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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604727N: <i>Joint Standoff Weapon Systems</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	9.673	12.567	7.506	-	7.506	0.498	0.510	0.521	0.533	Continuing	Continuing
2068: <i>Joint Standoff Weapon (JSOW)</i>	9.673	12.567	7.506	-	7.506	0.498	0.510	0.521	0.533	Continuing	Continuing

Note

The JSOW Telemetry Instrumentation Kit (TIK) planned accomplishment has been removed due to analysis indicating that the JSOW program has sufficient TIK Crypto components to meet current requirements.

A. Mission Description and Budget Item Justification

The Joint Standoff Weapon (JSOW) is an air-to-ground weapon designed to attack a variety of targets during day, night and adverse weather conditions. JSOW will enhance aircraft survivability as compared to current interdiction weapon systems by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW launch-and-leave capability will allow several target kills per aircraft sortie. The JSOW program first developed a baseline weapon for use against fixed area targets. JSOW is a Navy-led joint Navy/Air Force program.

The JSOW Baseline (AGM-154A) variant includes a kinematically efficient airframe, an integrated Inertial/Global Positioning System navigation capability, and a BLU-97/B or BLU-111 payload. This weapon was designed up front for pre-planned product improvements. Procurement of JSOW-A in the FYDP is deferred pending a fix to the Unexploded Ordnance issue or a change in the inventory levels. The JSOW BLU-108 (AGM-154B) variant incorporates the Sensor Fuze Weapon submunition (BLU-108) into the baseline vehicle. Planned production of the JSOW/BLU-108 is deferred pending a change in the threat. The JSOW Unitary (AGM-154C) variant has a terminal seeker, Autonomous Target Acquisition capability, and a Broach lethal package to enable the attack of blast/fragmentation and penetration type targets. The JSOW Unitary provides increased accuracy and lethality and the capability for aimpoint selection. Operational Testing of the JSOW-C was successfully completed in December 2004. Approval for Milestone-III/Full Rate Production (FRP) was granted on 20 December 2004. JSOW-C Initial Operational Capability (IOC) was achieved in February 2005.

FY 2010-2012 includes funding to integrate new functionality into the Joint Mission Planning Systems (JMPS) and Common Unique Planning Component (CUPC). FY 2010-2012 also includes funding for development, integration, qualification and follow-on developmental/operational test and evaluation of a Network Enabled Weapon (NEW) moving target capability into the JSOW Unitary weapon (AGM-154C-1). The moving target capability will be integrated as an Engineering Change Proposal beginning with FY 2009 procured JSOW-C weapons. The new AGM-154C-1 capability will enable the weapon to attack sea moving targets via real-time pre-and post-launch targeting updates. JSOW will also continue to develop and improve software to increase seeker and guidance performance.

JSOW utilizes a "common truck" for both AGM-154A and AGM-154C variants. Through adherence to international standards for weapons interfaces, weight, and dimension considerations, JSOW is compatible with Air Force and NATO aircraft.

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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	9.980	12.567	0.524	-	0.524
Current President's Budget	9.673	12.567	7.506	-	7.506
Total Adjustments	-0.307	-	6.982	-	6.982
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.298	-			
• Program Adjustments	-	-	7.099	-	7.099
• Section 219 Reprogramming	-0.009	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.117	-	-0.117

Change Summary Explanation

Technical: Not applicable.

Schedule:

- 1) JSOW FRP-7 award changed from 2Q FY 2011 to 3Q FY 2011 due to anticipated contract negotiations.
- 2) JSOW FRP-8 award changed from 1Q FY 2012 to 3Q FY 2012 due to anticipated contract negotiations.
- 3) JSOW FRP-9 award changed from 1Q FY 2013 to 2Q FY 2013 due to anticipated contract negotiations.
- 4) JSOW FRP-10 award changed from 1Q FY 2014 to 2Q FY 2014 due to anticipated contract negotiations.
- 5) JSOW FRP-11 award changed from 1Q FY 2015 to 2Q FY 2015 due to anticipated contract negotiations.
- 6) JSOW FRP-4 deliveries changed from ending 2Q FY 2010 to ending 3Q FY 2010.
- 7) JSOW FRP-5 deliveries changed from starting 2Q FY 2010 to 1Q FY 2011 due to delays in delivery schedule and subsequent over target rebaseline of the development program.
- 8) JSOW FRP-6 deliveries changed from starting 2Q FY 2011 to 4Q FY 2011 due to delays in delivery schedule and subsequent over target rebaseline of the development program.
- 9) JSOW FRP-7 deliveries changed from starting 2Q FY 2012 to 3Q FY 2012 due to delays in delivery schedule and subsequent over target rebaseline of the development program.
- 10) JSOW FRP-8 deliveries changed from starting 2Q FY 2013 to 3Q FY 2013 due to change in delivery schedule of GFE materials to prime contractor.
- 11) JSOW FRP-9 deliveries changed from starting 2Q FY 2014 to 3Q FY 2014 due to change in delivery schedule of GFE materials to prime contractor.
- 12) JSOW FRP-10 deliveries changed from starting 2Q FY 2015 to 3Q FY 2015 due to change in delivery schedule of GFE materials to prime contractor.

