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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2021 Navy **Date:** February 2020

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	409.935	84.029	50.096	62.488	-	62.488	64.256	53.952	49.035	49.991	Continuing	Continuing
1663: <i>SDB II F-18 Integration</i>	145.653	31.131	3.947	7.213	-	7.213	5.165	3.479	3.138	3.196	Continuing	Continuing
3072: <i>Small Diameter Bomb (SDB)</i>	264.282	52.898	46.149	55.275	-	55.275	59.091	50.473	45.897	46.795	0.000	620.860

**Program MDAP/MAIS Code:**  
**Project MDAP/MAIS Code(s):** 439

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

Small Diameter Bomb Increment II (SDB II) is an ACAT 1C joint Department of the Air Force (USAF) and Department of the Navy (DON) program, with the USAF as the lead service. The SDB II increases joint lethality in contested environments. The SDB can strike a diverse set of targets inside an adversary's air and missile defense networks to destroy mobile platforms through the weather. With increased loadout, range, and munitions effect the network enabled SDBII enhances close combat lethality in complex terrain and provides a net-centric operations capability. The BRU-61 is the Universal Armament Interface (UAI) pneumatic rack used to carry four SDB II's at one time. The threshold aircraft for the USAF is the F-15E and for the DON are the F-35B and F-35C. F/A-18 E/F is an objective platform for the DoN.

The DON has adjusted the platform integration strategy through the inclusion of F/A-18 E/F using BRU-55 to deliver the capability to the warfighter aligned to adjusted F-35 program's schedule.

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

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2021 Navy	<b>Date:</b> February 2020
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<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Previous President's Budget	96.980	50.096	77.197	-	77.197
Current President's Budget	84.029	50.096	62.488	-	62.488
Total Adjustments	-12.951	0.000	-14.709	-	-14.709
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-10.000	0.000			
• SBIR/STTR Transfer	-2.951	0.000			
• Program Adjustments	0.000	0.000	-14.642	-	-14.642
• Rate/Misc Adjustments	0.000	0.000	-0.067	-	-0.067

**Change Summary Explanation**

The FY 2021 funding request has been reduced by \$14.642M to account for the availability of prior year execution balances, combined with other miscellaneous reductions for a total reduction of \$14.709M in the FY21 funding request.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2021 Navy **Date:** February 2020

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>	<b>Project (Number/Name)</b> 1663 / <i>SDB II F-18 Integration</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
1663: <i>SDB II F-18 Integration</i>	145.653	31.131	3.947	7.213	-	7.213	5.165	3.479	3.138	3.196	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

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

Due to continuing delays in the F-35 program, the DON has adjusted the platform integration strategy by inclusion of Small Diameter Bomb II (SDB II) and BRU-55 on F/A-18 E/F to deliver the capability to the warfighter in light of continued F-35 program delays. This program funds the aircraft software, integration, and testing required to successfully integrate SDB II and BRU-55 on the F/A-18 E/F to meet a FY 2020 Initial Operational Capability (IOC). In order to meet the IOC, testing will be limited to the F/A-18 E/F midboard stations. Following midboard station testing, the program will test SDB II and BRU-55 on inboard stations and the SDB II and BRU-61 type II carriage system on midboard and inboard stations.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<b>Title:</b> F/A-18 Integration	31.131	3.947	7.213	0.000	7.213
<b>Articles:</b>	18	-	-	-	-
<b>FY 2020 Plans:</b> Execute Operational Test (OT).					
<b>FY 2021 Base Plans:</b> Address and correct any deficiencies from Operational Test. Test SDB II and BRU-55 on inboard stations. Begin integration of BRU-61 (the Type 2 Universal Armament Interface (UAI) pneumatic rack) which will carry four SDB II's per rack on both midboard and inboard stations.					
<b>FY 2021 OCO Plans:</b> N/A					
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Increase of \$3.266 million from FY 2020 to FY 2021 will correct deficiencies from OT, begin integration testing of SDB II and BRU-55 on inboard stations on the F/A-18 E/F, and begin integration of the BRU-61 for increased weapon loadout. In order to meet FY 2020 IOC, integration testing was limited to mid-board stations only.					
<b>Accomplishments/Planned Programs Subtotals</b>	31.131	3.947	7.213	0.000	7.213

