Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army											Date: March 2019	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603645A *I Armored System Modernization - Adv Dev*							
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	-	41.431	84.297	157.656	-	157.656	151.624	172.864	50.703	44.700	0.000	703.275
EV7: *Combat Vehicle Prototyping*	-	41.431	84.297	157.656	-	157.656	151.624	172.864	50.703	44.700	0.000	703.275

A. Mission Description and Budget Item Justification

Next Generation Combat Vehicle (NGCV) Prototyping provides focused investment for the development of combat vehicles for future battlefields. The purpose of this Program Element's (PE) funding is to integrate the next generation of technology enabled capabilities developed in the Science and Technology (S&T) portfolio to demonstrate new capabilities to meet emerging military needs, provide hardware for Soldier operational experiment/feedback, determine integration potential across the current Army portfolio of ground vehicles, and develop platform level prototypes. The primary efforts in this line include maturing and experimenting with Manned Un-Manned Teaming (in conjunction with Robotic Combat Vehicle) and maturing and experimenting with a variety of technologies that could potentially be added to the Optionally Manned Fighting Vehicle (OMFV) or legacy combat vehicles (such as Abrams and Bradley) in future incremental upgrades.

Prototyping allows for aggressive innovation (provides a bridge from S&T investment to vehicle integration and operational use), informs requirements through User Evaluations, ensures requirements are met, mitigates capability gaps and reduces integration risks. The strategy for NGCV will be to focus on delivering incremental experimental prototypes to the warfighter to demonstrate Manned Un-Manned Teaming (MUM-T) in conjunction with Robotic Combat Vehicles (RCV), to integrate technologies to maintain overmatch while demonstrating crew task reductions through crew augmentation enabled by optimized Warfighter Machine Interface (WMI) and sensor fusion.

Additionally, funding will support concept development, trade studies, technical/operational/affordability analyses to assess future concepts and designs for the Next Generation Tank (NGT). The analysis of these concepts will assist in targeting and maturing the correct S&T technologies to provide the next generation capabilities to the warfighter. This funding will also support the integration of a powertrain system in a high fidelity and realistic operating environment to buy back lost mobility due to increased combat vehicle platform weight. The effort will be focused on maturation of the engine and transmission for production. In addition, this funding will support technology maturation, integration risk reduction, and qualification of key lethality/weapon system and sensor technologies to support current and future increments of the Optionally Manned Fighting Vehicle (OMFV).

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army					Date: March 2019
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*			R-1 Program Element (Number/Name) PE 0603645A / *Armored System Modernization - Adv Dev*		
B. Program Change Summary ($ in Millions)	**FY 2018**	**FY 2019**	**FY 2020 Base**	**FY 2020 OCO**	**FY 2020 Total**
Previous President's Budget	32.739	119.395	64.986	-	64.986
Current President's Budget	41.431	84.297	157.656	-	157.656
Total Adjustments	8.692	-35.098	92.670	-	92.670
• Congressional General Reductions	-0.027	-0.098			
• Congressional Directed Reductions	-	-40.000			
• Congressional Rescissions	-	-			
• Congressional Adds	10.000	5.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.281	-			
• Adjustments to Budget Years	-	-	92.670	-	92.670

Change Summary Explanation

FY 2020 funding increase is to support experimental prototyping.

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army			Date: March 2019
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603645A / *Armored System Modernization - Adv Dev*	Project (Number/Name) EV7 / *Combat Vehicle Prototyping*	

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
EV7: *Combat Vehicle Prototyping*	-	41.431	84.297	157.656	-	157.656	151.624	172.864	50.703	44.700	0.000	703.275
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program supports the Cross Functional Team (CFT).

A. Mission Description and Budget Item Justification

Next Generation Combat Vehicle Prototyping provides focused investment for the development of combat vehicles for future battlefields. The purpose of this Program Element's (PE) funding is to integrate the next generation of technology enabled capabilities developed in the Science and Technology (S&T) portfolio to demonstrate new capabilities to meet emerging military needs, provide hardware for Soldier operational experiment/feedback, determine integration potential across the current Army portfolio of ground vehicles, and develop platform level prototypes. The primary efforts in this line include maturing and experimenting with Manned Un-Manned Teaming (in conjunction with Robotic Combat Vehicle) and maturing and experimenting with a variety of technologies that could potentially be added to the Optionally Manned Fighting Vehicle (OMFV) or legacy combat vehicles (such as Abrams and Bradley) in future incremental upgrades.

