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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy										Date: March 2019		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604800M I (U)Joint Strike Fighter (JSF) - EMD							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	50,902.883	157.162	66.566	1.710	-	1.710	0.540	0.556	0.567	0.578	0.000	51,130.562
2262: Joint Strike Fighter EMD STOVL	50,438.576	146.202	66.566	1.710	-	1.710	0.540	0.556	0.567	0.578	0.000	50,655.295
3350: F-35B Sustainment/ Capability Enhancements	464.307	10.960	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	475.267
Program MDAP/MAIS Code: Project MDAP/MAIS Code(s): 198												
A. Mission Description and Budget Item Justification												
The F-35 Joint Strike Fighter (JSF) Program will develop and field an affordable, highly common family of next generation strike aircraft for the USN, USAF, USMC and allies. The three variants are the F-35A conventional takeoff and landing; F-35B short takeoff and vertical landing; and the F-35C Aircraft Carrier suitable variant. The F-35A will be a stealthy multi-role aircraft, primary air-to-ground for the Air Force to replace the F-16 and A-10 and complement the F-22. The F-35B variant will be a multi-role strike fighter aircraft to replace the AV-8B and F/A-18 for the Marine Corps, replace the Sea Harrier and GR 7 for the United Kingdom, and replace the AV-8 currently employed by the Italian Navy. The F-35C will provide the Department of the Navy a multi-role, stealthy strike fighter aircraft to complement the F/A-18E/F. The United Kingdom, Italy, Netherlands, Turkey, Canada, Australia, Denmark, Norway, and Foreign Military Sales customers are also participants in the JSF program. The program shown here reflects USN, USMC, USAF, and International Partner funding. Funding at the accomplishment/planned program level is reported as the total of all services and partners as these activities support all aircraft variants. The System Development and Demonstration (SDD) budget funds a total quantity of 20 RDT&E test articles to include 6 ground test articles and 14 flight test articles for USN, USMC, and USAF use. FY07: 1 F-35A flight test article FY08: 1 F-35B flight test article; 1 F-35B ground test article FY09: 1 F-35B flight test article; 2 F-35A ground test articles FY10: 6 flight test articles: 3 F-35A, 2 F-35B, 1 F-35C; 3 ground test articles: 1 F-35B, 2 F-35C FY11: 4 flight test articles: 1 F-35A, 1 F-35B, 2 F-35C FY13: 1 F-35C flight test article JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under SDD 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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Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
1319: Research, Development, Test & Evaluation, Navy I BA 5: System Development & Demonstration (SDD)		PE 0604800M I (U)Joint Strike Fighter (JSF) - EMD			
B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	152.934	66.566	1.713	-	1.713
Current President's Budget	157.162	66.566	1.710	-	1.710
Total Adjustments	4.228	0.000	-0.003	-	-0.003
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	9.929	0.000			
• SBIR/STTR Transfer	-5.701	0.000			
• Rate/Misc Adjustments	0.000	0.000	-0.003	-	-0.003

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy										Date: March 2019		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD				Project (Number/Name) 2262 / Joint Strike Fighter EMD STOVL			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
2262: Joint Strike Fighter EMD STOVL	50,438.576	146.202	66.566	1.710	-	1.710	0.540	0.556	0.567	0.578	0.000	50,655.295
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: 198												
Note Total cost including United States Navy (USN), United States Marine Corps (USMC), International partner contributions and United States Air Force (USAF) funding are: FY18 \$537.672M, FY19 \$196.104M and FY20 \$10.828M R-2 data reflects variant unique funding only. R-2A(section B)/R-3 displays total combined program (i.e. not Service specific), including International partners. F-35 EMD Includes: USAF PE 0604800F BPAC 653831 USN PE 0604800N Project Unit 2261 USMC PE 0604800M Project Unit 2262 D&S Includes: USAF PE 0604800F BPAC 653832 USN PE 0604800N Project Unit 3352 USMC PE 0604800M Project Unit 3350												
A. Mission Description and Budget Item Justification The F-35 Joint Strike Fighter (JSF) Program will develop and field an affordable, highly common family of next generation strike aircraft for the USN, USAF, USMC and allies. The three variants are the F-35A Conventional Takeoff and Landing; F-35B Short Takeoff and Vertical Landing; and the F-35C Aircraft Carrier suitable variant. The F-35A will be a stealthy multi-role aircraft, primary air-to-ground for the Air Force to replace the F-16 and A-10 and complement the F-22. The F-35B variant will be a multi-role strike fighter aircraft to replace the AV-8B and F/A-18 for the Marine Corps, replace the Sea Harrier and GR 7 for the United Kingdom, and replace the AV-8 currently employed by the Italian Navy. The F-35C will provide the Department of the Navy a multi-role, stealthy strike fighter aircraft to complement the F/A-18E/F. The United Kingdom, other International Partner nations, and Foreign Military Sales customers are also participants in the Joint Strike Fighter program. The program shown here reflects United States Navy (USN), United States Marine Corps, United States Air Force (USAF), and International Partner funding. The top-line Program Element reflects the unique variant for each Service. Funding at the accomplishment/planned program level is reported as the total of all services and partners as these activities support all aircraft variants.												

