

# UNCLASSIFIED

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 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0604272N I Tact Air Dir Infrared CM (TADIRCM)							
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	31.940	59.753	52.554	47.278	-	47.278	48.907	51.979	35.605	36.409	Continuing	Continuing
3304: CIRCM	31.940	59.753	5.965	0.000	-	0.000	0.000	0.000	0.000	0.000	223.938	321.596
3348: DAIRCM Development	0.000	0.000	46.589	47.278	-	47.278	48.907	51.979	35.605	36.409	Continuing	Continuing

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

This element includes development of electronic warfare systems for the United States Navy (USN) and United States Marine Corps (USMC) assault aircraft. This includes the development and testing of advanced infrared countermeasures systems for emerging threats and emergency contingencies for Aircraft Survivability Equipment (ASE) suite integration.

FY 2017 Research Development Test and Evaluation (RDT&E) funding is required for a federated Distributed Aperture Infrared Countermeasure (DAIRCM) system in support of Joint Urgent Operational Need Statement (JUONS) S0-0010. Funding covers developmental activities in hardware and software to reduce the size, weight, and power required to achieve a threat (missile, LASER and Hostile Fire) warning detection and defeat system compatible with mission planning information that stores sensor data for post mission threat analysis.

FY 2018 RDT&E overseas contingency operations (OCO) funding is required to finalize testing in support of fielding the federated DAIRCM JUONS system. In addition, DAIRCM Program of Record risk reduction efforts will be funded.

FY 2019 RDT&E funding required for an integrated (under glass) DAIRCM solution on AH-1Z, UH-1Y and MH-60S/R platforms via an Engineering Change Proposal (ECP). Program of Record will eventually support integration and retrofit of 300 USMC and 397 USN aircraft.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES because it includes all efforts necessary to evaluate integrated technologies, representative models or prototype systems in a high fidelity and realistic operating environment.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy				Date: February 2018	
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM)			
B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	34.920	46.844	47.991	-	47.991
Current President's Budget	59.753	52.554	47.278	-	47.278
Total Adjustments	24.833	5.710	-0.713	-	-0.713
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-3.265	0.000			
• SBIR/STTR Transfer	-1.892	0.000			
• Program Adjustments	37.990	5.710	0.000	-	0.000
• Rate/Misc Adjustments	0.000	0.000	-0.713	-	-0.713
• Congressional Directed Reductions Adjustments	-8.000	-	-	-	-
Change Summary Explanation					
The JUONS schedule slid right due to hardware (HW) Electromagnetic Interference (EMI) exceedances found during early testing. The exceedances drove HW modifications that delayed the schedule but identified issues early enough to minimize the impact. The schedule has also been driven by platform integration issues associated with multiple Enhanced GPS/INS units and software transferring/timing issues from older, slower processing chips to more advanced chipsets.					
-JUONS Fielding changed ending quarter from 3 Qtr 2018 to 2 Qtr 2019					
-JUONS A Kit Development added					
-JUONS A Kit Installation Test Aircraft changed end date from 4Q17 to 3Q18					
-JUONS TRR changed from 4Q17 to 1Q19					
-JUONS Fleet Feedback Software Load changed from 1Q19-2Q19 to 3Q19-4Q23					
-JUONS Live Fire Test 1 changed from 1Q17 to 4Q18					
-JUONS Integrated Test 1 changed from 4Q17 to 3Q18					
-JUONS Integrated Test 2 changed from 1Q18 to 4Q18					
-JUONS Live Fire Test 2 changed from 2Q18 to 1Q19					
-JUONS Quick Reaction Assessment changed from 2Q18 to 1Q19					
-JUONS Test Assets Deliveries added					
DAIRCM slid right due to delayed approval of Program of Record.					

