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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy	Date: March 2019
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Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0604759N / <i>Major T&E Investment</i>
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	0.000	68.977	90.514	85.348	-	85.348	83.560	71.548	61.514	62.744	Continuing	Continuing
2195: <i>T & E Investment</i>	0.000	52.560	77.014	85.348	-	85.348	83.560	71.548	61.514	62.744	Continuing	Continuing
9999: <i>Congressional Adds</i>	0.000	16.417	13.500	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	29.917

A. Mission Description and Budget Item Justification

This project corrects major deficiencies, improves Test & Evaluation (T&E) capabilities, and increases T&E support effectiveness at Navy Major Range and Test Facility Base. The T&E Investment project provides improved test capabilities at the following test facilities: the Naval Undersea Warfare Center Division Newport Atlantic Undersea Test and Evaluation Center, Andros Island, Bahamas; the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport, Keyport, WA; the Sea Range, Land Ranges, Targets, Ordnance T&E Facility, Test Wing Pacific located at the Naval Air Warfare Center Weapons Division, Point Mugu, CA and China Lake, CA; and the Atlantic Test Range, Air Combat Environment T&E Facility, Electromagnetic Environmental Effects, Air Vehicle Modification and Instrumentation facility, Test Wing Atlantic, Targets, and the Propulsion Systems Evaluation Facility located at the Naval Air Warfare Center Aircraft Division, Patuxent River, MD and the test and evaluation capabilities located at the Pacific Missile Range Facility, Kauai, HI.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations required for general research, development, test and evaluation.

B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	52.634	77.014	85.348	-	85.348
Current President's Budget	68.977	90.514	85.348	-	85.348
Total Adjustments	16.343	13.500	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	13.500			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.657	0.000			
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000
• Congressional Add Adjustments	17.000	-	-	-	-

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 9999: *Congressional Adds*

FY 2018	FY 2019

UNCLASSIFIED

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<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>		FY 2018	FY 2019
Congressional Add: <i>Program Increase</i>		3.863	0.000
Congressional Add: <i>Navy UFR for Critical Infrastructure Investments- Major Range & Test Facilities</i>		12.554	0.000
Congressional Add: <i>Fifth Generation Radar Ground Test Upgrades</i>		0.000	4.000
Congressional Add: <i>Complex Electronic Warfare Test Equipment</i>		0.000	3.500
Congressional Add: <i>Ground Based Sense-and-Avoid</i>		0.000	6.000
Congressional Add Subtotals for Project: 9999		16.417	13.500
Congressional Add Totals for all Projects		16.417	13.500
<u>Change Summary Explanation</u>			
There are no changes from PB19 to PB20 for FY20			
Funding increase from FY 2019 to FY2020 supports the design of a framework to enable interaction between disparate models, developing a methodology to maintain configuration control and distribution of the common modeling tools, integrating electronic warfare effects into visualization models, as well as, for the purchase of a free standing chamber wall, the purchase of a global positioning simulator, and for the purchase of x-ray equipment.			
Technical: Not applicable.			
Schedule: Not applicable.			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy										Date: March 2019		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment				Project (Number/Name) 2195 / T & E Investment			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
2195: T & E Investment	0.000	52.560	77.014	85.348	-	85.348	83.560	71.548	61.514	62.744	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project corrects major deficiencies, improves Test & Evaluation (T&E) capabilities, and increases T&E support effectiveness at Navy Major Range and Test Facility Base. The T&E Investment project provides improved test capabilities at the following test facilities: the Naval Undersea Warfare Center Division Newport Atlantic Undersea Test and Evaluation Center (AUTEC), Andros Island, Bahamas; the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport, Keyport, WA; the Sea Range, Land Ranges, Targets, Ordnance T&E Facility, Test Wing Pacific located at the Naval Air Warfare Center Weapons Division, Point Mugu, CA and China Lake, CA; and the Atlantic Test Range, Air Combat Environment T&E Facility, Electromagnetic Environmental Effects, Air Vehicle Modification and Instrumentation facility, Test Wing Atlantic, Targets, and the Propulsion Systems Evaluation Facility located at the Naval Air Warfare Center Aircraft Division, Patuxent River, MD and the test and evaluation capabilities located at the Pacific Missile Range Facility, Kauai, HI.