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Navy		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>	<b>Project (Number/Name)</b> 1663 / <i>SDB II F-18 Integration</i>

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2021</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• WPN/2238: <i>Small Diameter Bomb II</i>	88.772	108.452	78.867	-	78.867	80.582	82.508	84.159	85.872	10,481.181	11,113.859

**Remarks**

**D. Acquisition Strategy**

Integration of SDB II and the BRU-55 is software driven by ground and flight test requirements.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>	<b>Project (Number/Name)</b> 1663 / <i>SDB II F-18 Integration</i>
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<b>Support (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
OFP Development and Support	SS/IDIQ	Boeing : St. Louis, MO	59.825	0.000	Nov 2018	0.214	Mar 2020	1.065	Nov 2020	-		1.065	3.099	64.203	64.203
SDB II Prime Contractor Support	SS/IDIQ	Raytheon Missile Systems : Tuscon, AZ	22.675	6.231	Feb 2019	0.202	Mar 2020	1.360	Feb 2021	-		1.360	4.198	34.666	35.666
SDB II Integration Support	WR	NAWC AD : Patuxent River, MD	6.130	0.250	Nov 2018	0.154	Mar 2020	0.154	Nov 2020	-		0.154	0.653	7.341	-
SDB II Software Support	WR	NAWC WD : China Lake, CA	33.901	18.834	Nov 2018	0.100	Mar 2020	1.979	Nov 2020	-		1.979	Continuing	Continuing	Continuing
BRU Prime Contractor Support	Various	Various : Various	11.172	0.000		0.000		1.000	Jan 2021	-		1.000	0.000	12.172	11.172
<b>Subtotal</b>			133.703	25.315		0.670		5.558		-		5.558	Continuing	Continuing	N/A

**Remarks**  
FY 2021 funds support verification and corrections of deficiencies as a result of Operational Test, additional software requirements to carry SDB II on inboard stations of the F/A-18E/F, and begin integration of BRU-61 to increase weapon loadout.

<b>Test and Evaluation (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Wind Tunnel Test	MIPR	various : various	9.003	1.316	May 2019	0.000		0.000		-		0.000	0.000	10.319	-
Development Test	WR	VX-23 : Patuxent River, MD	2.947	4.500	Nov 2018	0.000		1.655	Nov 2020	-		1.655	2.750	11.852	-
Operational Test	WR	COMOPTEVFOR : Norfolk, VA	0.000	0.000		3.277	Jan 2020	0.000	Nov 2020	-		0.000	4.451	7.728	-
<b>Subtotal</b>			11.950	5.816		3.277		1.655		-		1.655	7.201	29.899	N/A

**Remarks**  
FY 2021 funds verification and corrections of deficiencies as a result of Operational Test and additional software requirements to carry SDB II on inboard stations of the F/A-18E/F.