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2019 Navy		<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 Program Element (Number/Name)</b> PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i>
<ul style="list-style-type: none"> <li>-DAIRCM SRR changed from 3Q17 to 3Q19</li> <li>-DAIRCM SFR Added</li> <li>-DAIRCM PDR changed from 3Q18 to 1Q20</li> <li>-DAIRCM CDR from 1Q19 to 3Q20</li> <li>-DAIRCM Software Qualification Test from 1Q19 to 4Q21</li> <li>-DAIRCM B-Kit Integration end date extended from 2nd Qtr 2019 to 2nd Qtr 2021</li> <li>-DAIRCM TRR changed from 2Q19 to 1Q21</li> <li>-DAIRCM Integrated Test &amp; Evaluation changed from 3Q19 - 1Q22 to 1Q22 - 2Q22</li> <li>-DAIRCM Live Fire Test 3-5 removed</li> <li>-DAIRCM Operation Assessment Added</li> <li>-DAIRCM ECP Contract Award changed from 2nd Qtr 2018 to 3rd Qtr 2019</li> <li>-DAIRCM SW Val/Ver changed from 1Q19 to 4Q21</li> </ul> <p>The FY 2019 funding request was reduced by \$0.449M 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.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy										Date: February 2018		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM)				Project (Number/Name) 3304 / CIRCM			
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
3304: CIRCM	31.940	59.753	5.965	0.000	-	0.000	0.000	0.000	0.000	0.000	223.938	321.596
Quantity of RDT&E Articles		5	-	-	-	-	-	-	-	-		
Note Cost to Complete should be ZERO. Total Cost should be 97.658. CIRCM Funds for FY19 through FY23 are realigned to DAIRCM PU 3348.												
A. Mission Description and Budget Item Justification Common Infrared Countermeasures (CIRCM) was a new start for the Navy in FY 2013. This project includes the development, integration, and testing of a laser-based directed infrared countermeasure system for United States Navy and United States Marine Corps assault aircraft. This infrared countermeasure, when integrated with a threat warning detection system, will be capable of countering current and emerging infrared threats. An Under Secretary of Defense for Acquisition, Technology and Logistics (USD (AT&L)) Acquisition Decision Memorandum (ADM) dated 15 April 2009 designated the Army as the lead service for developing this capability for rotary-wing, tilt-rotor, and small fixed-wing aircraft across the Department of Defense. It also designated the program as an Acquisition Category (ACAT) ID special interest program. The Army has designated the acquisition effort for this capability as the CIRCM program. CIRCM is being evaluated as a potential replacement for Guardian Laser Tracker Assemblies (GLTA) on the DoN LAIRCM system.  Distributed Aperture Infrared Countermeasure (DAIRCM) developmental activities in hardware and software are being pursued to reduce the size, weight and power required to achieve a threat warning detection system integrated with an infrared countermeasure. DAIRCM development, integration and testing will first be conducted in a federated configuration to support Joint Urgent Operational Need Statement (JUONS) SO-0010 with follow-on work beginning in FY 2018 to provide an integrated (under glass) solution to host platforms. This program develops integrated hardware/software solutions that link on-board integrated Aircraft Survivability Equipment (iASE) that are compatible with mission planning information and store sensor data for post mission threat analysis. This project also adopts future multi-band, networking capabilities to facilitate real-time transfer of threat information, and off-board queuing and control of onboard sensors. CIRCM Funds for FY19 through FY23 are realigned to DAIRCM PU 3348.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: CIRCM Technology Development (TD)  Articles:								59.753	5.965	0.000	0.000	0.000
								5	-	-	-	-
FY 2018 Plans: Continuation of EMD contract and GLTA replacement evaluation study.												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Navy				<b>Date:</b> February 2018		
<b>Appropriation/Budget Activity</b> 1319 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i>		<b>Project (Number/Name)</b> 3304 / <i>CIRCM</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
Continuation of EMD contract.						
<b><i>FY 2019 Base Plans:</i></b> CIRCM efforts realigned to support DAIRCM PU 3348.						
<b><i>FY 2019 OCO Plans:</i></b> N/A						
<b><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i></b> CIRCM Funds decreased due to realignment to DAIRCM PU 3348.						
<b>Accomplishments/Planned Programs Subtotals</b>		59.753	5.965	0.000	0.000	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b> <p>Common Infrared Countermeasures (CIRCM) was a new start for the Navy in FY 2013. CIRCM is an Acquisition Category (ACAT) ID Army lead acquisition program for the development, integration and production of an infrared countermeasure for US Army, US Navy, and US Marine Corps assault aircraft. The Army conducted a 21 month competitive prototyping Technology Development (TD) phase with two contractors. During the TD phase, the contractors developed TD test articles for various test events with emphasis placed on reliability. Contractors concurrently developed preliminary designs for the CIRCM system, conducted systems requirements review, system functional review, and preliminary design review systems engineering technical review events at appropriate times in the schedule. Upon completion of the TD phase, the Army conducted a competition for award of Engineering Manufacturing Development (EMD) contract(s). The EMD phase will be no more than 26 months and will include critical design reviews, test readiness reviews, procurement of 5 EMD test articles in FY 2017 for USN evaluation.</p> <p>The federated DAIRCM system was chosen as the material solution to JUONS SO-0010 and funded via Rapid Acquisition Authority (RAA) with follow-on funding supplied via FY 2017 and FY 2018 Overseas Contingency Operations funding to complete the development, integration and test to support initial fielding in FY 2019. Department of Navy is in the process of developing a Capability Production Document (CPD) to support the transition to an integrated (under glass) solution. Development of the integrated DAIRCM solution will begin in FY 2018.</p> <p>FY2017: Procured 5 CIRCM test assets</p>						