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

	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: UNDERSEA RANGE INVESTMENTS	8.624	6.611	6.281	0.000	6.281
Articles:	-	-	-	-	-
Description: This effort funds the modernization, upgrades, and new test and evaluation capabilities required at the Navy's Major Range Test Facility Base undersea ranges, to include AUTEC, Andros Island, Bahamas and the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport, Keyport, WA.					
FY 2019 Plans: <ul style="list-style-type: none"> - Continue the minor upgrade and modernization of test capabilities at AUTEC, Nanoose and Dabob. - Continue tracking system modernization at Nanoose and Dabob. - Complete replacement of in-water sensors at AUTEC. - Complete replace of range tracking radar at AUTEC. - Complete range radar obsolescence project at Nanoose and Dabob. - Continue recovery system improvement at Nanoose and Dabob. - Complete operating system upgrade at Nanoose and Dabob. - Initiate torpedo control panel modernization at Nanoose and Dabob. 					
FY 2020 Base Plans: <ul style="list-style-type: none"> - Continue the minor upgrade and modernization of test capabilities at AUTEC, Nanoose and Dabob. - Continue tracking system modernization at Nanoose and Dabob. - Continue torpedo control panel modernization at Nanoose and Dabob. 					

UNCLASSIFIED

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Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment		Project (Number/Name) 2195 / T & E Investment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
<div>- Complete recovery system improvement at Nanoose and Dabob.</div> <div>-Initiate range telemetry and communications upgrade at Nanoose and Dabob.</div> <div>-Initiate procurement of small range craft for unmanned underwater vehicle (UUV) work at Nanoose and Dabob.</div> <div>-Initiate modernization of range data management system at Nanoose and Dabob.</div> <div>-Initiate cyber security upgrades at Nanoose and Dabob.</div> <div>FY 2020 OCO Plans:</div> <div>N/A</div> <div>FY 2019 to FY 2020 Increase/Decrease Statement:</div> <div>The funding decrease from FY 2019 to FY 2020 due to the completion of the range tracking radar at AUTECH, and the range radar obsolescence project at Nanoose and Dabob and the completion of all material purchases for the modification to the recovery system at Nanoose and Dabob.</div>						
<div>Title: OPEN AIR RANGE INVESTMENTS</div> <div>Articles:</div> <div>Description: This effort funds the modernization and upgrades of existing capabilities and the development of new T&E capabilities required at the Navy's Major Range Test Facility Base open air ranges at the Naval Air Warfare Center Aircraft Division (NAWCAD), Patuxent River, MD, Naval Air Warfare Center Weapons Division (NAWCWD), Point Mugu, CA and China Lake, CA and Pacific Missile Range Facility (PMRF), Kauai, HI.</div> <div>FY 2019 Plans:</div> <div>- Continue the minor upgrade and modernization of test capabilities at NAWCAD, NAWCWD and PMRF.</div> <div>- Continue procurement of Range Support Aircraft.</div> <div>- Continue the modernization of the telemetry antenna controllers and data processors at PMRF.</div> <div>- Continue the modernization of the imaging radar at PMRF.</div> <div>- Complete the modernization of the InfraRed measurement capability at NAWCAD.</div> <div>- Continue the upgrade of the avionic data processing and display system at NAWCAD.</div> <div>- Continue modernization of the imaging radar mechanical assemblies at PMRF.</div> <div>- Continue the development of Environmental Impact Statements at NAWCAD and NAWCWD.</div> <div>- Complete the acquisition of tactical data link capability at NAWCAD.</div> <div>- Complete the acquisition of new Infrared and Ultraviolet measurement capability at NAWCAD.</div> <div>- Continue the replacement of the FOCUS cable at NAWCWD.</div> <div>- Continue the development and integration of Telemetry and optics equipment on the Range Support Aircraft.</div> <div>- Complete the site preparation and integration of radars and emitters at NAWCWD.</div>		38.536 -	40.167 -	34.901 -	0.000 -	34.901 -

