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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy I BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0603599N I (U)Frigate Development							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	18.965	84.900	143.450	-	143.450	141.599	73.415	76.460	71.098	Continuing	Continuing
3086: Frigate	0.000	18.965	84.900	143.450	-	143.450	141.599	73.415	76.460	71.098	Continuing	Continuing
Program MDAP/MAIS Code: Project MDAP/MAIS Code(s): 374												
Note PE 0603599N was created per Congressional direction to establish a new budget line item.												
A. Mission Description and Budget Item Justification As directed by the Secretary of Defense (SECDEF) in 2014, the Navy via the Small Surface Combatant Task Force (SSCTF) reviewed the capabilities of Littoral Combat Ship (LCS) and explored alternatives to provide a more lethal and survivable ship to meet future missions. The SSCTF recommendations served as the foundation for the revised requirements for the modified LCS (designated as the Frigate (FF)) and an award no later than FY2019. Previous budgets and schedules supported the plan to develop the FF. As a result of the Navy's 2016 Force Structure Assessment and to address increasingly complex threats in the global maritime environment, the Navy is reassessing the capabilities required to ensure the Frigate paces future threats. The Navy desires to maximize the capability of the future Guided Missile Frigate (FFG(X)) in anti-surface warfare(SUW), anti-submarine warfare (ASW) and local air defense (LAD) mission areas, while keeping the ship affordable and part of a "high-low" mix of surface combatants. Our updated assessment will be completed to support finalization of FFG(X) requirements by Spring 2017. The FFG(X) program is currently updating their cost estimates based on schedule updates to include the no later than FY20 start, additional capabilities, and programmatic decisions. FY17 will focus on efforts for the performance specification (P-SPEC) development, based on updated FFG(X) requirements, and on the conceptual design contract development. Funding in FY18 will maintain Government Furnished Equipment (GFE) development, Combat Management System (CMS) design, coding, and test, C4I testing facility (C4I system innovation facility) configuration and system engineering efforts timelines from previous FF schedule to ensure mature Government Furnished Information (GFI) deliveries to the shipbuilding competition. Additional new efforts in FY18/19 reflect the conceptual design tasking, which will support the tentative FY19 Detail Design and Construction (DD&C) Request for Proposal (RFP) release. FY20 funding decreases are due the movement of costs for systems engineering, cost estimating, and ship design management to SCN (2127). Additional decreases in FY20 include the conclusion of the conceptual design efforts.												

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Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
1319: Research, Development, Test & Evaluation, Navy I BA 4: Advanced Component Development & Prototypes (ACD&P)		PE 0603599N I (U)Frigate Development			
B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	30.000	84.900	62.800	-	62.800
Current President's Budget	18.965	84.900	143.450	-	143.450
Total Adjustments	-11.035	0.000	80.650	-	80.650
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.035	0.000			
• Program Adjustments	0.000	0.000	80.143	-	80.143
• Rate/Misc Adjustments	0.000	0.000	0.507	-	0.507
• Congressional Add Adjustments	-10.000	-	-	-	-
Change Summary Explanation					
FY16 Adjustments:					
\$10M was transferred and executed out of LCS PE (0603581N PU 3096) due to new PE not established until after the FY 2016 Continuing Resolution.					
\$1.035M - SBIR taxes					
FY18 Adjustments:					
\$80.143M - Added additional funding for revised LCS/FF Profile for new Small Surface Combatant in FY20					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy										Date: May 2017		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603599N / (U)Frigate Development				Project (Number/Name) 3086 / Frigate			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
3086: Frigate	0.000	18.965	84.900	143.450	-	143.450	141.599	73.415	76.460	71.098	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: 374												
A. Mission Description and Budget Item Justification												
Frigate (FF) efforts comprised of design and development efforts for a more lethal and survivable multi-mission warship focused on both anti-surface warfare and anti-submarine warfare capabilities (SUW/ASW). The FFG(X) builds on these capabilities and adds local air defense and survivability features. It includes design, development, issue resolution, certification and testing efforts required to support the design baseline for FFG(X).												
The FFG(X) design and development phases include platform design and development, experimentation, combat system element integration, development of Technical Data Packages (TDPs), total ship system engineering and integration, combat systems and warfare systems certification, and planning and conduct of system testing. These efforts include procurement of combat and warfare system elements and/or simulators to support production representative testing in support of design, development, and certification efforts and ordnance in support of testing. Primary design modifications will include the FF features of an over-the-horizon surface-to-surface missile system, upgraded air defense weapons and sensors, advanced electronic warfare system and improved decoys, and the ability to employ all elements of the SUW and ASW mission packages simultaneously (horizon surface-to-surface missile system, 30mm guns, variable depth sonar, towed array and torpedo defense). FFG(X) will further add local air defense and survivability features.												
The RDT&E portion of FFG(X) funding is also composed of formal Developmental and Operational Assessment testing of the FFG(X). Test and Evaluation (T&E) will concentrate on verifying integration and interoperability of employed technologies and systems in the FFG(X) designs to achieve the mission capabilities and performance requirements as defined in the Frigate program's baseline Capabilities Development Documents (CDD). T&E functions will include the evaluation of Critical Technical Parameters (CTP), Measures of Effectiveness (MOE), Measures of Suitability (MOS), and Key Performance Parameters (KPP).												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Test & Evaluation								0.450	3.902	2.500	0.000	2.500
Articles:								-	-	-	-	-
Description: Execute formal FF and FFG(X) test planning in support of Developmental Testing and Operational Testing (DT/OT), including Live Fire Test and Evaluation (LFT&E), and procurement of T&E Ordnance. Plan for and execute DT and C4I integration & test, cyber test and certification, warfare system integration & test and certification, aviation (manned and unmanned) integration & test and certification. Late FY17 efforts were shifted to the FFG(X) test planning leveraging the FF test planning efforts.												
FY 2016 Accomplishments:												

