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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy **Date: May 2021**

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605898N / <i>Management HQ - R&D</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	0.000	38.921	41.091	35.614	-	35.614	-	-	-	-	-	-
0223: <i>Sub Combat System Improvement (ADV)</i>	0.000	0.135	0.128	0.124	-	0.124	-	-	-	-	-	-
0824: <i>Science & Technology Management</i>	0.000	0.000	24.439	18.445	-	18.445	-	-	-	-	-	-
1447: <i>Surf Combatant Combat System Imp</i>	0.000	0.171	0.111	0.221	-	0.221	-	-	-	-	-	-
3159: <i>Naval Integrated Fire Control-Counter Air SE&I</i>	0.000	0.170	0.110	0.216	-	0.216	-	-	-	-	-	-
3186: <i>Air and Missile Defense Radar</i>	0.000	0.503	0.532	0.529	-	0.529	-	-	-	-	-	-
3216: <i>Tactical Support Center-Integration</i>	0.000	0.025	0.015	0.000	-	0.000	-	-	-	-	-	-
3345: <i>ONR Management Headquarters</i>	0.000	37.917	15.756	16.079	-	16.079	-	-	-	-	-	-

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): P384

A. Mission Description and Budget Item Justification

The Management HQ - R&D program funds management headquarter civilian personnel salaries at the Office of Naval Research (ONR). These personnel support the management of the Naval Science and Technology (S&T) programs. This program also funds management headquarter contractor support for the Integrated Warfare Systems (IWS) Program Executive Office.

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B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	39.673	41.094	41.559	-	41.559
Current President's Budget	38.921	41.091	35.614	-	35.614
Total Adjustments	-0.752	-0.003	-5.945	-	-5.945
• Congressional General Reductions	-	-0.003			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.752	0.000			
• Rate/Misc Adjustments	0.000	0.000	-5.945	-	-5.945

Change Summary Explanation

Funding: Funding decrease in FY22 is due to DoN Total Force Manpower restructuring.

Technical: No significant change.

Technical: No significant change.

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D	Project (Number/Name) 0223 / Sub Combat System Improvement (ADV)
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
0223: Sub Combat System Improvement (ADV)	0.000	0.135	0.128	0.124	-	0.124	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides management headquarters contractor support to the Integrated Warfare Systems (IWS) Program Executive Office (PEO). This work supports Navy Acoustic Superiority and Technology Insertion Initiatives through the application of advanced development and testing of sensors and sensor processing systems supporting tactical control systems improvements. This addresses technology challenges to improve tactical control in littoral and open ocean environments for a variety of operational missions.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Management Headquarters Personnel	0.135	0.128	0.124	0.000	0.124
Articles:	-	-	-	-	-
FY 2021 Plans: - Continue APB development, integration, land-based testing, at-sea testing, and establishment of tactical scenarios.					
FY 2022 Base Plans: - Continue APB development, integration, land-based testing, at-sea testing, and establishment of tactical scenarios.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement: FY 2021 (\$0.128M) to FY 2022 (\$0.124M) decrease (\$-0.004M) reflects a nominal reduction in scope to APB development efforts.					
Accomplishments/Planned Programs Subtotals	0.135	0.128	0.124	0.000	0.124

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

N/A

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605898N / <i>Management HQ - R&D</i>	Project (Number/Name) 0223 / <i>Sub Combat System Improvement (ADV)</i>

D. Acquisition Strategy
N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D				Project (Number/Name) 0824 / Science & Technology Management			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
0824: Science & Technology Management	0.000	0.000	24.439	18.445	-	18.445	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds all basic costs of Office of Naval Research Management Headquarters Activity (MHA) non-labor in support of the entire Navy Science & Technology (S&T) program. Through this support, the S&T enterprise pursues the technological advances that enable the Fleet's ability to operate from a position of technological superiority.