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
<div>- Initiate and complete modernization of air traffic control radar at NAWCWD.</div> <div>- Initiate upgrade for ground based testing against a 5th generation aerial threat. This effort will upgrade an existing track test facility at NAWC WD with the ability to suspend a 5th generation aircraft for use in testing sensors.</div> <div>FY 2020 Base Plans:</div> <div>- Continue the minor upgrade and modernization of test capabilities at NAWCAD, NAWCWD and PMRF.</div> <div>- Continue procurement of Range Support Aircraft.</div> <div>- Continue the development of Environmental Impact Statements at NAWCAD and NAWCWD.</div> <div>- Continue the development and integration of Telemetry and optics equipment on the Range Support Aircraft.</div> <div>- Complete the modernization of the telemetry antenna controllers and data processors at PMRF.</div> <div>- Complete the modernization of the imaging radar at PMRF.</div> <div>- Complete the upgrade of the avionic data processing and display system at NAWCAD.</div> <div>- Complete modernization of the imaging radar mechanical assemblies at PMRF.</div> <div>- Complete the replacement of the FOCUS cable at NAWCWD.</div> <div>- Complete the upgrade for ground based testing against a 5th generation aerial threat. This effort will upgrade an existing track test facility at NAWCWD with the ability to suspend a 5th generation aircraft for use in testing sensors.</div> <div>-Initiate the imaging radar transmitter modernization at PMRF.</div> <div>-Initiate cyber security upgrades at NAWCWD.</div> <div>-Initiate and complete the modernization of the down range network at NAWCAD.</div> <div>-Initiate and complete the modernization of the surface surveillance radars at NAWCAD.</div> <div>-Initiate and complete the modernization of the HD video distribution capability at NAWCWD.</div> <div>-Initiate and complete the modernization of the command and control transmitter at NAWCWD.</div> <div>-Initiate and complete the laser designator modernization at NAWCWD.</div> <div>FY 2020 OCO Plans:</div> <div>N/A</div> <div>FY 2019 to FY 2020 Increase/Decrease Statement:</div> <div>The funding decrease from FY 2019 to FY 2020 due to the completion of a number of projects including the tactical data link terminal purchase, the infrared and ultraviolet measurement equipment purchase for the imaging radar mechanical modernization.</div>						
Title: TEST FACILITIES INVESTMENTS		5.400	30.236	44.166	0.000	44.166
Articles:		-	-	-	-	-

