Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy	Date: March 2014
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604522N *I (U)Advanced Missile Defense Radar (AMDR) System*

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	0.000	-	-	144.706	-	144.706	247.339	100.414	43.057	41.329	Continuing	Continuing
3186: *Air and Missile Defense Radar*	0.000	-	-	144.706	-	144.706	247.339	100.414	43.057	41.329	Continuing	Continuing

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

A. Mission Description and Budget Item Justification

Air and Missile Defense Radar (AMDR): (NOTE: FY14 and prior year funding is in PE 0604501N) The AMDR suite is being developed to fulfill Integrated Air and Missile Defense requirements for multiple ship classes. This suite consists of an S-Band radar (AMDR-S), an X-band radar and a Radar Suite Controller (RSC). Funding will develop AMDR-S and RSC, and integrate these components with an available X band radar. AMDR will provide multi-mission capabilities, simultaneously supporting both long range, exoatmospheric detection, tracking and discrimination of ballistic missiles, as well as Area and Self Defense against air and surface threats. For the Ballistic Missile Defense (BMD) capability, increased radar sensitivity and bandwidth over current radar systems are needed to detect, track and support engagements of advanced ballistic missile threats at the required ranges, concurrent with Area and Self Defense against Air and Surface threats. For the Area Air Defense and Self Defense capability, increased sensitivity and clutter capability is needed to detect, react to, and engage stressing Very Low Observable/Very Low Flyer (VLO/VLF) threats in the presence of heavy land, sea, and rain clutter. This effort provides for the development of an active phased array radar with the required capabilities to address the evolving threat. The AMDR suite will obtain performance and technology enhancements throughout its service life based upon an approach that includes modularity of hardware and software, a scalable design and Open Architecture (OA) compliance.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	144.706	-	144.706
Total Adjustments	-	-	144.706	-	144.706
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	147.494	-	147.494
• Rate/Misc Adjustments	-	-	-2.788	-	-2.788

Change Summary Explanation

Technical: Not applicable.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy	Date: March 2014
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604522N *I (U)Advanced Missile Defense Radar (AMDR) System*

Schedule: Not applicable.

Cost: Reduction in FY15 due to Department's decision to reduce Contracted Services and Engineering & Manufacturing Development (E&MD) contract award delay reduction.

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 0604522N / *(U)Advanced Missile Defense Radar (AMDR) System*	Project (Number/Name) 3186 / *Air and Missile Defense Radar*	

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
3186: *Air and Missile Defense Radar*	-	-	-	144.706	-	144.706	247.339	100.414	43.057	41.329	Continuing	Continuing
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-		

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

A. Mission Description and Budget Item Justification

Air and Missile Defense Radar (AMDR): (NOTE: FY14 and prior year funding is in PE 0604501N) The AMDR suite is being developed to fulfill Integrated Air and Missile Defense requirements for multiple ship classes. This suite consists of an S-Band radar (AMDR-S), an X-band radar and a Radar Suite Controller (RSC). Funding will develop AMDR-S and RSC, and integrate these components with an available X band radar. AMDR will provide multi-mission capabilities, simultaneously supporting both long range, exoatmospheric detection, tracking and discrimination of ballistic missiles, as well as Area and Self Defense against air and surface threats. For the Ballistic Missile Defense (BMD) capability, increased radar sensitivity and bandwidth over current radar systems are needed to detect, track and support engagements of advanced ballistic missile threats at the required ranges, concurrent with Area and Self Defense against Air and Surface threats. For the Area Air Defense and Self Defense capability, increased sensitivity and clutter capability is needed to detect, react to, and engage stressing Very Low Observable/Very Low Flyer (VLO/VLF) threats in the presence of heavy land, sea, and rain clutter. This effort provides for the development of an active phased array radar with the required capabilities to address the evolving threat. The AMDR suite will obtain performance and technology enhancements throughout its service life based upon an approach that includes modularity of hardware and software, a scalable design and Open Architecture (OA) compliance.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: SYSTEMS ENGINEERING	-	-	140.987
Articles:	-	-	-
FY 2013 Accomplishments: N/A			
FY 2014 Plans: N/A			
FY 2015 Plans: - Conduct Hardware Critical Design Review (CDR) - Conduct Software/System Critical Design Review (CDR) - Conduct Test Readiness Review and Commence Development Testing (DT-2) - Deliver the AMDR-S/RSC simulator - Commence test planning in support of system verification			
Title: PROGRAM MANAGEMENT SUPPORT	-	-	3.719