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i>	<b>Project (Number/Name)</b> 3304 / <i>CIRCM</i>
FY2018: Guardian Laser Tracker Assemblies(GLTA) Replacement evaluation		
<b>E. Performance Metrics</b> FY2017: Procured EMD Test assets		
FY2018: Guardian Laser Tracker Assemblies(GLTA) Replacement evaluation		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy												Date: February 2018			
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM)				Project (Number/Name) 3304 / CIRCM					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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 Dev CIRCM	C/CPAF	NGC : Rolling Meadows	0.985	1.736	Apr 2017	5.250	Mar 2018	0.000		-		0.000	0.000	7.971	7.971
Sys Eng Govt CIRCM	WR	NAWC : Patuxent River, MD	6.025	7.832	Dec 2016	0.000		0.000		-		0.000	0.000	13.857	-
Contractor Eng Supt CIRCM	C/CPFF	Alair : Lorton, VA	2.602	2.500	Apr 2017	0.000		0.000		-		0.000	0.000	5.102	5.102
Primary HDW DEV CIRCM	C/CPIF	DRS : Dallas, TX	5.389	8.866	Dec 2016	0.000		0.000		-		0.000	0.000	14.255	14.255
Sys Eng Govt CIRCM	WR	NRL : Washington DC	3.535	1.300	Jan 2017	0.000		0.000		-		0.000	0.000	4.835	-
Sys Eng Gov CIRCM	WR	NUWC : Jacksonville, FL	0.586	1.168	Apr 2017	0.000		0.000		-		0.000	0.000	1.754	-
Primary HDW DEV CIRCM	WR	NRL : Washington DC	0.000	17.100	Aug 2017	0.000		0.000		-		0.000	0.000	17.100	-
Subtotal			19.122	40.502		5.250		0.000		-		0.000	0.000	64.874	N/A
Remarks															
FY 2017 overseas contingency operations funding is required for developmental activities in hardware and software to reduce the size, weight, and power required to achieve a missile warning detection system compatible with mission planning information that stores sensor data for post mission threat analysis. Although not included the budget controls \$162.9 million funding is encumbered in support of Joint Urgent Operational Needs Statement SO-0010, entitled "Federated Distributed Aperture Infrared Countermeasures (DAIRCM)" via Rapid Acquisition Authority ontract awarded March 2016.															
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Integrated Logistics CIRCM I	WR	NAWC AD : Patuxent River, MD	2.202	0.657	Dec 2016	0.000		0.000		-		0.000	0.000	2.859	-
Integrated Logistics CIRCM II	C/CPFF	Wyle Labs : Huntsville, AL	1.531	0.314	Mar 2017	0.000		0.000		-		0.000	0.000	1.845	1.845
SW Dev CIRCM	WR	NAWCWD : Pt. Mugu, CA	4.050	1.802	Dec 2016	0.000		0.000		-		0.000	0.000	5.852	-
Subtotal			7.783	2.773		0.000		0.000		-		0.000	0.000	10.556	N/A

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Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM)				Project (Number/Name) 3304 / CIRCM					
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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 & Eval CIRCM	C/CPFF	Eglin AF Base : Fort Walton Beach FL	0.480	4.182	Dec 2016	0.500	Oct 2017	0.000		-		0.000	0.000	5.162	5.162
Eng & Eval Govt CIRCM	WR	NAWC : Patuxent River, MD	1.641	3.947	Jan 2017	0.000		0.000		-		0.000	0.000	5.588	-
Eng & Eval Govt CIRCM	WR	COTF : VA	0.100	0.455	Jan 2017	0.000		0.000		-		0.000	0.000	0.555	-
Test Equipment	WR	NRL : Washington, DC	0.000	3.911	Aug 2017	0.000		0.000		-		0.000	0.000	3.911	-
Eng & Eval Govt CIRCM	WR	NAWC : China Lake	0.000	0.132	Aug 2017	0.000		0.000		-		0.000	0.000	0.132	-
Test Assets	WR	Threat Systems Mgt : Redstone AL	0.000	2.525	Jul 2017	0.000		0.000		-		0.000	0.000	2.525	-
Subtotal			2.221	15.152		0.500		0.000		-		0.000	0.000	17.873	N/A
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Contractor PM Supt CIRCM	C/CPFF	American Electronics : Patuxent River, MD	1.014	0.110	Dec 2016	0.000		0.000		-		0.000	0.000	1.124	1.124
Govt Eng Supt CIRCM	WR	NAWCWD : Pt. Mugu, CA	0.665	0.093	Dec 2016	0.215	Jul 2018	0.000		-		0.000	0.000	0.973	-
Travel CIRCM	WR	NAVAIR : Various	0.490	0.155	Dec 2016	0.000		0.000		-		0.000	0.000	0.645	-
Cost Analysis Supt CIRCM	WR	NAWCAD : Patuxent River, MD	0.645	0.597	Dec 2016	0.000		0.000		-		0.000	0.000	1.242	-
Contractor ILS Supt CIRCM	C/CPFF	NSI : Patuxent River, MD	0.000	0.174	Mar 2017	0.000		0.000		-		0.000	0.000	0.174	0.174
Contractor Eng Supt	C/CPFF	GEORGIA TECH APPLIED RESEARCH CORPO : Atlanta, Ga	0.000	0.197	Jun 2017	0.000		0.000		-		0.000	0.000	0.197	0.197
Subtotal			2.814	1.326		0.215		0.000		-		0.000	0.000	4.355	N/A



