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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy	Date: May 2017
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Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy</i> / BA 6: <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605154N / <i>Center For Naval Analyses</i>											
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	45.558	46.634	50.432	-	50.432	51.799	52.853	53.873	54.898	Continuing	Continuing
0031: <i>MCOAG</i>	0.000	5.489	5.989	6.212	-	6.212	6.359	6.489	6.629	6.760	Continuing	Continuing
0148: <i>Center For Naval Analyses (CNA)</i>	0.000	40.069	40.645	44.220	-	44.220	45.440	46.364	47.244	48.138	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Center for Naval Analyses (CNA) is the Department of the Navy's (DoN) only Federally Funded Research and Development Center (FFRDC). CNA provides independent, objective, and expert analyses based on its unique access to sensitive data and hands-on exposure to fleet operations gained through its world-wide field program. CNA's research program is centrally funded by this program element and is primarily concentrated along one Marine Corps category and thirteen Navy categories of study called product areas. These product areas are structured to enhance CNA's focus of research and analysis upon the major present and future needs and issues of the Navy and the Marine Corps. Because of rapid advances in technology, changes in the fleet, the increasing complexity of weapon systems, and reductions in manpower, force structure, budgets, the current security environment, and Department of Defense (DoD) transformation, the Navy and Marine Corps have a greater need for analyses that are sophisticated, relevant, and timely. CNA conducts research and analysis at all security classification levels, to include Sensitive Compartmented Information (SCI) and Special Access Programs (SAP).

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	47.071	46.634	49.937	-	49.937
Current President's Budget	45.558	46.634	50.432	-	50.432
Total Adjustments	-1.513	0.000	0.495	-	0.495
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.182	0.000			
• SBIR/STTR Transfer	-1.694	0.000			
• Rate/Misc Adjustments	-0.001	0.000	0.495	-	0.495

Change Summary Explanation

The FY 2017 request was reduced by -\$1.3 million as required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015.

The increase in FY 2018 reflects increased investment in the areas of offensive and defensive cyber operation; increasing efforts supporting Electromagnetic Maneuver Warfare; and increased support and analysis on behalf of the Navy and Marine Corps special operations communities.

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<div>Technical: N/A</div> <div>Schedule: N/A</div>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy										Date: May 2017		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605154N / Center For Naval Analyses				Project (Number/Name) 0031 / MCOAG			
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
0031: MCOAG	0.000	5.489	5.989	6.212	-	6.212	6.359	6.489	6.629	6.760	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports the Marine Corps portion of the Department of Navy, CNA, Center for Naval Analysis Research Program, and is managed as an element of the Marine Corps Studies System. This program provides the Marine Corps with independent and objective research and analysis of specific issues/topics appropriately performed by a Federally Funded Research and Development Center (FFRDC). Marine Corps Division analysts work at CNA headquarters and, through CNA's Field representative Program serve at commands worldwide, including: Marine Forces Command, Marine Forces Pacific, Marine Special Operations Command, the three Marine Expeditionary Forces, Marine Aviation Weapons and Tactics Squadron One (MAWTS-1), and in Iraq, providing on-site analysis to deployed Marine forces there. CNA also assigns analysts to support the Deputy Commandants and their staffs as well as other Marine Corps organizations such as the Marine Corps Warfighting Lab, Marine Corps Systems Command, and the Commander, Marine Forces Reserve.

The program areas are linked to the Marine Corps Advocacy (prepotency), which are: (1) Logistics and Infrastructure; (2) Manpower and Training; (3) Research, Development and Acquisition; (4) Operations and Plans; (5) Programs and Resources; (6) Aviation; (7) Combat Development and Integration; and (8) Intelligence, Surveillance and Reconnaissance. Scientific Analyst support provides six scientific analysts for the following six focus areas: Deputy Commandant (DC), Plans, Policies and Operations; DC Aviation; DC Installation and Logistics; DC Programs and Resources; DC Manpower Reserve Affairs; and Director, Manpower Plans (MP) - Manpower and Reserve Affairs (M&RA). The program continues analytical support for field exercises, Ad Hoc and Quick Response study requirements.

