Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy												Date: February 2018
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0207161N *I Tactical Aim Missiles*							
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	424.073	54.678	42.884	40.121	-	40.121	20.053	7.571	0.424	0.446	0.000	590.250
0457: *AIM-9X*	424.073	54.678	42.884	40.121	-	40.121	20.053	7.571	0.424	0.446	0.000	590.250
Program MDAP/MAIS Code: **Project MDAP/MAIS Code(s):** 442												

A. Mission Description and Budget Item Justification

The AIM-9X (Sidewinder) short-range air-to-air missile is a long term evolution of the AIM-9 series of fielded missiles. The AIM-9X missile program provides a launch and leave, air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft and complements the Advanced Medium Range Air-to-Air Missile (AMRAAM). Air superiority in the short-range air-to-air missile arena is essential and includes first shot, first kill opportunity against an enemy employing IR countermeasures. The AIM-9X employs several components common with the AIM-9M (fuze, rocket motor and warhead). Anti-Tamper features have been incorporated to protect improvements inherent in this design. AIM-9X is a Post Milestone C, Acquisition Category IC joint service program with Navy lead.

The Block II program has completed independent operational testing and found to be operationally effective and operational/suitable. The program achieved Navy Initial Operational Capability (IOC) in March 2015 and received Full Rate Production decision in August 2015. The first Full Rate Production Lot contract was awarded in September 2015. This budget line will continue technical refresh of critical obsolete components, implement cost reduction initiatives, improve insensitive munitions performance, correct deficiencies, and increase capabilities through software enhancements, and conduct testing to ensure platform integration onto threshold US Navy aircraft.

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 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**
Previous President's Budget	56.285	42.884	33.458	-	33.458
Current President's Budget	54.678	42.884	40.121	-	40.121
Total Adjustments	-1.607	0.000	6.663	-	6.663
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.607	0.000			
• Rate/Misc Adjustments	0.000	0.000	6.663	-	6.663

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy	Date: February 2018
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0207161N *I Tactical Aim Missiles*

Change Summary Explanation

The FY 2019 funding request was reduced by $0.097 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

FY 2019 increase in Rate/Misc Adjustments is associated with continuing the development and testing of the missile processor and Instrumented Measurement Unit (IMU) to avoid obsolescence.

Schedule:

1. SIP III Missile software version 9.4 Integration Testing (IT-D1) has been extended 12 months due to software design and software development challenges. Additional time is required to verify performance thresholds of the performance specification, and to verify the AIM-9X Block II missile system is ready for Follow-On Operational Test and Evaluation (FOT&E, OT-D1).
2. Operational Test Readiness Review (OTRR) as well as Operation Testing OT-D1 start date has been extended 12 months to share results with DT and minimize program cost.
3. The Lot 17 Hardware Engineering Change Proposal (ECP) cut-in date has been extended 3 months due to AIM-9X Block II+ reliability issues discovered during production qualification.
4. The SIP III hardware Critical Design Review (CDR) has been extended 8 months due to allow for additional time to redesign the guidance unit processor.
5. The Production Delivery schedule has been adjusted by 3 months to allow additional time required to obtain AIM-9X Block II parts for production.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0207161N / *Tactical Aim Missiles*	Project (Number/Name) 0457 / *AIM-9X*	

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
0457: *AIM-9X*	424.073	54.678	42.884	40.121	-	40.121	20.053	7.571	0.424	0.446	0.000	590.250
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 442

A. Mission Description and Budget Item Justification

AIM-9X is a long-term evolution of the AIM-9, a fielded system, qualifying this as a research category operational systems development. The AIM-9X short range air-to-air missile modification program provides a launch and leave, air combat munition that uses passive Infra-Red (IR) energy for acquisition and tracking of enemy aircraft and complements the Advanced Medium Range Air-to-Air Missile (AMRAAM). Air superiority in the short range air-to-air missile arena is essential and includes first shot, first kill opportunity against an enemy employing IR countermeasures. The AIM-9X employs several components common with the AIM-9M (fuze, rocket motor and warhead). The AIM-9X Block II missile is critical to project power and win decisively in accordance with the Fiscal Year 2015 Defense Planning Guidance and Navy's Navigation Plan 2015 - 2019. The missile is essential to Pacific Command plans to counter threats employed by advanced Digital Radio Frequency Memory (DRFM) electronic attack, cruise missiles, and Unmanned Aerial Vehicles.