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Conducted development of FF Test and Evaluation Master Plan (TEMP) updates from existing LCS TEMP. Conducted analysis of future FF testing approaches throughout the development cycle. FY 2017 Plans: Continue development of FF Test and Evaluation Master Plan (TEMP) updates from existing LCS TEMP. Develop plan to support future updates required to support land-based SIM/STIM, modeling and test requirements for integration and test of the FF platform. Conduct testing analysis of FF structures and hull forms to verify operational effectiveness. Continue analysis of future FF testing approaches throughout the development cycle. FY 2018 Base Plans: Leverage FF Test and Evaluation Master Plan (TEMP) updates to build the FFG(X) TEMP. Support future updates required to support land-based SIM/STIM, modeling and test requirements for the integration and test of the FFG(X) platform. Leverage analysis for future FFG(X) testing approaches throughout the development cycle. Begin execution of land-based SIM/STIM efforts. FY 2018 OCO Plans: N/A						
Title: Ship Systems / C4I / Warfare Systems Engineering <div>Articles:</div> Description: The Frigate (FF) was a multi-mission ship that will leverage the existing Littoral Combat Ship (LCS) designs, and focuses on anti-surface warfare and anti-submarine warfare capabilities (SUW/ASW). The modifications from LCS included over-the-horizon (OTH) surface-to-surface missile system, upgraded Air Defense weapons and sensors, advanced electronic warfare system and improved decoys, and all elements of the SUW and ASW mission packages (horizon surface-to-surface missile system, 30mm guns, variable depth sonar, towed array and torpedo defense). FFG(X) will further add local air defense and survivability features. FY 2016 Accomplishments: Conducted system engineering efforts to support system requirements review (SRR) and prepared for future preliminary design review (PDR), including decomposing CDD requirements into system and warfare system element specifications, defining logical and physical interfaces, finalizing warfare system element selections, and conducting analyses to refine acquisition and contracting approaches for the FF systems. This included analysis, engineering design work and testing for OTH missile system selection. Conducted ship preliminary design, naval architecture, machinery engineering, trade-off studies, and topside design analysis for both FF ship variants to integrate warfare system, vulnerability, and recoverability improvements. Funded FF shipbuilders and prime		18.515 -	80.998 -	140.950 -	0.000 -	140.950 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
integrators to assess weight reduction initiatives and design feasibility of improved systems on FF Class ships no later than FY19. FY 2017 Plans: Increase from FY16 to FY17 is to support development efforts detailed below to support procurement of the FF starting in FY19. The Navy began analysis of the FFG(X), which will support a FY20 contract award. Early FY17 efforts supported the FF, with later efforts focused on FFG(X). Ship Systems Engineering Early FY17 efforts supported the FF system engineering efforts related to naval architecture, machinery engineering and topside design analysis. Efforts will be focused on enhancing data developed during the Preliminary Design (PD) period within the structures, mass properties, stability, materials, hydrodynamics and arrangements/habitability disciplines to develop a biddable Technical Data Package (TDP) in support of the planned FY17 Request for Proposal (RFP). Emphasis will be placed on the structural and stability disciplines, consisting of modeling, and incorporation of lethality and survivability enhancements to the LCS Flight 0+ design, to include the flow-down impacts to the supporting machinery and electrical systems. After program restructuring in FY17, later efforts focused on the development of the performance specification (P-SPEC) from the previous FF build specification. C4I / Warfare Systems Engineering Continue system engineering efforts related to C4I and warfare systems specifications. Transition preliminary design efforts to a biddable Technical Data Package (TDP) to inform planned FY17 shipbuilding contract Request for Proposals (RFP). Continue OTH systems engineering efforts for integration of OTH missile. Continue CMS development efforts to ensure full ship integration aligns with total ship design efforts. Execute SFR/SRR for Combat System (CS). Finalize all SWaP data for C4I suites. Integrate other CS elements into total ship design. Implement additional cyber security/ information assurance (IA) measures on the warfare system and C4I suite to pace the current threat. Finalize network architecture design to support warfighter effectiveness and cyber posture. All FF efforts in C4I/warfare system engineering directly support the FFG(X). Additional capabilities are added to FFG(X) baseline. FY 2018 Base Plans: Increase from FY17 to FY18 is to support development efforts detailed below to support procurement of the FFG(X) starting in FY20. Additional warfighting capabilities are inherent in the FFG(X) design. Ship Systems Engineering						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Government-led indicative design begins, including system engineering efforts related to naval architecture, machinery engineering and topside design analysis. Emphasis will be placed on the structural and stability disciplines, consisting of modeling, and incorporation of lethality and survivability enhancements to include the flow-down impacts to the supporting machinery and electrical systems. Continue development of the P-SPEC. Begin contractor-led conceptual designs to support FY20 competition.					
C4I / Warfare Systems Engineering Continue system engineering efforts related to C4I and warfare systems specifications. Continue OTH systems engineering and testing efforts for integration of OTH missile. Continue CMS development efforts to ensure full ship integration aligns with total ship design efforts and integrate additional FFG(X) required capabilities. Execute CS Software Preliminary Design Review (PDR). Integrate other CS and C4I elements into total ship design. Implement additional cyber security/information assurance (IA) measures on the warfare system and C4I suite to pace the current threat.					
<i>FY 2018 OCO Plans:</i> N/A					
Accomplishments/Planned Programs Subtotals	18.965	84.900	143.450	0.000	143.450