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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2019 Navy</b>										<b>Date:</b> February 2018			
<b>Appropriation/Budget Activity</b> 1319 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i>					<b>Project (Number/Name)</b> 3304 / <i>CIRCM</i>			
	<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	31.940	59.753		5.965		0.000		-		0.000	0.000	97.658	N/A
<b>Remarks</b>													

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy

Date: February 2018

Appropriation/Budget Activity

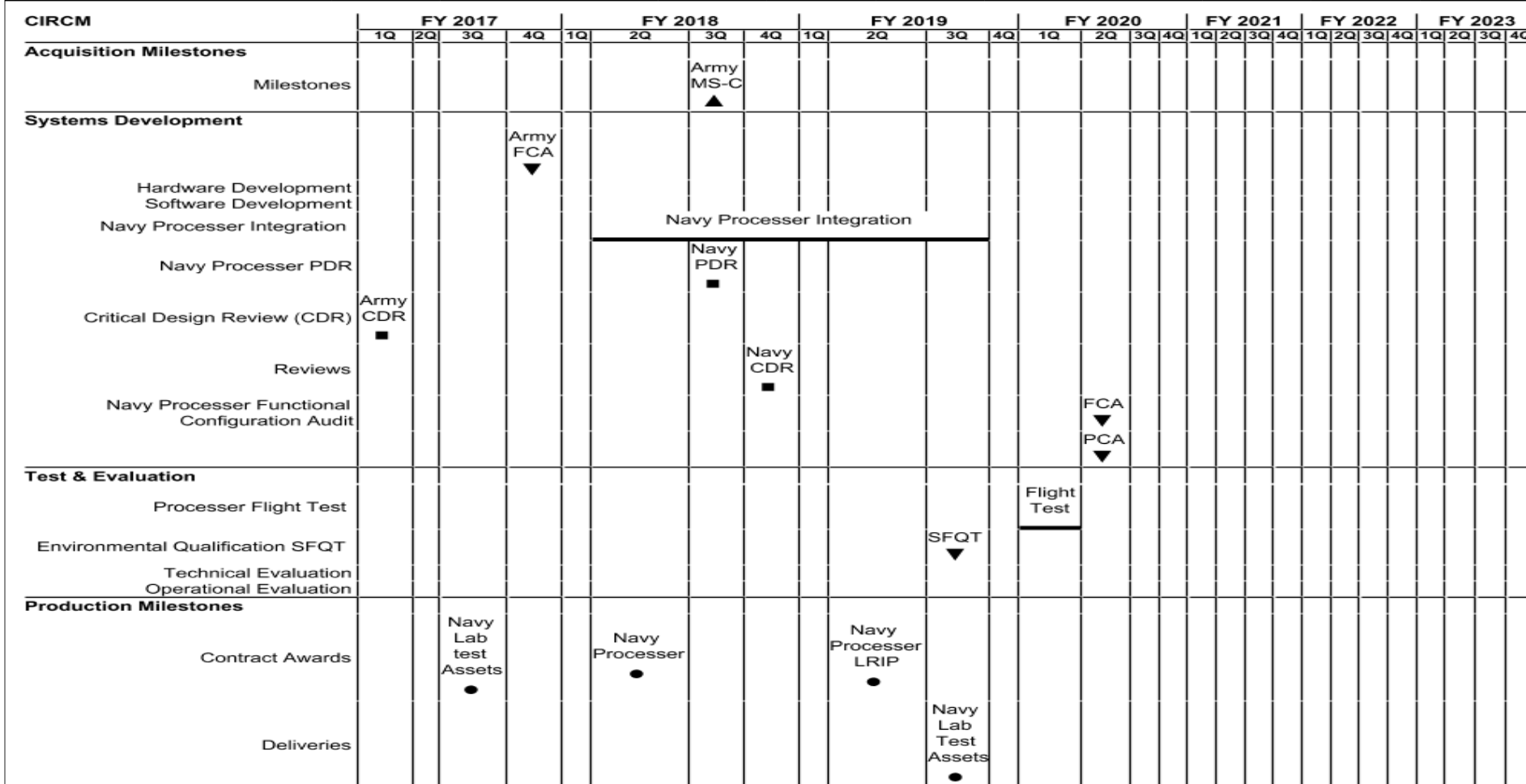
1319 / 4

R-1 Program Element (Number/Name)

