Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy											Date: February 2015	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604245N *I H-1 Upgrades*							
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	0.000	48.994	44.115	27.235	-	27.235	27.020	28.277	29.457	30.160	Continuing	Continuing
3359: *H-1 Improvements*	0.000	48.994	44.115	27.235	-	27.235	27.020	28.277	29.457	30.160	Continuing	Continuing

A. Mission Description and Budget Item Justification

The mission of the AH-1 attack helicopter is to provide rotary wing close air support, anti-armor, armed escort, armed/visual reconnaissance, survivability enhancements, and fire support coordination capabilities under day/night and adverse weather conditions. The mission of the UH-1 utility helicopter is to provide command and control and combat assault support under day/night and adverse weather conditions and special operations support; supporting arms coordination and aeromedical evacuation. Major modifications for both aircraft include 37 AH-1Ws converted to AH-1Zs, build 152 new AH-1Zs, remanufacture ten (10) H-1N helicopters and build 150 new UH-1Y models. AH-1Z and UH-1Y models include a 4-bladed, composite rotor system with semi-automatic bladefold, performance-matched transmissions, T700 Engine Digital Electronic Control Units, 4-bladed tail rotors and drive systems, more effective stabilizers, upgraded landing gear, and common, fully integrated cockpits and avionics systems. These upgrades will add 10,000 flight hours to AH-1Z/UH-1Y airframes. The fully integrated cockpits reduce operator workload and improve situational awareness, thus increasing safety and reducing the rate of aircraft attrition. They will provide considerable growth potential for future weapon systems and avionics, which will significantly increase mission effectiveness and survivability. The cockpits will also include integration of onboard mission planning, communications, digital fire control, self-navigation, night navigation/targeting, air-to-ground missile and air-launched intercept missile weapon systems management in nearly identical crew stations, which significantly reduces training requirements. These upgrades maximize commonality between the two aircraft and provide needed improvements in crew and passenger survivability, payload, power available, endurance, range, airspeed, maneuverability and supportability.

Follow-on improvements for H-1 aircraft sensors and weapons integration, avionics, and air vehicle components will address deficiencies, systems safety, obsolescence, reliability, supportability and cost growth issues. Improvements will include all associated System Configuration Set (SCS) updates as well as integration and testing related to the aircraft platforms.

B. Program Change Summary ($ in Millions)	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**
Previous President's Budget	47.123	44.115	27.433	-	27.433
Current President's Budget	48.994	44.115	27.235	-	27.235
Total Adjustments	1.871	-	-0.198	-	-0.198
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	2.466	-			
• SBIR/STTR Transfer	-0.595	-			
• Rate/Misc Adjustments	-	-	-0.198	-	-0.198

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy	Date: February 2015
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604245N *I H-1 Upgrades*

Change Summary Explanation

Technical: Beginning in FY 2016, technical content of fleet-driven corrections of deficiencies and increased capabilities will be scaled to the reduced budget.

Schedule: SCS 7.0, SCS 8.1, and SCS 8.2 deliveries extended to accommodate reduced budget profile. DT and OT extended to FY20 to allow for planned future test efforts including development & testing of upgrades to avionics, air vehicle, sensors & weapons, and system configuration set improvements.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604245N / *H-1 Upgrades*	Project (Number/Name) 3359 / *H-1 Improvements*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
3359: *H-1 Improvements*	-	48.994	44.115	27.235	-	27.235	27.020	28.277	29.457	30.160	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The objective of H-1 Improvements is to provide follow-on Research, Development, Test and Evaluation efforts in support of all H-1 aircraft.

H-1 Improvements include System Configuration Set (SCS) development and testing. SCS involves the integration of the entire set of airborne electronics connected via the 1553 data bus and includes much of the electronic hardware and software described in air vehicle, avionics, and sensors and weapons below. This includes correction of hardware and software deficiencies as identified through test and/or due to obsolescence issues.

Air Vehicle and Engine improvements include analysis of structural data to formulate Damage Limits and Tolerances for structural components to reduce life cycle costs and maintenance workload; and redesign of structural components and drive system components to minimize excessive and premature wear, increase reliability, and improve existing design deficiencies. Additional air vehicle upgrades include: redesign of the aircraft power-generating components (generators, inverters, wiring) to support power requirements for existing and future systems (avionics, sensors, and weapons) and to reduce aircraft weight, redesign of the Environmental Control System /Thermal Redesign to support cooling of Technology Refresh Mission Computer and other avionics, and redesign to add an aerial refueling capability.