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

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: MARINE CORPS OPERATIONS AND ANALYSIS GROUP	5.489	5.989	6.212	0.000	6.212
Articles:	-	-	-	-	-
FY 2016 Accomplishments: - Continued research analysis, modeling and simulation data that focused analytical support to the Special Marine Air Ground Task Forces (MAGTF) Crisis Response (CR) that provides critical mission research advise to unit commanders. - Continued support for current operations to include: weapons and systems programs, MAGTF training and exercise assessments, amphibious shipping capabilities, and reductions to naval operations and strategic commitments. Analysis and solutions relating to support and sustainment in terms of equipment readiness, training, responsiveness and maintaining squadron readiness, development of facilities sustainment and service life programs save the Marine Corps valuable time and resources. Manpower, force structure, aviation recruiting and retention, and valuations of recruiting, retaining and retiring Marines analyses provide viable personnel solutions in times of shrinking resources. Intelligence capabilities assessments, analyses of threat assessments					

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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
<p>from known and unknown enemies, i.e. Al-Qaeda, Northern Africa and Iran, and Joint Irregular Warfare Analytic Baseline (JIWAB) development provide valuable information to assist Marine Corps Intelligence organizations in keeping the force educated and safe.</p> <ul style="list-style-type: none"> - Continued high priority study and analysis projects approved in FY15 Marine Corps Studies System Master Plan (MCSSMP). - Continued research analysis, and survey support efforts associated with development and implantation of the Marine Forces Integration Plan (MCFIP) Women in Infantry. - Initiated high priority study and analysis projects approved in FY16 Marine Corps Studies System Master Plan (MCSSMP). <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Continue all efforts of FY16 - Initiate high priority study and analysis projects approved in FY17 Marine Corps Studies System Master Plan (MCSSMP). <p>FY 2018 Base Plans:</p> <ul style="list-style-type: none"> - Continue all efforts of FY17 - Initiate high priority study and analysis projects approved in FY18 Marine Corps Studies System Master Plan (MCSSMP). <p>FY 2018 OCO Plans:</p> <p>N/A</p>						
Accomplishments/Planned Programs Subtotals		5.489	5.989	6.212	0.000	6.212
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						
D. Acquisition Strategy						
N/A						
E. Performance Metrics						
This project supports the Marine Corps portion of the Department of Navy, CNA Center for Naval Analysis Research Program, and is managed as an element of the Marine Corps Studies System. This program provides the Marine Corps with independent and objective research and analysis of specific issues/topics appropriately performed by a Federally Funded Research and Development Center (FFRDC). Marine Corps Division analysts work at CNA headquarters and, through CNA's Field						

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<p>representative Program, serve at commands worldwide, including: Marine Forces Command, Marine Forces Pacific, Marine Special Operations Command, the three Marine Expeditionary Forces, Marine Aviation Weapons and Tactics Squadron One (MAWTS-1), and in Iraq, providing on-site analysis to deployed Marine forces there. CNA also assigns analysts to support the Deputy Commandants and their staffs as well as other Marine Corps organizations such as the Marine Corps Warfighting Lab, Marine Corps Systems Command, and the Commander, Marine Forces Reserve.</p> <p>The program areas are linked to the Marine Corps Advocacy (prepotency), which are: (1) Logistics and Infrastructure; (2) Manpower and Training; (3) Research, Development and Acquisition; (4) Operations and Plans; (5) Programs and Resources; (6) Aviation; (7) Combat Development and Integration; and (8) Intelligence, Surveillance and Reconnaissance. Scientific Analyst support provides six scientific analysts for the following six focus areas: Deputy Commandant (DC), Plans, Policies and Operations; DC Aviation; DC Installation and Logistics; DC Programs and Resources; DC Manpower Reserve Affairs; and Director, Manpower Plans (MP) - Manpower and Reserve Affairs (M&RA).</p> <p>The Marine Corps' portion of the CNA program is executed via the Marine Corps Studies System (MCSS) Annual Plan which is reviewed and updated on a quarterly basis. The MCSS maintains a comprehensive listing of all CNA studies performed for the Marine Corps. The MCSS ensures there are no duplicate analytical efforts within the Marine Corps. Additionally, the Operations Analysis Division of Combat Integration Division (CD&I, MCCDC) provides analytical review of all CNA products for the Marine Corps and integrates the results and recommendations into a quarterly newsletter for research and analysis.</p> <p>Other evaluation processes are as follows:</p> <p>A) Contract Status Meetings: The Marine Corps participates in contract status meetings. The Contracting Officer chairs monthly meetings with the Marine Corps, and members of the CNA Business Support Group to provide guidance regarding contract management to include reviewing the Defense Technical Information Center (DTIC) database requirements to emphasize the contractual requirement that all ongoing research be submitted to DTIC to ensure against duplication to reviewing CNA's cost effectiveness and efficiency.</p> <p>B) Marine Corps Three-Star Flag Officer Review: The Commanding General, CD&I, MCCDC and the Director, Operations Analysis Division (OAD) frequently to review the current research program and provide guidance to CNA regarding future research requirements. Meetings are essential to provide CNA to ensure that research conducted is of the greatest value to the Marine Corps. The meetings serve as a roadmap for future projects. The Marine Corps' research plan is consolidated with the DoN's Annual Plan that is submitted to the Deputy Chief of Naval Operations for Integration of Capabilities and Resources (N8) for final review and acceptance.</p>		

