Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0204460M *I Ground/Air Task Oriented Radar (G/ATOR)*

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	466.363	30.669	22.205	21.367	-	21.367	-	-	-	-	-	-
9999: *Congressional Adds*	0.000	4.827	0.000	0.000	-	0.000	-	-	-	-	-	-
9C89: *Marine Ground-Air Radar*	466.363	25.842	22.205	21.367	-	21.367	-	-	-	-	-	-

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 386

A. Mission Description and Budget Item Justification

The Ground/Air Task Oriented Radar (G/ATOR) is a multi-role, ground-based, expeditionary 3D radar system employed by both the Air Combat Element (ACE) and Ground Combat Element (GCE) within the Marine Air Ground Task Force. It satisfies the Marine Air Command and Control System and the Ground Counter Fire/Counter Battery capabilities. G/ATOR provides mobile, multi-functional, three-dimensional surveillance of air breathing targets, detection of cruise missiles, Unmanned Aerial Systems (UAS), Rockets, Artillery and Mortars, and the cueing of air defense weapons. G/ATOR contributes to Littoral Operations in a Contested Environment (LOCE) and Expeditionary Advanced Base Operations (EABO) by surveillance and detection of enemy air threats not seen by Navy sensors in the littorals and participating in a cooperative engagement network of sensors and shooters. G/ATOR enables integrated fire control (IFC) and provides engage/fire on remote capability. G/ATOR surveillance coverage with IFC will provide unprecedented reach, volume, and precision in the execution of Operational Maneuver From The Sea allowing Naval forces to project and sustain power deep inland. G/ATOR is the primary Ground-Based sensor for the United States Marine Corps, and is the only Air Defense/Air Surveillance radar currently in the Marine Corps inventory.

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	28.891	22.205	13.659	-	13.659
Current President's Budget	30.669	22.205	21.367	-	21.367
Total Adjustments	1.778	0.000	7.708	-	7.708
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	2.871	0.000			
• SBIR/STTR Transfer	-1.093	0.000			
• Program Adjustments	0.000	0.000	8.000	-	8.000
• Rate/Misc Adjustments	0.000	0.000	-0.292	-	-0.292

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0204460M *I Ground/Air Task Oriented Radar (G/ATOR)*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2020	FY 2021
Project: 9999: *Congressional Adds*		
Congressional Add: *Low, slow, small targets*	4.827	0.000
Congressional Add Subtotals for Project: 9999	4.827	0.000
Congressional Add Totals for all Projects	4.827	0.000

Change Summary Explanation

RDT&E funding decreases $0.838M from FY 2021 to FY 2022 due to reductions in test & evaluation and Government technical support, while ensuring continued improvement in G/ATOR software capabilities required in a Peer/Near-Peer Competitor environment.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	Project (Number/Name) 9999 / *Congressional Adds*	

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
9999: *Congressional Adds*	0.000	4.827	0.000	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Initiates the software development for G/ATOR to detect Low, Slow, Small targets, in support of JUONS #CC-0558 and JEONS #ST-0008 requirements to enhance the radar's ability for the Counter-Unmanned Aerial System (C-UAS) mission. This enhancement will enable G/ATOR to discriminate air threats below the current minimum velocity requirement. It will increase situational awareness within the operational picture and improve kill chain timeline to ensure forward deployed forces possess the capabilities required to mitigate threats from enemy Unmanned Aerial Systems.

FY 2020 RDT&E funding increases $4.827M to support Congressional add for Low, Slow, Small Target detection.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021
Congressional Add: Low, slow, small targets	4.827	0.000
FY 2020 Accomplishments: N/A		
FY 2021 Plans: N/A		
Congressional Adds Subtotals	4.827	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• RDTE/0604504N/0718: *Air Control MATCALS*	6.394	3.222	3.132	-	3.132	-	-	-	-	-	-
• PMC/4655: *Ground/ Air Task Oriented Radar*	275.655	276.673	298.603	-	298.603	-	-	-	-	-	-
• PMC/7000: *Initial Spares- G/ATOR.*	14.235	13.506	13.665	-	13.665	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

Software enhancements supporting Low, Slow, Small Target detection execution initiated on the GaN contract 3Q FY 2020.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	**Project (Number/Name)** 9999 / *Congressional Adds*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
G/ATOR BLOCK 1 DEVELOPMENT	C/CPIF	NORTHROP GRUMMAN MISSION SYSTEMS : LINTHICUM HEIGHTS	0.000	4.827	Jun 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	0.000	4.827		0.000		0.000		-		0.000	-	-	N/A

Remarks

FY 2020 RDT&E funding increases $4.827M due to a congressional add for Low, Slow, Small Target detection to enhance the radar's ability to support the Counter-Unmanned Aerial System (C-UAS) mission.