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 0604522N / *(U)Advanced Missile Defense Radar (AMDR) System*	**Project (Number/Name)** 3186 / *Air and Missile Defense Radar*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
FY 2013 Accomplishments: N/A			
FY 2014 Plans: N/A			
FY 2015 Plans: - Provide support to Integrated Product Teams (IPTs) and Working Groups (WGs) required for program execution of the E&MD contracts - Anaylze and assess contractor deliverables - Conduct regular Program Management Reviews - Assist in cost, schedule, and performance management, contract administration and oversight, earned value assessment, and risk identification mitigation - Provide support to the Hardware CDR and Software/System CDR - Provide support to the Test Readiness Review to facilitate start of DT-2 testing - Provide support to technical interchange meetings			
Accomplishments/Planned Programs Subtotals	-	-	144.706

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
• SCN/2122: *DDG 51 0204222N*	-	-	-	-	-	3,201.700	3,193.200	3,250.700	3,337.400	Continuing	Continuing
• RDT&E/0604501N: *AMDR*	193.947	125.132	-	-	-	-	-	-	-	-	1,004.852

Remarks

D. Acquisition Strategy

AMDR: Plans for the Air and Missile Defense Radar are to leverage research and development investments, integrate sufficiently matured advanced technologies from technology risk reduction efforts, and incorporate Open Architecture approaches to develop a scalable radar design with major improvements in power, sensitivity, resistance to natural and man-made environments over current radar systems for simultaneous multi-mission BMD, Area and Self Defense Anti-Air Warfare (AAW). System design will be accomplished by employing proven technologies and commercial standards to lower schedule risk and develop a product with the lowest life-cycle cost.

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 0604522N / *(U)Advanced Missile Defense Radar (AMDR) System*	**Project (Number/Name)** 3186 / *Air and Missile Defense Radar*

Program scope consists of the following phases: a Concept Studies phase; a Technology Development phase, which included competitive prototyping; an E&MD phase, which includes completion of a full Engineering Development Model (EDM) for land-based testing; and transition to production. The detailed scope of this acquisition is defined in the approved Milestone B AMDR Acquisition Strategy (AS).

E. Performance Metrics

- Complete Technology Development (TD) phase System Requirements Review, Test Readiness Review, TD Prototype testing, TD System Functional Review, and TD Preliminary Design Review (PDR)
- Achieve Milestone B decision to proceed into E&MD phase
- Award E&MD contract
- Conduct E&MD Phase Integrated Baseline Review
- Conduct Hardware Delta PDR and Software/System Delta PDR
- Conduct Hardware and Software/System CDRs
- Complete Engineering Development Model (EDM) testing
- Achieve Milestone C decision to proceed into production and exercise LRIP options

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Navy			Date: March 2014
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604522N / *(U)Advanced Missile Defense Radar (AMDR) System*	Project (Number/Name) 3186 / *Air and Missile Defense Radar*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	SS/CPFF	GTRI : Atlanta, GA	0.000	-		-		1.316	Dec 2014	-		1.316	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC/DD : Dahlgren, VA	0.000	-		-		8.710	Nov 2014	-		8.710	Continuing	Continuing	Continuing
Systems Engineering	WR	PMRF : Kekaha, HI	0.000	-		-		3.297	Dec 2014	-		3.297	Continuing	Continuing	Continuing
Systems Engineering	SS/CPFF	JHU/APL : Baltimore, MD	0.000	-		-		9.294	Dec 2014	-		9.294	Continuing	Continuing	Continuing
Systems Engineering	MIPR	MIT : Cambridge, MA	0.000	-		-		4.763	Dec 2014	-		4.763	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC/PHD : Port Hueneme, CA	0.000	-		-		6.633	Nov 2014	-		6.633	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC/CR : Crane, IN	0.000	-		-		2.528	Nov 2014	-		2.528	Continuing	Continuing	Continuing
Systems Engineering	WR	NRL : Washington, DC	0.000	-		-		1.641	Dec 2014	-		1.641	Continuing	Continuing	Continuing
Systems Engineering	C/CPFF	SPA-PSS : Alexandria, VA	0.000	-		-		6.263	Dec 2014	-		6.263	Continuing	Continuing	Continuing
Systems Engineering	WR	COMOPTEVFOR : Norfolk, VA	0.000	-		-		0.321	Dec 2014	-		0.321	Continuing	Continuing	Continuing
Systems Engineering	WR	SCSC Wallops : Wallops Island, VA	0.000	-		-		1.275	Dec 2014	-		1.275	Continuing	Continuing	Continuing
Systems Engineering	WR	SPAWAR : San Diego, CA	0.000	-		-		0.112	Dec 2014	-		0.112	Continuing	Continuing	Continuing
Systems Engineering	MIPR	ARL : Adelphi, MD	0.000	-		-		0.425	Dec 2014	-		0.425	Continuing	Continuing	Continuing
Systems Engineering	C/CPIF	E&MD Contractor RAYTHEON : Sudbury, MA	0.000	-		-		64.984	Dec 2014	-		64.984	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC CD : Carderock, MD	0.000	-		-		0.328	Dec 2014	-		0.328	Continuing	Continuing	Continuing
Systems Engineering	C/FFP	Alion Science : Washington, DC	0.000	-		-		0.397	Dec 2014	-		0.397	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC/PHD White Sands Detachment : Missile Range, NM	0.000	-		-		28.700	Dec 2014	-		28.700	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Navy			Date: March 2014
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604522N / *(U)Advanced Missile Defense Radar (AMDR) System*	Project (Number/Name) 3186 / *Air and Missile Defense Radar*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	-		-		140.987		-		140.987	-	-	-