PE 0604272N / Tact Air Dir Infrared CM  
(TADIRCM)

Project (Number/Name)

3304 / CIRCM



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM)	Project (Number/Name) 3304 / CIRCM
2019PB - 0604272N - 3304		

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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2019 Navy</b>			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i>	<b>Project (Number/Name)</b> 3304 / <i>CIRCM</i>	

**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><i>CIRCM</i></b>				
Acquisition Milestones: Milestones: Army Milestone C (MS-C)	3	2018	3	2018
Systems Development: Army Functional Configuration Audit (FCA)	4	2017	4	2017
Systems Development: Navy Processer Integration: Navy Processer	2	2018	3	2019
Systems Development: Navy Processer PDR: Navy Processer PDR	3	2018	3	2018
Systems Development: Critical Design Review (CDR): Army CDR	1	2017	1	2017
Systems Development: Reviews: Navy Processer CDR	4	2018	4	2018
Systems Development: Navy Processer Functional Configuration Audit: Functional Configuration Audit (FCA)	2	2020	2	2020
Systems Development: Navy Processer Functional Configuration Audit: Physical Configuration Audit (PCA)	2	2020	2	2020
Test & Evaluation: Processer Flight Test: Flight Test	1	2020	1	2020
Test & Evaluation: Environmental Qualification SFQT: Environmental Qualification SFQT	3	2019	3	2019
Test & Evaluation: Operational Evaluation: Schedule Detail	1	2017	1	2023
Test & Evaluation: Operational Evaluation: Navy Flight Test	1	2017	1	2023
Production Milestones: Contract Awards: Navy Lab test Assets	3	2017	3	2017
Production Milestones: Contract Awards: Navy Processer Contract	2	2018	2	2018
Production Milestones: Contract Awards: Navy Processer LRIP (Separate contract)	2	2019	2	2019
Production Milestones: Deliveries: NAVY Lab Assets Deliveries	3	2019	3	2019

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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
3348: DAIRCM Development	0.000	0.000	46.589	47.278	-	47.278	48.907	51.979	35.605	36.409	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Distributed Aperture Infrared Countermeasures (DAIRCM) Developmental activities in hardware and software are being pursued to reduce the size, weight and power required to achieve a threat warning detection system integrated with an infrared countermeasure. DAIRCM development, integration and testing will first be conducted in a federated configuration to support Joint Urgent Operational Needs Statement (JUONS) SO-0010 to provide increased survivability against Man-Portable Air Defense Systems (MANPADS), Rocket Propelled Grenades (RPG), hostile gunfire, Anti-Aircraft Artillery (AAA) and laser-directed weapons. Follow-on work begins in FY 2018 to provide an integrated (under glass) solution to the host platforms and will include development efforts to procure future threat technologies. This program develops integrated hardware/software solutions that link on-board integrated Aircraft Survivability Equipment (iASE) that are compatible with mission planning information and store sensor data for post mission threat analysis. This program also adopts future multi-band, networking capabilities to facilitate real-time transfer of threat information, and off-board queuing and control of onboard sensors.												
JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES because it includes all efforts necessary to evaluate integrated technologies, representative models or prototype systems in a high fidelity and realistic operating environment.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: DAIRCM Development  Articles:  FY 2018 Plans: Planning is beginning in FY 2018 to support Integrated DAIRCM efforts.  OCO: Planning is beginning in FY 2018 to support Integrated DAIRCM efforts.  FY 2019 Base Plans: Continuation of integrated DAIRCM efforts  FY 2019 OCO Plans: N/A  FY 2018 to FY 2019 Increase/Decrease Statement:								0.000	46.589	47.278	0.000	47.278
								-	-	-	-	-