Avionics improvements target digital inter-operability, integrated avionics, safety & survivability, and situational awareness for both the pilot and aircrew safety. This includes integrating Blue Force Tracking, Joint Battle Command-Platform (JBC-P), Full Motion Video (FMV), Degraded Visual Environment (DVE), Helmet Mounted Display improvements, cockpit displays, precision and GPS non-precision landing capability, Crash Survivable Flight Incident Recorder, collision avoidance, improved Embedded Global Positioning System (EGI), Inertial Navigation System (INS), targeting sensor systems and mission computer. H-1 capability improvements include improved Aircraft Survivability Equipment (ASE), digital operations & transfer of data, digital interoperability, digital video recording, video and data networking, and information integration with aviation combat elements and Marine Air Ground Task Force elements. Mandated capability efforts include CNS/ATM, Required Navigation Performance/Area Navigation (RNP/RNAV), GPS Selective Availability Anti-Spoofing Module (SAASM), Automatic Dependent Surveillance - Broadcast (ADS-B), Crash Survivable Flight Incident Recorder, development efforts required for Depot standup and incorporation of technology and information protection/Information Assurance in critical avionics and sensor systems. In addition, the goal is to reduce total ownership cost for H-1 aircraft and related support systems by improving reliability and maintainability of critical flight and avionics systems along with associated peculiar avionics support equipment and incorporating fact-of-life obsolescence solutions.

Sensors and Weapons improvements include upgrades and reliability initiatives, hardware and infrared improvements for the Targeting Sight System and BRITE Star Sensors. These enhancements will provide upgraded performance, improve overall design, producibility and maintainability. In addition, several aircraft stores integration efforts are being performed. The AN/ALQ-231 (V) Intrepid Tiger II Electronic Warfare Pod will be integrated to provide a new Electronic Warfare capability. The Joint Air-to-Ground Missile (JAGM) and AGM-114 Romeo Hellfire missiles began integration efforts starting in FY14. These missiles will provide new interfaces to the aircraft that allow for better targeting capabilities with a new millimeter wave sensor (JAGM), provide enhanced lethality with greater fuze functionality and incorporate a new multi-effects warhead. Continued improvements to aircraft armament systems and ordnance systems will continue with additional operational testing of Advanced Precision Kill Weapons (APKWS), and M299 Launcher improvements.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604245N / *H-1 Upgrades*	**Project (Number/Name)** 3359 / *H-1 Improvements*