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Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605154N / Center For Naval Analyses				Project (Number/Name) 0148 / Center For Naval Analyses (CNA)			
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
0148: Center For Naval Analyses (CNA)	0.000	40.069	40.645	44.220	-	44.220	45.440	46.364	47.244	48.138	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program supports the Navy's portion of the CNA Research Program, which is primarily concentrated along thirteen Navy categories of study called product areas. These product areas include the following: (1) Manpower/Personnel, Medical and Training; (2) Intelligence, Information and Networks; (3) Plans, Policy, and Operations; (4) Infrastructure and Readiness; (5) Resources, Programs, and Assessments; (6) Capability Integration; (7) Research, Development and Acquisition; (8) Navy Field Program; (9) Navy Field Exercise Program; (10) Scientific Analyst Program; (11) Navy Quick Response Projects; (12) Navy General Concept Development and (13) CNA Initiated Projects. This program provides the Navy with independent and objective research and analysis of specific issues/topics appropriately performed by a FFRDC and includes studies support (to include quick response studies support), field support to fleet commanders, scientific analyst support to Deputy Chiefs of Naval Operations (DCNOs) and their staffs, exercise support, and ad hoc support. CNA's analyses have resulted in substantial improvements in force structure, fleet effectiveness, and significant cost avoidance

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

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: CENTER FOR NAVAL ANALYSES, NAVY	40.069	40.645	44.220	0.000	44.220
Articles:	-	-	-	-	-
<p>Description: Funding in this project supports integrated research for the Department of Navy (DoN) and other DoD components across a broad range of issues including the development and evaluation of tactics, operations testing of new systems, assessment of current capabilities, logistics and readiness, work-force management, space and space-related activities, cyber operations, cost and operational program analysis, assessment of advanced technology, force planning, and strategies implications of political-military developments.</p> <p>The funding increase in FY 2018 reflects increased investment in the areas of offensive and defensive cyber operation; increasing efforts supporting Electromagnetic Maneuver Warfare; and increased support and analysis on behalf of the Navy and Marine Corps special operations communities.</p> <p>FY 2016 Accomplishments: CNA conducted over 400 individual analytic efforts in FY 2016. This work is for a wide range of DoN and DoD sponsors including: OPNAV and HQMC, the Navy Secretariat, Type Commanders, the numbered Fleets and Navy/Marine Corps component commanders, Combatant Commands, operational test and evaluation (OT&E)</p>					

