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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605813M / (U) <i>Joint Light Tactical Veh (JLTV) Sys Dev & Dem</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	2.239	0.000	2.105	2.541	-	2.541	2.023	3.357	2.106	2.147	Continuing	Continuing
3209: <i>Joint Light Tactical Vehicle</i>	2.239	0.000	2.105	2.541	-	2.541	2.023	3.357	2.106	2.147	Continuing	Continuing

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 279

Note
 The FY 2011 NDAA directed the Services to separate the Joint Light Tactical Vehicle (JLTV) program into distinct PEs to provide Congress with increased transparency and allow for more effective oversight. Transition of funding from PE 0603635M to PE 0605812M was effective beginning in FY 2013.

Beginning in FY18, program funding transitioned from Budget Activity 4, Program Element 0605812M Joint Light Tactical Vehicle (JLTV) EMD to account for program progression through the acquisition process.

A. Mission Description and Budget Item Justification

Funding supports the JLTV Family of Vehicles (FoV) to include the development and testing of Command, Control, Communications, Computers, & Intelligence (C4I) for integration with the JLTV. JLTV is a joint program between the U.S. Army and the U.S. Marine Corps, of which the U.S. Army is the lead service. JLTV is a FoV capable of performing multiple mission roles designed to provide protected, sustained, and networked mobility for personnel and payloads across the full Range of Military Operations (ROMO). JLTV features include increased performance, protection, and payload over the current legacy HMMWV fleet, minimizing ownership costs by maximizing commonality, fuel efficiency and reliability. The commonality of components, maintenance procedures, training, etc, among vehicles are inherent in FoV solutions across mission variants to minimize total ownership cost. Unique service requirements have been minimized.

FY21 budget activities include systems engineering/integration activities, design analysis and tests conducted at the Joint Government Systems Integration Laboratory (GSIL). Efforts will focus on enhancing performance of Command, Control, Communications, Computers and Intelligence Surveillance and Reconnaissance (C4ISR) system capabilities as they relate to the JLTV; developmental efforts required for the integration of future C4ISR requirements on the JLTV; cyber security vulnerability assessment and development of associated solutions of the JLTV system and integrated GFE and software.

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B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	0.000	2.105	0.000	-	0.000
Current President's Budget	0.000	2.105	2.541	-	2.541
Total Adjustments	0.000	0.000	2.541	-	2.541
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	2.440	-	2.440
• Rate/Misc Adjustments	0.000	0.000	0.101	-	0.101

Change Summary Explanation

The net funding increase from FY20 to FY21 of \$0.436M is due to increased requirements for Government Systems Integration Laboratory, a focus of which is on the integration of situational awareness capability to include integration of the Marine Corps Handheld Device with the PRC 117 (VRC114).

The approved Full Rate Production (FRP) joint cost position validated the requirement for continuing RDT&E for system enhancements. The FY21 funding increase of \$2.541M from FY 2020 President's Budget Submission to FY 2021 President's Budget Submission is a result of the Department's cost position.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605813M / (U)Joint Light Tactical Veh (JLTV) Sys Dev & Dem				Project (Number/Name) 3209 / Joint Light Tactical Vehicle			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
3209: Joint Light Tactical Vehicle	2.239	0.000	2.105	2.541	-	2.541	2.023	3.357	2.106	2.147	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: 279												

Note

Beginning in FY18, program funding transitioned from Budget Activity 4 Program Element 0605812M Joint Light Tactical Vehicle (JLTV) EMD to account for advancement through the acquisition process.

The net funding increase from FY20 to FY21 of \$.436M is due to increased requirements for Government Systems Integration Laboratory, a focus of which is on the integration of situational awareness capability to include integration of the Marine Corps Handheld Device with the PRC 117 (VRC114).

FY21 funding increase of \$2.541M from FY 2020 President's Budget Submission to FY 2021 President's Budget Submission is a result of the approved Full Rate Production (FRP) joint cost position which validates the requirement for continuing RDT&E for system enhancements.

A. Mission Description and Budget Item Justification

Funding supports the JLTV Family of Vehicles (FoV) to include the development and testing of Command, Control, Communications, Computers, & Intelligence (C4I) for integration with the JLTV. JLTV is a joint program between the U.S. Army and the U.S. Marine Corps, of which the U.S. Army is the lead service. JLTV is a FoV capable of performing multiple mission roles designed to provide protected, sustained, and networked mobility for personnel and payloads across the full Range of Military Operations (ROMO). JLTV features include increased performance, protection, and payload over the current legacy HMMWV fleet, reducing ownership costs by maximizing commonality, fuel efficiency and reliability. The commonality of components, maintenance procedures, training, etc, among vehicles are inherent in FoV solutions across mission variants to minimize total ownership cost. Unique service requirements have been minimized.