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
<p>Description: This effort funds the modernization and upgrades of existing capabilities and the development of new Test & Evaluation capabilities required at the Navy's Major Range Test Facility Base ground test facilities at NAWCAD, Patuxent River, MD, and NAWCWD, Point Mugu, CA and China Lake, CA.</p> <p>FY 2019 Plans:</p> <p>-Initiate the test cell performance improvement at NAWCAD. This effort will upgrade Propulsion Systems Evaluation Facility turbine engine test cell to provide uniform temperature and pressure intake airflow and improve dynamometer performance. FY 2019 work includes establishing requirements, analyzing solution alternatives, and preliminary and critical design reviews.</p> <p>- Initiate the modernization of the data acquisition and processing system at NAWCAD. This effort will modernize the Electro Magnetic Pulse (EMP) instrumentation by replacing analog fiber links and obsolete oscilloscopes and control triggers with modern supportable equipment. In FY 2019, the prototype instrumentation package will be developed.</p> <p>- Initiate the procurement of the direct drive electromagnetic test system at NAWCAD. This effort will evaluate potential amplifier solutions to replace amplifiers at the Electromagnetic/Environmental/Effects (E3)facility that are no longer supported by the manufacturer. The replacement amplifiers will provide less distortion/better representation responses and be maintainable.</p> <p>- Initiate the modernization of the insensitive munitions test arena at NAWCWD. Tasks include developing requirements for modernizing the control room, test pads and cable paths to the test arena and developing a contract package to implement the modernization of the Ordnance test facility.</p> <p>Modeling and Simulation:</p> <p>- Initiate and complete a study to evaluate past and current modeling and simulation environments in government and industry. Effort will confirm requirements of advanced modeling and simulation detailed requirements, analyze solution alternatives, and conduct design reviews for technical products.</p> <p>-Initiate multi-site and multi-domain modeling and simulation test bed design. Develop virtualized representations of high-priority Navy systems to integrate into complex digital battle space and into National Cyber Range. Innovate and standardize virtualization and integration process for use in DON Modeling & Simulation/Live</p>						

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
<p>Virtual Constructive (LVC) Environment. Evaluate architecture of major modeling and simulation environments and integrate major multi-domain test beds using best practices, open interfaces and ensure standing persistent connectability. Task will promulgate Enterprise models across Air, Surface, Subsurface and Cyber domains. Collaborate on improvements required for multi-Domain modeling and complex security environments to facilitate "Capability" Analysis/RDT&E/Training and fund enabling technologies.</p> <p>-Initiate common modeling and simulation tool design effort. Enhance Model Based Systems Engineering tools and integrate tools with T&E capabilities, allowing improved planning for agile software testing and cyber evaluations. Develop state-of-the-art data analysis and mining tools to integrate and present cohesive results in complex LVC environments. Develop architecture to integrate emerging Threat Intelligence products for both classified software, virtual and low-cost hardware representations. Improve and integrate Integrated Threat Analysis Simulation Environment to meet Navy requirements. Update immersive visualization model suite to add complex Electronic Warfare (EW) effects and improve ability to evaluate and understand complex interactions tied to warfighting outcomes. Continue to integrate and transition best-of-breed innovations coming from research centers, DIUX and the gaming industry into use at RDT&E facilities for program and prototyping support. Incorporate improved EW effects/interactions into constructive modeling and integrate with virtual/hardware in the loop labs/ranges to create a coherent LVC EW/Electromagnetic Spectrum Maneuver Warfare evaluation environment. Analyze future state and develop plan to assess new capabilities for fusion and predictive systems. Integrate ONR modeling tools into test beds to allow assessment of human performance when assisted by improved machine-learning technologies. Focus on integration with Next Generation Threat System as core enterprise simulation and allow assessment in both test/training environments. Design, develop and integrate reference Interoperability emulators, low fidelity capability assessment tools and battlespace suite design to allow platforms to assess performance early in system development</p> <p>- Continue the minor upgrade and modernization of test capabilities at NAWCAD and NAWCWD and the upgrade to general instrumentation and equipment.</p> <p>- Complete the modernization of the helicopter propulsion data acquisition system</p> <p>- Complete the procurement of time precision RF signal generation and distribution equipment.</p>						

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
<p>-Initiate upgrade for model and simulation testing against a 5th generation aerial threat. This effort will develop the capability to synchronize radio frequency output of different electronic warfare environment generators for a coherent presentation."</p> <p>FY 2020 Base Plans:</p> <p>- Continue the minor upgrade and modernization of test capabilities at NAWCAD and NAWCWD and the upgrade to general instrumentation and equipment.</p> <p>-Continue the test cell performance improvement at NAWCAD. This effort will upgrade Propulsion Systems Evaluation Facility turbine engine test cell to provide uniform temperature and pressure intake airflow and improve dynamometer performance. FY 2020 work includes completing the design work, ordering materials and beginning the assembly of the equipment.</p> <p>- Continue the modernization of the insensitive munitions test arena at NAWCWD. Tasks include developing requirements for modernizing the control room, test pads and cable paths to the test arena and developing a contract package to implement the modernization of the Ordnance test facility.</p> <p>-Complete the upgrade for model and simulation testing against a 5th generation aerial threat. This effort will develop the capability to synchronize radio frequency output of different electronic warfare environment generators for a coherent presentation."</p> <p>- Complete the modernization of the data acquisition and processing system at NAWCAD. This effort will modernize the Electro Magnetic Pulse (EMP) instrumentation by replacing analog fiber links and obsolete oscilloscopes and control triggers with modern supportable equipment. In FY 2019, the prototype instrumentation package will be developed.</p> <p>- Complete the procurement of the direct drive electromagnetic test system at NAWCAD. This effort will evaluate potential amplifier solutions to replace amplifiers at the Electromagnetic/Environmental/Effects (E3) facility that are no longer supported by the manufacturer. The replacement amplifiers will provide less distortion/better representation responses and be maintainable.</p> <p>-Initiate the purchase of materials that will enable the establishment of free standing chamber walls at NAWCAD. This will allow an increased through put of testing by allowing limited anechoic testing in spaces that were not designed to be anechoic.</p> <p>-Initiate and complete the purchase of a global positioning simulator at NAWCAD.</p> <p>-Initiate and complete the purchase of x-ray equipment designed to examine munitions and ordnance at NAWCWD.</p> <p>Modeling and Simulation:</p>						

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
<p>- Continue multi-site and multi-domain modeling and simulation test bed design. Develop virtualized representations of high-priority Navy systems to integrate into complex digital battle space and into National Cyber Range. Innovate and standardize virtualization and integration process for use in DON Modeling & Simulation/Live Virtual Constructive (LVC) Environment. Evaluate architecture of major modeling and simulation environments and integrate major multi-domain test beds using best practices, open interfaces and ensure standing persistent connectivity. Task will promulgate Enterprise models across Air, Surface, Subsurface and Cyber domains. Collaborate on improvements required for multi-Domain modeling and complex security environments to facilitate "Capability" Analysis/RDT&E/Training and fund enabling technologies. FY 2020 work includes decomposing major modeling architecture frameworks and designing a common compatible framework and developing a configuration methodology for promulgating enterprise models across multiple domains.</p> <p>- Continue common modeling and simulation tool design effort. Enhance Model Based Systems Engineering tools and integrate tools with T&E capabilities, allowing improved planning for agile software testing and cyber evaluations. Develop state-of-the-art data analysis and mining tools to integrate and present cohesive results in complex LVC environments. Develop architecture to integrate emerging Threat Intelligence products for both classified software, virtual and low cost hardware representations. Improve and integrate Integrated Threat Analysis Simulation Environment to meet Navy requirements. Update immersive visualization model suite to add complex Electronic Warfare (EW) effects and improve ability to evaluate and understand complex interactions tied to warfighting outcomes. Continue to integrate and transition best-of-breed innovations coming from research centers, DIUX and the gaming industry into use at RDT&E facilities for program and prototyping support. Incorporate improved EW effects/interactions into constructive modeling and integrate with virtual/hardware in the loop labs/ranges to create a coherent LVC EW/Electromagnetic Spectrum Maneuver Warfare evaluation environment. Analyze future state and develop plan to assess new capabilities for fusion and predictive systems. Integrate ONR modeling tools into test beds to allow assessment of human performance when assisted by improved machine-learning technologies. Focus on integration with Next Generation Threat System as core enterprise simulation and allow assessment in both test/training environments. Design, develop and integrate reference Interoperability emulators, low fidelity capability assessment tools and battlespace suite design to allow platforms to assess performance early in system development. FY 2020 work includes adding EW effects to immersive visualization model suites and adding EW effects into constructive models and integrating them with virtual and hardware in the loop labs and ranges.</p> <p>-Initiate advanced immersive visualization of battlespace and red/blue interactions. Task will update immersive visualization model suite to add complex EW effects and improve ability to evaluate and understand complex interactions tied to warfighting outcomes.</p> <p>-Initiate update of Naval model and simulation environment to implement improved electronic warfare modeling effect and interactions. Task will incorporate improved Electronic Warfare (EW) effects and interactions into</p>						