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Appropriation/Budget Activity 1319 / 5		R-1 Program Element (Number/Name) PE 0604800M I (U)Joint Strike Fighter (JSF) - EMD	Project (Number/Name) 2262 I Joint Strike Fighter EMD STOVL				
The System Development and Demonstration (SDD) budget funds a total quantity of 20 RDT&E test articles to include 6 ground test articles and 14 flight test articles for USN, USMC and USAF use.							
FY07: 1 F-35A flight test article FY08: 1 F-35B flight test article; 1 F-35B ground test article FY09: 1 F-35B flight test article; 2 F-35A ground test articles FY10: 6 flight test articles: 3 F-35A, 2 F-35B, 1 F-35C; 3 ground test articles: 1 F-35B, 2 F-35C FY11: 4 flight test articles: 1 F-35A, 1 F-35B, 2 F-35C FY13: 1 F-35C flight test article							
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: System Development and Demonstration (SDD)			377.434	105.710	10.828	0.000	10.828
Articles:			-	-	-	-	-
Description: SDD execution of the Air System (Lockheed Martin) including International Commonality Efforts; includes airframe, vehicle and mission systems, autonomic logistics, systems engineering & test efforts.							
FY 2019 Plans:							
Continue SDD execution of Air System Lockheed Martin, including International Commonality Effort which includes, airframe, vehicle systems, mission systems, autonomic logistics, systems engineering, and integrated test efforts. Activity aligned to IMS in accordance with variant IOC.							
FY 2020 Base Plans:							
Continue SDD execution of Air System Lockheed Martin, including International Commonality Effort which includes, airframe, vehicle systems, mission systems, autonomic logistics, systems engineering, and integrated test efforts. Activity aligned to IMS in accordance with variant IOC. Conduct SDD closure activities including FCA/PCA in order to establish production specification and transition to post-SDD, production and sustainment.							
FY 2020 OCO Plans:							
N/A							
FY 2019 to FY 2020 Increase/Decrease Statement:							
FY20 funding decrease is due to reduction in domestic and International controls as SDD phase draws to closure.							
Title: Systems Engineering (SE)			0.911	0.000	0.000	0.000	0.000
Articles:			-	-	-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Description: SDD SE including systems operations requirements analysis, program integration, requirements integration, and interoperability support.						
FY 2019 Plans: N/A						
FY 2020 Base Plans: N/A						
FY 2020 OCO Plans: N/A						
Title: Test and Evaluation (T&E)		98.035	77.826	0.000	0.000	0.000
Articles:		-	-	-	-	-
Description: Government DT&E/Operational Testing (OT) in support of first flight of test aircraft. Elements of DT&E includes preparation for flight testing and weapons integration testing.						
FY 2019 Plans: Continue government DT&E/OT in support of test aircraft. Continue flight sciences testing of CTOL, STOVL, and CV variants to expand air vehicle envelope and support mission systems testing. Elements of DT&E include flight testing, weapons integration testing, and component capabilities testing.						
FY 2020 Base Plans: IOT&E conclusion and reporting requirements.						
FY 2020 OCO Plans: N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: FY20 funding decrease is due to reduction in domestic and International controls as SDD phase draws to closure.						
Title: Development Support		20.598	12.568	0.000	0.000	0.000
Articles:		-	-	-	-	-
Description: SDD Support efforts for airframe, air vehicle systems, mission systems, weapons integration, mission support, and autonomic logistics development activities.						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
FY 2019 Plans: Continue SDD support efforts for airframe, air vehicle systems, mission systems, weapons integration, mission support, and autonomic logistics development activities.						
FY 2020 Base Plans: N/A						
FY 2020 OCO Plans: N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: FY20 funding decrease is due to reduction in domestic and International controls as SDD phase draws to closure.						
Title: Autonomic Logistics Information System (ALIS) Articles:		40.694 -	0.000 -	0.000 -	0.000 -	0.000 -
Description: SDD execution of Autonomic Logistics Information System (ALIS) develops the information infrastructure used to transmit health and maintenance action information for the aircraft to the appropriate users.						
FY 2019 Plans: Continue SDD execution of ALIS to develop the information infrastructure used to transmit health and maintenance action information for the aircraft to the appropriate users.						
FY 2020 Base Plans: N/A						
FY 2020 OCO Plans: N/A						
Accomplishments/Planned Programs Subtotals		537.672	196.104	10.828	0.000	10.828
Joint Strike Fighter 0604800F		263.936	69.001	7.628	-	7.628
Joint Strike Fighter 0604800N		100.084	60.537	1.490	-	1.490
International Partner		27.450	-	-	-	-
Navy Subtotals		146.202	66.566	1.710	0.000	1.710

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C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
• RDT&E/0604800F: F-35A Joint Strike Fighter SDD	263.936	69.001	7.628	-	7.628	5.434	0.013	0.000	0.000	0.000	22,334.784
• International: International Partner (SDD)	27.450	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5,013.463
• APAF/0207142F BP10: F-35A USAF CTOL	4,544.684	4,253.696	4,209.813	-	4,209.813	4,862.684	4,796.042	0.000	0.000	148,685.767	202,884.710
• RDT&E/0604800N/2261: F-35C Joint Strike Fighter (JSF) - EMD	100.084	60.537	1.490	-	1.490	0.238	0.252	0.234	0.234	0.000	50,601.645
• APN/0605B: F-35B Joint Strike Fighter STOVL Spares	105.671	92.198	160.150	-	160.150	140.989	143.809	0.000	0.000	Continuing	Continuing
• APN/0605C: F-35C Joint Strike Fighter CV Spares	84.591	44.971	52.858	-	52.858	303.608	309.680	0.000	0.000	Continuing	Continuing
• MILCON 0207142F: USAF MILCON Operations	181.250	175.150	154.400	-	154.400	0.000	0.000	0.000	0.000	0.000	1,602.550
• APAF/0207142F BP11: USAF Modification Funding	68.270	230.448	279.814	-	279.814	259.978	301.899	0.000	0.000	0.000	1,665.794
• FOD/0207142F: USAF Follow-on Development (FoD)	299.408	396.821	504.971	-	504.971	418.988	343.147	283.292	0.000	Continuing	Continuing
• 0207142F/USAF BP16: USAF Joint Strike Fighter Initial Spares	320.831	319.151	416.722	-	416.722	399.361	394.654	0.000	0.000	4,175.007	7,849.413
• USAF/OPAF 0207142F: USAF OPAF	3.326	3.310	2.993	-	2.993	2.463	2.507	0.000	0.000	Continuing	Continuing
• APN/0592: F-35B STOVL Series	34.963	36.618	65.585	-	65.585	47.545	67.429	55.402	61.693	Continuing	Continuing
• APN/0593: F-35C CV Series	31.689	21.236	15.358	-	15.358	12.169	13.323	13.001	13.319	Continuing	Continuing
• RDT&E/0604800N/3352: F-35C Sustainment/ Capability Enhancements	5.564	4.957	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	474.828
• USAF SDD BP 653832: JSF Deployability and Suitability Enhancements	18.190	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	222.147
• PAF/0207142F BP10: F-35A JSF CTOL Advance Procurement	780.300	405.200	1,003.600	-	1,003.600	965.300	414.700	0.000	0.000	20,154.954	26,885.296