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	4.827		0.000		0.000		-		0.000	-	-	N/A

Remarks

FY 2020 RDT&E funding increases $4.827M due to a congressional add for Low, Slow, Small Target detection.

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	**Project (Number/Name)** 9999 / *Congressional Adds*

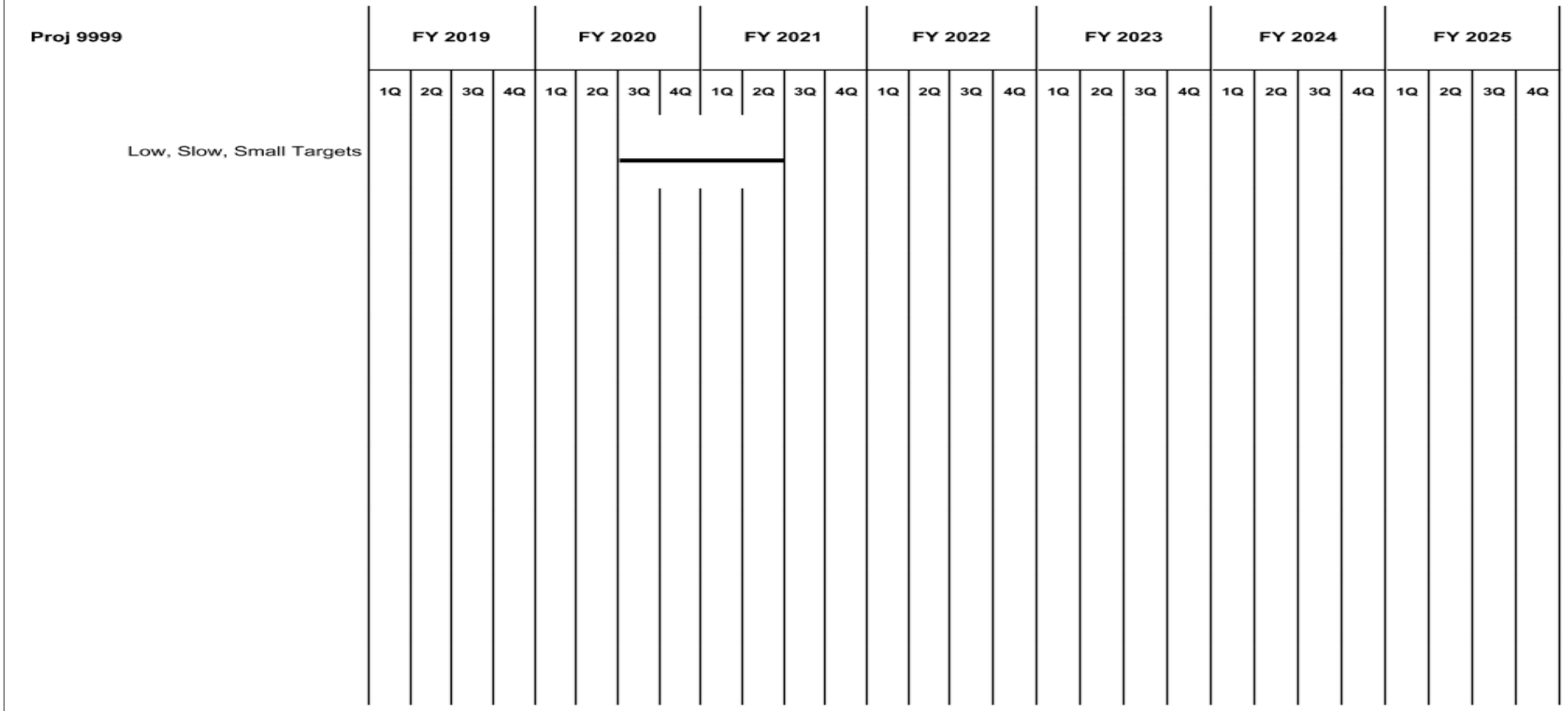

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	**Project (Number/Name)** 9999 / *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9999				
Low, Slow, Small Targets: Low, Slow, Small Targets	3	2020	2	2021