This line item continues Technical Refresh of components and software, as well as incorporates advanced development products and capabilities, to meet threshold requirements of the capabilities production document. Specifically, the program will redesign, develop and integrate components facing obsolescence, implement cost reduction initiatives, enhance insensitive munitions performance, incrementally improve operational flight software to fully utilize capabilities of the missile, and improvements in anti-tamper and cyber security technology.

The program strategy is to first redesign the control actuation system (CAS) battery, along with the AIM-9X Block II Plus (AIM-9X-3) and incorporate it into the Lot 17 (FY 2017) production missile. Next, the program will complete missile software improvements (software version 9.4) and release it into Lot 19 (FY 2019) and prior missiles. The software will provide improved infrared counter-countermeasures, partial and degraded cueing, improved lock on after launch capability, improve small target acquisition, and provide surface attack capability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Product Development	49.117	33.989	27.049	0.000	27.049
Articles:	-	-	-	-	-
Description: Continuation of Primary Hardware Development/Pre-Planned Product Improvement (Tech Refresh) efforts for the AIM-9X weapon system. This includes Systems Engineering / Program management, as well as support required, to ensure AIM-9X missile integration with threshold US Navy aircraft platforms. This also includes efforts to redesign missile components in order to resolve Block II component obsolescence to ensure missile producibility and increase reliability beyond Lot 20. Incorporate anti-temper and cyber security					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0207161N / *Tactical Aim Missiles*	**Project (Number/Name)** 0457 / *AIM-9X*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
technology improvements, and implement cost reduction initiatives, and to comply with the Insensitive Munitions (IM) requirements as established by Joint Requirements Oversight Council memo dated 11 February 2009. ***FY 2018 Plans:*** Complete v9.317 software release to resolve F-22 aircraft deficiencies discovered during Block II integration testing. Continue Engineering Manufacturing Development required to redesign, integrate, test and qualify components due to obsolescence and implement cost reduction initiatives. Incorporate anti tamper and cyber security technology improvements. Continue to develop v9.4 Block II software improvements to utilize full capability of the missile. Continue to develop missile hardware design improvements necessary to enhance IM performance. ***FY 2019 Base Plans:*** Continue Engineering Manufacturing Development required to redesign, integrate, test and qualify components due to obsolescence and implement cost reduction initiatives. Continue to develop v9.4 Block II software improvements to utilize full capability of the missile. Incorporate anti tamper and cyber security technology improvements. Continue to develop missile hardware design improvements necessary to enhance IM performance. Complete Critical Design Review necessary to incorporate IMU, dome and processor redesigns into Lot 20 production. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decrease in FY 2019 reflects the completion of the development activities associated the obsolescence redesign of missile components and v9.4 software improvements.					
Title: Test and Evaluation Activities and Support	5.352	8.688	12.865	0.000	12.865
Articles:	-	-	-	-	-
Description: Test and Evaluation (T&E) and associated governmental support required to ensure the AIM-9X missile integration with threshold US Navy aircraft platforms (F/A-18A+/C/D/E/F). Developmental and Operational testing of the next tech refresh version of software improvements to the missile, Operation Flight Software version 9.4. ***FY 2018 Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0207161N / *Tactical Aim Missiles*	**Project (Number/Name)** 0457 / *AIM-9X*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Continue Developmental Testing and Integrated Testing (DT/IT-D1) planning of Operational Flight Software version 9.4 including improvements associated with further integrating the F/A-18 aircraft to utilize full capability of the Block II missile. ***FY 2019 Base Plans:*** Continue Developmental Testing and Integrated Testing (DT/IT-D1) of Operational Flight Software version 9.4 including improvements associated with further integrating the F/A-18 aircraft to utilize full capability of the Block II missile. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Increase in FY 2019 reflects Developmental Testing and Integrated Testing conducted at the Naval Air Warfare Center and at Commander Operational Test Force required to incorporate software v9.4 improvements into the missile.					
Title: Management Services ***Articles:*** ***Description:*** Transportation / Travel for AIM-9X efforts in supporting the major test events and program decisions identified in the Product Development and Test and Evaluation sections above. ***FY 2018 Plans:*** Continue funding transportation and travel costs associated with AIM-9X missile program efforts supporting the major test events and program decisions identified in the Product Development and Test and Evaluation sections above. ***FY 2019 Base Plans:*** Continue funding transportation and travel costs associated with AIM-9X missile program efforts supporting the major test events and program decisions identified in the Product Development and Test and Evaluation sections above. ***FY 2019 OCO Plans:*** N/A	0.209 -	0.207 -	0.207 -	0.000 -	0.207 -
Accomplishments/Planned Programs Subtotals	54.678	42.884	40.121	0.000	40.121