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C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost	
• DCA/0207142F 676011: Dual Capable Aircraft (DCA)	35.122	78.016	71.339	-	71.339	106.329	45.328	11.643	11.852	Continuing	Continuing	
• APN/0147: F-35C Joint Strike Fighter CV	1,434.932	2,150.369	2,479.012	-	2,479.012	2,108.140	3,568.494	3,338.922	3,254.095	21,184.608	55,276.036	
• APN/0152C: F-35B Joint Strike Fighter STOVL AP	413.450	228.492	291.804	-	291.804	303.035	221.554	231.317	234.344	1,855.779	5,302.999	
• APN/0152: F-35B Joint Strike Fighter STOVL	3,185.195	2,850.311	1,661.713	-	1,661.713	1,967.950	2,243.672	2,705.528	2,879.021	20,762.973	48,897.043	
• DoN MILCON: DoN JSF MILCON	64.660	121.990	119.800	-	119.800	0.000	0.000	0.000	0.000	642.400	1,406.074	
• International 2: Intl Production/ Reprogramming Lab	124.114	151.776	150.588	-	150.588	149.848	87.119	0.000	0.000	Continuing	Continuing	
• OPN/4268: Logistics Information System (ALIS)	63.995	37.874	55.415	0.500	55.915	58.072	61.614	73.629	74.812	Continuing	Continuing	
• MC/0207597F: USAF MILCON Training	70.350	11.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	166.750	
• International 3: International R&D FoM/D&S	158.273	159.649	162.023	-	162.023	167.383	160.111	0.000	0.000	Continuing	Continuing	
• OPN 902010 S8JC: Aviation Support Equipment (ALIS)	2.297	2.321	0.139	-	0.139	1.977	0.000	0.000	0.000	Continuing	Continuing	
• USAF O&M: USAF O&M	516.569	731.134	909.930	-	909.930	985.790	1,089.394	0.000	0.000	Continuing	Continuing	
• USN 2936: F-35C Follow- on Development (CV)	138.308	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	490.099	
• International Unique: Intl Unique (SDD/PSFD)	15.566	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	481.617	
• APN/0147C: F-35C Joint Strike Fighter CV AP	263.112	140.010	339.053	-	339.053	443.786	278.323	249.135	243.615	2,304.960	5,795.077	
• USMC 2935: F-35C Follow- on Development (STOVL)	139.369	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	491.160	
• 0604840N F-35C C2D2: F-35C 3411	0.000	227.998	383.741	-	383.741	351.536	263.066	252.898	245.204	0.000	1,724.443	
• 0604840M F-35B C2D2: F-35B 3410	0.000	234.107	422.881	-	422.881	373.365	313.601	283.357	270.845	0.000	1,898.156	

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C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Remarks											
D. Acquisition Strategy											
The SDD program consists of a cost-reimbursement contract awarded to Lockheed Martin Aeronautics Company to develop the F-35 Air System, consisting of three aircraft variants and its associated logistics support system, for the U.S. Services and international participants. Similarly, a cost-reimbursement contract was awarded to Pratt & Whitney to develop the F135 propulsion system. Ground and flight testing will be conducted during development to accomplish validation and verification, with the extensive use of modeling and simulation to offset the risk of this large, complex, and concurrent lifecycle program. A comprehensive logistics support environment, including an integrated training system for aircrew, maintenance, and support personnel, is also being developed. On 25 April 2011, the Department of Defense terminated the development of the General Electric Rolls-Royce Fighter Engine Team F136 propulsion system. The F-35 Program has made international involvement a key element of the acquisition strategy. This includes international partnership in the development, production, and sustainment phases of the lifecycle. Additional international participation includes Foreign Military Sales arrangements. In Fiscal Year 2007, separate cost-type contracts were awarded to Lockheed Martin Aeronautics Company and Pratt & Whitney to begin low rate initial production for F-35 air vehicles, propulsion systems, and sustainment for the fielded systems. Transition to fixed-price-type procurement contracts occurred with the fourth low rate lot. To provide logistics support for delivered aircraft, Performance-Based Logistics cost-type contracts will be awarded to Lockheed Martin Aeronautics Company and Pratt & Whitney. At the completion of Low Rate Initial Production, a Defense Acquisition Board review, and Milestone Decision Authority approval, the F-35 Program will enter Full Rate Production. Fixed-price procurement contracts will be awarded for F-35 air vehicles and propulsion systems for the U.S. Services and international participants. Multiyear procurement authority for the F-35 Air System will be requested for Full Rate Production. Concurrently, a fixed-price-type Performance Based Logistics contracts for sustainment will be requested to support multi-Service and multi-national requirements.											
E. Performance Metrics											
The following are the key performance parameters from the F-35 Selected Acquisition Report: Performance Metrics reflect Key Program Performance data. Combat Radius F-35A Meets/Exceeds Tripwire Requirement F-35B Meets/Exceeds Tripwire Requirement											

