

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2019 Army **Date:** February 2018

<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604645A / <i>Armored Systems Modernization (ASM) - Eng Dev</i>
--	--

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	-	9.306	36.242	393.613	-	393.613	270.183	189.650	83.393	12.271	0.000	994.658
EV8: <i>Mobile Protected Firepower</i>	-	9.306	36.242	393.613	-	393.613	270.183	189.650	83.393	12.271	0.000	994.658

**A. Mission Description and Budget Item Justification**

Infantry Brigade Combat Teams (IBCTs) lack the mobile protected firepower capability necessary to defeat enemy prepared positions, destroy enemy armored vehicles, close with the enemy through fire and maneuver, and ensure freedom of maneuver and action in close contact with the enemy. Mobile Protected Firepower (MPF) will provide the protected, long range, precision direct-fire capability to ensure freedom of movement and action during offensive operations or defeat attacking enemy during defensive operations.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	9.678	36.242	90.159	-	90.159
Current President's Budget	9.306	36.242	393.613	-	393.613
Total Adjustments	-0.372	0.000	303.454	-	303.454
• Congressional General Reductions	-0.005	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.367	-			
• Other Adjustments 1	-	-	303.454	-	303.454

**Change Summary Explanation**

Increase from FY2018 to FY2019 is for the Engineering and Manufacturing Development (EMD) contract awards and other support costs to include support equipment

**UNCLASSIFIED**

**Exhibit R-2A, RDT&E Project Justification:** PB 2019 Army **Date:** February 2018

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev	<b>Project (Number/Name)</b> EV8 / Mobile Protected Firepower
--	--	--

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
EV8: Mobile Protected Firepower	-	9.306	36.242	393.613	-	393.613	270.183	189.650	83.393	12.271	0.000	994.658
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Infantry Brigade Combat Teams (IBCTs) lack the mobile protected firepower capability necessary to defeat enemy prepared positions, destroy enemy armored vehicles, close with the enemy through fire and maneuver, and ensure freedom of maneuver and action in close contact with the enemy. Mobile Protected Firepower (MPF) will provide the protected, long range, precision direct-fire capability to ensure freedom of movement and action during offensive operations or defeat attacking enemy during defensive operations.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	FY 2017	FY 2018	FY 2019
<p><b>Title:</b> Government Engineering and Project Management</p> <p><b>Description:</b> Funding is provided for government program management and system engineering support costs to include salaries, travel, training, supplies, facilities and equipment to manage the Mobile Protected Firepower program.</p> <p><b>FY 2018 Plans:</b> Conduct Development Request For Proposal (RFP) Release Decision Point by 1QFY2018 for approval to release RFP by 1QFY2018. Conduct a Source Selection Evaluation Board (SSEB) along with several Peer Reviews during RFP development and prior to SSEB selection. SSEB will encompass a paper proposal along with optional Bid Sample which will be evaluated. Includes funding for government personnel (labor, travel, training, and supplies) other support and planning efforts (other government agencies, support contractors, automated data processing, communications, and equipment). In addition PM will be funding ARDEC, Watervliet Arsenal and Rock Island Arsenal to procure tooling, non-recurring engineering, cannon assembly safety certification tests and Technical Data Package (TDP) Development.</p> <p><b>FY 2019 Plans:</b> Continue government program management and system engineering support costs. These funds cover the costs of government and direct support contractors salaries, travel, training, supplies, facilities and equipment to manage the Mobile Protected Firepower program. Support includes other government agencies, support contractors, automated data processing, communications and equipment. MPF plans to award up to two contracts for EMD in the 1st QTR FY2019.</p> <p><b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> Decrease from FY18 to FY19 will reduce project management and engineering support costs.</p>	9.306	36.242	20.888
<p><b>Title:</b> