Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy											Date: February 2018	
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 0604286M *I (U)Marine Corps Additive Manufacturing Tech Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**Cost To Complete**	**Total Cost**
Total Program Element	0.000	0.000	6.200	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.200
2741: *Additive Manufacturing*	0.000	0.000	6.200	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.200

Note

-In FY19 these efforts transition to PE 0604289M.

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 under the direction of DC I&L.

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 2019 Navy					Date: February 2018
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 0604286M *I (U)Marine Corps Additive Manufacturing Tech Dev*		
B. Program Change Summary ($ in Millions)	**FY 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**
Previous President's Budget	0.000	6.200	6.200	-	6.200
Current President's Budget	0.000	6.200	0.000	-	0.000
Total Adjustments	0.000	0.000	-6.200	-	-6.200
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	5.000	-	5.000
• Rate/Misc Adjustments	0.000	0.000	-11.200	-	-11.200

Change Summary Explanation

Decrease in FY19 is due to realignment of funds to PE 0604289M.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604286M / *(U)Marine Corps Additive Manufacturing Tech Dev*	Project (Number/Name) 2741 / *Additive Manufacturing*	

COST ($ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
2741: *Additive Manufacturing*	0.000	0.000	6.200	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.200
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports cost associated with the research and development of Marine Corps Systems Command policy, acquisition process modifications, prototyping, and future logistics innovations to support the USMC Additive Manufacturing (AM) Initiative under the direction of DC I&L.

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 effort supports 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. It also includes research and development of autonomous ground cargo delivery systems, tactical employment of in field digital manufacturing, and sensor driven logistics information technology. 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.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Expeditionary Logistics - Legacy Equipment and System Readiness Support	0.000	4.050	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2018 Plans: -Initiate efforts to identify and develop Additive Manufacturing (AM) requirements, verification methods, and technical data needed to acquire AM manufactured components. -Initiate fabrication of prototype hardware, fixtures, and jigs that facilitate design processes and procedures for test and performance verification. -Initiate prototype testing to verify component design and reliability attributes.					
FY 2019 Base Plans: N/A					
FY 2019 OCO Plans: N/A					
FY 2018 to FY 2019 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604286M / *(U)Marine Corps Additive Manufacturing Tech Dev*	**Project (Number/Name)** 2741 / *Additive Manufacturing*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
FY 19 this effort has been realigned to PE 0604289M/Expeditionary Logistics.					
Title: Expeditionary Logistics - Expeditionary Manufacturing and Repair Processes	0.000	2.150	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2018 Plans: - Initiate system engineering efforts to identify and develop Additive Manufacturing (AM) fabrication requirements, field repair procedures, and technical data needed to effectively repair AM manufactured components. - Initiate certification studies to assess potential performance/integration issues with expeditionary repaired AM parts.					
FY 2019 Base Plans: -In FY19 this effort transitions to PE 0604289M beginning in FY19.					
FY 2019 OCO Plans: N/A					
FY 2018 to FY 2019 Increase/Decrease Statement: FY 19 this effort has been realigned to PE 0604289M/Expeditionary Logistics.					
Accomplishments/Planned Programs Subtotals	0.000	6.200	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The AM program will execute 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, as well as the Joint Staff and 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.

FY 19 this effort has been realigned to PE 0604289M/Expeditionary Logistics.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604286M / *(U)Marine Corps Additive Manufacturing Tech Dev*	**Project (Number/Name)** 2741 / *Additive Manufacturing*

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604286M / *(U)Marine Corps Additive Manufacturing Tech Dev*	**Project (Number/Name)** 2741 / *Additive Manufacturing*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AM Guidebook development	MIPR	NSWC : Carderock, MD	0.000	0.000		0.630	Feb 2018	0.000	Mar 2019	-		0.000	0.000	0.630	-
AM Prototype Parts and Redesign	MIPR	Army : TBD	0.000	0.000		4.220	Feb 2018	0.000	Mar 2019	-		0.000	0.000	4.220	-
AM Structure Design	MIPR	Army/ERDC : Vicksburg, MS	0.000	0.000		1.100	Feb 2018	0.000	Feb 2019	-		0.000	0.000	1.100	-
		Subtotal	0.000	0.000		5.950		0.000		-		0.000	0.000	5.950	N/A

Remarks

The AM program will execute a non-traditional acquisition strategy, due to AM being a set of enabling technologies vice a conventional platform for milestone-driven acquisition. The funding distribution above reflects research and development efforts for additive manufacturing enabling technologies.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support AM Manuf. and Repair Product	MIPR	NSWC : Carderock, MD	0.000	0.000		0.200	Mar 2018	0.000		-		0.000	0.000	0.200	-
Travel	Various	TBD : TBD	0.000	0.000		0.050	Aug 2018	0.000	Jan 2019	-		0.000	0.000	0.050	-
		Subtotal	0.000	0.000		0.250		0.000		-		0.000	0.000	0.250	N/A

Remarks

The AM program will execute a non-traditional acquisition strategy, due to AM being a set of enabling technologies vice a conventional platform for milestone-driven acquisition. The funding distribution above reflects research and development efforts for additive manufacturing enabling technologies.

	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		6.200		0.000		-		0.000	0.000	6.200	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604286M / *(U)Marine Corps Additive Manufacturing Tech Dev*	**Project (Number/Name)** 2741 / *Additive Manufacturing*

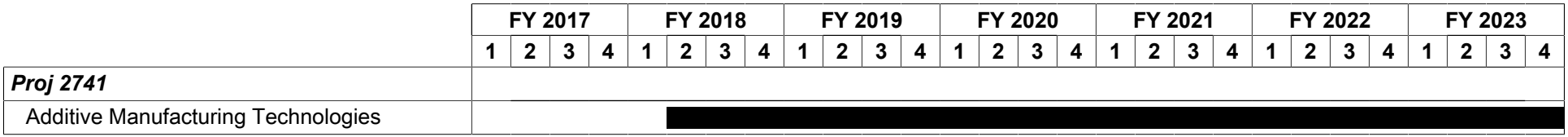

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604286M / *(U)Marine Corps Additive Manufacturing Tech Dev*	**Project (Number/Name)** 2741 / *Additive Manufacturing*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2741				
Additive Manufacturing Technologies	2	2018	4	2023