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0207161N / *Tactical Aim Missiles*	**Project (Number/Name)** 0457 / *AIM-9X*

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• WPN 2209: *Sidewinder*	70.912	79.692	77.927	0.381	78.308	81.970	89.480	92.044	99.881	352.510	1,725.102
• MPAF 3479: *Sidewinder*	127.438	125.350	121.253	-	121.253	122.108	164.987	108.441	118.413	33.290	2,060.745
• RDTE, AF 41: *Sidewinder*	52.898	34.952	37.511	-	37.511	28.517	19.598	16.121	14.127	Continuing	Continuing
• MPA, C62001000: *IFPC Inc 2-I Block 1, Missile*	0.000	57.742	189.047	-	189.047	336.570	415.426	292.100	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

Milestone C decision for LRIP was held June 24, 2011. The program received USN Initial Operational Capability (IOC) in March 2015 and Full Rate Production (FRP) Approval in August 2015 followed by contract award for FRP-1 in September 2015. The program awarded the FRP-3 contract in March 2017, and will award the option for FRP-4 in May 2018. The program plans to award FRP-5 in February 2019.

E. Performance Metrics

AIM-9X Block II:

1. Complete v9.317 software release to resolve F-22 aircraft deficiencies found during Block II integration testing (2Q FY 2018).

AIM-9X Block II Tech Refresh:

1. Complete Lot 17 Cut In Engineering Change Proposal to incorporate redesigned control actuation system battery and Block II plus (AIM-9X-3) into production (1Q FY 2018).
2. Complete Preliminary Design Review (PDR) to incorporate Inertial Measurement Unit (IMU), dome and processor redesigns into Lot 20 production (3Q FY 2018).
3. Complete Development Testing (DT-D1) for software v9.4 improvements (4Q FY 2017).
4. Complete (DT/IT-D1)for software v9.4 improvements (1Q FY 2020).
5. Complete OTRR for software v9.4 improvements (1Q FY 2020).
6. Complete Critical Design Review (CDR) to incorporate Inertial Measurement Unit (IMU), dome and processor redesigns into Lot 20 production (2Q FY 2019).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0207161N / *Tactical Aim Missiles*	**Project (Number/Name)** 0457 / *AIM-9X*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware & Software Development	SS/CPFF	Raytheon Missile Systems : Tucson, AZ	60.642	42.892	Feb 2017	29.221	Feb 2018	22.962	Feb 2019	-		22.962	0.000	155.717	149.391
Aircraft Integration - Contract	C/CPFF	NSMA : Arlington, VA	2.224	1.806	Mar 2017	0.432	Mar 2018	0.000		-		0.000	0.000	4.462	4.462
Aircraft Integration - USG	WR	NAWCWD : China Lake, CA	23.176	0.548	Dec 2016	0.472	Dec 2017	0.000		-		0.000	0.000	24.196	-
USG Systems Engineering & Project Managment Support	WR	NAWC AD : Patuxent River, MD	0.721	0.556	Dec 2016	0.357	Dec 2017	0.000		-		0.000	0.000	1.634	-
USG Systems Engineering & Project Managment Support	WR	NAWCWD : China Lake, CA	4.688	3.015	Dec 2016	3.507	Dec 2017	4.087	Feb 2019	-		4.087	0.000	15.297	-
Rocket Motor Technology Study	WR	Army Research Lab : Huntsville, AL	0.000	0.300	Feb 2017	0.000		0.000		-		0.000	0.000	0.300	-
Prior Year Prod Dev cost no longer funded in the FYDP	Various	Various : Various	263.154	0.000		0.000		0.000		-		0.000	0.000	263.154	-
		Subtotal	354.605	49.117		33.989		27.049		-		27.049	0.000	464.760	N/A