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	Project (Number/Name) 9C89 / *Marine Ground-Air Radar*	

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
9C89: *Marine Ground-Air Radar*	466.363	25.842	22.205	21.367	-	21.367	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 386

A. Mission Description and Budget Item Justification

The Ground/Air Task Oriented Radar (G/ATOR) is a critical CMC Force Design program. G/ATOR is a multi-role, ground-based, expeditionary 3D radar system employed by both the Air Combat Element (ACE) and Ground Combat Element (GCE) within the Marine Air Ground Task Force. It satisfies the Marine Air Command and Control System and the Ground Counter Fire/Counter Battery capabilities. G/ATOR provides mobile, multi-functional, three-dimensional surveillance of air breathing targets, detection of cruise missiles, Unmanned Aerial Systems (UAS), Rockets, Artillery and Mortars, and the cueing of air defense weapons. G/ATOR contributes to Littoral Operations in a Contested Environment (LOCE) and Expeditionary Advanced Base Operations (EABO) by surveillance and detection of enemy air threats not seen by Navy sensors in the littorals and participating in a cooperative engagement network of sensors and shooters. G/ATOR enables integrated fire control (IFC) and provides engage/fire on remote capability. G/ATOR surveillance coverage with IFC will provide unprecedented reach, volume, and precision in the execution of Operational Maneuver From The Sea allowing Naval forces to project and sustain power deep inland. G/ATOR is the primary Ground-Based sensor for the United States Marine Corps, and is the only Air Defense/Air Surveillance radar currently in the Marine Corps inventory.

RDT&E funding decreases $0.838M from FY 2021 to FY 2022 primarily due to reductions in test & evaluation and Government technical support, while ensuring continued improvement in G/ATOR software capabilities, such as, Low, Slow, Small Target Detection and Non-Cooperative Target Recognition development required in a Peer/Near-Peer Competitor environment.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: G/ATOR Contractor Technical, Development Engineering/Block 1	12.930	12.904	13.403	0.000	13.403
Articles:	-	-	-	-	-
FY 2021 Plans: - Completes G/ATOR Block I Tactical Target Generator (TTG), Pallet Communications Support Processor (PCSP) development and advanced software radar emplacement/displacement time improvements. - Continues Electronic Protection, Cyber Protection & Systems Security efforts.					
FY 2022 Base Plans: - Will continue Electronic Protection, Cyber Protection & Systems Security efforts, as well as, Low, Slow, Small (LSS) Target Detection software development. (An FY20 Congressional Add)					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	**Project (Number/Name)** 9C89 / *Marine Ground-Air Radar*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Initiates Non-Cooperative Target Recognition software development. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** G/ATOR Contractor Technical, Development Engineering/Block 1 increases $0.499M in order to continue LSS Target Detection and initiate Non-Cooperative Target Recognition software development.					
Title: Government Technical Support	6.206	5.555	4.968	0.000	4.968
Articles:	-	-	-	-	-
Description: The Government Technical Support Team provides primarily inherent governmental support functions, including Federally Funded Research and Development Centers (FFRDCs), adding depth, breadth, and expertise not resident in the G/ATOR Program Office. Functions include technical planning as well as execution and analysis across multi-disciplinary competencies to include: Systems Architecture, Radar Software Engineering, Radar Systems Engineering, Radar Decoy Engineering, Cyber Security/Information Assurance, Human Systems Integration, Safety, Program Protection and Configuration Management. It also includes the coordination necessary to enable a System of Systems interface with other programs in the "Cue to Slew" kill chain such as Air Command and Control and Sensor Netting (AC2SN), Composite Tracking Network (CTN) & Advanced Field Artillery Tactical Data System (AFATDS), ultimately ensuring platform/software compatibility. Technical Team support is vital during the G/ATOR System's Production phase as it is the Government's responsibility to ensure that G/ATOR meets Government Performance Specification Verification. ***FY 2021 Plans:*** Continue Government support from the following activities to enable program execution: MITRE; NAVAIR; NSWC Dahlgren; NSWC Crane; NAWC-AD China Lake; NSWC Indian Head; AIMS and DTIC. ***FY 2022 Base Plans:*** Will continue Government support from the following activities to enable program execution: MITRE; NAVAIR; NSWC Dahlgren; NSWC Crane; NAWC-AD China Lake; AIMS and DTIC. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:***					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	**Project (Number/Name)** 9C89 / *Marine Ground-Air Radar*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Government Technical Support funding decreases $0.587M from FY 2021 to FY 2022 as NSWC Indian Head technical support is no longer required.					
Title: G/ATOR: Test and Evaluation	6.421	3.466	2.721	0.000	2.721
Articles:	-	-	-	-	-
FY 2021 Plans: Conducts a survivability related engineering test event focusing on Electronic Protection, Cyber Protection and Systems Security, as well as, Emplacement/Displacement, 6400 Mil Mode and Decoys. ***FY 2022 Base Plans:*** Will conduct improved software capability and survivability related engineering testing focusing on Electronic Protection, Cyber Protection and Systems Security. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** T&E funding decreases $0.745M from FY 2021 to FY 2022 while G/ATOR continues to perform System survivability and software capability improvements engineering related testing.					
Title: G/ATOR: Management Services & Travel	0.285	0.280	0.275	0.000	0.275
Articles:	-	-	-	-	-
FY 2021 Plans: Provides program office travel in support of system development and a survivability related engineering test event. ***FY 2022 Base Plans:*** Will provide program office travel in support of system development and related engineering test event. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Travel funding decreases $0.005M from FY21 to FY22.					
Accomplishments/Planned Programs Subtotals	25.842	22.205	21.367	0.000	21.367

