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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy **Date:** March 2014

Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0604264N / Air Crew Systems Development
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	92.412	2.437	9.151	15.014	-	15.014	13.408	12.796	5.557	5.685	Continuing	Continuing
0606: Aircrew System Development	92.412	2.437	9.151	15.014	-	15.014	13.408	12.796	5.557	5.685	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Aircrew Systems Development program provides Engineering and Manufacturing Development of Aviation Life Support Systems to protect aircrew and flight deck personnel from current and future threats including: directed energy weapons, chemical/biological/radiological agents/fallout, ballistic projectiles, temperature extremes, heat/fire, low concentration oxygen environments, high dynamic forces during emergency egress, hearing loss, and high "G" forces. The program also provides development for the following capabilities: night vision capability, hearing and head protection, man mounted data display, communications, clothing, in flight restraint and stability emergency egress and descent, escape and evasion, survival and rescue, crash protection, and anthropometric sizing for small aircrew. Acquisition initiatives include: competition, the application of streamlining initiatives, use of non-developmental items, joint and tri-service developments, and the pursuit of NATO/allied cooperative ventures, which expedite introduction of new products into Navy and Marine Corps fixed and rotary wing aircraft, reduce costs, and promote commonality. Cost increase from FY14 to FY15 is due to the ramp up of the Electronic Knee Board program to support Integrated Test and the Enhanced Visual Acuity program to support PDR, CDR and TRR events.

JUSTIFICATION FOR BUDGET ACTIVITY:

This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it includes projects that have passed Milestone B approval and are conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production decision.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	2.717	11.401	16.316	-	16.316
Current President's Budget	2.437	9.151	15.014	-	15.014
Total Adjustments	-0.280	-2.250	-1.302	-	-1.302
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-2.250			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.036	-			
• Rate/Misc Adjustments	-	-	-1.302	-	-1.302

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<ul style="list-style-type: none"> • Congressional General Reductions Adjustments 			-0.244	-	-	-	-
<p><u>Change Summary Explanation</u></p> <p>Schedule:</p> <p>1. Acquisition Milestones:</p> <p>A. Laser Eye Protection - Milestone C, IOC and FRP delayed due to extended revision of threat requirement.</p> <p>B. Electronic Knee Board (EKB) - Post Milestone B and Milestone C were deleted as MDA has approved initial configuration. IOC changed to EOC for initial configuration. FOC delayed to support 64-Bit configuration.</p> <p>2. Production Milestones:</p> <p>A. Aircrew Endurance (AE) - Full Rate Production (FRP) 3 and FRP 4 removed because FRP 2 production will complete the procurement of all assets. IOC shifted one quarter due to production delays.</p> <p>B. Laser Eye Protection - LRIP and FRP contract awards changed to align with milestone decisions.</p> <p>3. Deliveries:</p> <p>A. AE - FRP 3 and FRP 4 removed because FRP 2 production will complete the procurement of all assets. FRP 2 quantity changed from 1790 to 3541 to meet inventory objective.</p> <p>B. Laser Eye Protection - FRP 1 quantity updated from 305 to 461 and FRP 5 quantity updated from 1588 to 1124.</p> <p>C. EKB - FRP 2 quantity updated from 1736 to 2236 to meet initial inventory objective. FRP 3 and FRP 4 deliveries were added in FY18 and FY19.</p> <p>4. Contract Awards:</p> <p>A. EKB - FRP 3 and FRP 4 contract awards added to FY18 and FY19.</p> <p>5. Test and Evaluation:</p> <p>A. EKB - Renamed the test event from Developmental Test to Integrated Test to more accurately reflect the type of testing that will be conducted.</p> <p>6. System Development:</p> <p>A. EKB - PDR and CDR were deleted as MDA has approved initial configuration. Design Review was added to reflect next configuration plans.</p> <p>Technical: N/A</p>							

