Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy											Date: March 2024	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604289M *I Expeditionary Logistics*							
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
Total Program Element	34.750	7.608	5.991	8.114	-	8.114	9.281	6.535	8.558	8.737	Continuing	Continuing
2741: *Additive Manufacturing*	8.684	2.781	5.991	8.114	-	8.114	9.281	6.535	8.558	8.737	Continuing	Continuing
9999: *Congressional Adds*	26.066	4.827	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	30.893

A. Mission Description and Budget Item Justification

This program element supports cost associated with the research and development of Marine Corps Systems Command policy, acquisition process modifications, and prototyping to support the USMC Additive Manufacturing (AM) Initiative.

The USMC Additive Manufacturing Initiative is an initiative intended to give Marine units access to additive manufacturing techniques to allow them the opportunity to exercise innovation in the resolution of issues affecting unit combat readiness. This PE will support of the development of procedures to enable the approval and manufacturing of items requested from Marines. This involves the development of Marine Corps Policy, an approval process, engineering analysis and testing, establishment of facilities to produce prototype additive manufactured parts, and development of training to support the Marine Corps use of additive manufacturing. This initiative incorporates development of strategic partnerships with other DoN Systems Commands and field activities to develop DoN standards, processes, and other associated acquisition activities to support future use of additive manufacturing in DoN acquisition and readiness areas.

The Next Generation Logistics (NexLog) project supports cost associated with the research and development, experimentation, and limited, rapid fielding of emerging logistics capabilities necessary to enable the Fleet Marine Forces to execute the Marine Corps Operating Concept and inform logistics policies. These emerging logistics capabilities include development of autonomous ground, surface, and sub-surface materiel distribution systems; development of operational and tactical, in-field digital fabrication capabilities; and, the development of sensor-driven logistics information technology. This element also supports development of strategic partnerships with DoN Systems Commands and field activities in order to leverage their capabilities and align DoN standards and processes, while furthering the use of additive manufacturing, and other emerging logistics technologies, to increase warfighter readiness, capability, survivability, and effectiveness.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy	Date: March 2024
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0604289M / *Expeditionary Logistics*

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	7.342	5.991	9.144	-	9.144
Current President's Budget	7.608	5.991	8.114	-	8.114
Total Adjustments	0.266	0.000	-1.030	-	-1.030
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.530	0.000			
• SBIR/STTR Transfer	-0.263	0.000			
• Rate/Misc Adjustments	-0.001	0.000	-1.030	-	-1.030

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Project: 9999: *Congressional Adds*		
Congressional Add: *Additive manufacturing part screening tool*	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

FY 2025 reduction is due to a fiscally constrained environment impacts the expanded development of the Digital Manufacturing Data Vault (DMDV), which is the Marine Corps digital data repository.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604289M / *Expeditionary Logistics*	Project (Number/Name) 2741 / *Additive Manufacturing*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
2741: *Additive Manufacturing*	8.684	2.781	5.991	8.114	-	8.114	9.281	6.535	8.558	8.737	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports costs associated with the research, development, testing and evaluation of Marine Corps Systems Command acquisition process modifications, prototyping, and future logistics innovations to support the USMC Additive Manufacturing (AM) Initiative under the direction of Marine Corps Systems Command. This project invests in the 3D printing of large-scale constructs such as metal and polymer landing craft and concrete structures to include buildings and bridges. The USMC Additive Manufacturing Initiative is intended to give Marine units access to additive manufacturing techniques allowing them the opportunity to exercise innovation in the resolution of issues affecting unit combat readiness and sustainment.