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
constructive modeling and integrate with virtual and hardware-in-the-loop labs and ranges to create a coherent Live Virtual Constructive (LVC) EW evaluation environment. -Initiate update to Family Of Simulation models to account for offensive and defensive cyber effects in the battlespace. Task will update constructive models used for analysis and RDT&E to incorporate modeling of red/blue cyber effects -Improvement to support assessment of machine-assisted learning and automated intelligence (AI). Integrate AI tools with Next Generation Threat System as core enterprise simulation and allow assessment in both test/training environments. FY 2020 OCO Plans: N/A FY 2019 to FY 2020 Increase/Decrease Statement: Funding increase from FY 2019 to FY 2020 supports the design of a framework to enable interaction between disparate models, developing a methodology to maintain configuration control and distribution of the common modeling tools, integrating electronic warfare effects into visualization models, and for the purchase of a free standing chamber wall, the purchase of a global positioning simulator and for the purchase of x-ray equipment.						
Accomplishments/Planned Programs Subtotals		52.560	77.014	85.348	0.000	85.348
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						
D. Acquisition Strategy						
Not Applicable.						
E. Performance Metrics						
Successfully achieve Initial Operational Capability of 8-15 Improvement and Modernization projects per year and have 90% of test capabilities scheduled in support of Navy acquisition test programs within 180 days.						

UNCLASSIFIED

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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
9999: Congressional Adds	0.000	16.417	13.500	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	29.917
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Congressional Add												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2018	FY 2019			
Congressional Add: Program Increase								3.863	0.000			
FY 2018 Accomplishments: Funding supports Range Support Aircraft flight termination system communication, and avionics upgrades.												
FY 2019 Plans: N/A												
Congressional Add: Navy UFR for Critical Infrastructure Investments- Major Range & Test Facilities								12.554	0.000			
FY 2018 Accomplishments: -Initiate and complete installation of the fiber optic connection across the Chesapeake Bay to complete the connection for the Atlantic Test Range to the Wallops Island facilities at NAWC AD.												
-Initiate and complete the purchase and integration of modern control radar for R2508 at NAWC WD.												
-Initiate and complete antenna pedestal modernizations and improvements at NAWC AD.												
-Initiate and complete cyber security upgrades to multiple systems at NAWC WD.												
FY 2019 Plans: N/A												
Congressional Add: Fifth Generation Radar Ground Test Upgrades								0.000	4.000			
FY 2018 Accomplishments: N/A												
FY 2019 Plans: To initiate and complete the development of advanced radar target generators for modern radar test support at NAWCAD.												
Congressional Add: Complex Electronic Warfare Test Equipment								0.000	3.500			
FY 2018 Accomplishments: N/A												
FY 2019 Plans: To initiate and complete upgrades to Air Combat Environment Test & Evaluation Facility (ACETEF) EW stimulation capability in support Mission testing at NAWCAD.												
Congressional Add: Ground Based Sense-and-Avoid								0.000	6.000			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019
FY 2018 Accomplishments: N/A			
FY 2019 Plans: To initiate and complete the enhancement of Atlantic Test Range (ATR) air and ground surveillance capability in support of Unmanned Aircraft Systems (UAS) operations at Naval Air Warfare Center Aircraft Division (NAWCAD).			
Congressional Adds Subtotals		16.417	13.500
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
Not required for Congressional Adds			
E. Performance Metrics			
Not required for Congressional Adds			