These improvements will provide considerable growth potential for future weapon systems, air vehicle improvements, software improvements, and avionics upgrades, which will significantly increase mission effectiveness & survivability, while potentially reducing life cycle costs. The cockpits will also include integration of onboard mission planning, communications, digital fire control, self-navigation, night navigation/targeting, precision guided munitions, and air-launched intercept missile weapon systems management in nearly identical crew stations, which significantly reduce training requirements. These upgrades maximize commonality between all H-1 Type/Model/Series aircraft and provide needed improvements in crew and passenger reliability, survivability, payload, power available, endurance, range, airspeed, maneuverability and supportability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: System Configuration Set Development	24.761	19.838	17.272	-	17.272
Articles:	-	-	-	-	-
FY 2014 Accomplishments: SCS 8.0- continue requirements definition and completion of design/development process. Correction of hardware and software correction of deficiencies as identified through test and/or due to obsolescence issues.					
FY 2015 Plans: FY 2015 plans - SCS 8.0 - Correction of hardware and software deficiencies as identified through test and/or due to obsolescence issues. SCS 8.0 is planned in two increments, SCS 8.1 and SCS 8.2, and will address key avionics and sensors obsolescence issues that affect Aircraft Production Lots. SCS 8.1 will continue development and flight test of Tech Refresh Mission Computer (avionics obsolescence issue required to support delivery of production aircraft beginning with Lot 11/FY 2014), Target Sight System (TSS) Turret Electronics Unit (TEU) (electro-optical sensor obsolescence issue required to support production aircraft beginning with Lot 13/ FY 2016), and the associated System Security Engineering (SSE) improvements required as DoD mandates for both updated avionics and updated sensor electronics. SCS 8.2 will continue the design and development of Radar Warning Set AN/APR-39 D(V)2 (sensor/avionics obsolescence issue required to support Lot 14/FY 2017), the Advanced Data Transfer System (ADTS) needed for digital map data to meet Terrain Awareness Warning System (TAWS) mandate, and Airborne Network Switch (ANS) needed to switch multiple devices to communicate with the TRMC via ethernet.					
FY 2016 Base Plans: SCS 8.1 development completion. Continue SCS 8.2 with the design and development of Radar Warning Set AN/APR-39 D(V)2 (sensor/avionics) to correct obsolescence issue required to support Lot 14/FY 2017. Integrate the Advanced Data Transfer System (ADTS) needed for digital map data to meet Terrain Awareness Warning System (TAWS) mandate, and Airborne Network Switch (ANS) needed to switch multiple devices to communicate with the Tech Refresh Mission Computer (TRMC) via Ethernet. Integrate and test AN/ALE-47					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604245N / *H-1 Upgrades*	**Project (Number/Name)** 3359 / *H-1 Improvements*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Dispensing System software updgrades to increase the survivability of platforms against Infrared (IR) threats. Integrate Target Sight System (TSS) Laser Spot Tracker (LST) to increase platform target acquisition capability. Complete Developmental Test (DT) and Operation Testing (OT) for SCS 8.2. ***FY 2016 OCO Plans:*** N/A					
Title: Weapons and Sensors Testing and Integration	6.192	6.105	2.989	-	2.989
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continue Target Sight System turret test and evaluation for hardware and infrared improvement efforts; initiate aircraft stores development, integration, and testing efforts including Advanced Precision Kill Weapon System, the M299A1 launcher, and Air-Launched Intercept Missiles on the AH-1Z. ***FY 2015 Plans:*** Develop, test and integrate hardware, software changes to address parts obsolescence and deficiencies identified in test for aircraft sensors; Target Sight Systems (TSS) and the BRITE Star II. Begin software integration of Joint Air to Ground Missile and AGM-114 Romeo Missile to test functionality and compatibility with aircraft software. Collect flight test data, to include captive carriage noise and vibration as well conduct safe separation analysis. Continue to refine rocket boresight and launch profiles to improve effectively of the Advanced Precision Kill System (APKWS). Conduct captive carriage and development/operational testing of the AN/ALQ-231 Intrepid Tiger, to include conducting feasibility studies as well as operational evaluations. ***FY 2016 Base Plans:*** Flight testing of TSS Laser Spot Tracker/HDTV/1K FLIR Software and Hardware improvements as well as begin conducting captive carriage and development testing of the Joint Air-to-Ground Missile as part of SCS 8.2 or later version. ***FY 2016 OCO Plans:*** N/A					
Title: Air Vehicle and Engines Improvements	15.356	15.455	2.989	-	2.989