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

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• SCN/2127: <i>Littoral Combat Ship (LCS)</i>	1,414.265	1,211.625	663.011	-	663.011	758.194	1,235.410	1,155.019	2,061.188	8,770.151	27,655.663
• RDTE/0603581N/3096: <i>Littoral Combat Ship</i>	86.858	28.906	20.841	-	20.841	16.140	9.997	5.537	0.000	0.000	1,361.405

Remarks

RDTE/0603581N/3096 contains \$10M of Frigate funding in FY 2016

In FY 2016 - 2019, the SCN represents LCS procurement. Beginning in FY 2020, the SCN represents FF procurement.

D. Acquisition Strategy

The FFG(X) acquisition strategy is currently being developed to pursue a competitive contract award no later than FY2020.

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E. Performance Metrics

T&E functions will include the evaluation of Critical Technical Parameters (CTP), Measures of Effectiveness (MOE), Measures of Suitability (MOS), and Key Performance Parameters (KPP). The LCS program conducts annual Defense Acquisition Board In-Process Reviews (DAB IPRs). The first Seaframe and Mission Module integrated program DAB IPR was conducted in January 2013 and is held in September thereafter.

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Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0603599N I (U)Frigate Development				Project (Number/Name) 3086 I Frigate					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Conceptual Design Contracts	TBD	Various : Various	0.000	0.000		1.000	Sep 2017	50.000	Feb 2018	-		50.000	Continuing	Continuing	Continuing
P-SPEC Development	WR	Government Activites : Various	0.000	0.000		6.580	Mar 2017	0.500	Jan 2018	-		0.500	Continuing	Continuing	Continuing
P-SPEC Development	C/CPAF	Various Contractors : Various	0.000	0.000		2.500	Mar 2017	1.500	Jan 2018	-		1.500	Continuing	Continuing	Continuing
Ship Design Modifications	C/CPAF	Lockheed Martin : Various	0.000	2.755	Feb 2016	6.960	Dec 2016	0.000		-		0.000	0.000	9.715	-
Ship Design Modifications	C/CPAF	Austal : Mobile, AL	0.000	2.726	Jun 2016	7.260	Dec 2016	0.000		-		0.000	0.000	9.986	-
Over the Horizon (OTH) Missile Integration	WR	NAWC, China Lake : China Lake, CA	0.000	0.067	Jun 2016	0.585	Feb 2017	0.597	Feb 2018	-		0.597	Continuing	Continuing	Continuing
Over the Horizon (OTH) Missile Integration	WR	Various : Various	0.000	0.202	Feb 2016	1.075	Feb 2017	1.097	Feb 2018	-		1.097	Continuing	Continuing	Continuing
C4I Development	WR	PEO C4I : San Diego, CA	0.000	0.250	Apr 2016	1.364	Nov 2016	0.965	Nov 2017	-		0.965	Continuing	Continuing	Continuing
C4I Development	WR	SPAWAR : Charleston, SC	0.000	0.919	Apr 2016	0.786	Nov 2016	2.000	Nov 2017	-		2.000	Continuing	Continuing	Continuing
C4I Development	WR	SPAWAR : San Diego, CA	0.000	0.828	Feb 2016	1.947	Nov 2016	1.967	Nov 2017	-		1.967	Continuing	Continuing	Continuing
Common Combat Management System Development (CMS)	C/CPIF	Lockheed Martin : Various	0.000	1.052	Jun 2016	14.000	Jan 2017	22.000	Jan 2018	-		22.000	Continuing	Continuing	Continuing