RDT&E funding supports modernization of the current JLTV by investigating technology insertions including, but not limited to: condition based maintenance, vetronics, autonomous operations and other emerging technologies; engineering change orders (ECOs) and retrofits to maintain the configuration of the RDT&E Government Systems Integration Laboratory (GSIL) trucks being used to integrate various weapons platforms.

FY21 budget activities include systems engineering/integration activities, design analysis and tests conducted at the Joint GSIL. Efforts will focus on enhancing performance of Command, Control, Communications, Computers and Intelligence Surveillance and Reconnaissance (C4ISR) system capabilities as they relate to the JLTV; developmental efforts required for the integration of future C4ISR requirements on the JLTV; cyber security vulnerability assessment and development of associated solutions of the JLTV system and integrated GFE and software.

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Future C4ISR integration activities include integration of systems such as: Marine Air Defense Integrated System (MADIS); Network on the Move (NOTM) Ground Combat Vehicles; Communications Emitter Sensing and Attack Systems (CESAS); Military GPS User Equipment (MGUE); and Remote Weapons System (RWS) Cannon. This line funds costs allocatable to the JLTV program.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Government Systems Integration Laboratory (GSIL) Analysis and Support Engineering	0.000	2.105	2.541	0.000	2.541
Articles:	-	-	-	-	-
FY 2020 Plans: Continue systems analysis and integration activity at the GSIL to assess the JLTV requirements associated with power, weight and space for upgraded legacy C4I systems as well as the introduction of future capabilities.					
FY 2021 Base Plans: Continue systems analysis and integration activity at the GSIL to assess the JLTV requirements associated with power, weight and space for upgraded legacy C4I systems as well as the introduction of future capabilities such as Marine Air Defense Integrated System (MADIS), Communications Emitter Sensing and Attack Systems (CESAS), Military GPS User Equipment, Marine Corps Handheld device and other Electronic Warfare and radio communication platforms.					
FY 2021 OCO Plans: N/A					
FY 2020 to FY 2021 Increase/Decrease Statement: The net funding increase from FY20 to FY21 of \$.436M is due to increased requirements for Government Systems Integration Laboratory, a focus of which is on the integration of situational awareness capability to include integration of the Marine Corps Handheld Device with the PRC 117 (VRC114).					
Accomplishments/Planned Programs Subtotals	0.000	2.105	2.541	0.000	2.541

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPA/D15603: JLTV (Army)	1,262.179	972.407	894.414	-	894.414	711.668	845.930	845.224	845.175	14,809.769	22,987.297
• RDT&E/VU9:	0.000	7.232	1.742	-	1.742	1.799	1.833	2.008	2.008	62.148	564.114
0605812A - JLTV (Army)											
• PMC/5095: JLTV (MC)	572.774	555.648	381.675	-	381.675	322.743	300.711	415.470	424.338	3,733.769	7,109.326

Remarks

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D. Acquisition Strategy

Joint Light Tactical Vehicle (JLTV) is a Joint Service Program with the U.S. Army and U.S. Marine Corps as the two main components. The U.S. Army is the JLTV service lead. The JLTV Program entered the Production and Deployment Phase with the Acquisition Decision Memorandum authorization on 25 August 2015. With Milestone C approval, the LRIP fixed price contract was awarded to Oshkosh Defense LLC on 25 August 2015.

This contract consists of a three year LRIP period with options for five additional years of FRP deliveries. JPO JLTV procured the Technical Data Package (TDP) with appropriate data rights to allow for possible future competition for production vehicles and spares. Current contract options may be exercised through 30 November 2023 assuming contractual quantity headspace is still available. Current funding indicates headspace quantity of 16,901 may be achieved in FY 2021, with competitive follow on contract award anticipated in FY 2022.

The approved Full Rate Production (FRP) joint cost position validated the requirement for continuing RDT&E for system enhancements.

The JLTV program will continually monitor emerging technologies and capabilities through its partnerships with U.S. Army and Marine Corps science and technology organizations as well as through industry market research and partnerships. The JLTV program will look for opportunities to implement increased capabilities throughout the systems' life cycle.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy **Date:** February 2020

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Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Integration Laboratory (GSIL)	MIPR	NIWC Atlantic : Charleston, SC	2.239	0.000		2.105	Feb 2020	2.541	Feb 2021	-		2.541	Continuing	Continuing	Continuing
Subtotal			2.239	0.000		2.105		2.541		-		2.541	Continuing	Continuing	N/A

Remarks
 FY2021 supports systems engineering/integration activities, design analysis and tests conducted at the Joint GSIL. Efforts will focus on enhancing performance of Command, Control, Communications, Computers and Intelligence Surveillance and Reconnaissance (C4ISR). The approved Full Rate Production (FRP) joint cost position validated the requirement for continuing RDT&E for system enhancements.