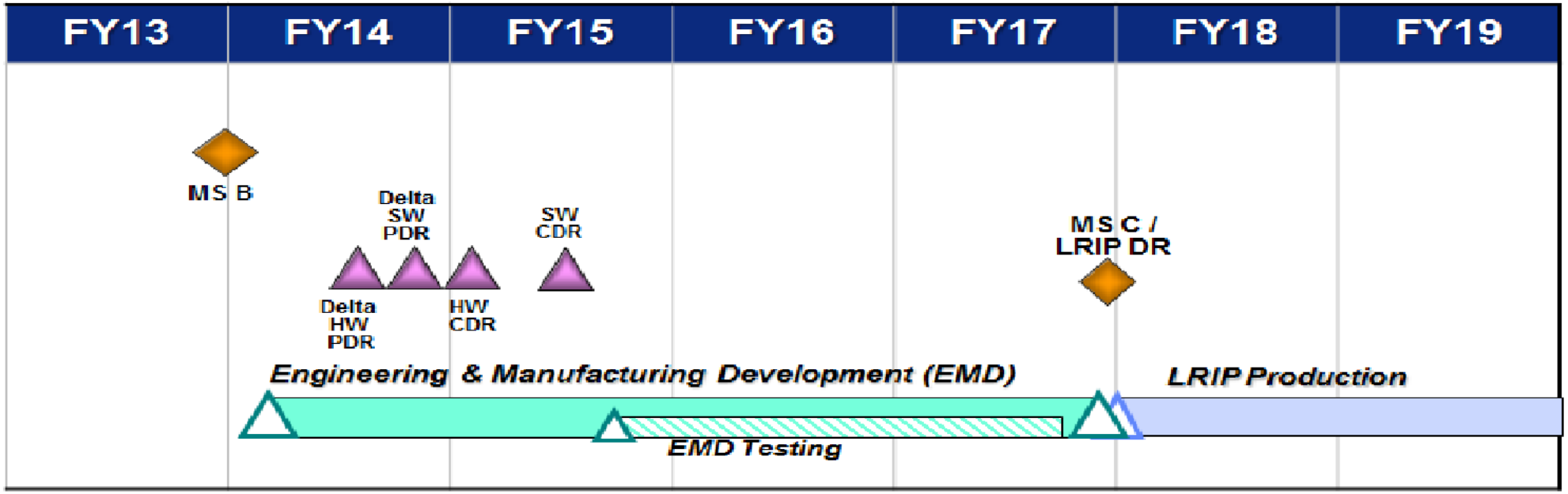
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Management Services	C/CPFF	SPA-PSS : Alexandria, VA	0.000	-		-		2.335	Dec 2014	-		2.335	Continuing	Continuing	Continuing
Support Management Services	Allot	PEOIWS2 : Washington, DC	0.000	-		-		0.117	Dec 2014	-		0.117	Continuing	Continuing	Continuing
Support Management Services	WR	NSWC/DD : Dahlgren, VA	0.000	-		-		1.267	Dec 2014	-		1.267	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		3.719		-		3.719	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		144.706		-		144.706	-	-	-

Remarks

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 0604522N / *(U)Advanced Missile Defense Radar (AMDR) System*	**Project (Number/Name)** 3186 / *Air and Missile Defense Radar*



Note: FY14 and prior captured under PE0604501N. Starting in FY15, effort moved to PE 0604522N.

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CDR	Critical Design Review
DR	Decision Review
HW	Hardware
LRIP	Low Rate Initial Production
MS	Milestone
PDR	Preliminary Design Review
SFR	System Functional Review
TRR	Test Readiness Review
SW	Software

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604522N / *(U)Advanced Missile Defense Radar (AMDR) System*	**Project (Number/Name)** 3186 / *Air and Missile Defense Radar*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3186				
Milestone B (MS B)	4	2013	4	2013
Engineering & Manufacturing Development (E&MD)	1	2014	4	2017
E&MD Hardware (HW) Delta Preliminary Design Review (PDR)	3	2014	3	2014
E&MD Software(SW)/System Delta PDR	4	2014	4	2014
E&MD HW Critical Design Review (CDR)	1	2015	1	2015
E&MD SW/System CDR	3	2015	3	2015
E&MD Testing	4	2015	4	2017
Milestone C (MS C)/Low Rate Initial Production Decision Review (LRIP DR)	4	2017	4	2017
LRIP Production	4	2017	4	2019