Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy

**Date:** May 2017

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

1319: Research, Development, Test & Evaluation, Navy I BA 5: System

PE 0604274N I Next Generation Jammer (NGJ)

Development & Demonstration (SDD)

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
Total Program Element	881.719	376.548	577.822	632.936	-	632.936	539.770	395.996	174.427	0.000	0.000	3,579.218
0557: Next Generation Jammer	881.719	376.548	577.822	632.936	-	632.936	539.770	395.996	174.427	0.000	0.000	3,579.218

Program MDAP/MAIS Code:

Project MDAP/MAIS Code(s): P445

#### A. Mission Description and Budget Item Justification

The Next Generation Jammer Increment 1 (NGJ Inc 1) Mid-Band is the next step in the evolution of Airborne Electronic Attack (AEA) and is needed to meet current and emerging Electronic Warfare gaps, ensure kill chain wholeness against growing threat capabilities and capacity, and keep pace with threat weapons systems advances and continuous expansion of the AEA mission area. Next Generation Jammer is an evolutionary acquisition program providing capability in three increments: Increment 1 (Mid-Band), Increment 2 (Low-Band) funded under PE 0604282N, and Increment 3 (High-Band) which is currently unfunded. The order of development - mid, low, and then high - was determined by the threat and available capability.

NGJ Inc 1 capabilities will address Mid-Band AEA capability gaps, AEA sufficiency gaps, and address AN/ALQ-99 Tactical Jamming System shortfalls in scalability. flexibility, supportability, interoperability, availability, and capability.

NGJ Inc 1 will deliver significantly improved radar and communications jamming capabilities with Open Systems Architecture that supports software and hardware updates to rapidly counter improving threats. NGJ Inc 1 will contribute across the spectrum of missions defined in the Defense Strategic Guidance to include strike warfare, projecting power despite anti-access/area denial challenges, and counterinsurgency/irregular warfare.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	387.770	577.822	544.124	-	544.124
Current President's Budget	376.548	577.822	632.936	-	632.936
Total Adjustments	-11.222	0.000	88.812	-	88.812
Congressional General Reductions	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
Congressional Adds	-	-			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-11.222	0.000			
Program Adjustments	0.000	0.000	87.929	-	87.929
Rate/Misc Adjustments	0.000	0.000	0.883	-	0.883

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PE 0604274N: Next Generation Jammer (NGJ) Navy

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy I BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0604274N / Next Generation Jammer (NGJ)	
Change Summary Explanation Technical: Not applicable.		
Schedule: Project Unit 0557: Integrated Testing moved from 3rd Qtr.	. 2016 to 2nd Qtr. 2017 due to test vehicle availability.	

PE 0604274N: Next Generation Jammer (NGJ) Navy

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EXIIIDIL K-ZA, KD I &E PIOJECT JU	Suncation.	F1 20101V	avy							Date. May	2017	
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0604274N / Next Generation Jammer (NGJ) Project (Number/N 0557 / Next General						
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
0557: Next Generation Jammer	881.719	376.548	577.822	632.936	-	632.936	539.770	395.996	174.427	0.000	0.000	3,579.218
Quantity of RDT&E Articles		15	-	-	-	-	4	-	-	-		

Project MDAP/MAIS Code: P445

### A. Mission Description and Budget Item Justification

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

Exhibit R-2A RDT&F Project Justification: EV 2018 Navy

The Next Generation Jammer Increment 1 (NGJ Inc 1) capabilities will address Mid-Band Airborne Electronic Attack (AEA) capability gaps, AEA sufficiency gaps, and address AN/ALQ-99 Tactical Jamming System shortfalls in scalability, flexibility, supportability, interoperability, availability, and capability. NGJ Inc 1 will deliver significantly improved radar and communications jamming capabilities with Open Systems Architecture that supports software and hardware updates to rapidly counter improving threats. NGJ Inc 1 will contribute across the spectrum of missions defined in the Defense Strategic Guidance to include strike warfare, projecting power despite anti-access/area denial challenges, and counterinsurgency/irregular warfare.