Remarks

1. Total prior years - FY95 and prior under PE 0603715D.
2. The decrease in Primary Hardware & Software Development between FY 2018 and FY2019 reflects curtailing the development activities associated the obsolescence redesign of missile components and v9.4 software upgrade.
3. The decrease in Aircraft Integration between FY 2018 to FY 2019 reflects completion of threshold platform software integration requirements with the AIM-9X Block II program.
4. The increase in USG Systems Engineering & Project Management from FY 2018 to FY 2019 reflects a USN government lab test support requirement to ensure tech refresh improvements are incorporated into the final hardware and software design at PAX, and conduct Insensitive Munitions Risk Reductions (IMRR) activities at China Lake.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0207161N / *Tactical Aim Missiles*	**Project (Number/Name)** 0457 / *AIM-9X*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Tech Support	C/CPIF	Navy System Mgmt Activity : Arlington, VA	0.476	0.025	Feb 2017	0.000		0.000		-		0.000	0.000	0.501	0.501
Operational Test and Eval (OPTEVFOR)	C/CPFF	Wyle Lab Inc. : Huntsville, AL	0.479	0.445	Feb 2017	0.000		0.000		-		0.000	0.000	0.924	0.799
Prior Year Support Costs	C/CPFF	Various : Various	0.949	0.000		0.000		0.000		-		0.000	0.000	0.949	-
		Subtotal	1.904	0.470		0.000		0.000		-		0.000	0.000	2.374	N/A

Remarks

Provides one-time engineering and management services in support of air to air weapons development, testing, and integration support.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Oper Test & Eval	WR	COMOPTEVFOR : Norfolk, VA	8.965	0.020	Mar 2017	0.845	Mar 2018	3.933	Mar 2019	-		3.933	0.000	13.763	-
Oper Test & Eval (NAWC CL) (GOVT)	WR	NAWCWD : China Lake, CA	6.552	4.862	Dec 2016	7.843	Dec 2017	8.932	Mar 2019	-		8.932	1.960	30.149	-
Prior year T&E cost no longer funded in the FYDP	Various	Various : Various	40.382	0.000		0.000		0.000		-		0.000	0.000	40.382	-
		Subtotal	55.899	4.882		8.688		12.865		-		12.865	1.960	84.294	N/A

Remarks

Increase in Operational Test and Evaluation at COMOPTEVFOR between FY 2018 and FY2019 reflects DT/IT-D1 efforts to incorporate software v9.4 into the missile.
Increase in Development Test at China Lake between FY2018 and FY2019 reflects DT/IT-D1 efforts to test software v9.4 improvements in accordance with the test and evaluation master plan (TEMP) revision after Block II.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0207161N / *Tactical Aim Missiles*	Project (Number/Name) 0457 / *AIM-9X*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Transportation - Material	WR	NAVAIR : Patuxent River, MD	0.503	0.100	Oct 2016	0.075	Oct 2017	0.075	Oct 2018	-		0.075	0.000	0.753	-
Travel - Obligation throughout the year	WR	NAWCAD : Patuxent River, MD	3.129	0.109	Oct 2016	0.132	Oct 2017	0.132	Oct 2018	-		0.132	0.134	3.636	-
Prior Year Mgmt cost no longer funded in the FYDP	Various	Various : Various	8.033	0.000		0.000		0.000		-		0.000	0.000	8.033	-
		Subtotal	11.665	0.209		0.207		0.207		-		0.207	0.134	12.422	N/A

Remarks

Provides transportation of test assets, as well as travel of persons, in support of the AIM-9X Block II System Improvement Program (SIP) III project.