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F-35C Meets/Exceeds Tripwire Requirement CV Recovery Performance Maximum Approach Speed at required carrier landing weight Mission Reliability F-35A Meets/Exceeds Tripwire Requirement F-35B Meets/Exceeds Tripwire Requirement F-35C Meets/Exceeds Tripwire Requirement Sortie Generation Rate F-35A Meets Tripwire Requirement F-35B Meets Tripwire Requirement F-35C Meets Tripwire Requirement Logistics Footprint F-35A Less than or equal to 8 C-17 equivalents F-35B Less than or equal to 8 C-17 equivalents F-35C Less than or equal to 38,800 cu ft., 217 ST		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy												Date: March 2019			
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Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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 Hardware Development - SDD	C/CPIF	Lockheed Martin : Ft. Worth, TX	32,030.502	348.078	Dec 2017	96.560	Dec 2018	10.828	Dec 2019	-		10.828	9.182	32,495.150	32,495.150
Primary Hardware Development - Award Fee	C/CPIF	Lockheed Martin : Ft. Worth, TX	1,738.689	6.354	Dec 2017	9.150	Dec 2018	0.000		-		0.000	0.000	1,754.193	1,754.193
Primary Hardware Development - ALIS	C/CPIF	Lockheed Martin : Ft. Worth, TX	462.538	40.694	Dec 2017	0.000		0.000		-		0.000	0.000	503.232	503.232
Primary Hardware Development - 0031	C/CPFF	Lockheed Martin : Ft. Worth, TX	0.843	0.169	Dec 2017	0.000		0.000		-		0.000	0.000	1.012	1.012
Primary Hardware Development - 0020	C/CPFF	Lockheed Martin : Ft. Worth, TX	221.119	9.813	Dec 2017	0.000		0.000		-		0.000	0.000	230.932	230.932
Primary Hardware Development - SDD	C/CPIF	Pratt and Whitney : Hartford, CT	7,401.776	11.220	Jan 2018	0.000		0.000		-		0.000	0.000	7,412.996	7,412.996
Primary Hardware Development - Award Fee	C/CPIF	Pratt and Whitney : Hartford, CT	692.198	1.800	Sep 2018	0.000		0.000		-		0.000	0.000	693.998	693.998
Systems Engineering	Various	Various : Various	458.948	0.911	Dec 2017	0.000		0.000		-		0.000	0.000	459.859	459.859
Prior Year No Longer Funded in FYDP	Various	Various : Various	2,909.122	0.000		0.000		0.000		-		0.000	0.000	2,909.122	2,909.122
Subtotal			45,915.735	419.039		105.710		10.828		-		10.828	9.182	46,460.494	N/A
Remarks															
Contract type prior to 2013 was CPAF.															
Cumulative Award Fee earned in prior years for Lockheed Martin is 97%.															
Cumulative Award Fee earned in prior years for Pratt and Whitney is 98%.															
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Development Support - AFFTC/Eglin	Various	Eglin AFB : Eglin, FL	140.760	0.830	Nov 2017	0.000		0.000		-		0.000	0.000	141.590	-
Development Support - AFLCMC/AFRL	Various	AFLCMC/AFRL : Various	78.962	0.000		0.000		0.000		-		0.000	0.000	78.962	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy												Date: March 2019			
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0604800M I (U)Joint Strike Fighter (JSF) - EMD				Project (Number/Name) 2262 I Joint Strike Fighter EMD STOVL					
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Engine Test and Evaluation Support - AEDC/Fuel	Various	Various : Various	203.718	0.000		0.000		0.000		-		0.000	0.000	203.718	-
Development Support - Miscellaneous	Various	Various : Various	135.872	12.855	Nov 2017	12.480	Nov 2018	0.000		-		0.000	0.000	161.207	-
Software Development Support	Various	NAWC WD : China Lake, CA	167.487	0.000		0.000		0.000		-		0.000	0.000	167.487	-
Development Support	Various	NAWC AD : Patuxent, MD	547.210	6.913	Nov 2017	0.000		0.000		-		0.000	0.000	554.123	-
Prior Year No Longer Funded in FYDP	Various	Various : Various	77.641	0.000		0.000		0.000		-		0.000	0.000	77.641	-
Subtotal			1,351.650	20.598		12.480		0.000		-		0.000	0.000	1,384.728	N/A
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Developmental Test and Evaluation	Various	NAWC WD : China Lake, CA	43.257	0.000		0.004	Nov 2018	0.000	Nov 2019	-		0.000	0.000	43.261	-
Developmental Test and Evaluation	Various	NAWC AD : Patuxent River, MD	807.112	4.400	Nov 2017	0.051	Nov 2018	0.000	Nov 2019	-		0.000	0.000	811.563	-
Developmental Test and Evaluation	Various	Edwards AFB : Edwards AFB, CA	738.919	4.400	Nov 2017	0.045	Nov 2018	0.000		-		0.000	0.000	743.364	-
Developmental Test and Evaluation - Other (including Classified PIDs)	Various	Other (incl Classified PIDs) : Various	271.874	2.400	Nov 2017	0.000		0.000		-		0.000	0.000	274.274	-
Operational Test and Evaluation Support	Various	OT-AFOTEC/ AFFTC : Kirkland AFB, NM/Eglin AFB, FL	239.981	61.610	Nov 2017	0.000		0.000		-		0.000	0.000	301.591	-
Operational Test and Evaluation Support	Various	OT-JITC/OPTEC : Various	104.199	19.609	Nov 2017	0.000		0.000		-		0.000	0.000	123.808	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy												Date: March 2019			
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD				Project (Number/Name) 2262 / Joint Strike Fighter EMD STOVL					
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Operational Test and Evaluation Support	Various	OT-CHLK : China Lake, CA	13.911	0.000	Nov 2017	0.000		0.000		-		0.000	0.000	13.911	-
Operational Test and Evaluation Support	Various	OT-Various : Various	10.598	5.528	Nov 2017	77.726	Nov 2018	0.000	Oct 2019	-		0.000	0.000	93.852	-
Prior Year No Longer Funded in FYDP	Various	Various : Various	27.829	0.000		0.000		0.000		-		0.000	0.000	27.829	-
Subtotal			2,257.680	97.947		77.826		0.000		-		0.000	0.000	2,433.453	N/A
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Security System High BOS	C/FP	Mantech : Arlington, VA	15.882	0.000		0.000		0.000		-		0.000	0.000	15.882	15.882
AFLCMC Civilian Pay	Various	AFLCMC CIVPAY : Wright Patterson, AFB, OH	130.581	0.000		0.000		0.000		-		0.000	0.000	130.581	-
Program Management Support	C/CPFF	Allutiiq : Arlington, VA	2.405	0.000		0.000		0.000		-		0.000	0.000	2.405	2.405
Facilities BOSS	Various	Various : Various	41.785	0.000		0.000		0.000		-		0.000	0.000	41.785	-
CIO ODCs	Various	Various : Various	20.277	0.000		0.000		0.000		-		0.000	0.000	20.277	-
Travel	Various	Various : Various	27.173	0.088	Dec 2017	0.088	Dec 2018	0.000		-		0.000	0.000	27.349	-
Program Management Support	Various	Jacobs BOSS : Arlington, VA	75.126	0.000		0.000		0.000		-		0.000	0.000	75.126	-
OPS - Cost/FM/EV ACT-I	Various	OPS - Cost/FM/EV : Arlington, VA	5.845	0.000		0.000		0.000		-		0.000	0.000	5.845	-
Program Management Support	Various	Andrews AFB : Camp Springs, MD	0.493	0.000		0.000		0.000		-		0.000	0.000	0.493	-
Prior Year No Longer Funded in FYDP	Various	Various : Various	593.944	0.000		0.000		0.000		-		0.000	0.000	593.944	-
Subtotal			913.511	0.088		0.088		0.000		-		0.000	0.000	913.687	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy										Date: March 2019			
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD					Project (Number/Name) 2262 / Joint Strike Fighter EMD STOVL			
	Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Subtotals	50,438.576	537.672		196.104		10.828		-		10.828	9.182	51,192.362	N/A
Joint Strike Fighter 0604800F	-	263.936		69.001		7.628		-		7.628			-
Joint Strike Fighter 0604800N	-	100.084		60.537		1.490		-		1.490			-
International Partner	-	27.450		-		-		-		-			-
Project Cost Totals	50,438.576	146.202		66.566		1.710		-		1.710	9.182	51,192.362	

Remarks

Subtotals and totals may not add due to rounding.

NOTE 1: Prior Years reflect \$21,988.772M USAF/\$19,801.023M USN/\$3,662.768M USMC /\$4,986.013 International/Total \$50,438.576M

FY 2018 reflects \$263.936M USAF/\$100.084M USN/\$146.202M USMC/\$ 27.450M International/Total \$537.672M

FY 2019 reflects \$ 69.001M USAF/\$ 60.537M USN/\$ 66.566M USMC/\$ 0.000M International/Total \$196.104M

FY 2020 reflects \$ 7.628M USAF/\$ 1.490M USN/\$ 1.710M USMC/\$ 0.000M International/Total \$10.828M

JSF EMD Includes:

USAF PE 0604800F BPAC 653831

USN PE 0604800N Project Unit 2261

USMC PE 0604800M Project Unit 2262

D&S Includes:

USAF PE 0604800F BPAC 653832

USN PE 0604800N Project Unit 3352

USMC PE 0604800M Project Unit 3350

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PE 0604800M: (U)Joint Strike Fighter (JSF) - EMD
Navy

R-1 Line #149

R-1 Program Element (Number/Name) PE 0604800M I (U)Joint Strike Fighter (JSF) - EMD
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2262 | Joint Strike Fighter EMD STOVL

- EMD

2020PB - 0604800M - 2262

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD	Project (Number/Name) 2262 / Joint Strike Fighter EMD STOVL	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
JSF Variants - CV, STOVL & CTOL				
Acquisition Milestones: F-35C Initial Operational Capability	2	2019	2	2019
Test & Evaluation: Test and Evaluation: Block 3F DT&E/Cert	1	2018	2	2018
Test & Evaluation: Test and Evaluation: Initial Operational Test and Evaluation (IOT&E)	1	2019	1	2020
Defense Acquisition Reviews: System Development Reviews: Interim Program Review (IPR) FY-18	1	2019	1	2019
Defense Acquisition Reviews: System Development Reviews: Interim Program Review (IPR) FY-19	1	2020	1	2020
Defense Acquisition Reviews: System Development Reviews: Interim Program Review (IPR) FY-20	1	2021	1	2021
Defense Acquisition Reviews: System Development Reviews: Interim Program Review (IPR) FY-21	1	2022	1	2022
Production Lots (Full Funding / Production / Delivery: U.S. Aircraft): LOT 10 Full Funding / Production / Delivery	2	2018	2	2019
Production Lots (Full Funding / Production / Delivery: U.S. Aircraft): LOT 11 Full Funding / Production / Delivery	2	2019	1	2020
Production Lots (Full Funding / Production / Delivery: U.S. Aircraft): LOT 12 Full Funding / Production / Delivery	2	2020	1	2021
Production Lots (Full Funding / Production / Delivery: U.S. Aircraft): LOT 13 Full Funding / Production / Delivery	2	2021	1	2022
Production Lots (Full Funding / Production / Delivery: U.S. Aircraft): LOT 14 Full Funding / Production / Delivery	2	2022	4	2023
Production Lots (Full Funding / Production / Delivery: U.S. Aircraft): LOT 15 Full Funding / Production / Delivery	2	2023	4	2024

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy										Date: March 2019		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD				Project (Number/Name) 3350 / F-35B Sustainment/Capability Enhancements			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
3350: F-35B Sustainment/Capability Enhancements	464.307	10.960	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	475.267
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: 198												
Note												
Total cost including United States Navy (USN), United States Marine Corps (USMC), United States Air Force (USAF) and International Partner contributions funding is: FY18 \$41.595M, FY19 \$4.957M and FY20 \$0.000M												
R-2A table shown above reflect service funding only.												
R-2A (section B)/R-3 displays total combined program (i.e. not Service-specific), including International partners.												
D&S Includes: USAF PE 64800F BPAC 653832 USN PE 0604800N Project Unit 3352 USMC PE 0604800M Project Unit 3350												
A. Mission Description and Budget Item Justification												
Funds enhancements to the deployability and suitability of the air system such as low observable (LO) maintenance enhancements, security architecture updates, redesign of obsolete items, and integrated training simulators. These enhancements will provide vital on-demand support to the war-fighter within a deployed environment and are not funded via the existing System Development and Demonstration (SDD) program or tied to Block 4 Operational Flight Program development. Funding will result in achieving targeted suitability, maintainability, and affordability returns employing the F-35 in deployed or austere locations.												
-Funding at the accomplishment/planned program level is reported as the total of all services as these activities support all aircraft variants. By agreement, USN and USMC funding shares are approximately equal and when combined are equal to the USAF share.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	
Title: Sustainment and Capability Enhancements							25.367	4.957	0.000	0.000	0.000	
Articles:							-	-	-	-	-	
Description: Apply disciplined systems engineering, refinement of requirements, develop and acquire												

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy				Date: March 2019				
Appropriation/Budget Activity 1319 / 5		R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD		Project (Number/Name) 3350 / F-35B Sustainment/Capability Enhancements				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
suitability and maintainability of the air system such as decentralized maintenance capabilities, LO maintenance enhancements, security architecture updates, redesign of obsolete items and integrated training simulators.								
FY 2019 Plans: Continue to conduct systems engineering, technical maturation, integration and test planning for suitability and deployability enhancements. Continue to perform sustaining engineering, development and test activities necessary to gain capacity, compatibility, and expansion in wiring, power, wing conduits, etc. in support of electronic warfare. This includes funding for suitability enhancements related to Distributed Mission Training (DMT).								
FY 2020 Base Plans: N/A								
FY 2020 OCO Plans: N/A								
FY 2019 to FY 2020 Increase/Decrease Statement: FY19 Sustainment/Capability Enhancements funding decrease is due to reduction in domestic and International controls in conjunction with SDD phase drawing to closure.								
Title: Development Support				1.000	0.000	0.000	0.000	0.000
Articles:				-	-	-	-	-
Description: SDD support efforts for airframe, air vehicle systems, mission systems, weapons integration, mission support, and autonomic logistics development activities.								
FY 2019 Plans: N/A								
FY 2020 Base Plans: N/A								
FY 2020 OCO Plans: N/A								
Title: Development Test and Evaluation				0.500	0.000	0.000	0.000	0.000
Articles:				-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy				Date: March 2019				
Appropriation/Budget Activity 1319 / 5		R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD		Project (Number/Name) 3350 / F-35B Sustainment/Capability Enhancements				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Description: Verification and testing for deployability and suitability enhancements.								
FY 2019 Plans: N/A								
FY 2020 Base Plans: N/A								
FY 2020 OCO Plans: N/A								
Title: Autonomic Logistics Information System				14.728	0.000	0.000	0.000	0.000
Articles:				-	-	-	-	-
Description: SDD execution of Autonomic Logistics Information System (ALIS) develops the information infrastructure used to transmit health and maintenance action information for the aircraft to the appropriate users.								
FY 2019 Plans: N/A								
FY 2020 Base Plans: N/A								
FY 2020 OCO Plans: N/A								
Accomplishments/Planned Programs Subtotals				41.595	4.957	0.000	0.000	0.000
Joint Strike Fighter 0604800N 3352				5.564	4.957	-	-	-
International Partner				6.881	-	-	-	-
Joint Strike Fighter 0604800F				18.190	-	-	-	-
Navy Subtotals				10.960	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy									Date: March 2019		
Appropriation/Budget Activity 1319 / 5				R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD				Project (Number/Name) 3350 / F-35B Sustainment/Capability Enhancements			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
• RDT&E/0604800F: F-35A Joint Strike Fighter	263.936	69.001	7.628	-	7.628	5.434	0.013	0.000	0.000	0.000	22,334.784
• International: International Partner (SDD)	43.274	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5,029.287
• APAF/0207142F BP10: F-35A USAF CTOL	4,544.684	4,253.696	4,209.813	-	4,209.813	4,862.684	4,796.042	0.000	0.000	148,685.767	202,884.710
• RDT&E/0604800N/2261: F-35C Joint Strike Fighter (JSF) - EMD	100.084	60.537	1.490	-	1.490	0.238	0.252	0.234	0.234	0.000	50,601.645
• APN/0605B: F-35B Joint Strike Fighter STOVL Spares	105.671	92.198	160.150	-	160.150	140.989	143.809	0.000	0.000	Continuing	Continuing
• APN/0605C: F-35C Joint Strike Fighter CV Spares	84.591	44.971	52.858	-	52.858	303.608	309.680	0.000	0.000	Continuing	Continuing
• MILCON 0207142F: USAF MILCON Operations	181.250	175.150	154.400	-	154.400	0.000	0.000	0.000	0.000	0.000	1,602.550
• APAF/0207142F BP11: USAF Modification Funding	68.270	230.448	279.814	-	279.814	259.978	301.899	0.000	0.000	0.000	1,665.794
• FOD/0207142F: USAF Follow-on Development (FoD)	299.408	396.821	504.971	-	504.971	418.988	343.147	283.292	0.000	Continuing	Continuing
• 0207142F/USAF BP16: USAF Joint Strike Fighter Initial Spares	320.831	319.151	416.722	-	416.722	399.361	394.654	0.000	0.000	4,175.007	7,849.413
• USAF/OPAF 0207142F: USAF OPAF	3.326	3.310	2.993	-	2.993	2.463	2.507	0.000	0.000	Continuing	Continuing
• APN/0592: F-35B STOVL Series	34.963	36.618	65.585	-	65.585	47.545	67.429	55.402	61.693	Continuing	Continuing
• APN/0593: F-35C CV Series	31.689	21.236	15.358	-	15.358	12.169	13.323	13.001	13.319	Continuing	Continuing
• RDT&E/0604800N/3352: F-35C Sustainment/ Capability Enhancements	5.564	4.957	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	474.828
• USAF SDD BP 653832: Deployability and Suitability Enhancements	18.190	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	222.147
• PAF/0207142F BP10: F-35A JSF CTOL Advance Procurement	780.300	405.200	1,003.600	-	1,003.600	965.300	414.700	0.000	0.000	20,154.954	26,885.296

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy									Date: March 2019		
Appropriation/Budget Activity 1319 / 5				R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD				Project (Number/Name) 3350 / F-35B Sustainment/Capability Enhancements			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
• DCA/0207142F 676011: Dual Capable Aircraft (DCA)	34.145	77.434	71.339	-	71.339	106.329	45.328	11.643	11.852	Continuing	Continuing
• APN/0147: F-35C Joint Strike Fighter CV	1,434.932	2,150.369	2,479.012	-	2,479.012	2,108.140	3,568.494	3,338.922	3,254.095	21,184.608	55,276.036
• APN/0152C: F-35B Joint Strike Fighter STOVL AP	413.450	228.492	291.804	-	291.804	303.035	221.554	231.317	234.344	1,855.779	5,302.999
• APN/0152: F-35B Joint Strike Fighter STOVL	3,185.195	2,850.311	1,661.713	-	1,661.713	1,967.950	2,243.672	2,705.528	2,879.021	20,762.973	48,897.043
• DoN MILCON: DoN JSF MILCON	64.660	121.990	119.800	-	119.800	0.000	0.000	0.000	0.000	642.400	1,406.074
• International 2: International Production/Reprogramming Lab	124.114	151.776	150.588	-	150.588	149.848	87.119	0.000	0.000	Continuing	Continuing
• OPN/4268: Logistics Information System (ALIS)	63.995	37.874	55.415	0.500	55.915	58.072	61.614	73.629	74.812	Continuing	Continuing
• MC/0207597F: USAF MILCON Training	70.350	11.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	166.750
• International 3: International R&D FoM/D&S	158.273	159.649	162.023	-	162.023	167.383	160.111	0.000	0.000	Continuing	Continuing
• OPN 902010 S8JC: Aviation Support Equipment (ALIS)	2.297	2.321	0.139	-	0.139	1.977	0.000	0.000	0.000	0.000	11.291
• USAF O&M: USAF O&M	516.569	731.134	909.930	-	909.930	985.790	1,089.394	0.000	0.000	Continuing	Continuing
• USN 2936: F-35C Follow- on Development (CV)	138.308	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	490.099
• International Unique: Imtl Unique (SDD/PSFD)	15.566	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	481.617
• APN/0147C: F-35C Joint Strike Fighter CV AP	263.112	140.010	339.053	-	339.053	443.786	278.323	249.135	243.615	2,304.960	5,795.077
• USMC 2935: F-35C Follow- on Development (STOVL)	139.369	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	491.160
• 0604840N F-35C C2D2: F-35C 3411	0.000	227.998	383.741	-	383.741	351.536	263.066	252.898	245.204	0.000	1,724.443
• 0604840M F-35B C2D2: F-35B 3410	0.000	234.107	422.881	-	422.881	373.365	313.601	283.357	270.845	0.000	1,898.156

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy										Date: March 2019	
Appropriation/Budget Activity 1319 / 5				R-1 Program Element (Number/Name) PE 0604800M I (U)Joint Strike Fighter (JSF) - EMD				Project (Number/Name) 3350 I F-35B Sustainment/Capability Enhancements			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Remarks											
D. Acquisition Strategy											
Implement Joint Strike Fighter Joint Executive Steering Board/Configuration Steering Board approved enhancements to existing capabilities through existing contracts using the engineering change proposal process. When appropriate, new cost type contracts may be established.											
E. Performance Metrics											
The following are the key performance parameters from the F-35 Selected Acquisition Report:											
Performance Metrics reflect Key Program Performance data.											
Combat Radius											
F-35A Meets/Exceeds Tripwire Requirement											
F-35B Meets/Exceeds Tripwire Requirement											
F-35C Meets/Exceeds Tripwire Requirement											
F-35B Performance											
Flat Deck (High-High-High Profile Fuel) Meets Requirement In Tripwire Band											
Ski Jump (High-Medium-Medium-High Profile Fuel) Meets Requirement In Tripwire Band											
Vertical Landing Bring Back Meets Requirement In Tripwire Band											
F-35C Recovery											
Maximum Approach Speed Meets Requirement In Tripwire Band											
Interoperability											
Net Ready Criteria- Meets Requirement In Tripwire Band											
Radio Frequency Signature Meets/Exceeds Tripwire Requirement											
Force Protection											
CB Pilot Protection (New Key Performance Parameters Per CN3) - Meets/Exceeds Tripwire Requirement											

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD	Project (Number/Name) 3350 / F-35B Sustainment/Capability Enhancements
Mission Reliability F-35A Meets/Exceeds Tripwire Requirement F-35B United States Marine Corps (USMC) Meets/Exceeds Tripwire Requirement F-35B United Kingdom (UK) Meets/Exceeds Tripwire Requirement F-35C Exceeds Operational Requirements Document Objective Sortie Generation Rate F-35A Meets/Exceeds Tripwire Requirement F-35B USMC Meets/Exceeds Tripwire Requirement F-35B UK Meets/Exceeds Tripwire Requirement F-35C Meets/Exceeds Tripwire Requirement Logistics Footprints F-35A Meets/Exceeds Tripwire Requirement F-35B USMC Meets/Exceeds Tripwire Requirement Logistics Footprint- Volume F-35B USMC Exceeds ORD Objective F-35B UK Meets/Exceeds Tripwire Requirement F-35C Exceeds Operational Requirements Document (ORD) Objective Logistics Footprint-Weight F-35B USMC Exceeds ORD Objective F-35B UK Meets/Exceeds Tripwire Requirement F-35C Exceeds ORD Objective		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy												Date: March 2019			
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD				Project (Number/Name) 3350 / F-35B Sustainment/Capability Enhancements					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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 Hardware Development - 3002 SDD	C/CPFF	Lockheed Martin : Fort Worth, TX	89.805	22.992	Mar 2018	4.957	Mar 2019	0.000		-		0.000	0.000	117.754	117.754
Primary Hardware Development - 3002 ALIS	C/CPFF	Lockheed Martin : Fort Worth, TX	185.146	14.728	Mar 2018	0.000		0.000		-		0.000	0.000	199.874	218.886
Primary Hardware Development -14-C-002 Band 2/5	C/CPFF	Lockheed Martin : Fort Worth, TX	133.165	2.375	Mar 2018	0.000		0.000		-		0.000	0.000	135.540	135.540
Subtotal			408.116	40.095		4.957		0.000		-		0.000	0.000	453.168	N/A
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Development Support	Various	AFLCMC : Eglin AFB	33.501	0.000		0.000		0.000		-		0.000	0.000	33.501	-
Development Support	Various	Various : Various	14.778	1.000	Mar 2018	0.000		0.000		-		0.000	0.000	15.778	-
Subtotal			48.279	1.000		0.000		0.000		-		0.000	0.000	49.279	N/A
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Developmental Test & Evaluation	WR	Various : Various	2.986	0.500	Mar 2018	0.000		0.000		-		0.000	0.000	3.486	-
Subtotal			2.986	0.500		0.000		0.000		-		0.000	0.000	3.486	N/A
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Program Support	Various	Various : Various	4.926	0.000		0.000		0.000		-		0.000	0.000	4.926	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy												Date: March 2019			
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0604800M I (U)Joint Strike Fighter (JSF) - EMD				Project (Number/Name) 3350 I F-35B Sustainment/Capability Enhancements					
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subtotal			4.926	0.000		0.000		0.000		-		0.000	0.000	4.926	N/A
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Subtotals			464.307	41.595		4.957		0.000		-		0.000	0.000	510.859	N/A
Joint Strike Fighter 0604800N 3352			-	5.564		4.957		-		-		-			-
International Partner			-	6.881		-		-		-		-			-
Joint Strike Fighter 0604800F			-	18.190		-		-		-		-			-
Project Cost Totals			464.307	10.960		0.000		0.000		-		0.000	0.000	510.859	-
Remarks															
NOTE: Prior Years reflect \$201.397M USAF/\$92.036M USN/\$82.175M USMC/\$88.669M International/Total \$464.307M FY 2018 reflects \$18.190M USAF/\$ 5.564M USN/\$10.960M USMC/\$ 6.881M International/Total \$ 41.595M FY 2019 reflects \$ 0.000M USAF/\$ 4.957M USN/\$ 0.000M USMC/\$ 0.000M International/Total \$ 4.957M FY 2020 reflects \$ 0.000M USAF/\$ 0.000M USN/\$ 0.000M USMC/\$ 0.000M International/Total \$ 0.000M															
R-2A (section B)/R-3 displays total combined program (i.e. not Service-specific), including International partners.															
JSF EMD Includes: USAF PE 0604800F BPAC 653831 USN PE 0604800N Project Unit 2261 USMC PE 0604800M Project Unit 2262															
D&S Includes: USAF PE 0604800F BPAC 653832 USN PE 0604800N Project Unit 3352 USMC PE 0604800M Project Unit 3350															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy												Date: March 2019																	
Appropriation/Budget Activity 1319 / 5												R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD								Project (Number/Name) 3350 / F-35B Sustainment/Capability Enhancements									
Proj 3350	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				
	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	
D&S																													
	SOUv2																												
	Band 2/5																												
	Security Architecture																												
	OMS																												
	DMT/DMO																												
2020DON - 0604800M - 3350																													

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604800M / (U)Joint Strike Fighter (JSF) - EMD	Project (Number/Name) 3350 / F-35B Sustainment/Capability Enhancements	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3350				
D&S: Standard Operating Unit (SOUv2)	1	2018	4	2018
D&S: Band 2/5	1	2018	3	2018
D&S: Security Architecture	1	2018	3	2019
D&S: Offboard Mission Support (OMS) Redesign	1	2018	4	2019
D&S: Distributed Mission Training/Distributed Mission Operations (DMT/DMO)	1	2018	4	2019