D. Accomplishments/ familied i Tograms (# in millions, Article additities in Eden)	FY 2016	FY 2017	Base	OCO	Total
Title: Next Generation Jammer Increment 1 Primary Hardware Development	209.534	383.585	364.311	0.000	364.311
Articles:	15	-	-	-	-
FY 2016 Accomplishments:					
Continued maturation of Critical Technology Elements (CTEs) to a Technology Readiness of 6 in support of Milestone B. Awarded Engineering and Manufacturing Development Contract in 3rd Qtr. FY 2016. Post Milestone B work focused on continuing maturation of technologies and maturation of the system design of the Pod Prime Hardware in preparation for Critical Design Review in 3rd Qtr. FY 2017 and the ordering of material in support of fifteen (15) Engineering Development Models test article builds.					
FY 2017 Plans:  System design of the Pod Prime Hardware will continue through the Critical Design Review (CDR) in 3rd Qtr. FY 2017. Upon a successful CDR, the remaining pod hardware will be procured and the assembly will commence for the fifteen (15) Engineering Development Models. Also during this time aeromechanical shapes are being developed to support the air worthiness testing during the integrated test phases (IT-B1 and IT-B2).					
FY 2018 Base Plans: Delivery of initial aeromechanical test shapes (Pods) to support air worthiness flight testing. Ongoing assembly and integration of the fifteen (15) Engineering Development Models.					
FY 2018 OCO Plans:					

PE 0604274N: Next Generation Jammer (NGJ)

Navy

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Date: May 2017

FY 2018 | FY 2018 | FY 2018

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy				Date: May	2017	
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/ PE 0604274N / Next Generation (NGJ)		Project (N 0557 / Nex		mmer	
B. Accomplishments/Planned Programs (\$ in Millions, Article	Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
N/A						
Title: Next Generation Jammer Increment 1 Systems Engineering	Articles:	46.298 -	48.599	50.621	0.000	50.62°
FY 2016 Accomplishments:  Performed System Engineering efforts in support of continued Nex to include initial system security engineering development activities in 3rd Qtr. FY 2017. A Technology Readiness Assessment was pe Technology Readiness Level (TRL) of the NGJ Critical Technology	s culminating in a Critical Design Review rformed during this timeframe, where the					
FY 2017 Plans: Perform Systems Engineering efforts, resulting in a Critical Design support development of the Engineering Development Models (ED Systems engineering efforts will also be supporting the Integration Readiness Review (TRR), to include update and traceability of specioseout of Request For Action (RFAs) and Request for Information	Ms) required for Developmental Testing. Readiness Review (IRR) and the Test ecifications, event planning, execution, and					
FY 2018 Base Plans: Perform Systems Engineering efforts, which will support the Aeron the Flight Readiness Review (FRR) 4th Qtr. FY 2018. System engintegration Lab testing at government and contractor facilities.						
<b>FY 2018 OCO Plans:</b> N/A						
Title: Next Generation Jammer Increment 1 Aircraft Integration	Articles:	87.676 -	93.069	127.122 -	0.000	127.12 -
FY 2016 Accomplishments:  Developed, designed, procured, and tested A-kit modifications and Milestone B (MS B) program requirements and testing activities. E proposed aircraft modifications, finalization of software requirement integration software build, and commencement of software development.	fforts included non-recurring engineering for the Next Generation Jammer (NGJ)					
FY 2017 Plans:						

PE 0604274N: Next Generation Jammer (NGJ) Navy UNCLASSIFIED
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Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy				Date: May	2017		
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number) PE 0604274N / Next Generation (NGJ)		Project (Number/Name) 0557 I Next Generation Jammer				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quan	tities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	
Simultaneously working on three System Configuration Set (SCS) softw Integration of Build #1, Design of Build #2, and System Specification and Engineering reviews, Software Integration Lab (SIL) testing, and flight to Continuation of A-kit modification activities to include assembly of A-kits	d Design of Build #3. Conduct System esting associated with each phase.						
FY 2018 Base Plans: Continue working on three System Configuration Set (SCS) software but Integration phase of Build #1, finish the Design phase and start the System Conduct the Design phase and the System Integration phases of Build #kits into the initial aircraft to be used for testing Next Generation Jamme tunnel reports for the performance aeromechanical high speed wind tuntest, and the high lift, low speed wind tunnel test.	tem Integration phase of Build #2, and 3. Installation of the first modification r Increment 1. Finalize and deliver wind						
FY 2018 OCO Plans: N/A							
Title: Next Generation Jammer Increment 1 Test and Evaluation	Articles:	29.313	48.283	86.730 -	0.000	86.730	
FY 2016 Accomplishments:  Developed Test Evaluation Master Plan for Milestone B. A static loads to of initiation of static loads testing. The Integrated Test Team (ITT) started disciplines and the flutter A/C was modified in support of flutter testing.							
FY 2017 Plans: Conduct High Speed Stability and Control (S&C) and Performance, Low and Stores Separation wind tunnel testing. Develop wind tunnel test rep delivered in support of initiation of static loads testing. Flutter, loads, noi jettison test articles will be developed and prepared in support of aerome Flutter Test Aircraft to include reconfiguration with wing-tip ALQ-218 ma EA-18G and instrumentation modifications. Conduct Flutter Test Aircraft Ground Vibration Test (GVT) and regression GVT analysis. The Integration in the mission systems disciplines in support of chamber, ground, an performance characterization.  FY 2018 Base Plans:	orts. A static loads test article will be se and vibration, flying qualities, and echanical flight testing. Prepare the ss property models to represent an t regression testing to include regression ted Test Team (ITT) will start build						