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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	PE 0604727N: <i>Joint Standoff Weapon Systems</i>

- 13) JSOW Network Enabled Weapon/Moving Target/AGM-154C-1 Design/Integration/Qualification changed from 1Q-4Q 2010 to 1Q 2010 - 4Q 2012 resulting from the rebaseline of the JSOW development program.
- 14) JSOW DT&E-I was changed from 1Q - 4Q FY 2010 to 1Q - 4Q FY 2011 due to delayed receipt of necessary hardware.
- 15) JSOW IT&E-I was changed from 1Q - 2Q FY 2011 to 1Q - 2Q FY 2012 due to delayed receipt of necessary hardware.
- 16) JSOW OT-IIIIB was changed from 3Q - 4Q FY 2011 to 1Q FY2013 - 2Q FY 2013 resulting from the rebaseline of the JSOW development program.
- 17) JSOW IOC changed from 3Q FY 2012 to 3Q FY 2013 resulting from the rebaseline of the JSOW development program.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604727N: <i>Joint Standoff Weapon Systems</i>				PROJECT 2068: <i>Joint Standoff Weapon (JSOW)</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
2068: <i>Joint Standoff Weapon (JSOW)</i>	9.673	12.567	7.506	-	7.506	0.498	0.510	0.521	0.533	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Includes RDT&E funds for the development of a weapon to be employed by aircraft to attack targets during day, night, and adverse weather conditions. The Advanced Interdiction Weapon Systems (AIWS) design will capitalize on aircraft sensor capabilities and minimize individual weapon sophistication, reducing unit cost and provides a significant increase in strike warfare capability. Excludes civilian and military manpower and their related costs and military construction costs which are included in appropriate management and support elements in this program.

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

	FY 2010	FY 2011	FY 2012
<p>Title: Network Enabled Weapon (NEW)</p> <p align="right">Articles:</p> <p>Description: Develop and integrate the NEW moving target capability into JSOW-C, termed AGM-154C-1.</p> <p>FY 2010 Accomplishments: Commenced weapon qualification and follow-on Developmental Test/Operational Test (DT/OT) efforts.</p> <p>FY 2011 Plans: Includes funding to complete weapon qualification and follow-on DT/OT efforts.</p> <p>FY 2012 Plans: Includes funding to complete weapon qualification and follow-on DT/OT efforts.</p>	9.580 0	11.897 0	7.337 0
<p>Title: JSOW Common Unique Planning Component (CUPC)</p> <p align="right">Articles:</p> <p>Description: Plan new functions into the JSOW CUPC and develop new software releases. Address new mission planning functionality related to the incorporation of the NEW moving target capability into the JSOW-C-1 weapons.</p> <p>FY 2010 Accomplishments: Continued integration of JSOW C-1 functionality.</p> <p>FY 2011 Plans:</p>	0.093 0	0.670 0	0.169 0

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604727N: <i>Joint Standoff Weapon Systems</i>	PROJECT 2068: <i>Joint Standoff Weapon (JSOW)</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Begin interoperability efforts for JSOW C-1.			
<i>FY 2012 Plans:</i> Continue interoperability efforts for JSOW C-1.			
Accomplishments/Planned Programs Subtotals	9.673	12.567	7.506

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• USN WP,N BLI 223000: JSOW	141.997	131.141	137.722	0.000	137.722	147.923	167.117	169.572	172.048	1,434.037	4,012.209

D. Acquisition Strategy

The contracting strategy for JSOW is planned to be sole source for the life of the program. Cost type contracts are utilized for the Engineering and Manufacturing Development and follow-on modification program (i.e., Block II (AGM-154C), AGM-154C-1) efforts. Component breakout is used, when possible, to promote full and open competition.

Fixed price type contracts are utilized for production.

E. Performance Metrics

The JSOW C-1 program is meeting the cost schedule, performance, funding and life cycle sustainment in accordance with the Acquisition Program Baseline.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604727N: <i>Joint Standoff Weapon Systems</i>	PROJECT 2068: <i>Joint Standoff Weapon (JSOW)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development-NEW	SS/CPFF	Raytheon Systems:Tucson, AZ	67.924	11.158	Nov 2010	3.338	Dec 2011	-		3.338	0.000	82.420	83.730
System Engineering	MIPR	National Security Agency:Maryland	0.340	0.359	Dec 2010	0.359	Jun 2012	-		0.359	0.000	1.058	1.058
System Engineering	WR	Naval Research Lab:Maryland	0.805	0.140	Dec 2010	0.140	May 2012	-		0.140	0.000	1.085	
System Engineering	WR	NAWCWD:China Lake, CA	109.018	0.050	Oct 2010	1.000	Nov 2011	-		1.000	0.000	110.068	
Prior year cost no longer funded in the FYDP	Various	Various:Various	601.305	-		-		-		-	0.000	601.305	
Subtotal			779.392	11.707		4.837		-		4.837	0.000	795.936	