	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	424.073	54.678		42.884		40.121		-		40.121	2.094	563.850	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0207161N / *Tactical Aim Missiles*	**Project (Number/Name)** 0457 / *AIM-9X*

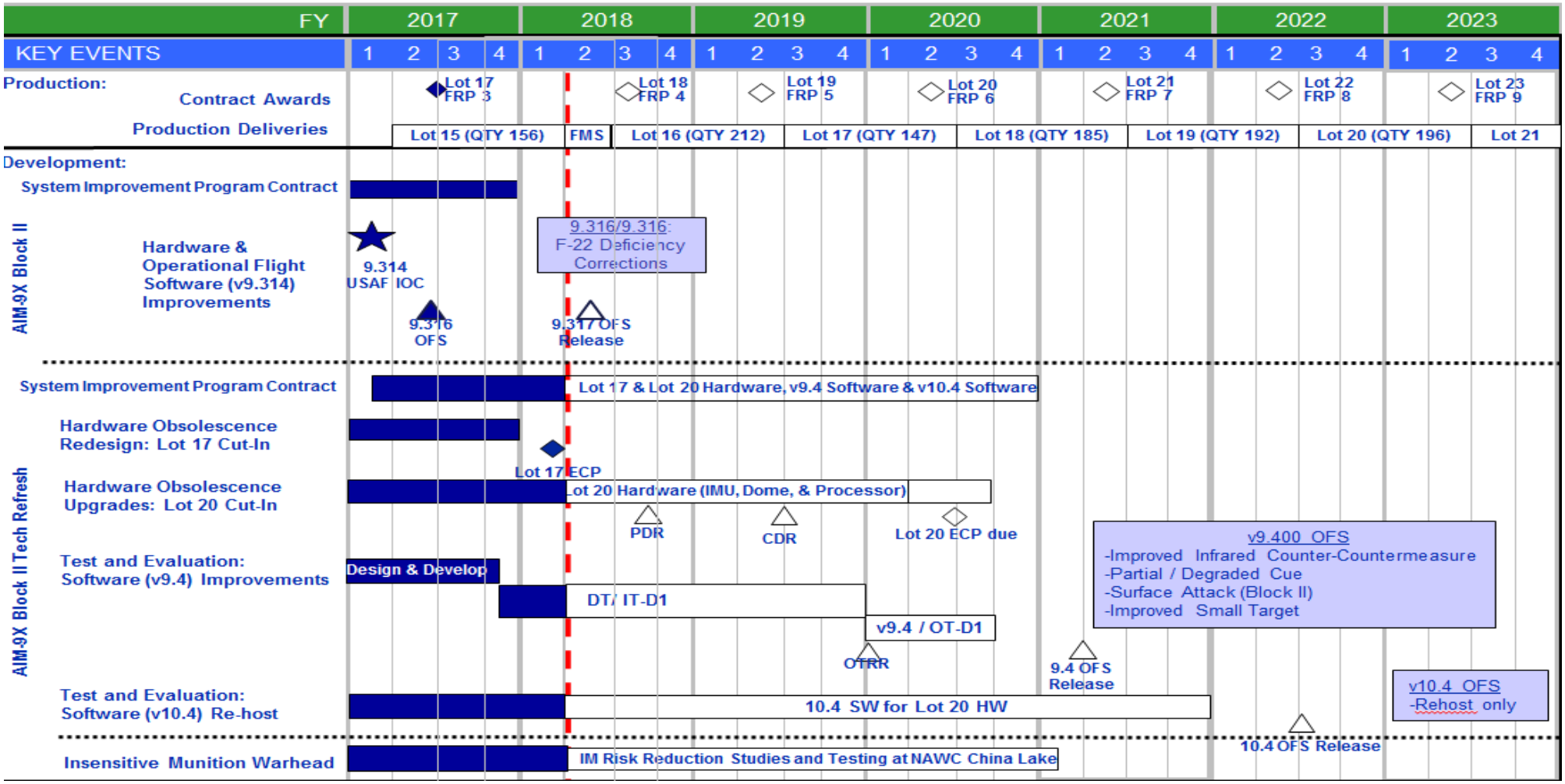

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0207161N / *Tactical Aim Missiles*	**Project (Number/Name)** 0457 / *AIM-9X*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
TACTICAL AIM MISSILES				
Production Milestones - Block II: Contract Awards: Lot 17 (FRP 3): QTY 147	2	2017	2	2017
Production Milestones - Block II: Contract Awards: Lot 18 (FRP 4): QTY 185	3	2018	3	2018
Production Milestones - Block II: Contract Awards: Lot 19 (FRP 5): QTY 192	2	2019	2	2019
Production Milestones - Block II: Contract Awards: Lot 20 (FRP 6): QTY 196	2	2020	2	2020
Production Milestones - Block II: Contract Awards: Lot 21 (FRP 7): QTY 198	2	2021	2	2021
Production Milestones - Block II: Contract Awards: Lot 22 (FRP 8): QTY 188	2	2022	2	2022
Production Milestones - Block II: Contract Awards: Lot 23 (FRP 9): QTY 173	2	2023	2	2023
Production Deliveries: Lot 15 (FRP 1) QTY 156	2	2017	1	2018
Production Deliveries: Lot 16 (FRP 2) QTY 212	3	2018	2	2019
Production Deliveries: Lot 17 (FRP 3) QTY 147	3	2019	2	2020
Production Deliveries: Lot 18 (FRP 4) QTY 185	3	2020	2	2021
Production Deliveries: Lot 19 (FRP 5) QTY 192	3	2021	2	2022
Production Deliveries: Lot 20 (FRP 6) QTY 196	3	2022	2	2023
Production Deliveries: Lot 21 (FRP 7) QTY 198	3	2023	4	2023
AIM-9X Block II: System Improvement Program Contract Award: System Improvement Program II Engineering Manufacturing Development Contract	1	2017	4	2017
AIM-9X Block II: Hardware & Software (v9.3) Improvements: Air Force Initial Operational Capability	1	2017	1	2017
AIM-9X Block II: Hardware & Software (v9.3) Improvements: Operational Flight Software Release v9.316	2	2017	2	2017