Specifically, funding facilitates the execution of the Navy's basic research, applied research, and advanced technology development programs at the nation's universities/colleges, Navy laboratories, Warfare Centers, and private industry.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Science and Technology Management	0.000	24.439	18.445	0.000	18.445
Articles:	-	-	-	-	-
FY 2021 Plans: Provides corporate MHA Non-Labor support in facilitating the purchase of the S&T programs for the Navy to ensure consistent external reporting. All Non-Operational HQ is now Major Headquarters Activity (MHA).					
FY 2022 Base Plans: Provides corporate MHA Non-Labor support in facilitating the purchase of the S&T programs for the Navy to ensure consistent external reporting.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement: Decrease from FY21 to FY22 due to Department of Navy Total Force Manpower restructuring.					
Accomplishments/Planned Programs Subtotals	0.000	24.439	18.445	0.000	18.445

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

N/A

Remarks

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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605898N / <i>Management HQ - R&D</i>	Project (Number/Name) 0824 / <i>Science & Technology Managment</i>
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D. Acquisition Strategy

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D	Project (Number/Name) 1447 / Surf Combatant Combat System Imp
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
1447: Surf Combatant Combat System Imp	0.000	0.171	0.111	0.221	-	0.221	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides management headquarters contractor support to the Integrated Warfare System (IWS) Program Executive Office (PEO). This work supports Cruiser and Destroyer AEGIS Combat System (ACS) upgrades and integrates new equipment and systems to pace the threat and capture advances in technology.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Management Headquarter Personnel	0.171	0.111	0.221	0.000	0.221
Articles:	-	-	-	-	-
FY 2021 Plans: Continue to support Cruiser and Destroyer AEGIS Combat System (ACS) upgrades and integrate new equipment and systems to pace the threat and capture advances in technology.					
FY 2022 Base Plans: Continue to support Cruiser and Destroyer AEGIS Combat System (ACS) upgrades and integrate new equipment and systems to pace the threat and capture advances in technology.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement: Increase is due to additional support required for AEGIS Capability Package 22-1, which captures additional warfighting improvements.					
Accomplishments/Planned Programs Subtotals	0.171	0.111	0.221	0.000	0.221

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

N/A

Remarks

D. Acquisition Strategy

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D	Project (Number/Name) 3159 / Naval Integrated Fire Control-Counter Air SE&I
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
3159: Naval Integrated Fire Control-Counter Air SE&I	0.000	0.170	0.110	0.216	-	0.216	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides management headquarters contractor support to the Integrated Warfare System (IWS) Program Executive Office (PEO). This work supports Naval Integrated Fire Control - Counter Air (NIFC-CA) project. Through this support technological advances are being developed enabling PEO IWS to extend the Naval Theater Air and Missile Defense battlespace out to the maximum kinematic range of our weapons.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Management Headquarter Personnel	0.170	0.110	0.216	0.000	0.216
Articles:	-	-	-	-	-
FY 2021 Plans: Continue to support the Navy's research and development efforts for NIFC-CA's System Engineering, Integration and Test (SEI&T) project.					
FY 2022 Base Plans: Support the Navy's research and development efforts for NIFC-CA's System Engineering, Integration and Test (SEI&T) project. Assist with Test Events At SEA and Land Based Test events.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement: Increase is due to additional support required for the additional Test Events at SEA and Land Based Test Events in FY22.					
Accomplishments/Planned Programs Subtotals	0.170	0.110	0.216	0.000	0.216

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

N/A

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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605898N / <i>Management HQ - R&D</i>	Project (Number/Name) 3159 / <i>Naval Integrated Fire Control-Counter Air SE&I</i>

D. Acquisition Strategy
N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D	Project (Number/Name) 3186 / Air and Missile Defense Radar
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
3186: Air and Missile Defense Radar	0.000	0.503	0.532	0.529	-	0.529	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: P384