PE 0604274N: Next Generation Jammer (NGJ) Navy UNCLASSIFIED
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Complete High Speed Stability and Control, High and Low Speed Performance, and Loads/Stores wind tunnel test reports. Plan, conduct and report Ram Air Turbine Generator (RATG) performance testing and NGJ pod static loads testing. Complete Regression Ground Vibration Testing (RGVT) analysis and initiate regression flights on flutter instrumented aircraft. Plan, conduct and report on Ground Vibration Testing (No on flutter instrumented aircraft. Plan, conduct and report on Ground Vibration Testing (No on flutter instrumented aircraft. Plan, conduct and report on Ground Vibration Testing (No on flutter instrument and FIA-18F for flying qualities and stability and control testing. Plan and initiate captive carriage flight test for weapons separation testing. Modify and instrument EA-1 and EA-2 for Next Generation Jammer to support regression flight testing. Plan and initiate ANIALO-99 and NGJ regression flight testing. Instrument two EA-18G aircraft to support mission systems ground and flight test. Finalize NGJ Mission Systems Test Planning for installed system performance characterization that includes System Performance Specification verification, EA-18G Airborne Electronic Attack systems integration, regression interoperability, software integration and functionality, technique generation and management, Crew Vehicle Interface, aircrew workload, safety, mission planning, cybersecurity, reliability, maintainability, ground support equipment, and environmental qualifications.  FY 2018 OCO Plans:  N/A  Title: Next Generation Jammer Increment 1 Support & Management Services  Articles:  FY 2016 Accomplishments:  Provided Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 Base Plans:  Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 Base Plans:  N/A	UN	CLASSIFIED					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)  Fy 2016  Fy 2017  Fy 2018  Fy	Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy				Date: May	2017	
Complete High Speed Stability and Control, High and Low Speed Performance, and Loads/Stores wind tunnel test reports. Plan, conduct and report Ram Air Turbine Generator (RATG) performance testing and NGJ pod static loads testing. Complete Regression Ground Vibration Testing (RGVT) analysis and initiate regression flights on flutter instrumented aircraft. Plan, conduct and report on Ground Vibration Testing (RGVT) on flutter instrumented aircraft. Plan, conduct and report on Ground Vibration Testing (RGVT) on flutter instrumented aircraft. Plan, conduct and report on Ground Vibration Testing (RGVT) on flutter instrument an FIA-18F for flying qualities and stability and control testing. Plan and initiate captive carriage flight test for weapons separation testing, Modify and instrument an FIA-18E to support store loads testing. Instrument to Support regression flight testing. Plan and initiate ANIALQ-99 and NGJ regression flight testing. Instrument to Securify of the Securification of Instrument to Securification, EA-18G Airborne Electronic Attack systems ground and flight test. Finalize NGJ Mission Systems Test Planning for installed system performance characterization that includes System Performance Specification verification, EA-18G Airborne Electronic Attack systems integration, regression interoperability, software integration and functionality, Echicique generation and management, Crew Vehicle Interface, are interest workload, safety, mission planning, cybersecurity, reliability, maintainability, ground support equipment, and environmental qualifications.  FY 2018 OCO Plans:  N/A  Title: Next Generation Jammer Increment 1 Support & Management Services  Articles:  FY 2018 Accomplishments:  Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 Base Plans:  Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 Base Plans:	,,,,						
