

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: February 2005
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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE							
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5	0605212N CH-53X RDTE							
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	*	*						
	0.000	0.000	271.941	300.069	340.985	351.445	369.744	363.944
3059 CH-53X DEVELOPMENT *	0.000	0.000	271.941	300.069	340.985	351.445	369.744	363.944

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

3059 - The CH-53 is the only marinized heavy lift helicopter in the world, and the CH-53E is the Marine Corps only heavy-lift helicopter. An improved CH-53E is needed to support the Marine Air-Ground Task Force heavy-lift requirements in the 21st century joint environment. The CH-53E mission is the conduct of expeditionary heavy-lift assault transport of armored vehicles, equipment and personnel to support distributed operations deep inland from sea-based center of operations. The CH-53E "Super Stallion" was introduced into operations in 1980 as an upgrade version of the CH-53D. The CH-53E has developed performance degradation, fatigue life, interoperability, maintenance supportability, and other operational concerns. The CH-53X, an upgraded variant of the CH-53E, will provide improvements in range and payload performance, cargo handling and turn-around times, reliability and maintainability, interoperability, and survivability. The CH-53X program is required to provide full system capability, including shipboard compatibilities, at Initial Operational Capability (IOC), in Fiscal Year (FY) 2015. The CH-53X will replace the CH-53E, with Full Operational Capability (FOC) achieved by FY 2021.

* FY 2004 and FY 2005 costs are shown under Program Element 0604212N.

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0605212N CH-53X RDTE			PROJECT NUMBER AND NAME 3059 CH-53X DEVELOPMENT				
COST (\$ in Millions)		FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost		4.781 *	102.326 *	271.941	300.069	340.985	351.445	369.744	363.944
RDT&E Articles Qty							1	2	2
<p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The CH-53 is the only marinized heavy-lift helicopter in the world, and the CH-53E is the Marine Corps only heavy-lift helicopter. An improved CH-53E is needed to support the Marine Air-Ground Task Force heavy-lift requirements in the 21st century joint environment. The CH-53E mission is the conduct of expeditionary heavy-lift assault transport of armored vehicles, equipment and personnel to support distributed operations deep inland from a sea-based center of operations. The CH-53E "Super Stallion" was introduced into operations in 1980 as an upgrade version of the CH-53D. The CH-53E has developed performance degradation, fatigue life, interoperability, maintenance supportability, and other operational concerns. The CH-53X, an upgraded variant of the CH-53E, will provide improvements in range and payload performance, cargo handling and turn-around times, reliability and maintainability, interoperability, and survivability. The CH-53X program is required to provide full system capability, including shipboard compatibilities, at Initial Operational Capability (IOC), in Fiscal Year (FY) 2015. The CH-53X will replace the CH-53E, with Full Operational Capability (FOC) achieved by FY 2021.</p> <p>FY04-FY05 RDT&E efforts have focused on trade studies for the CH-53X. FY05-FY07 RDT&E efforts focus on CH-53X System Development and Demonstration (SDD) activities that accomplish a successful FY06 Preliminary Design Review and promote a successful FY08 Critical Design Review.</p> <p>*FY 2004 and FY 2005 Project Costs are from Program Element 0604212N.</p>									

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0605212N CH-53X RDTE	PROJECT NUMBER AND NAME 3059 CH-53X DEVELOPMENT

B. Accomplishments/Planned Program

	FY 04	FY 05	FY 06	FY 07
Air Vehicle Development	0.000	84.335	226.222	247.250
RDT&E Articles Quantity				

Trade studies, risk reduction, design, development, and integration System Development and Demonstration (SDD) activities for the CH-53X air vehicle and it's associated subsystems and components, and CH-53X ancillary systems.

	FY 04	FY 05	FY 06	FY 07
Systems Engineering and Project Management	2.674	15.425	35.343	40.585
RDT&E Articles Quantity				

In-house, field activities, and contractors support of Integrated Product Teams (IPTs) to allow for preparation of acquisition strategy, examination of equipment and avionics for the CH-53X, and development of acquisition documentation. Efforts include, but are not limited to, government development support, engineering support, program management support, systems engineering support, and travel for the CH-53X program.

	FY 04	FY 05	FY 06	FY 07
Integrated Logistics Support	2.107	2.566	10.376	12.234
RDT&E Articles Quantity				

In-house, field activities, and contractors support of Integrated Logistics Support, including but not limited to planning, preparation, and management of data, support equipment, Government Furnished Equipment (GFE), and training elements of CH-53X development.