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Initiate redesign of structural components including UH-1Y floor boards attach beams/belly access panels, the elevator, the landing gear skid tubes, UH-1Y cargo doors, and the Improved Defensive Armament System;					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604245N / *H-1 Upgrades*	**Project (Number/Name)** 3359 / *H-1 Improvements*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Environmental Control System/Thermal Redesign to support cooling of Tech Refresh Mission Computer (TRMC)/Mission Computer (MC); redesign of the aircraft power generating components (generator, inverters, wiring) to support power requirements for existing and future system (avionics, sensors and weapons) and to reduce aircraft weight; and redesign of the environmental control system for cooling of the TRMC/MC, and redesign of the drive system components to increase reliability and reduce high cost and/or failure deficiencies. ***FY 2015 Plans:*** Complete aircraft flight load survey and conduct analysis of structural data to formulate Damage Limits and Tolerances for rotor components to reduce life cycle costs, and maintenance workload; continue redesign of structural components to minimize excessive and premature wear, increase reliability, and improve existing design deficiencies. Initiate redesign of the auxiliary fuel system, and initiate aerial refueling capability. Initiate component fatigue testing to increase component life limits (Tailboom, rotor system components). Continue air vehicle and engine improvements upgrades to include redesign of the aircraft power-generating components (generator, inverters, wiring) to support power requirements for existing and future systems (avionics, sensors and weapons) and to reduce aircraft weight. Continue redesign of structural components including UH-1Y floor boards, attach beams/belly access panels, the elevator, the landing gear skid tubes, UH-1Y cargo doors, and the Improved Defensive Armament System; continue Environmental Control System/Thermal Redesign to support cooling of Tech Refresh Mission Computer/Mission Computer and other avionics. Continue redesign of the drive system components (rotor brake/slip ring/standpipe/gearboxes/drive shaft & couplers/chip detectors) to increase reliability and reduce high cost and/or failure deficiencies. ***FY 2016 Base Plans:*** Continue redesign of structural components to minimize excessive and premature wear, increase reliability, and improve existing design deficiencies. Initiate redesign of the auxiliary fuel system, and initiate aerial refueling capability. Continue air vehicle and engine improvements upgrades to include redesign of the aircraft power-generating components (generator, inverters, wiring) to support power requirements for existing and future systems (avionics, sensors and weapons) and to reduce aircraft weight. Continue Environmental Control System/Thermal Redesign to support other avionics on the UH-1Y/AH-1Z. ***FY 2016 OCO Plans:*** N/A					
Title: Avionics Improvements	2.685	2.717	3.985	-	3.985
Articles:	-	-	-	-	-
FY 2014 Accomplishments:					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604245N / *H-1 Upgrades*	**Project (Number/Name)** 3359 / *H-1 Improvements*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continue avionics development & testing on Digital Map and data storage capability, avionics components obsolescence and regression testing begun in 2279; initiate development efforts on Terrain Awareness Warning System, which determines whether there is high risk of controlled flight into terrain in support of the Ground Proximity Warning System. Continue Full Motion Video design/development and digital interoperability efforts. ***FY 2015 Plans:*** Continue avionics development & testing on Digital Map and data storage capability, digital video recording, digital systems upgrades, avionics components obsolescence and regression testing; continue development efforts on Terrain Awareness Warning System. Continue enhanced digital capability efforts, Aircraft Survivability Equipment (ASE) improvements, Helmet Mounted Display improvements, avionics systems obsolescence mitigation efforts, development of peculiar avionics support equipment, and development of automatic test equipment. Continue Full Motion Video design/development and digital interoperability efforts to receive and send video imagery for situational awareness and to reduce the kill chain while complying with rules of engagement for targeting accuracy, maintaining positive ID, and for timely Battle Damage Assessment. ***FY 2016 Base Plans:*** Continue avionics development & testing on Digital Map and data storage capabilities, digital video recording, avionics components obsolescence and regression testing; continue development efforts on Terrain Awareness Warning System (TAWS). Continue enhanced digital capability efforts, Aircraft Survivability Equipment (ASE) improvements, Helmet Mounted Display improvements, avionics systems obsolescence mitigation efforts, development of peculiar avionics support equipment, and development of automatic test equipment. Continue Full Motion Video (FMV) design/development and digital interoperability efforts. Initiate development efforts on Wireless Intercommunication Systems (WICS), Joint Battlefield Command - Platform (JBC-P), Mobile User Objective System (MUOS) for over the horizon communication, Degraded Visual Environment and collision avoidance capability. Initiate Embedded Global Positioning System/Inertial Navigation System (EGI) upgrade for Aircraft Dependent Surveillance Broadcast (ADS-B), Selective Availability Anti-Spoofing Module (SAASM), GPS non-precision approach capability and Navigation Warfare (NAVWAR) GPS signal protection efforts. Also initiate UH-1Y aft cabin display for situational awareness and portable tablet Marine Air-Ground Task Force (MAGTF) digital interoperability coordination capability along with digital helmet mounted display capabilities. Initiate integration of Crash Survivable Flight Incident Recorder and Improved Vehicle Health and Monitoring System. ***FY 2016 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	48.994	44.115	27.235	-	27.235