This effort also supports the development of procedures to enable the approval and manufacturing of items requested from Marines. This involves the development of Marine Corps Policy, the digital data repository required to share equipment technical data and part designs, a part approval process, engineering analysis and testing, establishment of facilities to produce prototype additive manufactured parts, and development of training to support the Marine Corps' use of additive manufacturing. This initiative incorporates development of strategic partnerships with other DoN Systems Commands and field activities to develop DoN Standards, Processes, and other associated acquisition activities to support future use of additive manufacturing in DoN acquisition, readiness, and sustainment.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Additive Manufacturing	2.781	5.991	8.114	0.000	8.114
Articles:	-	-	-	-	-
FY 2024 Plans: - Continue the development and implementation of the digital data repository that is critical to sharing technical data across the Marine Corps and with other DoD Services and the DLA. - Continue maturing 3D printed part candidacy tools in development in order to assess USMC equipment programs in sustainment for printable parts, as well as evaluating future USMC programs under development and assessment for percentage of parts that can be 3D printed to support sustainment operations in the field and garrison. - Continue the development of large scale printed Unmanned Surface Vehicle (USV) hull to enable rapid reconstitution of forces and highly tailorable designs or craft. - Continue the use of additive manufacturing and advanced manufacturing in the use of fabricating circuit boards in expeditionary environments.					
FY 2025 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604289M / *Expeditionary Logistics*	**Project (Number/Name)** 2741 / *Additive Manufacturing*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
- Continue the development and implementation of the digital data repository that is critical to sharing technical data across the Marine Corps and with other DoD Services and the DLA. - Continue maturing 3D printed part candidacy tools in development in order to assess USMC equipment programs in sustainment for printable parts, as well as evaluating future USMC programs under development and assessment for percentage of parts that can be 3D printed to support sustainment operations in the field and garrison. - Continue the development of large scale printed Unmanned Surface Vehicle (USV) hull to enable rapid reconstitution of forces and highly tailorable designs or craft. - Continue the use of additive manufacturing and advanced manufacturing in the use of fabricating circuit boards in expeditionary environments. - Initiate the development of standardized garrison advanced manufacturing equipment sets. - Initiate OCONUS experimentation of Construction Scale Additive Manufacturing (CSAM). ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The FY24 to FY25 increase of $2.123M supports the expanded development of the Digital Manufacturing Data Vault (DMDV), which is the Marine Corps digital data repository. This expanded development will support process development, expanded system integration and technology implementation critical to the DMDV supporting the resolution of issues affecting unit combat readiness and sustainment.					
Accomplishments/Planned Programs Subtotals	2.781	5.991	8.114	0.000	8.114

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The AM program utilizes a non-traditional acquisition strategy due to AM being a set of enabling technologies vice a conventional platform for milestone-driven acquisition. It will incorporate strategic partnerships with other DoN activities, Joint Staff, and the other Services. For that reason, these AM investments are designed to explore future capabilities where AM may resolve gaps in logistical readiness, provide warfighting solutions, and to mitigate AM-related risk within existing programs of record.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604289M / *Expeditionary Logistics*	Project (Number/Name) 2741 / *Additive Manufacturing*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative Funding	Various	NA : NA	3.953	0.000		0.000		0.000		-		0.000	0.000	3.953	-
AM Digital Data Repository Prototype	MIPR	GSA : O'Fallon, Il	0.467	0.545	Mar 2023	0.000		0.000		-		0.000	0.000	1.012	-
Digital Manufacturing Data Vault development	WR	NIWC PAC : San Diego, CA	0.545	1.217	Mar 2023	3.083	Mar 2024	5.006	Mar 2025	-		5.006	Continuing	Continuing	Continuing
AM of expendable USV hull	RO	NIWC PAC : San Diego, CA	0.000	0.800	Mar 2023	2.425	Mar 2024	1.871	Mar 2025	-		1.871	0.000	5.096	-
AM of circuit cards and electronics	MIPR	NSWC-CR : Crane, IN	0.000	0.100	Jan 2023	0.100	Jan 2024	0.209	Jan 2025	-		0.209	0.000	0.409	-
OCONUS CSAM	MIPR	USACE CERL : Champaign, IL	0.000	0.000		0.000		0.511	Jan 2025	-		0.511	0.000	0.511	-
Garrison AM Equipment Set	WR	NSWC CD : Bethesda, MD	0.000	0.000		0.000		0.212	Apr 2025	-		0.212	0.000	0.212	-
		Subtotal	4.965	2.662		5.608		7.809		-		7.809	Continuing	Continuing	N/A

Remarks

The FY 2024 to FY 2025 increase supports the expanded development of the Digital Manufacturing Data Vault (DMDV), which is the Marine Corps digital data repository. Increase also supports initial development of both OCONUS experimentation of Construction Scale Additive Manufacturing (CSAM) and garrison additive manufacturing equipment sets.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	Various	Various : Various	0.107	0.037	Jun 2023	0.043	Jun 2024	0.048	Jun 2025	-		0.048	0.000	0.235	-
AM Identify Cases for Prototypes	MIPR	NSWC : Carderock	0.000	0.082	Jan 2023	0.340	Jan 2024	0.257	Jan 2025	-		0.257	0.000	0.679	-
Prior Years Cumulative Funding	Various	Vrious : Various	3.612	0.000		0.000		0.000		-		0.000	0.000	3.612	-
		Subtotal	3.719	0.119		0.383		0.305		-		0.305	0.000	4.526	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604289M / *Expeditionary Logistics*	Project (Number/Name) 2741 / *Additive Manufacturing*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

The FY 2024 to FY 2025 decrease reflects reduced support required to identify cases for prototypes.