Prototyping allows for aggressive innovation (provides a bridge from S&T investment to vehicle integration and operational use), informs requirements through User Evaluations, ensures requirements are met, mitigates capability gaps and reduces integration risks. The strategy for NGCV will be to focus on delivering incremental experimental prototypes to the warfighter to demonstrate Manned Un-Manned Teaming (MUM-T) in conjunction with Robotic Combat Vehicles (RCV), to integrate technologies to maintain overmatch while demonstrating crew task reductions through crew augmentation enabled by optimized Warfighter Machine Interface (WMI) and sensor fusion.

Additionally, funding will support concept development, trade studies, technical/operational/affordability analyses to assess future concepts and designs for Next Generation Tank (NGT). The analysis of these concepts will assist in targeting and maturing the correct S&T technologies to provide the next generation capabilities to the war fighter. This funding will also support the integration of a powertrain system in a high fidelity and realistic operating environment to buy back lost mobility due to increased combat vehicle platform weight. The effort will be focused on maturation of the engine and transmission for production. In addition, this funding will support technology maturation, integration risk reduction, and qualification of key lethality/weapon system and sensor technologies to support current and future increments of the Optionally Manned Fighting Vehicle (OMFV).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
Title: Government Engineering & Program Management	14.854	18.760	9.550
Description: This effort conducts system level ground vehicle advanced concepting, prototyping and demonstration. This effort will partner government organic capabilities and Industry for an iterative process to develop combat vehicle concepts and			

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603645A / *Armored System Modernization - Adv Dev*	**Project (Number/Name)** EV7 / *Combat Vehicle Prototyping*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
prototypes in order to inform and stabilize future capability requirements, performance characteristics, and affordability, evaluate and update operational concepts, and reduce future acquisition risk. Activity will include the integration and demonstration of a series of subsystem demonstrators building off of previous investment in ground combat acquisition and science and technology programs along with advanced technologies from Industry and Academia. ***FY 2019 Plans:*** Analyzed results of completed experimental demonstrations in support of next generation combat vehicles (both manned and autonomous) to include the Mission Enabling Technologies - Demonstrator (MET-D) demonstration of closed hatch Infantry Fighting Vehicle (IFV) and split-squad operations and applying lessons learned to mature the system level concepts and designs for integration of the S&T developed advanced ground vehicle subsystem technologies into a system level experimental prototype. Continued to conduct soldier-in-the-loop virtual simulations of future combat vehicle concepts to assess next generation capabilities and conduct system level performance trades. Analyzed system concepts and designs to identify long-lead hardware in preparation for procurement prior to system build and physical integration. Current prototype build by TARDEC will be accelerated for delivery by FY 2020. Initiated work on data fusion technology based on multiple sensor inputs for use in target identification and tracking, surveillance, and autonomous control. ***FY 2020 Plans:*** Will continue Government program management that will cover the costs of government and direct support contractor salaries, travel, training, supplies, equipment and facilities to manage the experimental prototyping program. This will also continue management of MET-D Phase I cost and schedule during the Performance Test and Soldier Experiment; MET-D Phase II cost, schedule and performance as the project transitions from the design to build phase and prepares for the test phase; and begins management of MET-D Phase II cost, schedule and performance during the design phase to enable long lead procurement. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Program Management will decrease in FY 2020 due to the acceleration of the OMFV competition and shifting of program management costs to PE 0605625A.			
Title: Test & Evaluation ***Description:*** Test and Evaluation activities includes contractor and government testing as well as test documentation development. Contractor prove-out testing will be conducted using U.S. Army test facilities. Government development testing of prototype vehicles will evaluate vehicle performance and include user evaluation. ***FY 2019 Plans:*** Test & Evaluation included but not limited to safety, integration, and demonstration. ***FY 2020 Plans:***	7.981	8.000	2.480