Remarks

The target value of the contract exceeds the JSOW funding because the Harpoon Block III (PE0604227N PU1843) program shares a portion of the Strike Common Weapons Data Link (SCWDL) development costs.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development -JMPS	SS/CPFF	Raytheon Systems:Tucson, AZ	5.445	0.670	Dec 2010	0.169	Dec 2011	-		0.169	2.996	9.280	9.280
Prior year cost no longer funded in the FYDP	Various	Various:Various	8.007	-		-		-		-	0.000	8.007	
Subtotal			13.452	0.670		0.169		-		0.169	2.996	17.287	

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Int Test and Evaluation	WR	NAWCWD:China Lake, CA	27.937	0.100	Dec 2010	2.500	Dec 2011	-		2.500	0.000	30.537	

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604727N: <i>Joint Standoff Weapon Systems</i>	PROJECT 2068: <i>Joint Standoff Weapon (JSOW)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Joint Standoff Weapon				
Acquisition Milestones: Milestones: Initial Operational Capability C-1	3	2013	3	2013
Systems Development: Software Development: Network Enabled Weapon/Moving Target/AGM-154C-1 Design/Integration/Qual	1	2010	4	2012
Systems Development: Reviews: Operational Test Readiness Review	4	2012	4	2012
Test and Evaluation: Development Test and Evaluation: Network Enabled Weapon/Moving Target/AGM-154C-1 Development Test (DT-I)	1	2011	4	2011
Test and Evaluation: Development Test and Evaluation: Network Enabled Weapon/Moving Target/AGM-154C-1 Development Test Final Qualification Test (DT-1)	3	2011	3	2011
Test and Evaluation: Development Test and Evaluation: Network Enabled Weapon/Moving Target/AGM-154C-1 Development Test (DT-II)	3	2011	1	2012
Test and Evaluation: Development Test and Evaluation: Network Enabled Weapon/Moving Target/AGM-154C-1 Development Test Final Qualification Test (DT-II)	1	2012	1	2012
Test and Evaluation: Integrated Test and Evaluation: Network Enabled Weapon/Moving Target/AGM-154C-1 Integrated Test (IT-I)	1	2012	2	2012
Test and Evaluation: Integrated Test and Evaluation: Network Enabled Weapon/Moving Target/AGM-154C-1 Integrated Test (IT-II)	1	2012	3	2012
Test and Evaluation: Integrated Test and Evaluation: Network Enabled Weapon/Moving Target/AGM-154C-1 Integrated Test (IT-III)	2	2012	3	2012
Test and Evaluation: Integrated Test and Evaluation: Network Enabled Weapon/Moving Target/AGM-154C-1 Integrated Test (IT-III)	3	2012	4	2012
Test and Evaluation: Operational Test and Evaluation: Network Enabled Weapon/Moving Target/AGM-154C-1 Development Test (OT-III A)	1	2010	2	2010
Test and Evaluation: Operational Test and Evaluation: Network Enabled Weapon/Moving Target/AGM-154C-1 Development Test (OT-III B)	1	2013	2	2013

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Production Milestones: Contract Awards: FRP Award AGM-154C FRP-6	2	2010	2	2010
Production Milestones: Contract Awards: FRP Award AGM-154C FRP-7	3	2011	3	2011
Production Milestones: Contract Awards: FRP Award AGM-154C FRP-8	3	2012	3	2012
Production Milestones: Contract Awards: FRP Award AGM-154C FRP-9	2	2013	2	2013
Production Milestones: Contract Awards: FRP Award AGM-154C FRP-10	2	2014	2	2014
Production Milestones: Contract Awards: FRP Award AGM-154C FRP-11	2	2015	2	2015
Production Milestones: Contract Awards: FRP Award AGM-154C FRP-12	2	2016	2	2016
Deliveries: FRP-4 Deliveries AGM-154C	1	2010	3	2010
Deliveries: FRP-5 Deliveries- AGM-154C-1	1	2011	4	2011
Deliveries: FRP-6 Deliveries- AGM-154C-1	4	2011	3	2012
Deliveries: FRP-7 Deliveries- AGM-154C-1	3	2012	3	2013
Deliveries: FRP-8 Deliveries- AGM-154C-1	3	2013	3	2014
Deliveries: FRP-9 Deliveries- AGM-154C-1	3	2014	3	2015
Deliveries: FRP-10 Deliveries- AGM-154C-1	3	2015	3	2016
Deliveries: FRP-11 Deliveries- AGM-154C-1	3	2016	4	2016