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	8.684	2.781		5.991		8.114		-		8.114	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604289M / *Expeditionary Logistics*	**Project (Number/Name)** 2741 / *Additive Manufacturing*

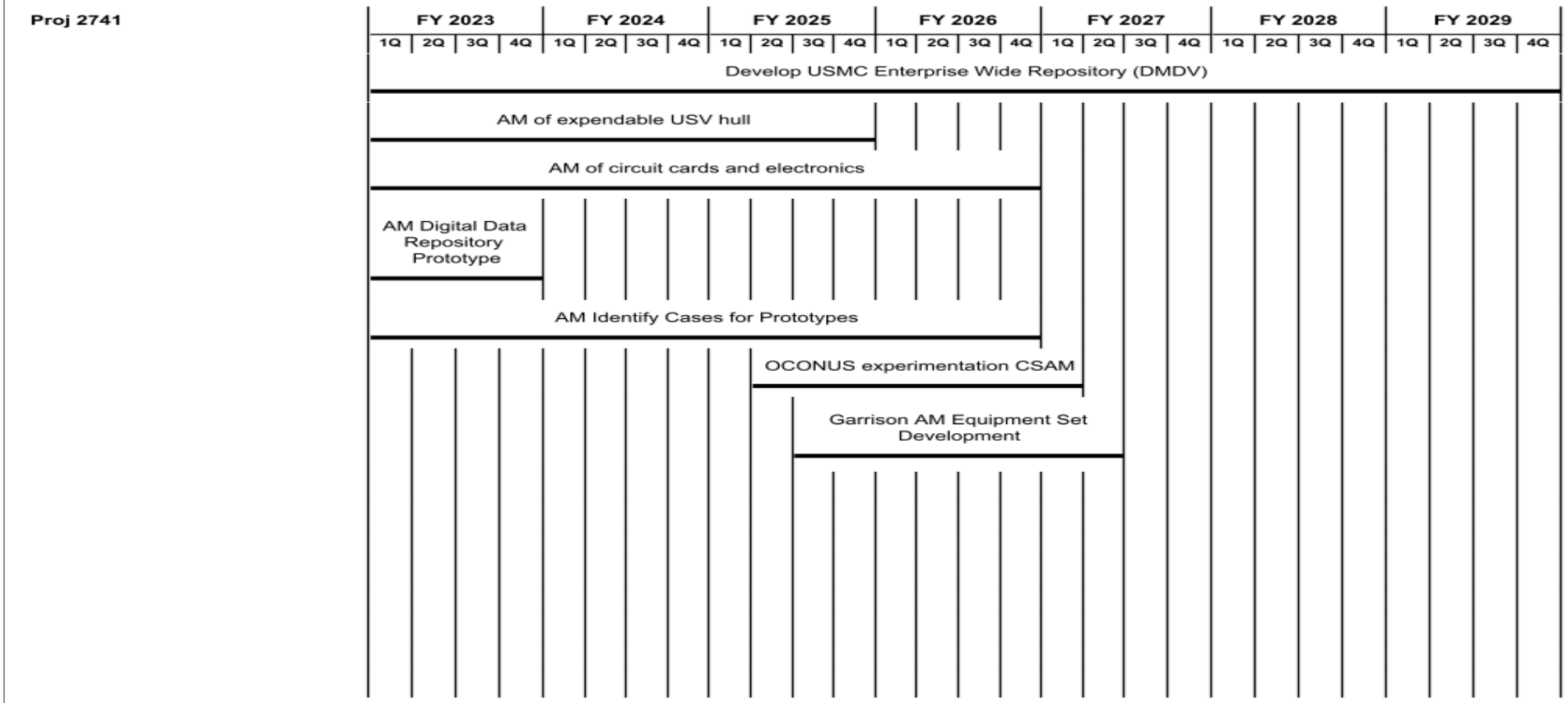

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604289M / *Expeditionary Logistics*	**Project (Number/Name)** 2741 / *Additive Manufacturing*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2741				
Develop USMC Enterprise Wide Repository (DMDV)	1	2023	4	2029
AM of expendable USV hull	1	2023	4	2025
AM of circuit cards and electronics	1	2023	4	2026
AM Digital Data Repository Prototype	1	2023	4	2023
AM Identify Cases for Prototypes	1	2023	4	2026
OCONUS experimentation CSAM	2	2025	1	2027
Garrison AM Equipment Set Development	3	2025	2	2027