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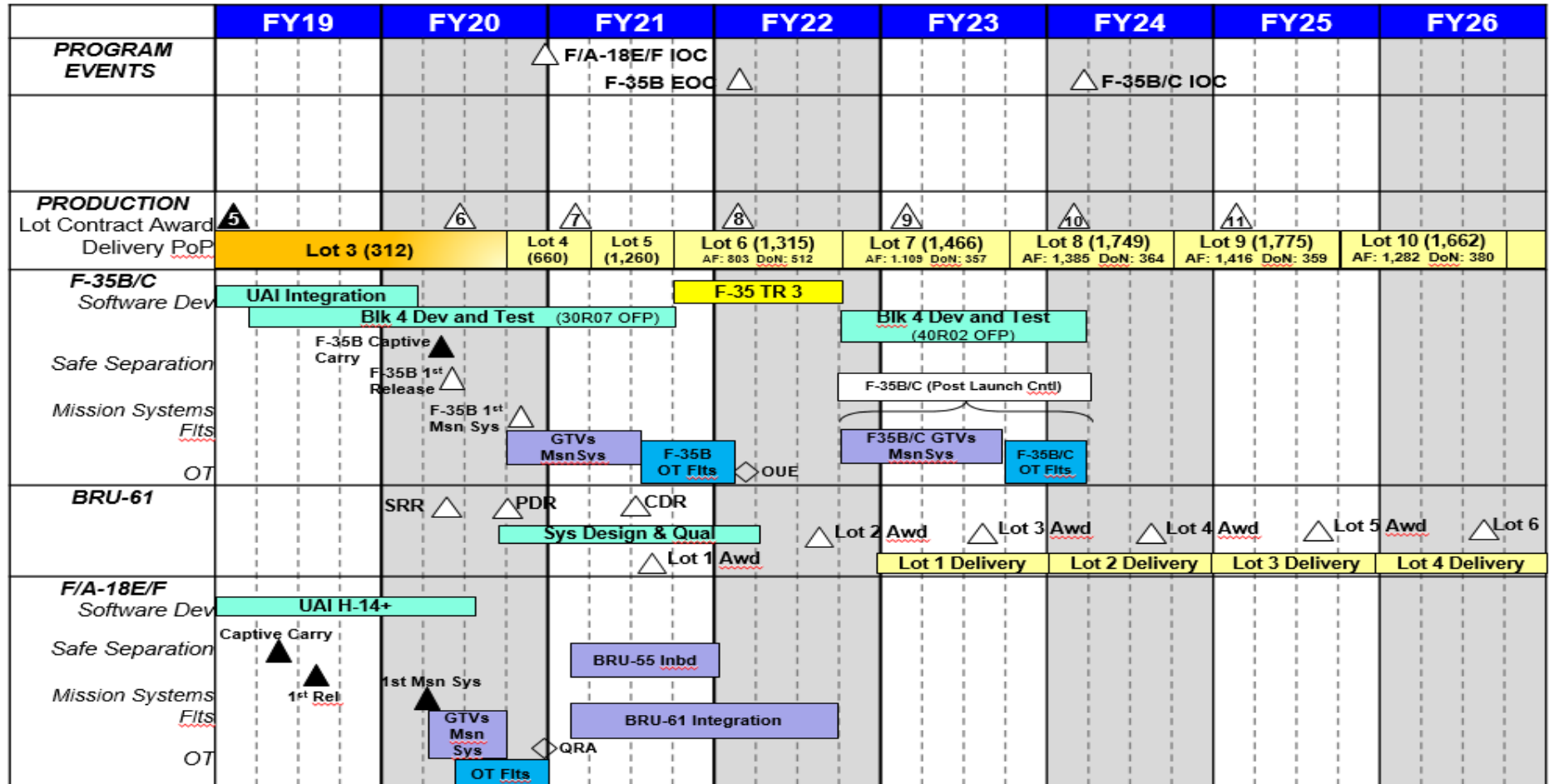
Exhibit R-4, RDT&E Schedule Profile: PB 2021 Navy

Date: February 2020

Appropriation/Budget Activity  
1319 / 5

R-1 Program Element (Number/Name)  
PE 0604329N / Small Diameter Bomb  
(SDB)

Project (Number/Name)  
1663 / SDB II F-18 Integration



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Navy		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>	<b>Project (Number/Name)</b> 1663 / <i>SDB II F-18 Integration</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>F/A-18 E/F SDB II Integration</i></b>				
Acquisition Milestones: IOC	4	2020	4	2020
Test & Evaluation: Developmental Test	1	2019	4	2021
Test & Evaluation: Captive Carriage Flights	2	2020	2	2020
Test & Evaluation: First Release Flight	2	2020	2	2020
Test & Evaluation: BRU-55 Inboard Station Testing	1	2021	1	2022
Test & Evaluation: First Mission Systems Flight	4	2020	4	2020
Test & Evaluation: GTV Mission System	4	2020	3	2021
Test & Evaluation: BRU-61 Integration	1	2021	3	2022
Test & Evaluation: Operational Test	2	2020	4	2020