test reports. Plan, conduct and report Ram Air Turbine Generator (RATG) performance testing and NGJ pod static loads testing. Complete Regression Ground Vibration Testing (RGVT) analysis and initiate regression flights on flutter instrumented aircraft. Plan, conduct and report on Ground Vibration Testing (GVT) on flutter instrumented aircraft. Calibrate sensors for stores load testing. Instrument an F/A-18E for flying qualities and stability and control testing. Plan and initiate captive carriage flight test for weapons separation testing. Modify and instrument EA-1 and EA-2 for Next Generation Jammer to support regression flight testing. Plan and initiate AN/ALQ-99 and NGJ regression flight testing. Instrument two EA-18G aircraft to support mission systems ground and flight test. Finalize NGJ Mission Systems Test Planning for installed system performance characterization that includes System Performance Specification verification, EA-18C Airborne Electronic Attack systems integration, regression interoperability, software integration and functionality. Electromagnetic Environmental Effects, assignment control, frequency and spatial coverage, beam capacity, beam switching, beam stabilization, Effective Isotropic Radiated Power, antenna patterns, receive functionality, technique generation and management, Crew Vehicle Interface, aircrew workload, safety, mission planning, cybersecurity, reliability, maintainability, ground support equipment, and environmental qualifications.  FY 2018 OCO Plans:  N/A  Title: Next Generation Jammer Increment 1 Support & Management Services  Articles:  FY 2016 Accomplishments:  Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 Base Plans:  Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 Base Plans:  Provide Support and Management Services associated with the Next Generation Jammer Program.	B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in	n Each)	FY 2016	FY 2017			FY 2018 Total
Title: Next Generation Jammer Increment 1 Support & Management Services  Articles:  FY 2016 Accomplishments: Provided Support and Management Services associated with the Next Generation Jammer Program.  FY 2017 Plans: Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 Base Plans: Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 OCO Plans: N/A	test reports. Plan, conduct and report Ram Air Turbine Generator (RATG) perf static loads testing. Complete Regression Ground Vibration Testing (RGVT) at flights on flutter instrumented aircraft. Plan, conduct and report on Ground Vibration Testing. Instrument an Figure 1. Instrument an Figure 2. Instrument an Figure 3. Instrument an Figure 3. Instrument an Figure 3. Instrument and Figure 3. Instrument and Figure 3. Instrument and Figure 3. Instrument EA-1 Jammer to support regression flight testing. Plan and initiate AN/ALQ-99 and North 1. Instrument two EA-18G aircraft to support mission systems ground and flight test Planning for installed system performance characterization that includes Severification, EA-18G Airborne Electronic Attack systems integration, regression integration and functionality, Electromagnetic Environmental Effects, assignment coverage, beam capacity, beam switching, beam stabilization, Effective Isotrop patterns, receive functionality, technique generation and management, Crew V safety, mission planning, cybersecurity, reliability, maintainability, ground supposed 3.	formance testing and NGJ pode nalysis and initiate regression ration Testing (GVT) on flutter F/A-18E to support store loads and Plan and initiate captive and EA-2 for Next Generation Plan and France NGJ Mission Systems Performance Specification interoperability, software and control, frequency and spatial pic Radiated Power, antennal ethicle Interface, aircrew workload,					
FY 2016 Accomplishments: Provided Support and Management Services associated with the Next Generation Jammer Program.  FY 2017 Plans: Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 Base Plans: Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 OCO Plans: N/A							
Provided Support and Management Services associated with the Next Generation Jammer Program.  FY 2017 Plans: Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 Base Plans: Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 OCO Plans: N/A	Title: Next Generation Jammer Increment 1 Support & Management Services	Articles:	3.727	4.286	4.152	0.000	4.152 -
Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 Base Plans: Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 OCO Plans: N/A	<u> </u>	tion Jammer Program.					
Provide Support and Management Services associated with the Next Generation Jammer Program.  FY 2018 OCO Plans: N/A		on Jammer Program.					
N/A		on Jammer Program.					
Accomplishments/Planned Programs Subtotals 376.548 577.822 632.936 0.000 632							
P	Accomplishmen	nts/Planned Programs Subtotals	376.548	577.822	632.936	0.000	632.936