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603645A / *Armored System Modernization - Adv Dev*	**Project (Number/Name)** EV7 / *Combat Vehicle Prototyping*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
Will complete MET-D Phase I performance and user evaluation; gather and analyze all data; and develop and deliver final test report. Will further the development and refinement of the MET-D Phase II Test and Evaluation Master Plan (TEMP) and test procedures to support Phase II integration, safety, and demonstration testing set to begin in FY 2021. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Test & Evaluation has decreased in FY 2020 due to acceleration of MET-D Phase I test and evaluation, which now begins in FY 2019.			
Title: Other Support Costs ***Description:*** Funding provided support software development, integration and support services, hardware, and vehicle electronics architecture subsystems.	15.596	-	-
Title: Modeling & Simulation ***Description:*** The modeling and simulation effort is to assess operational needs and operational employment by using the Maneuver Battle lab at Fort Benning and One Semi-Automated Forces (OneSAF) modeling. Results provide the analytical underpinnings to support development of requirements. ***FY 2019 Plans:*** Continued to assess operational needs and operational employment through modeling and simulation by using the Maneuver Battle lab at Fort Benning and One Semi-Automated Forces (OneSAF) modeling. Modeling and simulation results will continue to support the development of requirements for future systems. The modeling and simulation outcomes coupled with planned technology proto-type demonstrations and user evaluations will provide the combat developer an analytical base to support the development and refinement of requirements. ***FY 2020 Plans:*** Will refine models utilized across ground vehicle platforms based on MET-D Phase I test results. Will update models with technologies identified for MET-D Phase II integration to conduct analysis prior to integration informing performance characteristics and identifying potential integration challenges. Will conduct performance and operational analysis with Manned Fighting Vehicle (MFV) Phase II models and Next Generation Tank (NGT) concepts to inform and stabilize capability requirements, performance characteristics, and operational concepts to reduce future acquisition risk. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Modeling & Simulation has increased in FY 2020 due to the start of Phase II modeling and simulation and Next Generation Tank concepting.	3.000	1.834	4.360
Title: Experimental Prototyping	-	51.512	139.266