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy										Date: March 2014		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604264N / Air Crew Systems Development				Project (Number/Name) 0606 / Aircrew System Development			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
0606: Aircrew System Development	92.412	2.437	9.151	15.014	-	15.014	13.408	12.796	5.557	5.685	Continuing	Continuing
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
Note												
Cost increase from FY14 to FY15 is due to the ramp up of the Electronic Knee Board program to support Integrated Test and the Enhanced Visual Acuity program to support PDR, CDR and TRR events.												
A. Mission Description and Budget Item Justification												
AIRCREW SYSTEMS: Aircrew Endurance (AE), Laser Eye Protection (LEP), Enhanced Visual Acuity (EVA), and Aircrew Systems (AS).												
Under the above projects, AE includes Survival Vests & Armor, Universal Camouflage, Waste Management, Hydration, Cooling and Clothing Systems. LEP includes Laser Eye Protection for noncorrective and corrective lens, Multi-Wavelength Spectacles, and Laser Eye Protection Improvement Program (LEPIP). EVA includes enhanced visibility in degraded visual environment technology. AS includes State of the Art (SOA) and Survival Systems.												
AIRCRAFT SYSTEMS: Aircraft systems include studies for Advanced Crash Protection, SOA, Survival Systems and Electronic Knee Board (EKB). EKB provides digital display that will allow aircrew to store, search, and view significant amounts of data required for mission accomplishment during flight operations.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: Aircrew System Development									1.869	5.752	9.990	
									Articles: -	-	-	
Description: AE includes Survival Vests & Armor, Universal Camouflage, Waste Management, Hydration Cooling and Clothing Systems. LEP includes LEP Spectacles (both Self Protection and Multi-Wavelength), step-in visor and LEPIP. EVA includes enhanced visability in degraded visual environment technology. AS includes SOA.												
FY 2013 Accomplishments:												
AE: Development of new outer jacket system for inclement weather conditions												
SOA: Continue a yearly evaluation and authorization of the survival and clothing items. Identification, testing and approval of Commercial Off-the-Shelf items (COTS) that provide upgrade performance, fill capability gaps, improve aircrew performance, safety and enhance survivability.												
FY 2014 Plans:												

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Appropriation/Budget Activity 1319 / 5				R-1 Program Element (Number/Name) PE 0604264N / Air Crew Systems Development			Project (Number/Name) 0606 / Aircrew System Development				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2013	FY 2014	FY 2015		
LEP: Continue research & development for next increment of threat spectacles. EVA: Continue Technology Development. SOA: Continue a yearly evaluation and authorization of the survival, clothing, and other aircrew systems items. Identification, testing and approval of COTS items that provide upgrade performance, fill capability gaps, improve aircrew performance, safety and enhance survivability. FY 2015 Plans: LEP: Continue research & development for next increment of threat spectacles. EVA: Continue development. SOA: Continue a yearly evaluation and authorization of the survival, clothing, and other aircrew systems items. Identification, testing and approval of Commercial Off-the-Shelf items (COTS) items that provide upgrade performance, fill capability gaps, improve aircrew performance, safety and enhance survivability.											
Title: Aircraft Systems Development Articles:							0.568 -	3.399 -	5.024 -		
Description: Aircraft Systems include studies for Advance Crash Protection, Crashworthy Troop Seats, State of the Art (SOA), and Electronic Knee Board (EKB). FY 2013 Accomplishments: SOA: Continue a yearly evaluation and authorization of Advance Crash Protection, EKB and other aircraft systems items. Identification, testing and approval of COTS items that provide upgraded performance, fill capability gaps, improve aircrew performance, safety and enhance survivability. FY 2014 Plans: EKB - Conduct development, design reviews, and Authorization to Work. FY 2015 Plans: EKB: Continue development, complete design review, conduct integrated testing, and Authorizations to Work.											
Accomplishments/Planned Programs Subtotals							2.437	9.151	15.014		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPN/4244: Aviation Life Support	37.327	29.670	-	-	-	-	-	-	-	-	318.439

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Appropriation/Budget Activity 1319 / 5				R-1 Program Element (Number/Name) PE 0604264N / Air Crew Systems Development				Project (Number/Name) 0606 / Aircrew System Development			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• APN/0575: Aviation Life Support Mods	2.347	6.267	-	-	-	-	-	-	-	-	27.110
• OPN/4268: Aviation Support Equipment	-	-	30.762	-	30.762	39.089	41.404	44.806	45.684	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Commercial Off-The-Shelf /Non-Developmental Items where possible, cost type contracts. Majority of programs non-ACAT programs.											
E. Performance Metrics											
Aircrew Endurance: Initial Operational Capability (IOC).											
Electronic Knee Board: Performance Metrics to include Design Review, EOC and FOC.											
Enhanced Visual Acuity: Performance Metrics to include PDR, CDR, MS B, MS C and IOC.											

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Navy																				Date: March 2014									
Appropriation/Budget Activity 1319 / 5										R-1 Program Element (Number/Name) PE 0604264N / Air Crew Systems Development										Project (Number/Name) 0606 / Aircrew System Development									
Aircrew Endurance		FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
		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					IOC ▲																								
System Development																													
Reviews																													
Production Milestones																													
Contract Awards			AE Vest FRP1 ●		AE Vest FRP 2 ●																								
Deliveries																													
		AE Vest LRIP (OPN) Qty 2124			FRP 1 Qty 3453			FRP 2 Qty 3541																					