PE 0604274N: Next Generation Jammer (NGJ) Navy UNCLASSIFIED
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Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		<b>Date:</b> May 2017
Appropriation/Budget Activity	R-1 Program Element (Number/Name	,   , , , , , , , , , , , , , , , , , ,
1319 / 5	PE 0604274N I Next Generation Jamme (NGJ)	er 0557 I Next Generation Jammer
C. Other Program Funding Summary (\$ in Millions)		

_		-	FY 2018	FY 2018	FY 2018					<b>Cost To</b>	
Line Item	FY 2016	FY 2017	Base	OCO	<u>Total</u>	FY 2019	FY 2020	FY 2021	FY 2022	Complete	<b>Total Cost</b>
<ul> <li>APN/0591: Next</li> </ul>	0.000	0.000	0.000	-	0.000	153.071	342.950	456.970	524.218	3,328.046	4,805.255
Generation Jammer											
<ul> <li>APN/0605: Spares</li> </ul>	0.000	0.000	0.000	-	0.000	27.543	27.811	28.048	0.000	0.000	83.402
and Renair Parts											

#### Remarks

### **D. Acquisition Strategy**

Next Generation Jammer is designated an Acquisition Category 1D Major Defense Acquisition Program (MDAP), MDAP program number 445. The activity will focus on Engineering and Manufacturing Development (EMD) phase completing the design of the pod and building fifteen (15) Engineering Development Model (EDM) pods for developmental test. The EMD phase will complete with an operational assessment followed by a Milestone C decision and Low Rate Initial Production (LRIP).

### **E. Performance Metrics**

The Engineering and Manufacturing Development (EMD) phase completes the pod design which culminates with the system Critical Design Review (CDR) 3rd Qtr. FY 2017. First flight of an aeromechanical developmental test shape is scheduled for 4th Qtr. FY 2018.

PE 0604274N: Next Generation Jammer (NGJ)

Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy

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

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PE 0604274N I Next Generation Jammer (NGJ)

**Project (Number/Name)** 0557 *I Next Generation Jammer* 

Product Developmen	t (\$ in M	illions)		FY 2	2016	FY 2	2017	FY 2018 Base			FY 2018 FY 20 OCO Tota				
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	Total Cost	Target Value of Contract
Primary Hardware Development - Technology Development	C/CPIF	Raytheon : El Segundo, CA	274.357	30.932	Oct 2015	0.000		0.000		-		0.000	0.000	305.289	305.289
Primary Hardware Development - Engineering and Manufacturing Development	C/CPIF	Raytheon : El Segundo, CA	0.000	178.602	Apr 2016	383.585	Oct 2016	364.311	Oct 2017	-		364.311	527.047	1,453.545	1,453.545
Aircraft Integration	SS/CPIF	Boeing : St. Louis, MO	21.912	6.722	Dec 2015	0.000		0.000		-		0.000	0.000	28.634	28.634
Aircraft Integration - EMD	C/CPIF	Boeing : St. Louis, MO	0.000	7.191	Jun 2016	29.193	Dec 2016	41.223	Dec 2017	-		41.223	72.262	149.869	149.869
Aircraft Integration - FCNS	SS/FFP	Harris : Palm Bay, FL	6.099	4.255	Jul 2016	0.000		0.000		-		0.000	0.000	10.354	10.354
Software /Aircraft Integration	WR	NAWCWD : China Lake, CA	15.707	5.932	Nov 2015	7.821	Nov 2016	7.477	Nov 2017	-		7.477	22.599	59.536	-
Software Integration - Systems Integration Lab	Various	NAVSUP : Philadelphia, PA	2.738	32.598	Feb 2016	0.000		0.000		-		0.000	0.000	35.336	35.336
Software Integration- Systems Integration Lab	SS/FFP	Northrop Grumman : Bethpage. NY	29.849	0.000		0.000		1.955	Feb 2018	-		1.955	2.990	34.794	34.794
Software Integration - SOR	C/CPIF	Boeing : St. Louis, MO	24.164	1.535	Mar 2016	1.130	Dec 2016	1.157	Oct 2017	-		1.157	0.795	28.781	28.781
Software Integration - Blk Update	WR	NAWCWD : Pt. Mugu, CA	18.481	11.927	Nov 2015	13.354	Nov 2016	13.772	Nov 2017	-		13.772	31.763	89.297	-
Software integration H-16	C/CPIF	Boeing : St Louis, MO	0.000	10.524	Oct 2015	27.500	Dec 2016	41.226	Oct 2017	-		41.226	14.440	93.690	93.690
Software Integration H-16	SS/FFP	Northrup Grumman : Bethpage, NY	0.000	6.706	Dec 2015	12.555	Dec 2016	15.976	Dec 2017	-		15.976	24.460	59.697	59.697
Software Integration H-16	WR	NAWCWD : China Lake	0.000	0.286	Nov 2015	1.516	Nov 2016	0.870	Nov 2017	-		0.870	1.332	4.004	-
Systems Engineering Trainer	Various	TBD : TBD	0.000	0.000		0.000		3.466	Nov 2017	-		3.466	3.543	7.009	-
Systems Engineering	WR	NAWCAD : Patuxent River, MD	80.893	19.779	Nov 2015	21.238	Nov 2016	20.668	Nov 2017	-		20.668	20.986	163.564	-