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**Exhibit R-2A, RDT&E Project Justification:** PB 2021 Navy **Date:** February 2020

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>	<b>Project (Number/Name)</b> 3072 / <i>Small Diameter Bomb (SDB)</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
3072: <i>Small Diameter Bomb (SDB)</i>	264.282	52.898	46.149	55.275	-	55.275	59.091	50.473	45.897	46.795	0.000	620.860
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**Project MDAP/MAIS Code:** 439

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

Small Diameter Bomb Increment II (SDB II) is an ACAT 1C joint Department of the Air Force (USAF) and Department of the Navy (DON) program, with the USAF as the lead service. The SDB II increases joint lethality in contested environments. The SDB can strike a diverse set of targets inside an adversary's air and missile defense networks to destroy mobile platforms through the weather. With increased loadout, range, and munitions effect the network enabled SDBII enhances close combat lethality in complex terrain and provides a net-centric operations capability. The BRU-61 is the Universal Armament Interface (UAI) rack used to carry four SDB II's at one time. The threshold aircraft for the USAF is the F-15E and for the DON are the F-35B and F-35C.

This Project Unit includes all funding for DoN support on the DoN threshold platforms, F-35B and F-35C. The USMC requirement to field SDB II on F-35B is in F-35 Operational Flight Plan (OFP) Block 4.1; the F-35C is being conducted as part of Block 4.2.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<b>Title:</b> SDB II Weapon Support	31.131	31.927	42.688	0.000	42.688
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Funding provides for SDB II Engineering Manufacturing and Development (EMD) efforts including weapon vendor support (Raytheon Missile Systems - RMS), test assets, and government support. Test articles were procured in prior years as part of a joint buy with the Air Force for a better priced quantity buy.					
<b>FY 2020 Plans:</b> Continue Flight Sciences and Flight Test support and analysis for Development Test (DT). Testing includes, ejection tests, environmental & loads analysis and release envelope clearance.					
<b>FY 2021 Base Plans:</b> Complete Flight Sciences and Flight Test support and analysis for DT. Testing includes, ejection tests, environmental & loads analysis and release envelope clearance. Begin Operational Test (OT) on F-35B.					
<b>FY 2021 OCO Plans:</b>					

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<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>	<b>Project (Number/Name)</b> 3072 / <i>Small Diameter Bomb (SDB)</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
N/A					
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Increase of \$10.761 million from FY 2020 to FY 2021 provides funding for Developmental Test efforts of SDB II and BRU-61 on F-35B.					
<b>Title:</b> JSF Integration	21.767	14.222	12.587	0.000	12.587
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Funding provided for integration of SDB II on F-35B and F-35C, specifically for Lockheed Martin to develop F-35 Operational Flight Program (OFP) software, flight missions, and support and analysis of missions.					
<b>FY 2020 Plans:</b> Continue F-35 OFP Block 4 software and Flight Sciences which conducts aircraft environment test, Ground Vibration, and Jettison testing to prove the weapon can safely separate from the aircraft without damaging the aircraft and establishes weapon carriage and release envelopes. Continue DT flights.					
<b>FY 2021 Base Plans:</b> Continue F-35 OFP Block 4 software and Flight Sciences which conducts aircraft environment test, Ground Vibration, and Jettison testing to prove the weapon can safely separate from the aircraft without damaging the aircraft and establishes weapon carriage and release envelopes. Continue DT flights.					
<b>FY 2021 OCO Plans:</b> N/A					
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Decrease of \$1.635 million from FY 2020 to FY 2021 is due to shift of flight testing from Lockheed Martin to government flight test events and costs in preparation for Operational Test (OT).					
<b>Accomplishments/Planned Programs Subtotals</b>	52.898	46.149	55.275	0.000	55.275