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	**Project (Number/Name)** 9C89 / *Marine Ground-Air Radar*

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• RDTE/0604504N/0718: *AIR CONTROL MATCALS*	6.394	3.222	3.136	-	3.136	-	-	-	-	-	-
• PMC/7000: *INITIAL SPARES-G/ATOR*	14.235	13.506	13.506	-	13.506	-	-	-	-	-	-
• PMC/4655: *GROUND/AIR TASK ORIENTED RADAR*	275.655	276.673	297.369	-	297.369	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

The Ground/Air Task Oriented Radar (G/ATOR) is a multi-role, ground-based, expeditionary radar that replaces five legacy radar systems and provides the USMC Air Defense and Air Surveillance (AD/AS) (G/ATOR Block 1), Counterfire/Targeting (G/ATOR Block 2), and Air Traffic Control (G/ATOR Block 4) capability. The AD/AS (GB1) development effort was competitively awarded in 2007 and completed Milestone C in FY 2014. GB1 achieved Initial Operational Capability (IOC) in March 2018. Development of the Counterfire/Targeting (GB2) capability was initiated in FY 2010 with a RFI to industry, followed by a Business Case Analysis (BCA) to select the most cost effective procurement strategy. The results of the BCA indicated that a sole source contract to Northrup Grumman Mission Systems (NGMS) was the most cost effective solution. Thus, the GB2 development contract awarded in August FY 2015. GB2 achieved IOC in February 2019. The Full Rate Production (FRP) Contract with NGMS awarded in June 2019. G/ATOR enhancements include a three-phased Electronic Protection, Cyber Protection and Systems Security effort, Radar Emplacement/Displacement improvements, G/ATOR Block I Tactical Target Generators (Decoys), Low-Slow-Small (LSS) Target Detection and Non-Cooperative Target Recognition (NCTR), which are all necessary to increase both G/ATOR's and the Fleet Marine Force's survivability in a Peer/Near-Peer competitor environment. In order to improve G/ATOR's reliability and sustainability, a Pallet Communications Support Processor (PCSP) implementation will be cut-in to FRP Lots 3 and 4, along with the retrofit of the remaining 29 Radar Systems beginning with the procurement of 15 PCSP Retrofit Kits in FY 2021 and 14 PCSP Retrofit Kits in FY 2022. These capability enhancements/improvements will be awarded as task orders on the Northrup Grumman Mission Systems Sustainment Engineering and Logistics Support (SELS) contract, initially awarded 4Q FY 2020, that will support the continued development of G/ATOR capability enhancements and the deployment, sustainment and maintenance of delivered G/ATOR systems.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	Project (Number/Name) 9C89 / *Marine Ground-Air Radar*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
G/ATOR BLOCK 1 DEVELOPMENT	C/CPIF	NORTHROP GRUMMAN SYSTEMS CORPORATION : LINTHICUM HEIGHTS, MD	219.906	12.930	Dec 2019	12.904	Dec 2020	13.403	Dec 2021	-		13.403	-	-	-
G/ATOR BLOCK 2 SOFTWARE DEVELOPMENT	C/CPFF	NORTHROP GRUMMAN SYSTEMS CORPORATION : LINTHICUM HEIGHTS, MD	66.962	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	286.868	12.930		12.904		13.403		-		13.403	-	-	N/A