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.239	0.000	2.105	2.541	-	2.541	Continuing	Continuing	N/A

Remarks

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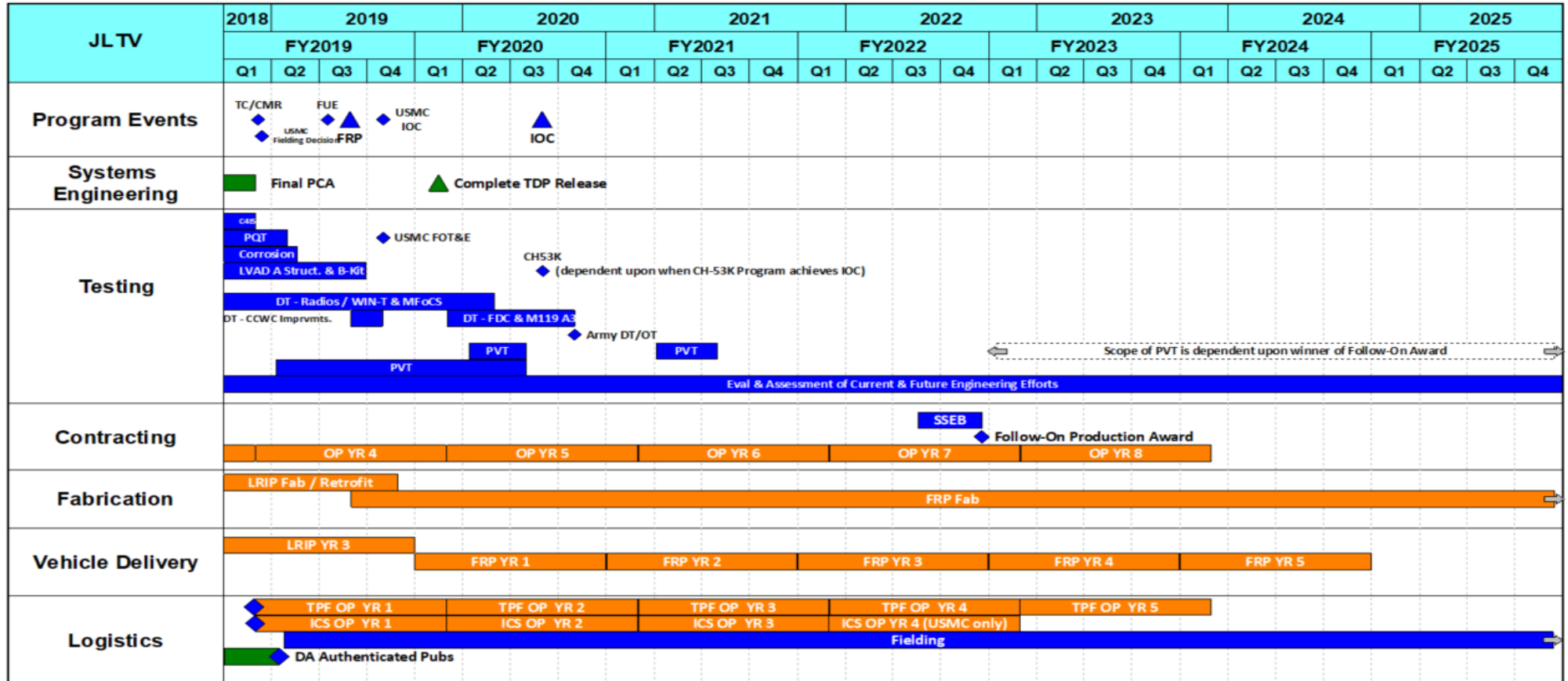
Exhibit R-4, RDT&E Schedule Profile: PB 2021 Navy

Date: February 2020

Appropriation/Budget Activity
1319 / 5

R-1 Program Element (Number/Name)
PE 0605813M / (U)Joint Light Tactical Veh
(JLTV) Sys Dev & Dem

Project (Number/Name)
3209 / Joint Light Tactical Vehicle



Contractor Effort
 Shared Govt / Contractor Effort
 Government Effort

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Navy		Date: February 2020
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605813M / (U)Joint Light Tactical Veh (JLTV) Sys Dev & Dem	Project (Number/Name) 3209 / Joint Light Tactical Vehicle

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3209				
USMC Fielding Decision	1	2019	1	2019
Full Rate Production Decision	3	2019	3	2019
USMC Initial Operational Capability	4	2019	4	2019
Follow-on Production contract	4	2022	4	2022