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<b>Appropriation/Budget Activity</b> 1319 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i>		<b>Project (Number/Name)</b> 3348 / <i>DAIRCM Development</i>							
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>											
		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>					
Funds increased for continued DAIRCM efforts.											
<b>Accomplishments/Planned Programs Subtotals</b>		0.000	46.589	47.278	0.000	47.278					
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• APN/0576: <i>Assault DIRCM</i>	27.460	40.970	0.000	9.820	9.820	0.000	0.000	0.000	0.000	0.000	78.250
<b>Remarks</b>											
<b>D. Acquisition Strategy</b> The federated Distributed Aperture Infrared Countermeasures (DAIRCM) system is the solution for small/medium aircraft in response to Joint Urgent Operational Need Statement (JUONS) SO-0010. It was funded in FY16 via Rapid Acquisition Authority (RAA) executed from PUC 3304 CIRCM. Follow-on funding supplied via Overseas Contingency Operations in FY 2017 and FY 2019 APN OCO; FY 2018 RDT&E PUC 3348 . Funding provided to complete the development, integration and test to support initial fielding in FY19. Department of Navy is in the process of developing a Capability Production Document (CPD) to support the transition to an integrated (under glass) solution. Development, integration and test of the integrated solution will occur between FY 2018 and FY 2023.											
<b>E. Performance Metrics</b> FY 2018: Program of Record Risk Reduction Delivery Order on Navy BOA scheduled for 3Q18. FY 2019: Award of ECP to meet statutory regulations scheduled for 3Q19.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy												Date: February 2018			
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM)				Project (Number/Name) 3348 / DAIRCM Development					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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 HW Dev DAIRCM	C/CPFF	DRS : Dallas, TX	0.000	0.000		10.024	Mar 2018	11.790	Jan 2019	-		11.790	Continuing	Continuing	Continuing
Primalry HW Dev DAIRCM	C/CPFF	Daylight Solutions : San Diego, CA	0.000	0.000		3.194	Mar 2018	8.328	Jan 2019	-		8.328	Continuing	Continuing	Continuing
H-60 Operational Flight Program Dev	C/CPFF	Lockheed Martin : Owego, NY	0.000	0.000		9.420	Mar 2018	5.536	Jan 2019	-		5.536	Continuing	Continuing	Continuing
H-1 Operational Flight Program Deve	C/CPFF	Northrop Grumman : Woodland Hills, CA	0.000	0.000		5.943	Mar 2018	2.820	Jan 2019	-		2.820	Continuing	Continuing	Continuing
Govt Eng Support	WR	NAWCAD : Patuxent River, MD	0.000	0.000		2.500	Jan 2018	2.560	Jan 2019	-		2.560	Continuing	Continuing	Continuing
Govt Eng Support	WR	FRC : Jacksonville, FL	0.000	0.000		0.680	Jan 2018	0.700	Jan 2019	-		0.700	Continuing	Continuing	Continuing
Govt Software Eng Support	WR	NAWCAD : PT Mugu	0.000	0.000		2.000	Dec 2017	2.000	Jan 2019	-		2.000	Continuing	Continuing	Continuing
Govt Software Eng Support	WR	NRL : Washington, DC	0.000	0.000		3.807	Jan 2018	2.905	Jan 2019	-		2.905	Continuing	Continuing	Continuing
Govt Integrated Logistic Support	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.410	Jan 2018	0.500	Jan 2019	-		0.500	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		37.978		37.139		-		37.139	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Govt Integrated Logistic Support	WR	Fleet Readiness Center : Jacksonville, FL	0.000	0.000		0.350	Oct 2017	0.350	Dec 2018	-		0.350	Continuing	Continuing	Continuing
Contractor Logistic Support	SS/CPFF	RIAC : Ft Belvoir, VA	0.000	0.000		0.622	Oct 2017	0.622	Jan 2019	-		0.622	Continuing	Continuing	Continuing
ESOH support	WR	NAWC WD : China lake	0.000	0.000		0.128	Oct 2017	0.131	Jan 2019	-		0.131	Continuing	Continuing	Continuing
Material/Equipment	C/CPFF	CSS : ATK	0.000	0.000		0.325	Oct 2017	4.000	Oct 2018	-		4.000	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy												Date: February 2018			
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM)				Project (Number/Name) 3348 / DAIRCM Development					
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Integrated Logistic Support	C/CPAF	DTIC : Ft Belvoir, VA	0.000	0.000		0.213	Jan 2018	0.230	Jan 2019	-		0.230	Continuing	Continuing	Continuing
Commercial Transportation	TBD	Various : Various	0.000	0.000		0.050	Oct 2017	0.050	Oct 2018	-		0.050	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		1.688		5.383		-		5.383	Continuing	Continuing	N/A
Remarks ATK Material/Equipment contract increase due to SM-932 Upgrade.															
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Govt T&E Support	WR	NAWCAD : Patuxent River, MD	0.000	0.000		1.394	Oct 2017	0.210	Dec 2018	-		0.210	Continuing	Continuing	Continuing
Govt T&E Support	WR	NAWCWD : China Lake, CA	0.000	0.000		0.500	Feb 2018	0.250	Dec 2018	-		0.250	Continuing	Continuing	Continuing
Live Fire	WR	USA DPG : TBD	0.000	0.000		2.000	May 2018	0.571	Mar 2019	-		0.571	Continuing	Continuing	Continuing
Contractor T& E Support	TBD	GWEF : Eglin AFB, FL	0.000	0.000		0.500	Jul 2018	1.225	Feb 2019	-		1.225	Continuing	Continuing	Continuing
Govt T&E Support	WR	COTF : Norfolk, VA	0.000	0.000		0.210	Dec 2017	0.150	Jun 2019	-		0.150	Continuing	Continuing	Continuing
Govt T&E Support	WR	CRANE : CRANE	0.000	0.000		0.500	Jan 2018	0.525	Jun 2019	-		0.525	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		5.104		2.931		-		2.931	Continuing	Continuing	N/A
Remarks Contractor T& E Support to GWEF will increase due to 2 events in FY19.															
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Govt Eng Support	WR	NAWCWD : China Lake, CA	0.000	0.000		0.200	Oct 2017	0.200	Dec 2018	-		0.200	Continuing	Continuing	Continuing