Remarks

Developmental funding increases $0.499M in FY 2022 as G/ATOR is in Full Rate Production (FRP), while continuing to focus on software capability enhancements including Program/Cyber Protection, Systems Security, Low, Slow, Small Target Detection and Non-Cooperative Target Recognition. These efforts are designed to increase both Radar and Force Survivability in a Peer, Near-Peer Competitor environment. Award dates reflected are the actual obligation date for the first incremental award. The Northrop Grumman Sustainment Engineering and Logstics Support (SELS) contract is incrementally funded throughout the fiscal year. FY 2021 & FY 2022 funding is specific to the entire Radar system and displayed in Block 1.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC TECHNICAL SUPPORT	FFRDC	MITRE : BOSTON, MA	6.734	1.196	Dec 2019	1.175	Dec 2020	1.155	Dec 2021	-		1.155	-	-	-
NSWC TECHNICAL SUPPORT	WR	NSWC DAHLGREN : DAHLGREN, VA	47.156	1.564	Dec 2019	1.448	Dec 2020	1.244	Dec 2021	-		1.244	-	-	-
NSWC TECHNICAL SUPPORT	WR	NSWC CRANE : CRANE, IN	2.752	1.370	Dec 2019	1.282	Dec 2020	1.277	Dec 2021	-		1.277	-	-	-
NAVAIR TECHNICAL SUPPORT	WR	NAWC AD : CHINA LAKE, CA	0.095	0.020	Dec 2019	0.020	Dec 2020	0.020	Dec 2021	-		0.020	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	**Project (Number/Name)** 9C89 / *Marine Ground-Air Radar*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NAVAIR TECHNICAL SUPPORT	WR	NAVAIR : PAX RIVER, MD	6.147	0.826	Dec 2019	0.781	Dec 2020	0.740	Dec 2021	-		0.740	-	-	-
NSWC TECHNICAL SUPPORT	WR	NWSC-IH : INDIAN HEAD, MD	1.318	0.355	Dec 2019	0.309	Dec 2020	0.000		-		0.000	-	-	-
AIMS TECHNICAL SUPPORT	WR	AIMS : ROBINS AFB, GA	0.755	0.260	Dec 2019	0.256	Dec 2020	0.252	Dec 2021	-		0.252	-	-	-
NAWCWD TECHNICAL SUPPORT	WR	NAWCWD : PT MUGU, CA	1.890	0.335	Dec 2019	0.000		0.000		-		0.000	-	-	-
DTIC TECHNICAL SUPPORT	WR	DTIC : FT BELVOIR, VA	0.960	0.280	Dec 2019	0.284	Dec 2020	0.280	Dec 2021	-		0.280	-	-	-
Prior Years Cumulative Funding	Various	N/A : N/A	10.988	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	78.795	6.206		5.555		4.968		-		4.968	-	-	N/A