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603645A / *Armored System Modernization - Adv Dev*	**Project (Number/Name)** EV7 / *Combat Vehicle Prototyping*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
Description: Accelerate prototyping and technology maturation (both organic and from Industry) for combat vehicles and internal fusion of data from different sensors and how it will be displayed and used by manned and autonomous systems. Experimental prototyping allows for aggressive innovation through integration of next generation technologies developed in the S&T portfolio and public/private partnerships. This includes the development of the XM-913 and additional ammo needed for the development of lethality improvements. Experimentation of these platforms will help to inform requirements for the NGCV platform(s) and how they will operate, mitigate capability gaps, and reduce technology maturation and integration risks. The prototypes will also provide improved capabilities for command and control of the Robotic Combat Vehicle (RCV), demonstrating those capabilities through experimentation. ***FY 2019 Plans:*** TARDEC is using their existing OTA contract and accelerating the IFV build in order to deliver a first prototype by 1Q FY2021. The prototype is utilizing latest off-the shelf technologies and have the capability to upgrade to the Combat Vehicle Prototyping (CVP) technologies as they become available. Acceleration of the contract will require modification of the current contract. NGCV Cross Functional Team (CFT)/PM is using the OTA to submit a call for white papers to Industry for concepts that will show technologies that will improve a combat vehicle (IFV or Tank) in the areas of mobility, survivability, lethality, situational awareness, sensor fusion and demonstrate a path to autonomy. The white papers will be used to award 1 to 2 contracts to build a prototype which will be delivered by 1Q FY2021. Information from the prototypes (both organic and from Industry), along with the parallel modeling and simulation will inform the development of the NGCV requirements. Demonstrating Sensor Fusion/Crew Station requirements for manned and unmanned systems. Continuing to provide integration support and technology procurement for the software system integration laboratory (SIL). Providing integration support and user evaluation for the crew station SIL. These SILs will allow the integration team to simulate integrated system functionality prior to the actual physical integration of the system. Work performed in these SILs is critical to the successful mitigation of risk for the integrated systems experimentation by identifying any system integration-related errors as early as possible. Identifying errors early in the integration process will allow the team to develop solutions in a timely and effective manner. Continuing to mature the system level integration of the powerpack (engine, transmission, integrated starter generator, exhaust, air inlet, and thermal management system) along with working new projects in the areas of sensor fusion, which may include, but not limited to, data inputs from Global Positioning System (GPS), Light Detection and Raging (LIDAR), SOund Navigation And Ranging (SONAR), RAdio Detection And Ranging (RADAR), optical Infrared, UltraViolet (UV), etc. Procuring specialty tooling and long-lead items, and continuing to provide software support that is needed for system integration, for the accelerated experimentation. ***FY 2020 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603645A / *Armored System Modernization - Adv Dev*	**Project (Number/Name)** EV7 / *Combat Vehicle Prototyping*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
The program will utilize an Other Transaction Agreement (OTA) mechanism in order to deliver the second phase of MET-D experimental prototypes in FY 2021. The MET-D Phase II efforts will continue system level prototype development and integration; maintain system level software; and develop software stability upgrades based on results from the MET-D Phase I Experimentation. The platform software upgrades will support integration of advanced technologies, improved Warfighter Machine Interface (WMI), and improvements for Robotic Combat Vehicle (RCV) command and control. Based on feedback from the Phase I Experiment, MET-D Phase II will also update the software system integration laboratory (SIL), crew station SIL, and software test benches in order to simulate integrated system functionality prior to physical integration for Phase II. The MET-D Phase II effort will also begin to build prototypes with increased capability provided from the next increment of S&T technological deliverables. The effort will begin with the purchase of long lead materials and technologies, design of the Phase II prototype upgrades for integration of the technologies, and system software updates. The effort will continue the refinement and maturation of foundational architectures and technologies for power and mobility, lethality, protection, and situational awareness. The effort will conduct the development engineering effort for maturation and integration of technologies necessary to support Next Generation Combat Vehicles, such as powertrain and running gear, indirect driver's vision and situational awareness technologies, sensors, crew interfaces and autonomous systems for crew augmentation, lethality solutions, high voltage power architecture, data architecture, communications, active and adaptive protection solutions and payloads. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Experimental Prototypoing has increased in FY 2020 due to the beginning of MET-D Phase II.			
Title: Powertrain Maturation ***Description:*** This effort will emphasize improving component engine and transmission subsystem maturity and reduce engine and transmission cost and manufacturing time. The Army will conduct maturation and demonstration activities to expedite technology transition from laboratory to operational use and prepare for low rate initial production of the advanced combat engine and transmission. This effort will conduct the evaluation of reliability, maintainability, and logistical analyses necessary to transition to a vehicle platform and conduct maturation to the components as a result of these evaluations. ***FY 2020 Plans:*** Advanced Combat Engine efforts developed and delivered in FY19 under the Advanced Powertrain Demonstrator Science and Technology project will be assessed for manufacturability of the design. Design improvements will be made to further improve integration of the components and reduce cost and manufacturing time of the components. In 2020, the focus will be on the manufacturability of the design which includes replacing expensive custom subcomponents against mass produced hardware. These efforts will lead to iterative engine prototypes that require performance testing to ensure they can achieve durability metrics	-	-	2.000

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603645A / *Armored System Modernization - Adv Dev*	**Project (Number/Name)** EV7 / *Combat Vehicle Prototyping*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
while maintaining their performance capabilities. These will be the initial assessments for the reliability, maintainability, and logistical analyses necessary to transition to a vehicle platform. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Powertrain Maturation is a new requirement for FY 2020.			
Title: 2019 SBIR/STTR Transfer ***FY 2019 Plans:*** FY 2019 SBIR/STTR Transfer ***FY 2019 to FY 2020 Increase/Decrease Statement:*** FY 2019 SBIR/STTR transfer	-	4.191	-
Accomplishments/Planned Programs Subtotals	41.431	84.297	157.656

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• 0605625A: *Manned Ground Vehicle*	-	-	378.400	-	378.400	320.100	218.700	65.700	52.300	0.000	1,035.200