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604289M / *Expeditionary Logistics*	Project (Number/Name) 9999 / *Congressional Adds*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
9999: *Congressional Adds*	26.066	4.827	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	30.893
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Marine Corps continues to research and evaluate next generation logistics solutions for key sustainment technologies focused on enabling and enhancing combat capabilities in support of Expeditionary Advanced Based Operations (EABO). Specifically, the USMC seeks to enhance small maneuver units' ability to generate power, create purified water, and provide for its own subsistence. This includes identifying and integrating non-traditional power and propulsion technologies to enhance sustainment and tactical advantages. In addition, the USMC will evaluate logistics technologies that operate in the surface domain to fill identified gaps relating to littoral maneuver and sustainment.

Additive Manufacturing (AM), or 3-dimensional (3D) printing, is a technology with significant implications for the U.S. manufacturing base, naval warfare and expeditionary operations. It can shorten the design-to-production cycle, enable new designs for a multitude of items, and facilitate cost-effective on-demand manufacturing. AM provides the Marine Corps increased readiness and sustainment, extended reach, and increased lethality. AM also provides Marines the autonomy to solve problems at the forward edge of battle. As additive manufacturing evolves to produce end-use items, there is significant potential to resolve obsolescence, diminishing manufacturing sources and material shortages (DMSMS), and long lead time issues currently inherent in the fleet that will become more pervasive in EABO / DO. Additive manufacturing of components and entire platforms 'on demand' at the point of need shall support a scalable supply chain and enable a new era of supply chain independence.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024
Congressional Add: Additive manufacturing part screening tool	4.827	0.000
FY 2023 Accomplishments: -Complete the development of an automated additive manufacturing part candidacy tool that evaluates technical feasibility, economic viability, and readiness drivers for Marine Corps ground system program offices. These tools will be able to leverage USMC technical and logistics data to focus resources on additively manufacturing the highest-return items. This tool will allow the Marine Corps to maximize its use of USMC and industry AM capabilities as well as create a standard operating procedure that consistently provides viable AM candidates based on repeatable grading criteria within the selection process. In addition to the software tool, the effort will include 3D printing in industrial metal of the candidate parts identified and follow on engineering evaluation, as well as integrating the data generated into the USMC's digital manufacturing repository, Digital Manufacturing Data Vault (DMDV).		
FY 2024 Plans: N/A		
Congressional Adds Subtotals	4.827	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604289M / *Expeditionary Logistics*	**Project (Number/Name)** 9999 / *Congressional Adds*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The AM program utilizes a non-traditional acquisition strategy, due to AM being a set of enabling technologies vice a conventional platform for milestone-driven acquisition. It will incorporate strategic partnerships with other DoN activities, Joint Staff, and the other Services. For that reason, these AM investments are designed to explore future capabilities where AM may resolve gaps in logistical readiness, provide a warfighting solutions, and to mitigate AM-related risk within existing programs of record.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604289M / *Expeditionary Logistics*	Project (Number/Name) 9999 / *Congressional Adds*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PTC Windchill Phase II - CR	MIPR	GSA : O'Fallon, Illinois	0.820	1.387	May 2023	0.000		0.000		-		0.000	0.000	2.207	-
Automated AM Part Screening and Selection Software Development	MIPR	NIWC PAC : San Diego, CA	1.072	2.928	Sep 2023	0.000		0.000		-		0.000	0.000	4.000	-
AM Industrial Metal Printing	MIPR	WHS : Washington, DC	0.000	0.415	Apr 2023	0.000		0.000		-		0.000	0.000	0.415	-
Prior Year Cumulative	Various	Various : Various	17.914	0.000		0.000		0.000		-		0.000	0.000	17.914	-
		Subtotal	19.806	4.730		0.000		0.000		-		0.000	0.000	24.536	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AM Fleet Support - 3D printing training and integration - RS	WR	NSWC CD : Carderock, MD	0.400	0.097	May 2023	0.000		0.000		-		0.000	0.000	0.497	-
Prior Year Cumulative	Various	Various : Various	5.360	0.000		0.000		0.000		-		0.000	0.000	5.360	-
		Subtotal	5.760	0.097		0.000		0.000		-		0.000	0.000	5.857	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	Various	Various : Various	0.500	0.000		0.000		0.000		-		0.000	0.000	0.500	-
		Subtotal	0.500	0.000		0.000		0.000		-		0.000	0.000	0.500	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	26.066	4.827		0.000		0.000		-		0.000	0.000	30.893	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604289M / *Expeditionary Logistics*	Project (Number/Name) 9999 / *Congressional Adds*	