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• RDTE,AF/0604329F: <i>Small Diameter Bomb</i>	73.158	31.241	17.311	-	17.311	27.427	27.927	28.430	0.000	0.000	1,339.472

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Navy		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>	<b>Project (Number/Name)</b> 3072 / <i>Small Diameter Bomb (SDB)</i>

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2021</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• MPAF/0207327F: <i>Small Diameter Bomb</i>	100.861	212.434	333.546	-	333.546	308.116	321.972	219.598	0.000	489.974	2,161.567
• WPN/BLI2238: <i>Small Diameter Bomb II</i>	88.772	108.452	78.867	-	78.867	80.582	82.502	84.159	85.872	206.498	839.170
• APN/BLI0720: <i>War Consumables</i>	0.000	8.247	17.381	-	17.381	17.726	17.820	18.176	18.594	Continuing	Continuing

**Remarks**

APN funding is the BRU-61 line within the 0720 BLI.

**D. Acquisition Strategy**

The SDB II acquisition strategy was to conduct a full and open competition to select up to two contractors to compete during a planned 42-month risk reduction phase prior to entering EMD. This competition began April 17, 2006 with the signature of contracts to the competing contractors: 1) Raytheon and 2) the team of Boeing and Lockheed Martin. A Fixed Price Incentive Firm Target type contract for EMD, including Firm Fixed Price procurement options for Lots 1-3 was awarded to Raytheon August 9, 2010. Lots 4 & 5 are included in the contract, but are Not-To-Exceed options. Milestone C was approved 4 June 2015, with Lot 1 (Air Force only) awarded 12 June 2015. Lot 4 is the first DoN procurement and was awarded April 2018 for 90 DoN weapons. Lot 5 was awarded 18 December 2018 for 750 DoN weapons.

The Navy funding will support Navy-unique efforts for SDB Increment II, such as aircraft integration, ship suitability, studies and analysis, and program management and government in-house support. These efforts will be performed on several cost-type contracts or through cost reimbursable work requests to government activities and contractors.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>	<b>Project (Number/Name)</b> 3072 / <i>Small Diameter Bomb (SDB)</i>
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<b>Product Development (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Primary Hardware Development - SDB II EMD	C/FPIF	Raytheon : Tucson, AZ	66.389	17.645	Mar 2019	10.754	Mar 2020	13.195	Mar 2021	-		13.195	44.029	152.012	152.012
Aircraft Integration - JSF	C/CPFF	Lockheed Martin : Fort Worth, TX	39.825	4.500	Mar 2019	0.000		0.000		-		0.000	0.000	44.325	44.325
Prior year Prod Dev cost no longer funded in the FYDP	Various	Various : Various	11.238	0.000		0.000		0.000		-		0.000	0.000	11.238	-
Hardware Development - BRU-61	C/CPFF	Boeing : St. Charles, MO	4.259	5.612	Mar 2019	7.000	Oct 2019	8.761	Dec 2020	-		8.761	10.210	35.842	35.842
<b>Subtotal</b>			121.711	27.757		17.754		21.956		-		21.956	54.239	243.417	N/A

**Remarks**  
 Primary Hardware Development to Raytheon in Tucson, AZ reflects the SDB II prime contractor and includes test assets and contractor costs to support F-35 integration.  
 Funding for Lockheed Martin F-35 includes Associate Contractor Agreements (ACA), bay modifications, logistics efforts, and adapter hardware. It does not include Operational Flight Plan (OFP), Universal Armament Interface (UAI) software coding, nor test missions which are represented in Support and Test sections, respectively.  
 Funding to Boeing for BRU-61 modifications required to carry SDB II on Navy and Marine Corps aircraft. Prior year efforts were to provide data and support to the BRU-77 contractor.

<b>Support (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Software Development - JSF	C/CPFF	Lockheed Martin : Ft. Worth, TX	35.202	6.508	Jan 2019	12.843	Dec 2019	5.765	Jan 2021	-		5.765	30.603	90.921	90.921
Prior year Support cost no longer funded in the FYDP	Various	Various : Various	17.410	0.000		0.000		0.000		-		0.000	0.000	17.410	-
<b>Subtotal</b>			52.612	6.508		12.843		5.765		-		5.765	30.603	108.331	N/A

**Remarks**  
 Software Development for F-35 is the UAI, OFP, and mission planning which supports the SDB II program. Block 4 OFP coding began in FY 2019 and will continue through Development Test (DT).

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>	<b>Project (Number/Name)</b> 3072 / <i>Small Diameter Bomb (SDB)</i>
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<b>Test and Evaluation (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test & Evaluation	Various	Various : Various	4.717	8.937	Nov 2018	7.093	Dec 2019	8.375	Nov 2020	-		8.375	31.061	60.183	-
Operational Test & Evaluation - SDBII	WR	NAWC WD : China Lake, CA	1.010	0.000		0.000		7.077	Nov 2020	-		7.077	34.261	42.348	-
Developmental Test & Evaluation - SDB II	C/CPFF	Lockheed Martin : Ft. Worth, TX	1.907	2.389	Mar 2019	3.517	Mar 2020	6.822	Mar 2021	-		6.822	26.029	40.664	40.664
Prior Year T&E cost no longer funded in the FYDP	Various	Various : Various	8.049	0.000		0.000		0.000		-		0.000	0.000	8.049	-
<b>Subtotal</b>			15.683	11.326		10.610		22.274		-		22.274	91.351	151.244	N/A

**Remarks**  
 Developmental Test (DT) and Operational Test (OT) include all aspects of the weapon system - SDB II, BRU-61, and F-35B and F-35C aircraft OFP with third party post-launch control to include JTAC or other Link 16 capable aircraft.  
  
 DT squadrons and locations for F-35B and F-35C are still uncertain as squadrons are being established. Incremental funding of contract awards will support test programs which begin in the fourth quarter FY 2019 through fourth quarter FY 2025.  
  
 Operational test is scheduled to begin in FY 2021 to support FY 2022 IOC. Funding in outyears is to support DT and OT of SDB II and F-35 with BRU-61 for F-35 post-launch control.

<b>Management Services (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Contractor Services	Various	Various : Various	4.649	0.845	Nov 2018	0.457	Dec 2019	0.250	Nov 2020	-		0.250	0.750	6.951	-
Government Support	WR	NAWC WD : China Lake, CA	37.364	4.829	Nov 2018	2.725	Dec 2019	2.693	Nov 2020	-		2.693	17.104	64.715	-
Government Support	WR	Various : Various	29.963	1.573	Nov 2018	1.680	Dec 2019	2.277	Nov 2020	-		2.277	8.810	44.303	-
Travel	WR	NAVAIR : Patuxent River, MD	2.300	0.060	Oct 2018	0.080	Oct 2019	0.060	Oct 2020	-		0.060	0.240	2.740	-
<b>Subtotal</b>			74.276	7.307		4.942		5.280		-		5.280	26.904	118.709	N/A

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2021 Navy								<b>Date:</b> February 2020			
<b>Appropriation/Budget Activity</b> 1319 / 5				<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>				<b>Project (Number/Name)</b> 3072 / <i>Small Diameter Bomb (SDB)</i>			
	<b>Prior Years</b>	<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	264.282	52.898		46.149		55.275	-	55.275	203.097	621.701	N/A