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604245N / *H-1 Upgrades*	**Project (Number/Name)** 3359 / *H-1 Improvements*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• APN/017800: *UH-1Y/AH-1Z APN1*	600.617	839.057	800.057	-	800.057	860.485	841.163	921.532	16.889	-	4,879.800
• APN/01780C: *UH-1Y/AH-1Z APN1 Advance Procurement*	60.000	63.354	56.168	-	56.168	57.232	58.324	-	-	-	295.078

Remarks

D. Acquisition Strategy

Both UH-1Y and AH-1Z are currently in the follow-on test and evaluation period. Planning and testing has begun to evaluate enhancements such as incorporating improvements to address critical reliability deficiencies, avionics upgrades to improve existing capability including sending/receiving data in battlefield conditions, additional weapons and sensor capabilities, and Engineering Change Proposals as they are funded and approved. Test and Evaluation Master Plan revisions will be developed in support of testing for future enhancements. Future engineering changes will be funded to correct deficiencies as identified by test and fleet usage. Additional upgrades to the aircraft will be completed incrementally as requirements are defined and funded.

E. Performance Metrics

System Configuration Set (SCS) 7.0 software delivery 3Q FY 2015. SCS 8.1 software delivery 4Q FY 2016. SCS 8.2 software delivery 1Q FY 2019. Successfully complete Developmental Test and Operational Test for H-1 Improvements.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604245N / *H-1 Upgrades*	**Project (Number/Name)** 3359 / *H-1 Improvements*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	SS/CPFF	BHTI : Amarillo, TX	0.000	8.866	Jan 2014	6.906	Jan 2015	1.237	Jan 2016	-		1.237	11.767	28.776	28.776
Primary Hardware Development	SS/CPFF	Northrup Grumman : Woodland Hills, CA	0.000	-		2.066	Nov 2014	0.648	Nov 2015	-		0.648	-	2.714	2.714
Systems Engineering	WR	NAWCAD : Patuxent River, MD	0.000	0.951	Nov 2013	0.962	Nov 2014	0.519	Nov 2015	-		0.519	2.142	4.574	-
		Subtotal	0.000	9.817		9.934		2.404		-		2.404	13.909	36.064	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	SS/CPFF	BHTI : Amarillo, TX	0.000	13.941	Feb 2014	6.257	Feb 2015	8.198	Feb 2016	-		8.198	32.313	60.709	60.709
Software Development	SS/FP	Northrup Grumman : Woodland Hills, CA	0.000	-		3.201	Nov 2014	1.814	Nov 2015	-		1.814	7.356	12.371	12.371
Software Development	WR	NAWCWD : China Lake, CA	0.000	11.885	Nov 2013	10.406	Nov 2014	7.359	Nov 2015	-		7.359	29.862	59.512	-
		Subtotal	0.000	25.826		19.864		17.371		-		17.371	69.531	132.592	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test and Evaluation	WR	COMOPTEVFOR : Norfolk, VA	0.000	2.163	Nov 2013	2.189	Nov 2014	0.802	Nov 2015	-		0.802	3.280	8.434	-
Development Test and Evaluation	WR	NAWCAD : Patuxent River, MD	0.000	9.990	Nov 2013	10.712	Nov 2014	5.418	Nov 2015	-		5.418	22.756	48.876	-
		Subtotal	0.000	12.153		12.901		6.220		-		6.220	26.036	57.310	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604245N / *H-1 Upgrades*	**Project (Number/Name)** 3359 / *H-1 Improvements*

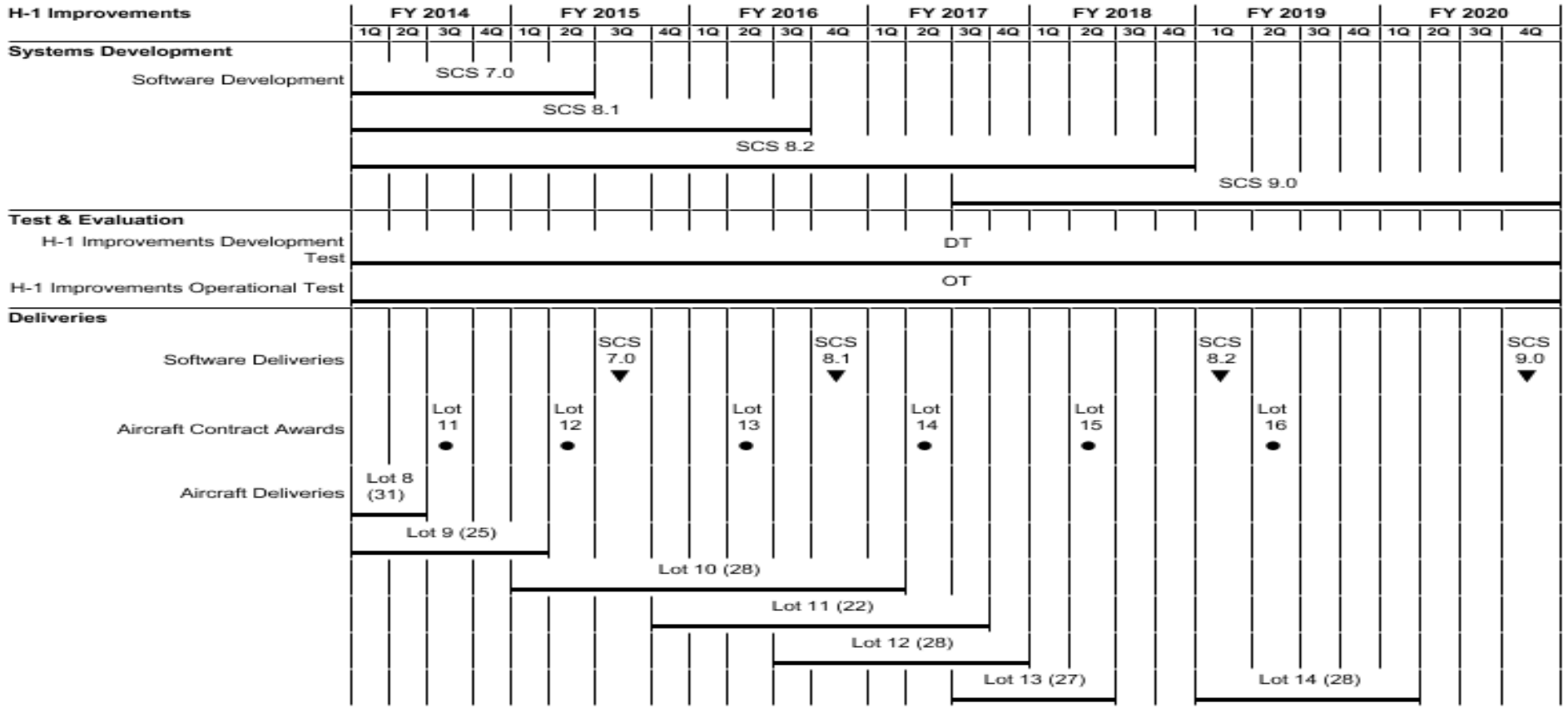
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	Various : Various	0.000	0.318	Nov 2013	0.322	Nov 2014	0.326	Nov 2015	-		0.326	1.343	2.309	2.309
Program Management Support	Various	Various : Various	0.000	0.671	Nov 2013	0.894	Nov 2014	0.679	Nov 2015	-		0.679	2.799	5.043	-
Travel	WR	NAVAIR : Patuxent River, MD	0.000	0.209	Oct 2013	0.200	Oct 2014	0.235	Oct 2015	-		0.235	Continuing	Continuing	Continuing
		Subtotal	0.000	1.198		1.416		1.240		-		1.240	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	48.994		44.115		27.235		-		27.235	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604245N / *H-1 Upgrades*	**Project (Number/Name)** 3359 / *H-1 Improvements*