PE 0604274N: Next Generation Jammer (NGJ) Navy UNCLASSIFIED
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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy

R-1 Program Element (Number/Name)

Project (Number/Name)

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Appropriation/Budget Activity

PE 0604274N / Next Generation Jammer (NGJ)

0557 I Next Generation Jammer

**Date:** May 2017

Product Developme	nt (\$ in M	illions)		FY 2	2016	FY 2	FY 2018 FY 2017 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
Systems Engineering	WR	NAWCWD : Pt. Mugu, CA	37.924	9.079	Nov 2015	9.615	Nov 2016	8.681	Nov 2017	-		8.681	20.220	85.519	-
Systems Engineering	WR	NSWC Crane : Crane, IN	28.412	3.692	Nov 2015	4.258	Nov 2016	3.842	Nov 2017	-		3.842	5.742	45.946	-
Systems Engineering	WR	NSWC Dahlgren : Dahlgren, VA	3.984	0.167	Nov 2015	0.102	Nov 2016	0.104	Nov 2017	-		0.104	0.325	4.682	-
Systems Engineering	SS/CPFF	Johns Hopkins University Applied Physics Lab : Laurel, MD	27.958	11.109	Nov 2015	9.833	Feb 2017	10.030	Feb 2018	-		10.030	28.737	87.667	87.667
Systems Engineering	WR	Naval Research Laboratory : Washington, DC	3.940	0.686	Nov 2015	0.642	Nov 2016	0.655	Nov 2017	-		0.655	1.412	7.335	-
Systems Engineering	Various	Various : Various	9.554	0.500	Nov 2015	0.015	Nov 2016	0.015	Nov 2017	-		0.015	0.048	10.132	-
Systems Engineering	SS/FFP	NSMA : Arlington, VA	0.000	1.286	Feb 2016	2.896	Apr 2017	6.626	Feb 2018	-		6.626	10.245	21.053	21.053
Prior Year Prod Dev no longer funded in FYDP	Various	Various : Various	261.711	0.000		0.000		0.000		-		0.000	0.000	261.711	-
		Subtotal	847.683	343.508		525.253		542.054		-		542.054	788.946	3,047.444	-

#### Remarks

Engineering Manufacturing Development (EMD) Aircraft Integration award and increase from FY 2017 to FY 2018 due to phasing of Aircraft Integration efforts.

Support (\$ in Million	ns)			FY 2	2016	FY 2	2017	FY 2 Ba	2018 ise		2018 CO	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
Eng & Tech Srvc (Non FFRDC)	Various	Various : Various	30.460	3.541	Dec 2015	4.006	Dec 2016	3.866	Dec 2017	-		3.866	4.531	46.404	46.404
		Subtotal	30.460	3.541		4.006		3.866		-		3.866	4.531	46.404	46.404

PE 0604274N: Next Generation Jammer (NGJ)

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy

R-1 Program Element (Number/Name)

Project (Number/Name)

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Appropriation/Budget Activity

PE 0604274N / Next Generation Jammer (NGJ)

0557 I Next Generation Jammer

**Date:** May 2017

Test and Evaluation	(\$ in Milli	ons)		FY 2	2016	FY 2	2017		2018 ise		2018 CO	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 T & E	WR	NAWCAD : Patuxent River, MD	0.000	21.563	Nov 2015	27.899	Nov 2016	53.833	Nov 2017	-		53.833	233.396	336.691	-
Development T & E Flight Instrumentation	C/IDIQ	Teletronics : Newton, PA	0.000	2.620	Jul 2016	0.000		0.000		-		0.000	0.000	2.620	2.620
Development T & E Flight	SS/FFP	NSMA : Arlington, VA	0.000	2.943	Jul 2016	0.000		0.000		-		0.000	0.000	2.943	2.943
Development T & E	Various	Boeing : St Louis, MO	0.000	2.187	Mar 2016	13.720	Dec 2016	21.714	Oct 2017	-		21.714	33.800	71.421	71.421
Development T & E	Various	Boeing : St Louis MO	0.000	0.000		0.000		9.850	Dec 2017	-		9.850	27.564	37.414	37.414
Development T & E - Wind Tunnel	WR	Various : AEDC	2.413	0.000		3.860	Nov 2016	0.000		-		0.000	0.000	6.273	-
Development T & E - Wind Tunnel	WR	Various : NASA AMES	0.000	0.000		2.804	Jan 2017	0.000		-		0.000	0.000	2.804	-
Test OT	Various	Various : Various	0.000	0.000		0.000		1.333	Mar 2018	-		1.333	21.064	22.397	-
Prior year T&E no longer funded in the FYDP	Various	Various : Various	0.558	0.000		0.000		0.000		-		0.000	0.000	0.558	-
		Subtotal	2.971	29.313		48.283		86.730		-		86.730	315.824	483.121	-