**Remarks**

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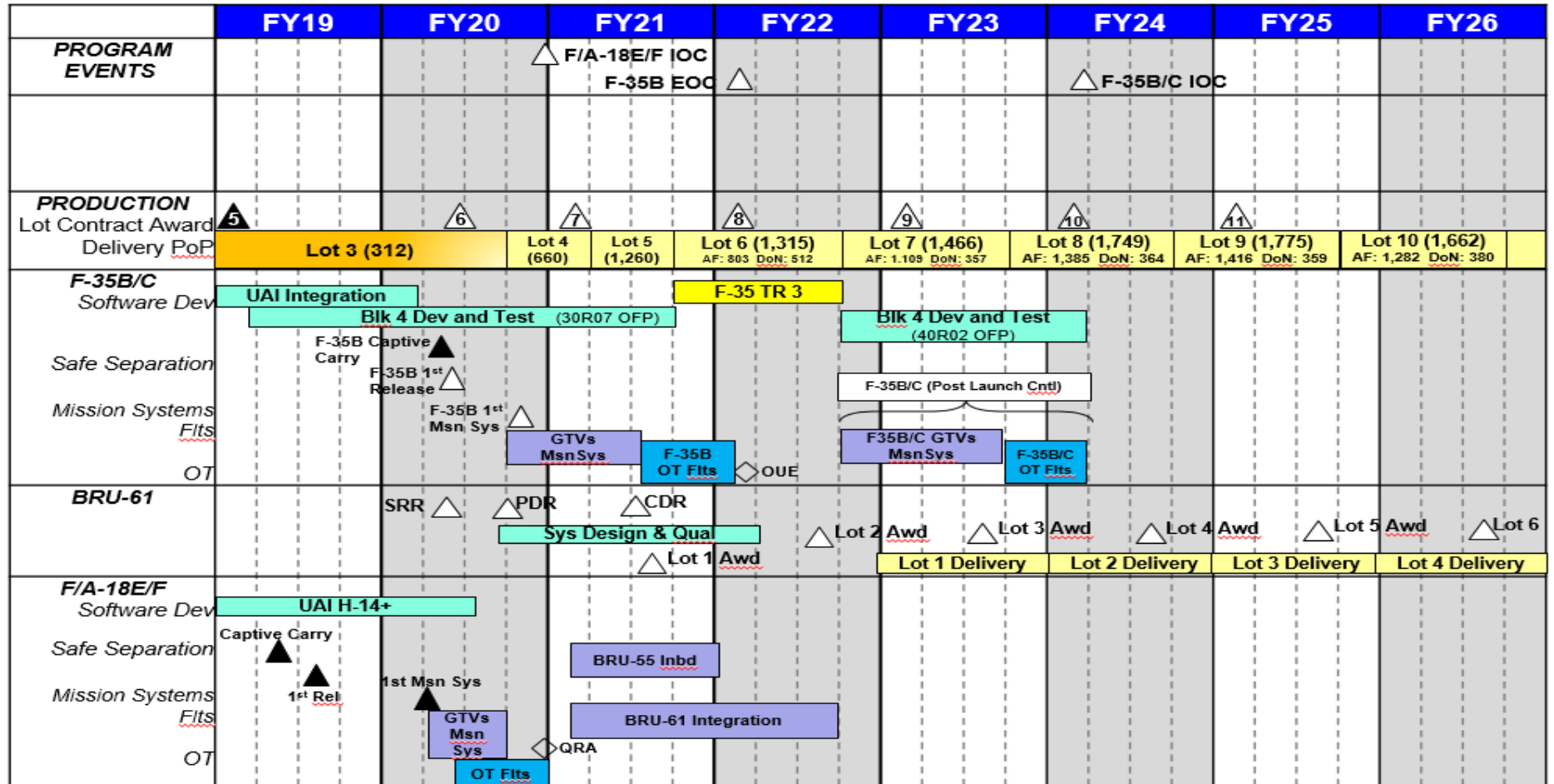
Exhibit R-4, RDT&E Schedule Profile: PB 2021 Navy

Date: February 2020

Appropriation/Budget Activity  
1319 / 5

R-1 Program Element (Number/Name)  
PE 0604329N / Small Diameter Bomb  
(SDB)

Project (Number/Name)  
3072 / Small Diameter Bomb (SDB)