Remarks

D. Acquisition Strategy

Next Generation Combat Vehicle (NGCV) prototyping provides focused investment for development of the combat vehicles in future battlefields. The purpose of this funding is to integrate the next generation of technology enabled capabilities developed in the Science and Technology (S&T) portfolio to demonstrate new capabilities to meet emerging military needs, provide hardware for Soldier operational evaluation/feedback, to determine integration potential across the current Army portfolio of ground vehicles and to develop platform level prototypes.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army			Date: March 2019
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603645A / *Armored System Modernization - Adv Dev*	**Project (Number/Name)** EV7 / *Combat Vehicle Prototyping*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NGCV Contract(s)	C/TBD	TBD : TBD	-	5.671	Jul 2018	31.188	Mar 2019	67.321	Mar 2020	-		67.321	Continuing	Continuing	Continuing
SCMM Phase 1	RO	CERDEC : TBD	-	1.233	Jul 2018	-		-		-		-	Continuing	Continuing	Continuing
Prototyping with Industry	C/Various	Various : Various	-	-		15.324	Jul 2019	71.945	Feb 2020	-		71.945	Continuing	Continuing	Continuing
Sensor Fuse/Crew/SIL	SS/TIA	TBD : TBD	-	10.000	Oct 2018	5.000	Jul 2019	-		-		-	0.000	15.000	-
Powerttrain Maturation	C/TBD	TBD : TBD	-	-		-		2.000	Jul 2020	-		2.000	0.000	2.000	-
		Subtotal	-	16.904		51.512		141.266		-		141.266	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO/PEO Support	MIPR	PM/PEO : Warren, MI	-	13.546	Dec 2018	18.760	Dec 2018	9.550	Dec 2019	-		9.550	0.000	41.856	-
2019 SBIR/STTR Transfer	TBD	ASA(ALT) : Washington, DC	-	-		4.191	Nov 2018	-		-		-	0.000	4.191	-
		Subtotal	-	13.546		22.951		9.550		-		9.550	0.000	46.047	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SCMM User Evaluation	MIPR	Various : Various	-	7.981	Oct 2017	-		-		-		-	Continuing	Continuing	Continuing
Modeling & Simulation	Various	Various : Various	-	3.000	Jan 2018	1.834	Mar 2019	4.360	Mar 2020	-		4.360	Continuing	Continuing	Continuing
Developmental testing	MIPR	Various : Various	-	-		8.000	Jul 2019	2.480	Jul 2020	-		2.480	Continuing	Continuing	Continuing
		Subtotal	-	10.981		9.834		6.840		-		6.840	Continuing	Continuing	N/A

	Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	41.431		84.297		157.656		-		157.656	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army			Date: March 2019
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603645A / *Armored System Modernization - Adv Dev*	Project (Number/Name) EV7 / *Combat Vehicle Prototyping*	

	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603645A / *Armored System Modernization - Adv Dev*	**Project (Number/Name)** EV7 / *Combat Vehicle Prototyping*