#### Remarks

Engineering Manufacturing Development (EMD) award ramp up from FY 2017 to FY 2018 start of Integrated Testing.

Management Service	s (\$ in M	illions)		FY 2	2016	FY 2	2017	FY 2 Ba		FY 2		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
Travel	WR	Various : Various	0.598	0.186	Oct 2015	0.280	Oct 2016	0.286	Oct 2017	-		0.286	0.892	2.242	-
Prior years Mgmt Svcs no longer funded in the FYDP	WR	Various : Various	0.007	0.000		0.000		0.000		-		0.000	0.000	0.007	-
		Subtotal	0.605	0.186		0.280		0.286		-		0.286	0.892	2.249	-

PE 0604274N: Next Generation Jammer (NGJ) Navy

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.018 Navy	/							Date:	May 201	7	
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Prior Years	FY 2016	FY 2	017			1		FY 2018 Total	Cost To	Total Cost	Target Value of Contract
881.719	376.548	577.822		632.936		-		632.936	1,110.193	3,579.218	-
,											
	Prior Years	O18 Navy  Prior Years  FY 2016	018 Navy  R-1 Pro PE 0604 (NGJ)  Prior Years FY 2016 FY 2	018 Navy    R-1 Program E	R-1 Program Element (N   PE 0604274N / Next Gene (NGJ)   Prior   FY 2016   FY 2017   Ba	R-1 Program Element (Number/N   PE 0604274N / Next Generation J (NGJ)	R-1 Program Element (Number/Name)   PE 0604274N   Next Generation Jammer (NGJ)   Prior	R-1 Program Element (Number/Name)   Project	R-1 Program Element (Number/Name)   Project (Number   PE 0604274N   Next Generation Jammer (NGJ)   Prior   FY 2018   FY 2018   FY 2018   FY 2018   FY 2018   Total	R-1 Program Element (Number/Name)   Project (Number/Name)   PE 0604274N / Next Generation Jammer (NGJ)   Prior   FY 2018   FY 2018   FY 2018   FY 2018   Cost To Years   FY 2016   FY 2017   Base   OCO   Total   Complete	Prior Years FY 2016 FY 2017  R-1 Program Element (Number/Name) Project (Number/Name) 0557 / Next Generation Jammer 0557 / Next Generation Jammer FY 2018 FY 2018 FY 2018 Cost To Total Complete Cost

xhibit R-4, RDT&E Schedule Prof	ile: FY	2018	Navy											<b></b>		/A1		(5.1				<b></b>			: May		7	
ppropriation/Budget Activity 319 / 5										PE						(Nu Gener						<b>Project</b> 1557 <i>I I</i>					mme	er
Next Generation Jammer (Increment 1)		FY 20	16			FY 2	017			FY 2	2018	.		FY	2019	•		FY 2	020	,		FY 2	021		,	FY 2	022	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Acquisition Milestones																												
Milestones			MS B ▲													MS C ▲								IOC	FRP DR			
Systems Development						$\dashv$	1							$\neg$														
Hardware Development	Ted Develo	ch pment						Е	ngin	eeri	ng 8	Ма	nufa	ctur	ing [	Devel	opm	ent										
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													ED	M D	elive	eries (	(Qty	15)										
Software Development				_							н	Build	d Int	egra	ition							<u> </u>	_	_				
Test & Evaluation														$\Box$														
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PE 0604274N: *Next Generation Jammer (NGJ)* Navy