AIM-9X Block II: Hardware & Software (v9.3) Improvements: Operational Flight Software Release v9.317	2	2018	2	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0207161N / *Tactical Aim Missiles*	**Project (Number/Name)** 0457 / *AIM-9X*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
AIM-9X Block II Tech Refresh: Tech Refresh Development Contracts: System Improvement Program III Engineering Manufacturing Development Contract	1	2017	4	2020
AIM-9X Block II Tech Refresh: Hardware Obsolescence Redesign: Lot 17 Cut In: Lot 17 Hardware (CAS Battery & Block II+)	1	2017	4	2017
AIM-9X Block II Tech Refresh: Hardware Obsolescence Redesign: Lot 17 Cut In: Lot 17 Hardware Cut-In Engineering Change Proposal	1	2018	1	2018
AIM-9X Block II Tech Refresh: Hardware Obsolescence Redesign: Lot 20 Cut In: Hardware (IMU, Dome & Processor)	1	2017	2	2020
AIM-9X Block II Tech Refresh: Hardware Obsolescence Redesign: Lot 20 Cut In: Lot 20 Hardware Cut-In Preliminary Design Review	3	2018	3	2018
AIM-9X Block II Tech Refresh: Hardware Obsolescence Redesign: Lot 20 Cut In: Lot 20 Hardware Cut-In Critical Design Review	2	2019	2	2019
AIM-9X Block II Tech Refresh: Hardware Obsolescence Redesign: Lot 20 Cut In: Lot 20 Hardware Cut-In Engineering Change Proposal	2	2020	2	2020
AIM-9X Block II Tech Refresh: Test and Evaluation: Software (v9.4) Improvements: Development Testing	1	2017	4	2017
AIM-9X Block II Tech Refresh: Test and Evaluation: Software (v9.4) Improvements: Development Test / Integrated Testing	4	2017	1	2020
AIM-9X Block II Tech Refresh: Test and Evaluation: Software (v9.4) Improvements: Operational Test Readiness Review	1	2020	1	2020
AIM-9X Block II Tech Refresh: Test and Evaluation: Software (v9.4) Improvements: Operational Testing	1	2020	4	2020
AIM-9X Block II Tech Refresh: Test and Evaluation: Software (v9.4) Improvements: Software v9.4 Release	2	2021	2	2021
AIM-9X Block II Tech Refresh: Test and Evaluation: Software (v10.x) Rehost: Software v10.4 Development Testing	1	2017	4	2021
AIM-9X Block II Tech Refresh: Test and Evaluation: Software (v10.x) Rehost: Software v10.4 Operational Flight Software Release	3	2022	3	2022