Remarks

Award dates reflected are the actual obligation date for the first incremental award. Most activities, excluding MITRE are incrementally funded throughout the fiscal year.
Government Technical Support funding decreases $0.587M from FY 2021 to FY 2022 as NSWC-Indian Head technical and other support is reduced.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PRIME CONTRACTOR TEST SUPPORT	C/CPIF	NORTHROP GRUMMAN SYSTEMS CORPORATION : LINTHICUM HEIGHTS, MD	14.529	1.466	Dec 2019	1.244	Dec 2020	0.783	Dec 2021	-		0.783	-	-	-
TEST SUPPORT	WR	NSWC DAHLGREN : DAHLGREN, VA	11.158	0.832	Dec 2019	0.466	Dec 2020	0.260	Dec 2021	-		0.260	-	-	-
TEST SUPPORT	MIPR	JTIC : FT HUACHUCA, AZ	0.547	0.050	Dec 2019	0.000		0.000		-		0.000	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	Project (Number/Name) 9C89 / *Marine Ground-Air Radar*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TEST PLANNING/ SUPPORT	Various	NSWC-FALLBROOK : CPEN, CA	9.431	0.432	Dec 2019	0.275	Dec 2020	0.215	Dec 2021	-		0.215	-	-	-
TEST PLANNING/ SUPPORT	Various	NSWC CRANE : CRANE, IN	0.229	0.295	Dec 2019	0.305	Dec 2020	0.255	Dec 2021	-		0.255	-	-	-
TEST SUPPORT	Various	NSWC CORONA : CORONA, CA	5.812	0.250	Dec 2019	0.225	Dec 2020	0.199	Dec 2021	-		0.199	-	-	-
TEST PLANNING/ SUPPORT	Various	NSWC PHD : DAM NECK, VA	9.303	0.696	Dec 2019	0.226	Dec 2020	0.204	Dec 2021	-		0.204	-	-	-
TEST OPERATOR SUPPORT	Various	MARFOR : Various	1.607	0.150	Dec 2019	0.125	Dec 2020	0.105	Dec 2021	-		0.105	-	-	-
TEST RANGE SUPPORT	MIPR	YPG : YUMA, AZ	3.076	0.525	Dec 2019	0.375	Dec 2020	0.000		-		0.000	-	-	-
TEST FACILITY SUPPORT	WR	SCSC : WALLOPS IS, MD	0.837	0.433	Dec 2019	0.000		0.200	Jan 2022	-		0.200	-	-	-
TEST FACILITY SUPPORT	WR	MCB 29 PALMS : 29 PALMS, CA	0.805	0.150	Dec 2019	0.225	Dec 2020	0.000		-		0.000	-	-	-
TEST RANGE SUPPORT	MIPR	WSMR : OTERO, NM	0.000	1.142	May 2020	0.000		0.250	Jan 2022	-		0.250	-	-	-
TEST RANGE SUPPORT	MIPR	DUGWAY AFB : DUGWAY, AZ	0.000	0.000		0.000		0.250	Jan 2022	-		0.250	-	-	-
Prior Years Cumulative Funding	Various	N/A : N/A	29.808	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	87.142	6.421		3.466		2.721		-		2.721	-	-	N/A

Remarks

Award dates reflected are the actual obligation date for the first incremental award. T&E funding decreases $0.745M from FY 2021 to FY 2022 based on T&E activities. Both SCSC Wallops Island and WSMR will be used for GB1 Engineering Tests and and Dugway AFB will be used for GB2 Engineering Tests.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	Project (Number/Name) 9C89 / *Marine Ground-Air Radar*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MANAGEMENT SERVICES	C/FP	MCSC : MCSC - QUANTICO, VA	11.548	0.000		0.000		0.000		-		0.000	-	-	-
TRAVEL	Various	MCSC : QUANTICO, VA	2.010	0.285	Sep 2020	0.280	Sep 2021	0.275	Sep 2022	-		0.275	-	-	-
		Subtotal	13.558	0.285		0.280		0.275		-		0.275	-	-	N/A

Remarks

Travel funding decreases $0.005M from FY 2021 to FY 2022.

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	466.363	25.842		22.205		21.367		-		21.367	-	-	N/A

Remarks

RDT&E funding decreases $0.838M from FY 2021 to FY 2022 ensuring continued improvement in G/ATOR software capabilities supporting both Low, Slow, Small Target Detection and Non-Cooperative Target Recognition required in a Peer/Near-Peer competitor environment.