Common Combat Management System Development (CMS)	C/CPAF	Austal : Mobile, AL	0.000	0.250	May 2016	0.250	Jan 2017	0.000		-		0.000	0.000	0.500	-
Common Combat Management System Development (CMS)	WR	Government Activites : Various	0.000	0.117	May 2016	2.216	Nov 2016	4.407	Nov 2017	-		4.407	Continuing	Continuing	Continuing
Warfare Systems Development	WR	NUWC, Newport : Newport, RI	0.000	0.150	Feb 2016	1.350	Nov 2016	3.300	Nov 2017	-		3.300	Continuing	Continuing	Continuing
Warfare Systems Development	WR	NSWC, DD : Dahlgren, VA	0.000	1.040	Apr 2016	4.166	Nov 2016	4.845	Nov 2017	-		4.845	Continuing	Continuing	Continuing
Warfare Systems Development	WR	NSWC, CD : Carderock, MD	0.000	0.115	Apr 2016	0.830	Nov 2016	3.475	Nov 2017	-		3.475	Continuing	Continuing	Continuing

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Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0603599N / (U)Frigate Development				Project (Number/Name) 3086 / Frigate					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Warfare Systems Development	C/CPAF	Lockheed Martin : Various	0.000	0.100	May 2016	1.452	Dec 2016	2.162	Dec 2017	-		2.162	Continuing	Continuing	Continuing
Warfare Systems Development	Various	Various : Various	0.000	0.600	Apr 2016	2.220	Nov 2016	3.247	Nov 2017	-		3.247	Continuing	Continuing	Continuing
Aviation Integration Development	WR	NAWC, AD : Patuxent River, MD	0.000	0.263	Apr 2016	1.013	Nov 2016	1.500	Nov 2017	-		1.500	Continuing	Continuing	Continuing
Aviation Integration Development	WR	NSWC, DD : Dahlgren, VA	0.000	0.000		0.116	Dec 2016	0.118	Dec 2017	-		0.118	Continuing	Continuing	Continuing
Subtotal			0.000	11.434		57.670		103.680		-		103.680	-	-	-
Remarks															
Changes from DON18 to OSD18/PB18 effort are due to the redirection of the programs from FF to FFG(X) efforts by the Navy. Ship Design Modifications efforts were stopped and new conceptual design efforts started.															
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Government Engineering Support	WR	NSWC, CD : Carderock, MD	0.000	0.261	Feb 2016	6.554	Nov 2016	7.005	Nov 2017	-		7.005	Continuing	Continuing	Continuing
Government Engineering Support	WR	NSWC, PD : Philadelphia, PA	0.000	0.185	Feb 2016	1.575	Nov 2016	2.607	Nov 2017	-		2.607	Continuing	Continuing	Continuing
Government Engineering Support	WR	NSWC, DD : Dahlgren, VA	0.000	0.385	Feb 2016	1.445	Nov 2016	2.406	Nov 2017	-		2.406	Continuing	Continuing	Continuing
Government Engineering Support	WR	NSWC, Indian Head : Indian Head, MD	0.000	0.055	Feb 2016	0.000		0.000		-		0.000	0.000	0.055	-
Government Engineering Support	WR	NSWC, PHD : Port Hueneme, CA	0.000	0.003	May 2016	0.576	Nov 2016	0.587	Nov 2017	-		0.587	Continuing	Continuing	Continuing
Government Engineering Support	WR	Government Activites : Various	0.000	0.040	Feb 2016	0.098	Nov 2016	0.100	Nov 2017	-		0.100	Continuing	Continuing	Continuing
Contractor Engineering Support	C/CPAF	Booz Allen Hamilton : McLean, VA	0.000	0.545	Aug 2016	0.811	Feb 2017	0.725	Feb 2018	-		0.725	Continuing	Continuing	Continuing

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Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Contractor Engineering Support	C/CPAF	CACI : Arlington, VA	0.000	0.037	May 2016	0.939	Feb 2017	0.447	Nov 2017	-		0.447	Continuing	Continuing	Continuing
Contractor Engineering Support	C/CPAF	Alion : Arlington, VA	0.000	0.486	Aug 2016	4.801	Feb 2017	5.744	Feb 2018	-		5.744	Continuing	Continuing	Continuing
Contractor Engineering Support	C/CPAF	Various : Various	0.000	0.875	Aug 2016	1.974	Jan 2017	3.820	Jan 2018	-		3.820	Continuing	Continuing	Continuing
Subtotal			0.000	2.872		18.773		23.441		-		23.441	-	-	-
Remarks															
Changes from DON18 to OSD18/PB18 effort are due to the redirection of the programs from FF to FFG(X) efforts by the Navy. Increase funding for FY 17/18 Engineering Support are due to conceptual design effort, GFI/GFE development, and Combat System development.															
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Model/ Hull Form Testing	WR	NSWC, CD : Carderock, MD	0.000	0.320	Mar 2016	3.482	Nov 2016	0.000		-		0.000	0.000	3.802	-
Test and Evaluation Master Plan (TEMP) Development	C/CPAF	Alion : Arlington, VA	0.000	0.130	May 2016	0.420	Dec 2016	0.500	Dec 2017	-		0.500	Continuing	Continuing	Continuing
Land Based Integration & Test	WR	Government Activites : Various	0.000	0.000		0.000		1.000	Dec 2017	-		1.000	Continuing	Continuing	Continuing
Land Based Integration & Test	TBD	Lockheed Martin : Various	0.000	0.000		0.000		1.000	Nov 2017	-		1.000	Continuing	Continuing	Continuing
Subtotal			0.000	0.450		3.902		2.500		-		2.500	-	-	-
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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 Management Support	C/CPAF	Alion : Arlington, VA	0.000	0.786	Feb 2016	1.290	Dec 2016	1.099	Dec 2017	-		1.099	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy	Date: May 2017
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Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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 Management Support	WR	Various : Various	0.000	3.423	Mar 2016	3.265	Dec 2016	12.730	Dec 2017	-		12.730	Continuing	Continuing	Continuing
Subtotal			0.000	4.209		4.555		13.829		-		13.829	-	-	-

Remarks

Program Management Support includes Program Office support, PEO LCS taxes, travel, and funds for equipment/supplies.

	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	18.965	84.900	143.450	-	143.450	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Navy

