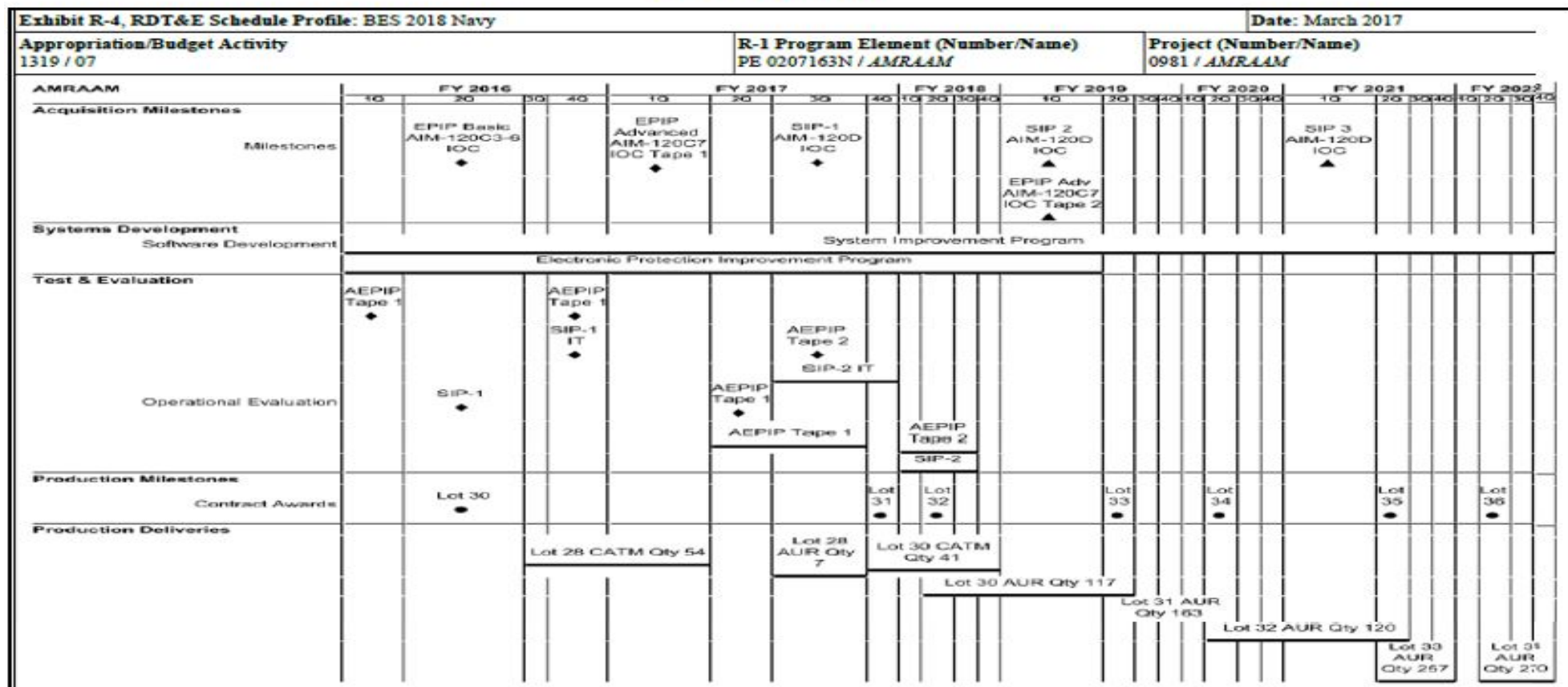
Appropriation/Budget Activity  
1319 / 7

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PE 0207163N / AMRAAM

Project (Number/Name)  
0981 / AMRAAM

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<b>Exhibit R-4A, RDT&amp;E Schedule Details: FY 2018 Navy</b>			<b>Date: May 2017</b>
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207163N / AMRAAM	<b>Project (Number/Name)</b> 0981 / AMRAAM	

**Schedule Details**

<b>Events by Sub Project</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
<b>AMRAAM</b>				
Acquisition Milestones: Milestones: EPIP Basic AIM-120C3-6 IOC	2	2016	2	2016
Acquisition Milestones: Milestones: SIP-1 AIM-120D IOC	3	2017	3	2017
Acquisition Milestones: Milestones: EPIP Advanced AIM-120C7 IOC Tape 1	1	2017	1	2017
Acquisition Milestones: Milestones: SIP 2 AIM-120D IOC	1	2019	1	2019
Acquisition Milestones: Milestones: SIP 3 AIM-120D IOC	1	2021	1	2021
Acquisition Milestones: Milestones: EPIP Advanced AIM-120C7 IOC Tape 2	1	2019	1	2019
Systems Development: Software Development: System Improvement Program Start (P3I Follow-On)	1	2016	4	2022
Systems Development: Software Development: Electronic Protection Improvement Program	1	2016	1	2019
Test & Evaluation: AEPIP Tape 1 IT-1/2	1	2016	1	2016
Test & Evaluation: AEPIP Tape 1 IT- 3	4	2016	4	2016
Test & Evaluation: SIP-1 IT-03	4	2016	4	2016
Test & Evaluation: AEPIP Tape 2 IT-4/5	3	2017	3	2017
Test & Evaluation: SIP-2 IT-1/2/3	3	2017	4	2017
Test & Evaluation: Operational Evaluation: SIP-1 OT-1/2	2	2016	2	2016
Test & Evaluation: Operational Evaluation: AEPIP Tape 1 OT-1	2	2017	2	2017
Test & Evaluation: Operational Evaluation: AEPIP Tape 1 OT-2/3	2	2017	3	2017
Test & Evaluation: Operational Evaluation: AEPIP Tape 2 OT-4/5/6	1	2018	3	2018
Test & Evaluation: Operational Evaluation: SIP-2 OT-1/2/3/4	1	2018	3	2018
Production Milestones: Contract Awards: Production Lot 30 Contract Award	2	2016	2	2016
Production Milestones: Contract Awards: Production Lot 31 Contract Award	4	2017	4	2017

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> FY 2018 Navy	<b>Date:</b> May 2017
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<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0207163N / AMRAAM	<b>Project (Number/Name)</b> 0981 / AMRAAM
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
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 Milestones: Contract Awards: Production Lot 35 Contract Award	2	2021	2	2021
Production Milestones: Contract Awards: Production Lot 36 Contract Award	2	2022	2	2022
Production Deliveries: Production Lot 28 AUR Qty 7	3	2017	3	2017
Production Deliveries: Production Lot 28 CATM Qty 54	3	2016	1	2017
Production Deliveries: Production Lot 30 CATM Qty 41	4	2017	4	2018
Production Deliveries: Production Lot 30 AUR Qty 117	2	2018	2	2019
Production Deliveries: Production Lot 31 AUR Qty 163	2	2019	2	2020
Production Deliveries: Production Lot 32 AUR Qty 120	2	2020	2	2021
Production Deliveries: Production Lot 33 AUR Qty 257	2	2021	4	2021
Production Deliveries: Production Lot 34 AUR Qty 270	2	2022	4	2022