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	**Project (Number/Name)** 9C89 / *Marine Ground-Air Radar*

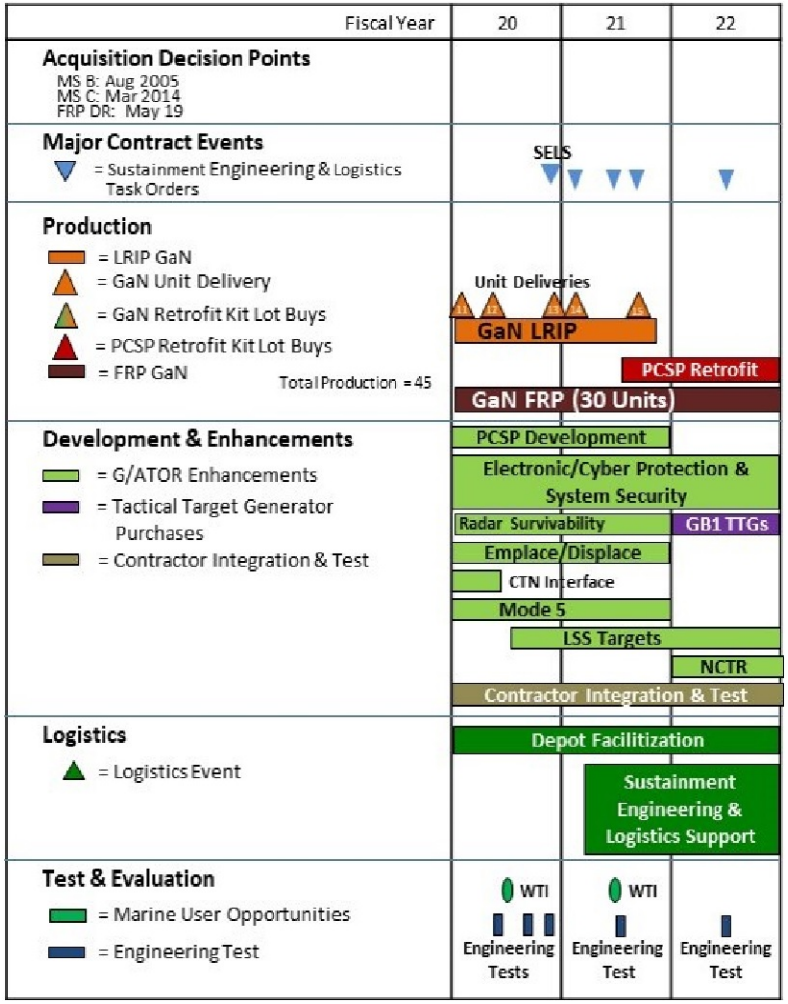

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204460M / *Ground/Air Task Oriented Radar (G/ATOR)*	**Project (Number/Name)** 9C89 / *Marine Ground-Air Radar*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9C89				
Gallium Nitride (GaN) Radar: FRP	1	2020	4	2022
Gallium Nitride (GaN) Radar: Engineering Test 2	2	2020	2	2020
Gallium Nitride (GaN) Radar: FY20 WTI	3	2020	3	2020
Gallium Nitride (GaN) Radar: Engineering Test 3	3	2020	3	2020
Gallium Nitride (GaN) Radar: Engineering Test 4	4	2020	4	2020
Gallium Nitride (GaN) Radar: Engineering Test 5	3	2021	3	2021
Gallium Nitride (GaN) Radar: Engineering Test 6	3	2022	3	2022
Gallium Nitride (GaN) Radar: PCSP Retrofit	3	2021	4	2022
Enhancements: Electronic/Cyber Protection & System Security	1	2020	4	2022
Enhancements: Radar Survivability/Decoys	1	2020	2	2021
Enhancements: GB1 Tactical Target Generator Procurements	1	2022	4	2022
Enhancements: Pallet Communications Support Processor (PCSP) Development	1	2020	4	2021
Enhancements: Emplacement/Displacement	1	2020	4	2021
Enhancements: CTN Interface	1	2020	2	2020
Enhancements: Mode 5	1	2020	1	2021
Enhancements: Low, Slow, Small (LSS) Targets	3	2020	4	2022
Enhancements: Non-Cooperative Target Recognition (NCTR)	1	2022	4	2022
Enhancements: Contractor Integration & Test	1	2020	4	2022
Logistics: Depot Facilitzation (LRU Repair & IROAN)	1	2020	4	2022
Logistics: Sustainment Engineering and Logistics Support Contract Award	4	2020	4	2020
Logistics: Sustainment Engineering and Logistics Support	4	2020	4	2022