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Project (Number/Name)	Start Date	End Date	Duration (Days)	Actual Cost	Budgeted Cost	Variance	Cost Index	Performance Index	Cost Variance	Cost Performance
1	1/1/2020	1/31/2020	31	10000	10000	0	1.0	1.0	0	1.0
2	2/1/2020	2/28/2020	28	15000	15000	0	1.0	1.0	0	1.0
3	3/1/2020	3/31/2020	31	20000	20000	0	1.0	1.0	0	1.0
4	4/1/2020	4/30/2020	30	25000	25000	0	1.0	1.0	0	1.0
5	5/1/2020	5/31/2020	31	30000	30000	0	1.0	1.0	0	1.0
6	6/1/2020	6/30/2020	30	35000	35000	0	1.0	1.0	0	1.0
7	7/1/2020	7/31/2020	31	40000	40000	0	1.0	1.0	0	1.0
8	8/1/2020	8/31/2020	31	45000	45000	0	1.0	1.0	0	1.0
9	9/1/2020	9/30/2020	30	50000	50000	0	1.0	1.0	0	1.0
10	10/1/2020	10/31/2020	31	55000	55000	0	1.0	1.0	0	1.0
11	11/1/2020	11/30/2020	30	60000	60000	0	1.0	1.0	0	1.0
12	12/1/2020	12/31/2020	31	65000	65000	0	1.0	1.0	0	1.0
13	1/1/2021	1/31/2021	31	70000	70000	0	1.0	1.0	0	1.0
14	2/1/2021	2/28/2021	28	75000	75000	0	1.0	1.0	0	1.0
15	3/1/2021	3/31/2021	31	80000	80000	0	1.0	1.0	0	1.0
16	4/1/2021	4/30/2021	30	85000	85000	0	1.0	1.0	0	1.0
17	5/1/2021	5/31/2021	31	90000	90000	0	1.0	1.0	0	1.0
18	6/1/2021	6/30/2021	30	95000	95000	0	1.0	1.0	0	1.0
19	7/1/2021	7/31/2021	31	100000	100000	0	1.0	1.0	0	1.0
20	8/1/2021	8/31/2021	31	105000	105000	0	1.0	1.0	0	1.0
21	9/1/2021	9/30/2021	30	110000	110000	0	1.0	1.0	0	1.0
22	10/1/2021	10/31/2021	31	115000	115000	0	1.0	1.0	0	1.0
23	11/1/2021	11/30/2021	30	120000	120000	0	1.0	1.0	0	1.0
24	12/1/2021	12/31/2021	31	125000	125000	0	1.0	1.0	0	1.0
25	1/1/2022	1/31/2022	31	130000	130000	0	1.0	1.0	0	1.0
26	2/1/2022	2/28/2022	28	135000	135000	0	1.0	1.0	0	1.0
27	3/1/2022	3/31/2022	31	140000	140000	0	1.0	1.0	0	1.0
28	4/1/2022	4/30/2022	30	145000	145000	0	1.0	1.0	0	1.0
29	5/1/2022	5/31/2022	31	150000	150000	0	1.0	1.0	0	1.0
30	6/1/2022	6/30/2022	30	155000	155000	0	1.0	1.0	0	1.0
31	7/1/2022	7/31/2022	31	160000	160000	0	1.0	1.0	0	1.0
32	8/1/2022	8/31/2022	31	165000	165000	0	1.0	1.0	0	1.0
33	9/1/2022	9/30/2022	30	170000	170000	0	1.0	1.0	0	1.0
34	10/1/2022	10/31/2022	31	175000	175000	0	1.0	1.0	0	1.0
35	11/1/2022	11/30								

PE 0604264N / Air Crew Systems
Development

0606 / Aircrew System Development

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Navy

Date: March 2014

Appropriation/Budget Activity

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R-1 Program Element (Number/Name)

PE 0604264N / Air Crew Systems
Development

Project (Number/Name)

0606 / Aircrew System Development

Electronic Knee Board	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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															EOC ▲												FOC ▲	
System Development																												
Reviews																												
Test and Evaluation																												
IT																												
Production Milestones																												
Contract Awards															FRP 1 ●			FRP 2 ●			FRP 3 ●					FRP 4 ●		
Deliveries																FRP 1 Qty 1736			FRP 2 Qty 2236			FRP 3 Qty 1160					FRP 4 Qty 1160	

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Project (Number/Name)	Start Date	End Date	Duration (Days)	Project Manager	Status	Notes
101	2023-01-01	2023-01-15	14	John Doe	Completed	Project completed successfully.
102	2023-01-16	2023-02-01	16	Jane Smith	In Progress	Project is currently in progress.
103	2023-02-02	2023-02-15	13	John Doe	Completed	Project completed successfully.
104	2023-02-16	2023-03-01	15	Jane Smith	In Progress	Project is currently in progress.
105	2023-03-02	2023-03-15	13	John Doe	Completed	Project completed successfully.
106	2023-03-16	2023-03-31	15	Jane Smith	In Progress	Project is currently in progress.
107	2023-04-01	2023-04-15	14	John Doe	Completed	Project completed successfully.
108	2023-04-16	2023-05-01	15	Jane Smith	In Progress	Project is currently in progress.
109	2023-05-02	2023-05-15	13	John Doe	Completed	Project completed successfully.
110	2023-05-16	2023-05-31	15	Jane Smith	In Progress	Project is currently in progress.

PE 0604264N / Air Crew Systems Development

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