Date: May 2017

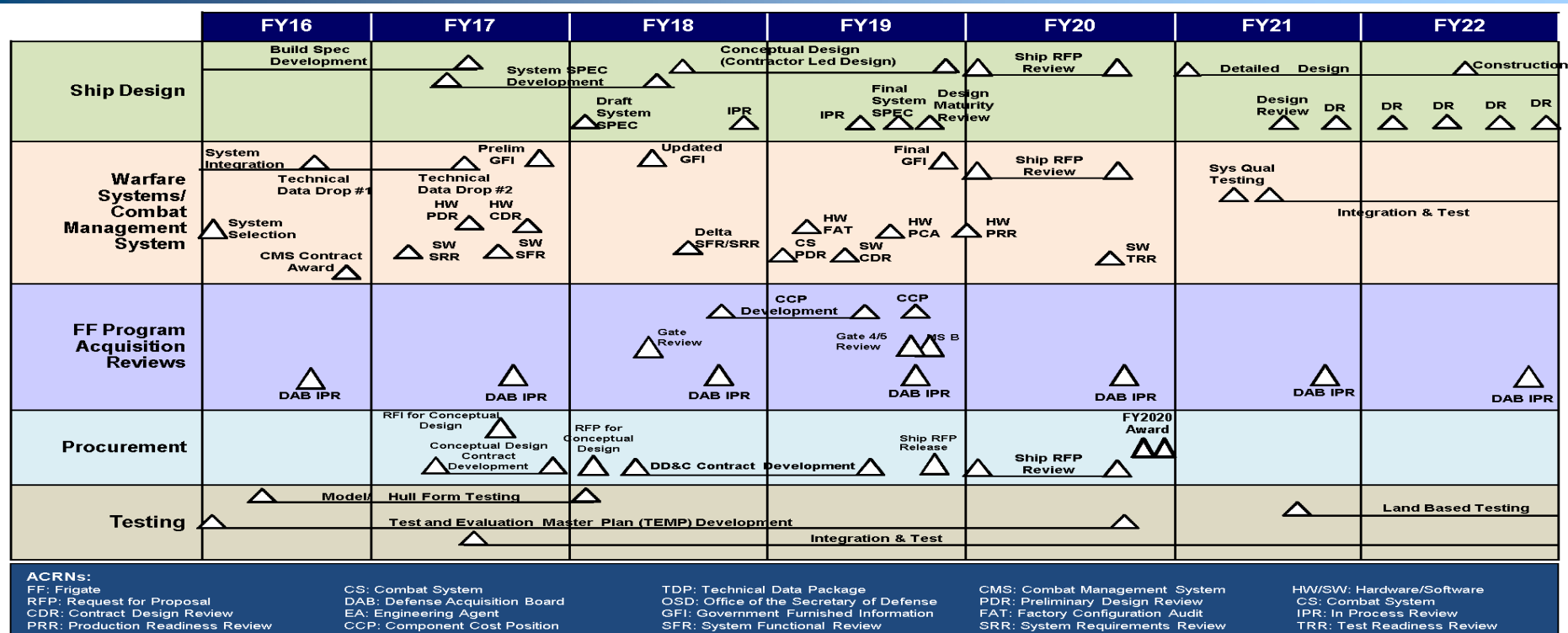
Appropriation/Budget Activity
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R-1 Program Element (Number/Name)
PE 0603599N / (U)Frigate Development

Project (Number/Name)
3086 / Frigate



FFG(X) Program Schedule



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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Navy			Date: May 2017
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3086				
Build Spec /P-SPEC Development	1	2016	2	2018
Warfare System Selection	1	2016	1	2016
Warfare Systems Integration	1	2016	3	2017
Test and Evaluation Master Plan (TEMP) Development	1	2016	3	2020
Model / Hull Form Testing	2	2016	4	2017
Technical Data Package Data Drop #1	3	2016	3	2016
Combat Management System (CMS) Contract Award	4	2016	4	2016
Component Cost Position (CCP) Development	4	2018	3	2019
In Process Review #1	4	2018	4	2018
In Process Review #2	2	2019	2	2019
CS Software System Requirements Review (SRR)	2	2017	2	2017
Technical Data Package Data Drop #2	3	2017	3	2017
Integration and Test	2	2017	1	2022
CMS Hardware Preliminary Design Review (PDR)	2	2017	2	2017
Draft P-Spec Approval	1	2018	1	2018
CMS Hardware Critical Design Review (CDR)	4	2017	4	2017
CS Software System Functional Review (SFR)	3	2017	3	2017
Final P-SPEC Approval	3	2019	3	2019
Ship Design Maturity Review	3	2019	3	2019
Production RFP Released	4	2019	4	2019
RFP for Conceptual Design	1	2018	1	2018
DD&C Contract Development	2	2018	3	2019

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Navy

Date: May 2017

Appropriation/Budget Activity

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R-1 Program Element (Number/Name)

PE 0603599N / (U)Frigate Development

Project (Number/Name)

3086 / Frigate

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
CS Software Preliminary Design Review (PDR)	3	2018	3	2018
RFP Review and Downselect	1	2020	3	2020
CMS Hardware Factory Acceptance Testing (FAT)	3	2018	3	2018
CS Software Critical Design Review (CDR)	2	2019	2	2019
CMS Hardware Physical Configuration Audit (PCA)	4	2019	4	2019
CMS Hardware Production Readiness Review (PRR)	1	2020	1	2020
CS Software Test Readiness Review (TRR)	3	2020	3	2020
Detailed Design	1	2021	4	2022
System Qualification Testing	2	2021	2	2021
Land Based Testing	3	2021	4	2022
CS Integration and Test	3	2021	4	2022