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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
activities including OPTEVFOR and DOT&E, SYSCOMs, Office of the Secretary of Defense, Defense agencies and the Defense Intelligence Community.						
Examples of recently completed or ongoing efforts that parallel the general topics mentioned in the preceding section include: <ul style="list-style-type: none">- Offensive and defensive cyber operations- Electro-magnetic warfare- Support to the Navy and Marine Corps special operations communities- Great power dynamics with a special emphasis on China and Russia- Increased field representative support in the Warfighting Development Commands- Adversary analytics to better understand implications of Iran, North Korea, Russia, and other state actor's actions on USN strategy and operations- Navy future force architecture, related capabilities, and implications for CONOPs and acquisition strategy- China's military reorganization and its impact on USN as well partner nations in the Pacific and other AORs future- Recruiting and retaining the force of the future- Understanding and addressing new and every-changing threats from non-state actors- Improving the interoperability of Navy systems and greater use of the systems-of-systems concept- Implementing and assessing the effectiveness of new distributed lethality concepts- Applications and potential of big data to better understand and address complex operational and logistical challenges facing the USN- Cyber considerations into Operational Test & Evaluation (OT&E) of new Navy systems and better understanding how to best man the cyber force of the future- Recruiting and re-training the force of the future- Understanding and addressing new and every-changing threats from non-state actors- Improving and interoperability of Navy systems and greater use of the systems-of-systems concept- Implementing and assessing the effectiveness of new distributed lethality concepts- New applications for unmanned systems						
FY 2017 Plans: <ul style="list-style-type: none">- Continue all efforts of FY 2016 in support of the following CNO 2017 priorities:- Maintaining maritime superiority for the future- Applying maritime power today						

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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
<ul style="list-style-type: none"> - Navy strategy and policy - Strategic Workforce planning and management - Operating the Navy more efficiently and effectively - Balancing current and future readiness - Understanding great power dynamics <p><i>FY 2018 Base Plans:</i></p> <ul style="list-style-type: none"> - Continue topic based efforts of FY 2017. - Increase work in offensive and defensive cyber operations - Increase work in Electromagnetic Maneuver Warfare (EMW) - Increase support to the Navy and Marine Corps special operations communities - Increase work based on the 7 CNO approved FY 2017 priorities and FY 2018 revisions based on Navy emerging priorities and requirements <p><i>FY 2018 OCO Plans:</i> N/A</p>						
Accomplishments/Planned Programs Subtotals		40.069	40.645	44.220	0.000	44.220
C. Other Program Funding Summary (\$ in Millions) N/A						
Remarks						
D. Acquisition Strategy N/A						
E. Performance Metrics CNA is reviewed throughout the research year on several different levels to ensure that research produced is not duplicated elsewhere. The primary (and most effective) method of review for duplication is the Contracting Officer's Technical Representative (COTR) review and approval of each and every project proposal submitted by CNA. This method is highly effective in providing the necessary oversight to ensure that duplication of effort does not occur. The Marine Corps Studies System (MCSS) maintains a comprehensive listing of all CNA studies performed for the USMC. The MCSS ensures that there are no duplicate analytical efforts within the USMC. Additionally, the Studies and Analysis Division of the Marine Corps Combat Development Command (MCCDC) provides analytical review of all CNA products for the USMC and integrates the results and recommendations into a quarterly newsletter and an annual plan for research and analysis. Other evaluation processes:						

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<p>A) DoN Contract Status Meetings: As part of the CNA oversight process, the Office of Naval Research Contracting Officer chairs a monthly meeting with the COTR, the USMC, and the CNA's Chief Financial Office to provide guidance regarding contract management.</p> <p>B) Two-Star Flag Officers and VCNO Corporate Board Meetings: DoN Two-Star and their equivalent civilian counterparts meet several times a year to review the current fiscal year's research and provide guidance to CNA regarding their future research for DoN. These high level meetings are essential to provide CNA with DoN's guidance to ensure that the research conducted is of the greatest value to DoN. The meetings also serve as the catalyst for the formation of the CNA Annual Plan, CNA's roadmap for research during the upcoming fiscal year. The CNA Annual Plan is then submitted to VCNO/N8 for final review and acceptance.</p> <p>C) CNA Comprehensive Review: Prior to contract renewal, CNA, as an Federally Funded Research and Development Center (FFRDC), must be evaluated to ensure that the DoN wants to renew CNA's contract for an additional five year period. DoN completes an exhaustive review of sponsors' technical needs and mission requirements; DoN's consideration of other sources; CNA's efficiency and effectiveness; CNA's management and cost effectiveness; as well as the FFRDC establishment criteria and sponsorship agreement. The CNA Comprehensive Review is approved by ASN (RDA) and accepted by OSD (AT&L).</p> <p>D) Navy-CNA Integration Board. DON 3-stars and CNA leadership meet quarterly to review the annual research program, discuss priorities and related implications for current and future work, and address issues impacting CNA's ability to execute its mission as an FFRDC. CNA research highlights are also briefed and discussed. The board meetings are chaired by the Director, Navy Staff.</p>		