2016PB - 0604245N - 3359

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604245N / *H-1 Upgrades*	**Project (Number/Name)** 3359 / *H-1 Improvements*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
H-1 Improvements				
Systems Development: Software Development: SCS 7.0 Software Development	1	2014	2	2015
Systems Development: Software Development: SCS 8.1 Software Development	1	2014	3	2016
Systems Development: Software Development: SCS 8.2 Software Development	1	2014	4	2018
Systems Development: Software Development: SCS 9.0 Software Development	3	2017	4	2020
Test & Evaluation: H-1 Improvements Development Test: H-1 Improvements Development Test	1	2014	4	2020
Test & Evaluation: H-1 Improvements Operational Test: H-1 Improvements Operational Test	1	2014	4	2020
Deliveries: Software Deliveries: SCS 7.0	3	2015	3	2015
Deliveries: Software Deliveries: SCS 8.1	4	2016	4	2016
Deliveries: Software Deliveries: SCS 8.2	1	2019	1	2019
Deliveries: Software Deliveries: SCS 9.0	4	2020	4	2020
Deliveries: Aircraft Contract Awards: Lot 11	3	2014	3	2014
Deliveries: Aircraft Contract Awards: Lot 12	2	2015	2	2015
Deliveries: Aircraft Contract Awards: Lot 13	2	2016	2	2016
Deliveries: Aircraft Contract Awards: Lot 14	2	2017	2	2017
Deliveries: Aircraft Contract Awards: Lot 15	2	2018	2	2018
Deliveries: Aircraft Contract Awards: Lot 16	2	2019	2	2019
Deliveries: Aircraft Deliveries: Lot 8 FRP Y + Z	1	2014	2	2014
Deliveries: Aircraft Deliveries: Lot 9 FRP Y + Z	1	2014	1	2015
Deliveries: Aircraft Deliveries: Lot 10 FRP Y + Z	1	2015	1	2017
Deliveries: Aircraft Deliveries: Lot 11 FRP Y + Z	4	2015	3	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604245N / *H-1 Upgrades*	**Project (Number/Name)** 3359 / *H-1 Improvements*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: Aircraft Deliveries: Lot 12 FRP Y + Z	3	2016	4	2017
Deliveries: Aircraft Deliveries: Lot 13 FRP Y + Z	3	2017	2	2018
Deliveries: Aircraft Deliveries: Lot 14 FRP Y + Z	1	2019	1	2020