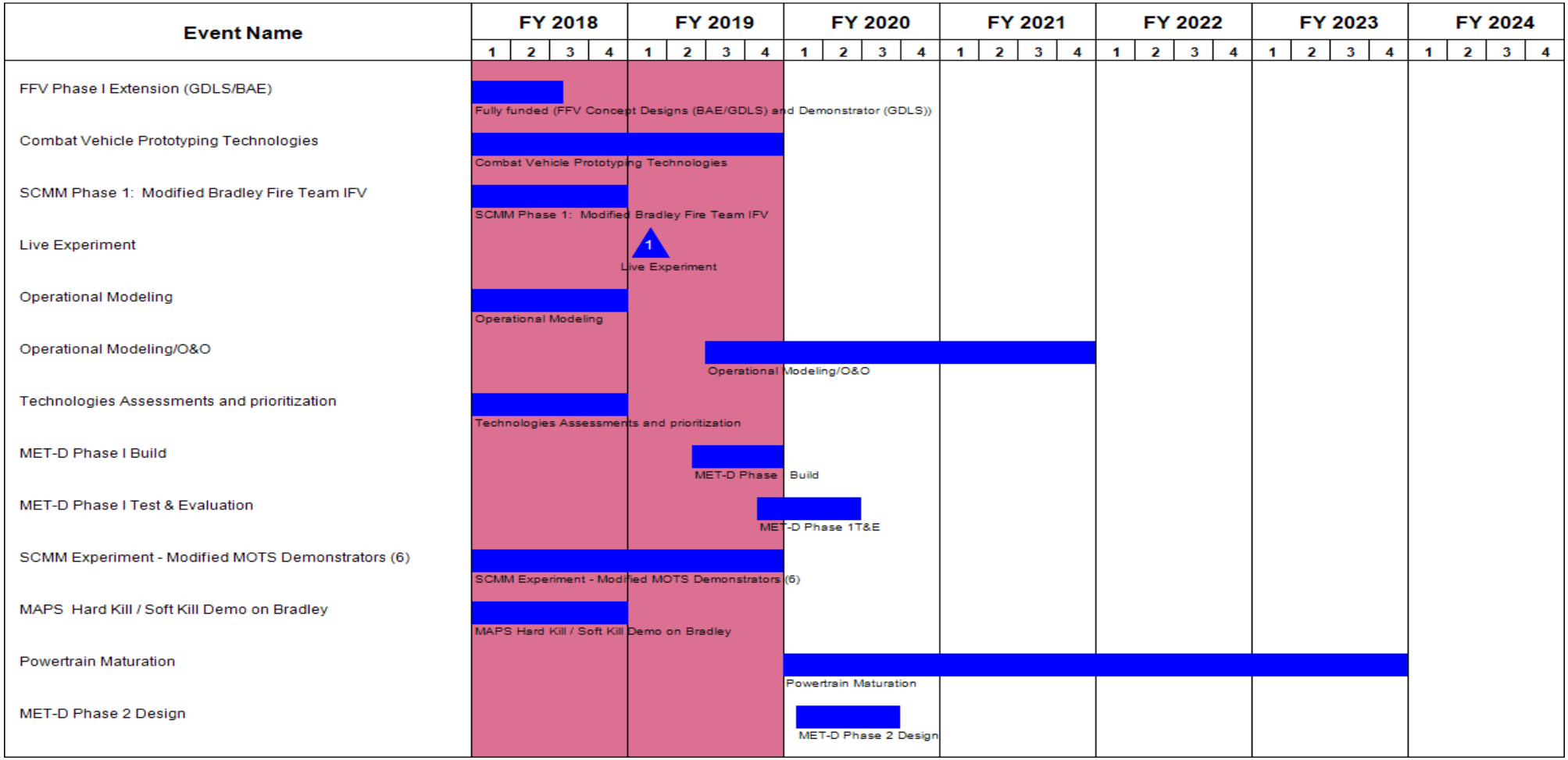

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603645A / *Armored System Modernization - Adv Dev*	**Project (Number/Name)** EV7 / *Combat Vehicle Prototyping*