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy												Date: February 2018			
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM)				Project (Number/Name) 3348 / DAIRCM Development					
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Amelex Contractor Mgmt Support	C/CPFF	Amelex : Patuxent River, MD	0.000	0.000		0.200	Nov 2017	0.200	Oct 2018	-		0.200	Continuing	Continuing	Continuing
Engility Contractor Eng Support	C/CPFF	Engility : Patuxent River, MD	0.000	0.000		0.200	Jun 2018	0.200	Oct 2018	-		0.200	Continuing	Continuing	Continuing
Travel DAIRCM	WR	NAVAIR Various : Patuxent River, MD	0.000	0.000		0.300	Dec 2017	0.300	Oct 2018	-		0.300	Continuing	Continuing	Continuing
Govt PM support	WR	NAWCWD : Patuxent River, MD	0.000	0.000		0.699	Dec 2017	0.705	Oct 2018	-		0.705	Continuing	Continuing	Continuing
Govt Eng Support	WR	NSWC : Dahlgren, VA	0.000	0.000		0.020	Jun 2018	0.020	Nov 2018	-		0.020	Continuing	Continuing	Continuing
Eng Support	C/CPFF	DCS : ALEXANDRIA, VA	0.000	0.000		0.200	Feb 2018	0.200	Jan 2019	-		0.200	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		1.819		1.825		-		1.825	Continuing	Continuing	N/A
			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			0.000	0.000		46.589		47.278		-		47.278	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy

Date: February 2018

Appropriation/Budget Activity

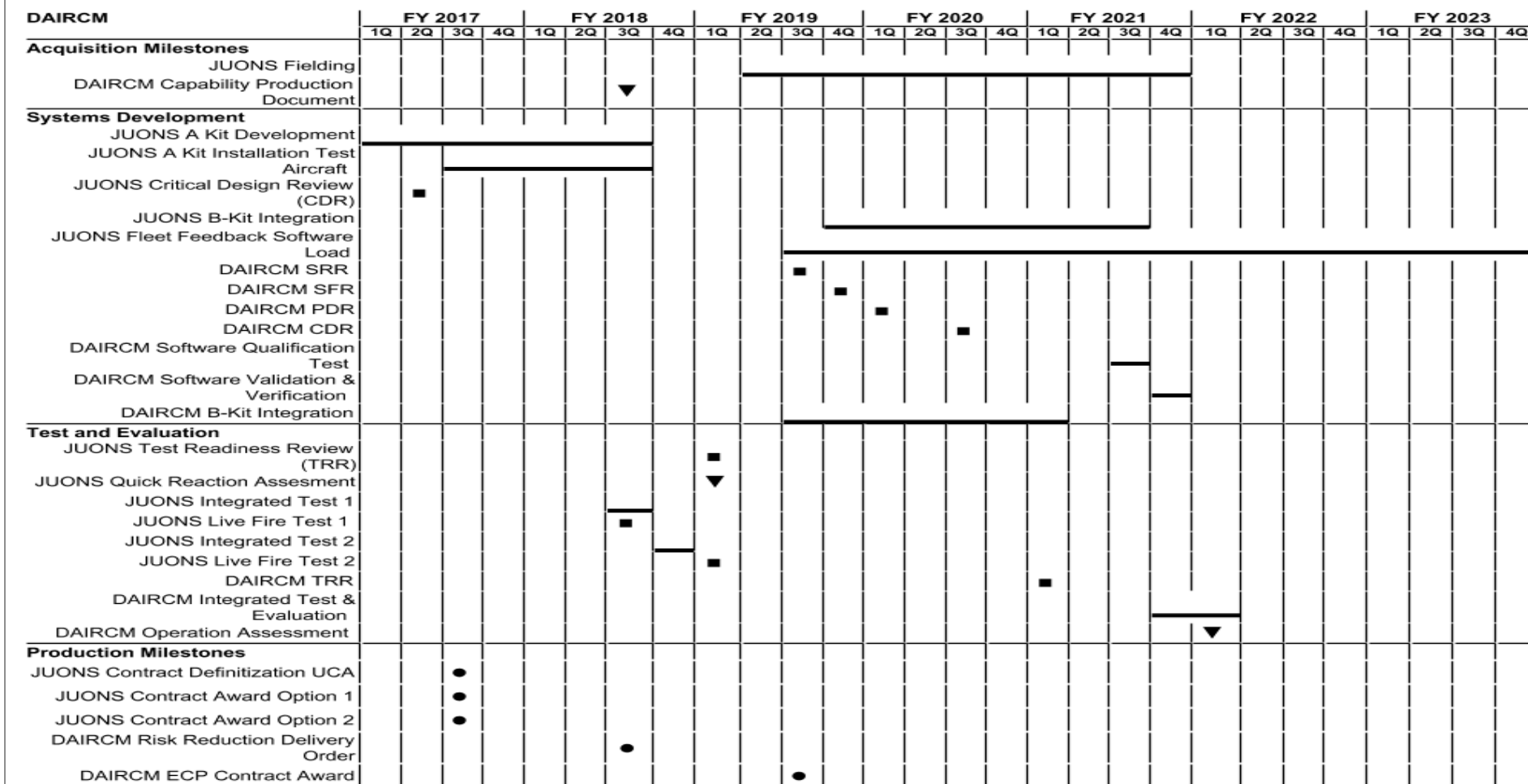
1319 / 4

R-1 Program Element (Number/Name)

PE 0604272N / Tact Air Dir Infrared CM  
(TADIRCM)

Project (Number/Name)

3348 / DAIRCM Development



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy														Date: February 2018																											
Appropriation/Budget Activity 1319 / 4														R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM)														Project (Number/Name) 3348 / DAIRCM Development													
DAIRM LRIP																																									
Deliveries																																									
JUONS Test Assets Deliveries																																									
JUONS Hardware Deliveries																																									
2019PB - 0604272N - 3348																																									

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2019 Navy			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i>	<b>Project (Number/Name)</b> 3348 / <i>DAIRCM Development</i>	

**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>DAIRCM</b>				
Acquisition Milestones: JUONS Fielding: Schedule Detail	2	2019	4	2021
Acquisition Milestones: DAIRCM Capability Production Document: Schedule Detail	3	2018	3	2018
Systems Development: JUONS A Kit Development: Schedule Detail	1	2017	3	2018
Systems Development: JUONS A Kit Installation Test Aircraft: Schedule Detail (TEST)	3	2017	3	2018
Systems Development: JUONS Critical Design Review (CDR): Schedule Detail	2	2017	2	2017
Systems Development: JUONS B-Kit Integration: Schedule Detail	4	2019	3	2021
Systems Development: JUONS Fleet Feedback Software Load: Schedule Detail	3	2019	4	2023
Systems Development: DAIRCM SRR: Schedule Detail	3	2019	3	2019
Systems Development: DAIRCM SFR: Schedule Detail	4	2019	4	2019
Systems Development: DAIRCM PDR: Schedule Detail	1	2020	1	2020
Systems Development: DAIRCM CDR: Schedule Detail	3	2020	3	2020
Systems Development: DAIRCM Software Qualification Test: Schedule Detail	3	2021	3	2021
Systems Development: DAIRCM Software Validation & Verification: Schedule Detail	4	2021	4	2021
Systems Development: DAIRCM B-Kit Integration: Schedule Detail	3	2019	1	2021
Test and Evaluation: JUONS Test Readiness Review (TRR): Schedule Detail	1	2019	1	2019
Test and Evaluation: JUONS Quick Reaction Assesment: Schedule Detail	1	2019	1	2019
Test and Evaluation: JUONS Integrated Test 1: Schedule Detail	3	2018	3	2018
Test and Evaluation: JUONS Live Fire Test 1: Schedule Detail	3	2018	3	2018
Test and Evaluation: JUONS Integrated Test 2: Schedule Detail	4	2018	4	2018
Test and Evaluation: JUONS Live Fire Test 2: Schedule Detail	1	2019	1	2019
Test and Evaluation: DAIRCM TRR: Schedule Detail	1	2021	1	2021

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy			Date: February 2018		
Appropriation/Budget Activity 1319 / 4		R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM)		Project (Number/Name) 3348 / DAIRCM Development	
		Start		End	
Events by Sub Project		Quarter	Year	Quarter	Year
Test and Evaluation: DAIRCM Integrated Test & Evaluation: Schedule Detail		4	2021	1	2022
Test and Evaluation: DAIRCM Operation Assessment: Schedule Detail		1	2022	1	2022
Production Milestones: JUONS Contract Definitization UCA: Schedule Detail		3	2017	3	2017
Production Milestones: JUONS Contract Award Option 1: Schedule Detail		3	2017	3	2017
Production Milestones: JUONS Contract Award Option 2: Schedule Detail		3	2017	3	2017
Production Milestones: DAIRCM Risk Reduction Delivery Order: Schedule Detail		3	2018	3	2018
Production Milestones: DAIRCM ECP Contract Award: Schedule Detail		3	2019	3	2019
Production Milestones: DAIRM LRIP: Schedule Detail		2	2022	2	2022
Deliveries: JUONS Test Assets Deliveries: Schedule Detail		3	2017	3	2018
Deliveries: JUONS Hardware Deliveries: Schedule Detail		3	2017	3	2020