A. Mission Description and Budget Item Justification

This project provides management headquarters contractor support to the Integrated Warfare System (IWS) Program Executive Office (PEO). Through this support, technological advances are being developed, enabling PEO IWS to deliver "Enterprise" solutions for Naval Warfare Systems that operate seamlessly and effectively within the Fleet and Joint Forces.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Management Headquarter Personnel	0.503	0.532	0.529	0.000	0.529
Articles:	-	-	-	-	-
FY 2021 Plans: Continue risk reduction testing at ARDEL, including refinement of radar operation functions (calibration, fault detection/fault isolation, environmental adaptation), improving electronic protection capabilities, and continue data collection on ballistic missile defense targets of opportunity.					
FY 2022 Base Plans: Continue risk reduction testing at ARDEL, including refinement of radar operation functions (calibration, fault detection/fault isolation, environmental adaptation), improving electronic protection capabilities, and continue data collection on ballistic missile defense targets of opportunity.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement: Increase due to need for additional support for AMDR development.					
Accomplishments/Planned Programs Subtotals	0.503	0.532	0.529	0.000	0.529

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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D	Project (Number/Name) 3186 / Air and Missile Defense Radar
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDT&E/0604522N: <i>Air and Missile Defense Radar (AMDR) System</i>	36.912	78.319	98.186	-	98.186	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

N/A

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Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605898N / <i>Management HQ - R&D</i>				Project (Number/Name) 3216 / <i>Tactical Support Center-Integration</i>			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
3216: <i>Tactical Support Center-Integration</i>	0.000	0.025	0.015	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides management headquarters contractor support to the Integrated Warfare System (IWS) Program Executive Office (PEO). This supports AN/SQQ-34 Aircraft Carrier Tactical Support Center (CV-TSC) fulfillment of Anti-Submarine Warfare (ASW) and Surface Warfare (SUW) coordination functions utilizing data received from multiple sources to assess the threat and assist the Tactical Action Officer (TAO) and Composite Warfare Commander (CWC) in effectively applying available resources to support CVN self-defense. This supports CV-TSC functionality updates being implemented through an evolutionary acquisition approach, providing phased incremental builds that are developed, tested, certified and fielded.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Management Headquarter Personnel	0.025	0.015	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2021 Plans: - Continue CV-TSC Development/Integration including development of software builds and systems engineering efforts, conduct of incremental requirements, design, and test reviews.					
FY 2022 Base Plans: N/A					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement: FY 2021 (\$0.015M) to FY 2022 (\$0.000M) decrease reflects the realignment of all funding to higher priorities within the department.					
Accomplishments/Planned Programs Subtotals	0.025	0.015	0.000	0.000	0.000

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

N/A

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Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
1319 / 6	PE 0605898N / <i>Management HQ - R&D</i>	3216 / <i>Tactical Support Center-Integration</i>

D. Acquisition Strategy

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D				Project (Number/Name) 3345 / ONR Management Headquarters			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
3345: ONR Management Headquarters	0.000	37.917	15.756	16.079	-	16.079	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds all basic costs of Office of Naval Research Management Headquarters Activity (MHA) salaries in support of the entire Navy Science & Technology (S&T) program. Through this support, the S&T enterprise pursues the technological advances that enable the Fleet's ability to operate from a position of technological superiority.

Specifically, funding facilitates the execution of the Navy's basic research, applied research, and advanced technology development programs at the nation's universities/colleges, Navy laboratories, Warfare Centers, and private industry.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Management Headquarters Personnel	37.917	15.756	16.079	0.000	16.079
Articles:	39	-	-	-	-
Description: N/A					
FY 2021 Plans: Provides corporate MHA personnel salaries to facilitate management of S&T programs for the Navy to ensure consistent external reporting. All Non-Operational HQ is now Major Headquarters Activity (MHA). Continue to reduce auditability challenges to meet the mandate.					
FY 2022 Base Plans: Continue to provides corporate MHA personnel salaries to facilitate the purchase of the S&T programs for the Navy to ensure consistent external reporting. All Non-Operational HQ is now Major Headquarters Activity (MHA). Continue to reduce auditability challenges to meet the mandate.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement:					

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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605898N / <i>Management HQ - R&D</i>	Project (Number/Name) 3345 / <i>ONR Management Headquarters</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
No significant change from FY 2021 to FY 2022					
Accomplishments/Planned Programs Subtotals	37.917	15.756	16.079	0.000	16.079

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

N/A

Remarks

D. Acquisition Strategy

N/A