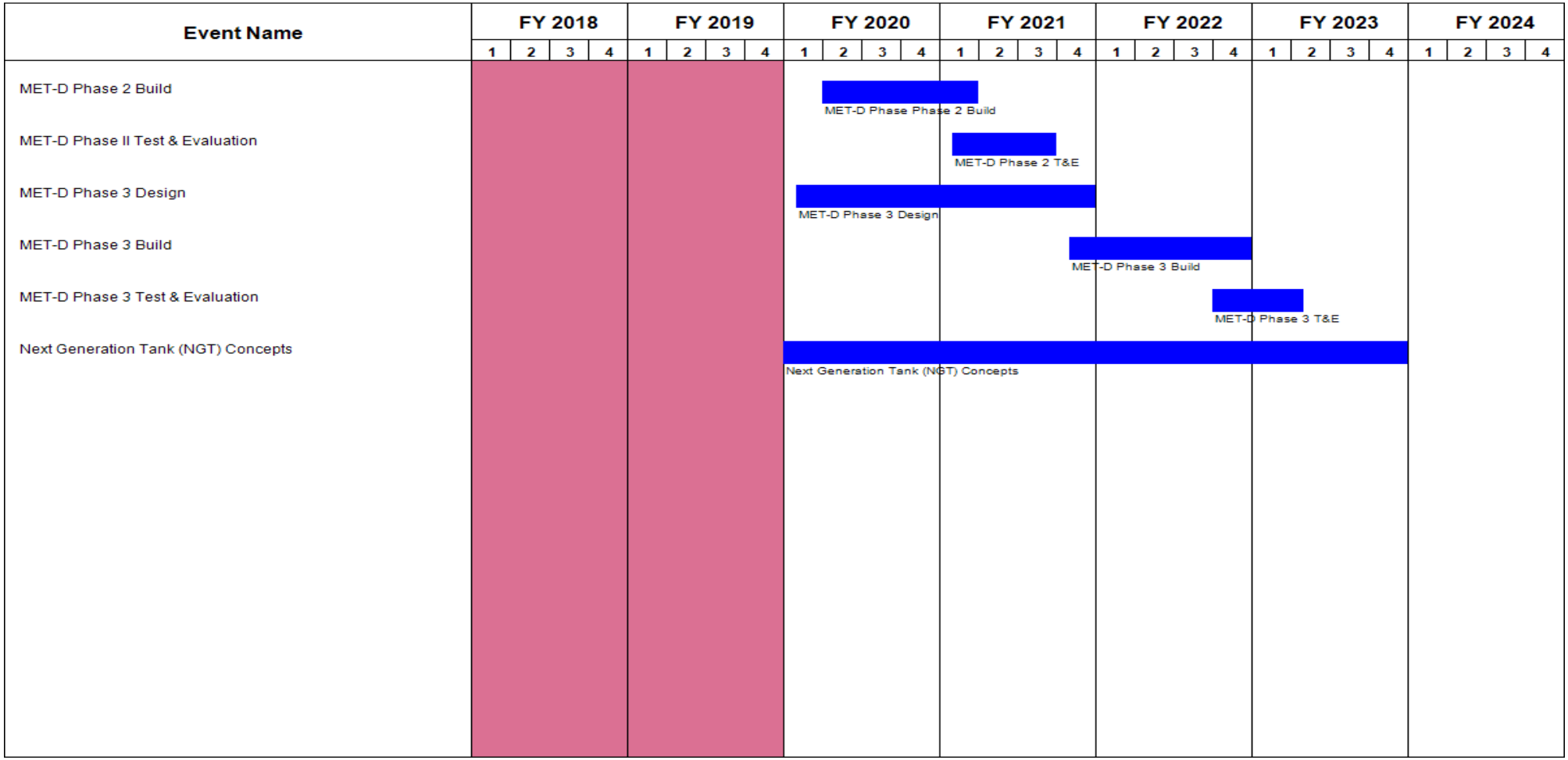

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Army		Date: March 2019
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603645A / *Armored System Modernization - Adv Dev*	**Project (Number/Name)** EV7 / *Combat Vehicle Prototyping*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
FFV Phase I Extension (GDLS/BAE)	1	2018	3	2018
Combat Vehicle Prototyping Technologies	1	2018	4	2019
SCMM Phase 1: Modified Bradley Fire Team IFV	1	2018	4	2018
Live Experiment	1	2019	1	2019
Operational Modeling	1	2018	4	2018
Operational Modeling/O&O	3	2019	4	2021
Technologies Assessments and prioritization	1	2018	4	2018
MET-D Phase I Build	2	2019	4	2019
MET-D Phase I Test & Evaluation	4	2019	2	2020
SCMM Experiment - Modified MOTS Demonstrators (6)	1	2018	4	2019
MAPS Hard Kill / Soft Kill Demo on Bradley	1	2018	4	2018
Powertrain Maturation	1	2020	4	2023
MET-D Phase 2 Design	1	2020	3	2020
MET-D Phase 2 Build	2	2020	1	2021
MET-D Phase II Test & Evaluation	1	2021	3	2021
MET-D Phase 3 Design	1	2020	4	2021
MET-D Phase 3 Build	4	2021	4	2022
MET-D Phase 3 Test & Evaluation	4	2022	2	2023
Next Generation Tank (NGT) Concepts	1	2020	4	2023