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C. PROGRAM CHANGE SUMMARY:					
Funding:		FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget:		4.798	103.267	296.719	331.863
Current BES/President's Budget		4.781	102.326	271.941	300.069
Total Adjustments		-0.017	-0.941	-24.778	-31.794
Summary of Adjustments					
Congressional program reductions					
Congressional undistributed reductions			-0.920		
Congressional rescissions					
SBIR/STTR Transfer		-0.109			
Other Adjustments			-0.021	-27.565	-36.509
Economic Assumptions				2.787	4.715
Reprogrammings		0.092			
Congressional increases					
Subtotal		-0.017	-0.941	-24.778	-31.794
Schedule:					
Schedule has matured as CH-53X Engineering Trade Studies have been completed and requirements have been defined. While MS B remains scheduled for 4QFY05, MS C has moved to FY12 from FY08, with corresponding adjustments to key events between MS B and MS C.					
Technical:					
Not Applicable					

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D. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>
P-1 Procurement Line: BLI 015800/CH-53E SLEP									TBD	TBD

E. ACQUISITION STRATEGY:

This acquisition is intended to satisfy the United States Marine Corps (USMC) CH-53X Heavy-Lift Helicopter (CH-53X) Operational Requirements Document (ORD), number AAS 34.6. The Marine Corps Requirements Oversight Council (MROC) concurred with the CH-53X ORD, per MROC Decision Memorandum 05-2004 dated 17 November 2003. This ORD was submitted on 10 December 2003 for Joint Requirements Oversight Council review and approval, under Knowledge Management / Decision Support System control number 03-50090314-00. The Analysis of Alternatives was completed on 11 September 2003, and recommended a new-build approach for update of the CH-53E to the CH-53X configuration.

The CH-53X Heavy Lift Helicopter program is a pre-Major Defense Acquisition Program (program number 390). The CH-53X program will be initiated as an Acquisition Category (ACAT) I program, based on total estimated costs for both Research, Development, Test and Evaluation (RDT&E), and Aircraft Procurement, Navy (APN). Entry into the acquisition process at Milestone (MS) B is planned for the fourth quarter of Fiscal Year (FY) 2005. Approval of MS B will mark initiation of the System Development and Demonstration (SDD) phase of the CH-53X program. The CH-53X program will use a single-step acquisition approach to meet an Initial Operational Capability (IOC) of FY 2015.

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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0605212N CH-53X RDTE			3059 CH-53X DEVELOPMENT						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	TBD	Sikorsky		84.335	12/04	87.900	Various	127.318	Various	1,712.500	2,012.053	2,012.053
Software Development	TBD	MITRE				96.000	Various	97.700	Various	49.700	243.400	243.400
Training Development											0.000	
Aircraft Integration											0.000	
Ship Suitability											0.000	
Systems Engineering	TBD	Contractors TBD	2.085								2.085	2.085
Licenses											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Product Development			2.085	84.335		183.900		225.018		1,762.200	2,257.538	
Remarks: Primary Hardware Development contracts not yet negotiated. Target Value of Contracts will be available after contracts are awarded.												
Development Support											0.000	
Software Development											0.000	
Integrated Logistics Support	Various	NAWCAD Pax River, MD	0.665	1.605	11/04	7.634	Various	8.534	Various	263.900	282.338	
Configuration Management											0.000	
Technical Data											0.000	
Studies & Analyses	Various	Contractors TBD	3.572	0.285	12/04						3.857	3.857
GFE											0.000	
Other	Various	Contractors TBD				42.322	Various	22.232	Various	243.500	308.054	308.054
Subtotal Support			4.237	1.890		49.956		30.766		507.400	594.249	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0605212N CH-53X RDTE			3059 CH-53X DEVELOPMENT						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	NAWCAD Pax River, MD		0.163	11/04	2.742	Various	3.700	Various	265.800	272.405	
Operational Test & Evaluation	Various	OPTEVFOR (HMX)		0.163	11/04						0.163	
Live Fire Test & Evaluation	Various	NAWCWD China Lake, CA & AIR FORCE		0.350							0.350	
Test Assets											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal T&E			0.000	0.676		2.742		3.700		265.800	272.918	
Remarks:												
Contractor Engineering Support	Various	NAWCAD Pax River, MD	0.530								0.530	
Government Engineering Support	Various	NAWCAD Pax River, MD	1.833	12.425	11/04	28.210	Various	33.318	Various	216.872	292.658	
Program Management Support	Various	NAWCAD Pax River, MD	0.805	2.875	11/04	6.778	Various	6.870	Various	45.880	63.208	
Travel	Various	NAWCAD Pax River, MD	0.030	0.125	11/04	0.355	Various	0.397	Various	5.589	6.496	
Transportation											0.000	
SBIR Assessment											0.000	
Subtotal Management			3.198	15.425		35.343		40.585		268.341	362.892	
Remarks:												
Total Cost			9.520	102.326		271.941		300.069		2,803.741	3,487.597	
Remarks: Total Cos includes both PE 0604212N and 0605212N.												

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Exhibit R-3, Project Cost Analysis
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EXHIBIT R4, Schedule Profile																								DATE: February 2005								
APPROPRIATION/BUDGET ACTIVITY								PROGRAM ELEMENT NUMBER AND NAME								PROJECT NUMBER AND NAME																
RDT&E, N / BA-5								0605212N CH-53X RDTE								3059 CH-53X DEVELOPMENT																
Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones	ORD Update				MS B																				DRR							
	Acquisition Documentation				System Development & Demonstration																											
	Trade Studies & Analysis																															
Contract Milestones					SDD KA																											
Engineering Milestones	SRR				SFR				PDR								CDR								FRR				PRR			
Logistics Milestones	ILA																															
Test & Evaluation Milestones	TEMP				ALFT&E Plan				LFT&E																TRR				First Flight			
Production Milestones																																
Aircraft Quantities																																
Aircraft Deliveries																																

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* Not required for Budget Activities 1, 2, 3, and 6

**Schedule Profile for both PE 0604212N and PE 0605212N

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