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xhibit R-4, RDT&E Schedule Prof	file: F	Y.	2018 N	lavy																		D	ate:	May	2017	7
Appropriation/Budget Activity 319 / 5										F					t (Num Genera						oject (I 57 / Ne					mmer
Next Generation Jammer (Increment 1) (cont)		FY	2016		F	Y 20	017		FY 20	018	в		FY	2019			FY 20	020			FY 202	21		F	<b>Y</b> 20:	22
	1Q	2Q	3Q	4Q	1Q2	Q 3	Q 4	Q 1Q	2Q 3	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q 1	20	30	4Q
Engineering Milestones Reviews	PDF			IBR		CI	DR		AERO TRR	ļ	AERO FRR	MS TRR	MS FRR													
													PRR	SVR ■												
Production Milestones	ļ	П		İ	П	1	Ţ	Ţ		Ţ					ĺ	İ	İ	İ				П	Ţ	<u> </u>	ij-	İ
Contract Awards			E&MD Award •										SDTA (4) RDTE		LRIP 1 (3) APN-5		LRIP 2 (8) APN-5				LRIP 3 (12) APN-5			FRE 1 (14 APN	1)	
Deliveries	╁	П		<del>                                     </del>	计	╁	十	╁	<del>                                     </del>	┪		-		<del> </del>	<u> </u>	┪		i	H			H	十	<del>                                     </del>	┪╴	<del>                                     </del>
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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Navy		Date: May 2017
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# Schedule Details

	Sta	art	Er	nd
Events by Sub Project	Quarter	Year	Quarter	Year
Next Generation Jammer (Increment 1)				
Acquisition Milestones: Milestone B	3	2016	3	2016
Acquisition Milestones: Milestone C	4	2019	4	2019
Acquisition Milestones: Milestones: Initital Operational Capability	4	2021	4	2021
Acquisition Milestones: Milestones: Full Rate Production Decision Review	1	2022	1	2022
Systems Development: Hardware Development: Technology Development	1	2016	2	2016
Systems Development: Hardware Development: Engineering & Manufacturing Development	3	2016	3	2021
Systems Development: Hardware Development: Engineering Development Model Deliveries	1	2019	2	2020
Systems Development: Software Development: H Build Integration	2	2016	4	2021
Test & Evaluation: Technical Evaluation: Milestone B Test & Evaluation Master Plan	3	2016	3	2016
Test & Evaluation: Technical Evaluation: Integrated Testing	2	2017	1	2021
Test & Evaluation: Operational Evaluation: Early Operational Assessment	1	2016	1	2016
Test & Evaluation: Operational Evaluation: Operational Assessment	3	2019	3	2019
Test & Evaluation: Operational Evaluation: Operational Test Readiness Review	2	2021	2	2021
Test & Evaluation: Operational Evaluation: Intial Operational Test & Evaluation	2	2021	3	2021
Next Generation Jammer (Increment 1) (cont)				
Engineering Milestones: Reviews: Preliminary Design Review	1	2016	1	2016
Engineering Milestones: Reviews: Integrated Baseline Review	4	2016	4	2016
Engineering Milestones: Reviews: Critical Design Review	3	2017	3	2017
Engineering Milestones: Reviews: AERO Test Readiness Review	2	2018	2	2018
Engineering Milestones: Reviews: AERO Flight Readiness Review	4	2018	4	2018

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604274N / Next Generation Jammer (NGJ)	- , (	umber/Name) tt Generation Jammer

	Sta	art	Er	nd
Events by Sub Project	Quarter	Year	Quarter	Year
Engineering Milestones: Reviews: MS Test Readiness Review	1	2019	1	2019
Engineering Milestones: Reviews: MS Flight Readiness Review	2	2019	2	2019
Engineering Milestones: Reviews: Production Readiness Review	2	2019	2	2019
Engineering Milestones: Reviews: System Verification Review	3	2019	3	2019
Production Milestones: Contract Awards: Engineering & Manufacturing Development Contract Award	3	2016	3	2016
Production Milestones: Contract Awards: System Demonstration Test Article RDTEN Contract Award	2	2019	2	2019
Production Milestones: Contract Awards: Low Rate Initial Production 1 APN-5 Contract Award	4	2019	4	2019
Production Milestones: Contract Awards: Low Rate Initial Production 2 APN-5 Contract Award	2	2020	2	2020
Production Milestones: Contract Awards: Low Rate Initial Production 3 APN-5 Contract Award	2	2021	2	2021
Production Milestones: Contract Awards: Full Rate Production 1 APN-5 Contract Award	2	2022	2	2022
Deliveries: System Demonstration Test Article RDTEN Deliveries	3	2020	1	2021
Deliveries: LRIP 1 Deliveries	2	2021	4	2021
Deliveries: LRIP 2 Deliveries	4	2021	4	2022
Deliveries: LRIP 3 Deliveries	4	2022	4	2022