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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2021 Navy</b>		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>	<b>Project (Number/Name)</b> 3072 / <i>Small Diameter Bomb (SDB)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Small Diameter Bomb II</i></b>				
Acquisition Milestones: Milestones: F-35B EOC	1	2022	1	2022
Acquisition Milestones: Milestones: F-35 B/C IOC	1	2024	1	2024
Test & Evaluation: Technical Evaluation: F-35B Captive Carriage Flight	2	2020	2	2020
Test & Evaluation: Technical Evaluation: F-35B First Release	2	2020	2	2020
Test & Evaluation: Technical Evaluation: F-35B First Mission Systems Flight	4	2020	4	2020
Test & Evaluation: Technical Evaluation: GTV Mission System	4	2020	3	2021
Test & Evaluation: Technical Evaluation: F-35 post-launch control DT	4	2022	1	2024
Test & Evaluation: Technical Evaluation: F-35 post-launch control OT	4	2023	1	2024
BRU-61: System Design and Qualification: System Design and Qualification	3	2020	2	2022
BRU-61: System Design and Qualification: SRR	2	2020	2	2020
BRU-61: System Design and Qualification: PDR	4	2020	4	2020
BRU-61: System Design and Qualification: CDR	3	2021	3	2021
BRU-61: BRU-61 Production: Lot 1 Award	3	2021	3	2021
BRU-61: BRU-61 Production: Lot 2 Award	3	2022	3	2022
BRU-61: BRU-61 Production: Lot 3 Award	3	2023	3	2023
BRU-61: BRU-61 Production: Lot 4 Award	3	2024	3	2024
BRU-61: BRU-61 Production: Lot 5 Award	3	2025	3	2025
BRU-61: BRU-61 Deliveries: Lot 1 Del (80 units)	4	2022	1	2024
BRU-61: BRU-61 Deliveries: Lot 2 Del (90 units)	1	2024	4	2024
BRU-61: BRU-61 Deliveries: Lot 3 Del (90 units)	1	2025	4	2025
SDB II Production Milestones: SDB II Contract Awards: Lot 5 Award (AF and DoN)	1	2019	1	2019

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**Exhibit R-4A, RDT&E Schedule Details: PB 2021 Navy** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604329N / <i>Small Diameter Bomb (SDB)</i>	<b>Project (Number/Name)</b> 3072 / <i>Small Diameter Bomb (SDB)</i>
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<b>Events by Sub Project</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
SDB II Production Milestones: SDB II Contract Awards: Lot 6 Award (AF and DoN)	2	2020	2	2020
SDB II Production Milestones: SDB II Contract Awards: Lot 7 Award (AF and DoN)	1	2021	1	2021
SDB II Production Milestones: SDB II Contract Awards: Lot 8 Award (AF and DoN)	1	2022	1	2022
SDB II Production Milestones: SDB II Contract Awards: Lot 9 Award (AF and DoN)	1	2023	1	2023
SDB II Production Milestones: SDB II Contract Awards: Lot 10 Award (AF and DoN)	1	2024	1	2024
SDB II Production Milestones: SDB II Contract Awards: Lot 11 Award (AF and DoN)	1	2025	1	2025
SDB II Deliveries: Lot 3 Del (AF only 312 units)	1	2019	3	2019
SDB II Deliveries: Lot 4 Del (AF 570/DoN 90)	4	2019	3	2020
SDB II Deliveries: Lot 5 Del (AF 510/DoN 750)	4	2020	3	2021
SDB II Deliveries: Lot 6 Del (AF 803/DoN 526)	4	2021	3	2022
SDB II Deliveries: Lot 7 Del (AF 1109/DoN 357)	4	2022	3	2023
SDB II Deliveries: Lot 8 Del (AF 1385/DoN 364)	4	2023	3	2024
SDB II Deliveries: Lot 9 Del (AF 1416/DoN 359)	4	2024	3	2025
SDB II Deliveries: Lot 10 Del (AF 1282/DoN 380)	4	2025	4	2025