	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604289M / *Expeditionary Logistics*	**Project (Number/Name)** 9999 / *Congressional Adds*

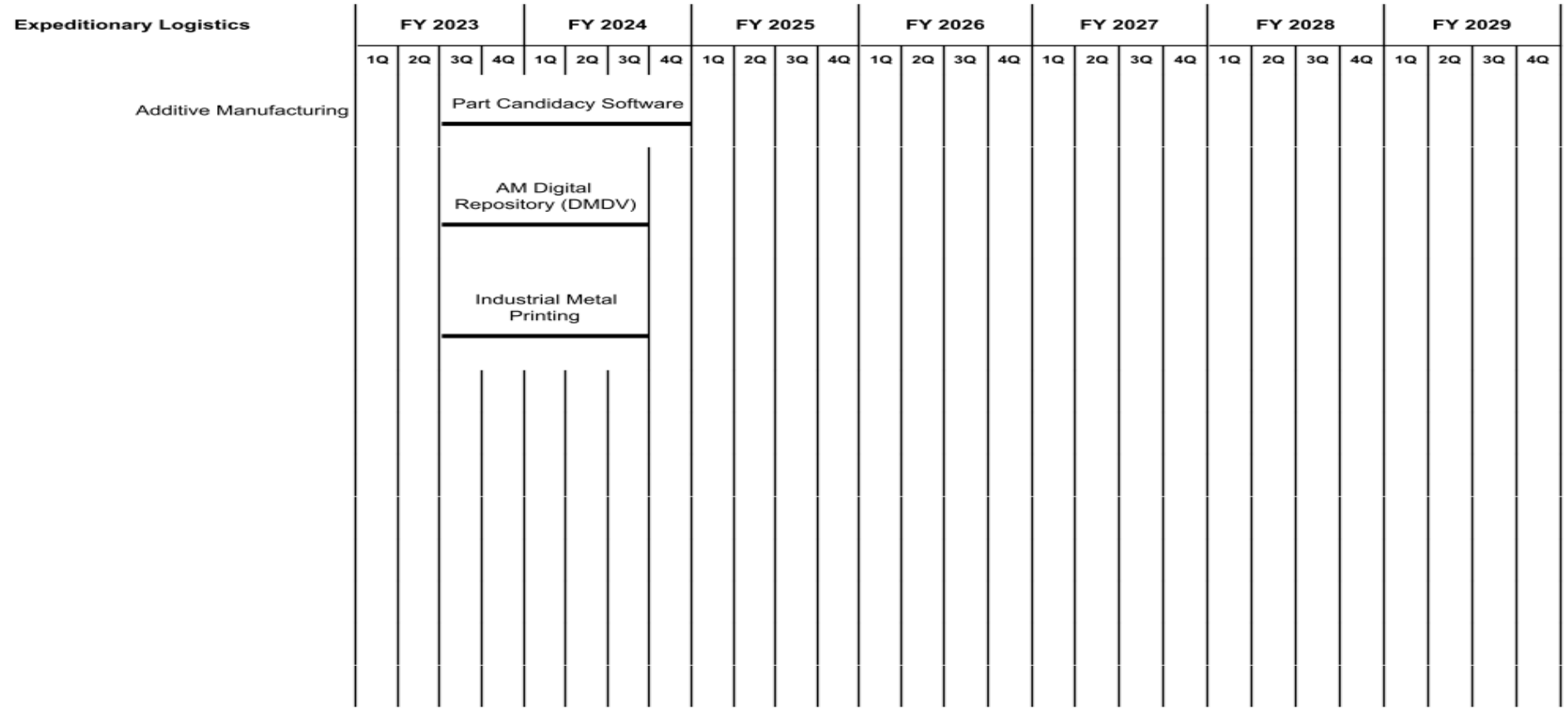

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604289M / *Expeditionary Logistics*	**Project (Number/Name)** 9999 / *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Expeditionary Logistics				
Additive Manufacturing: Part Candidacy Software Development	3	2023	4	2024
Additive Manufacturing: Digital Repository Development (DMDV)	3	2023	3	2024
Additive Manufacturing: Industrial Metal Printing Development	3	2023	3	2024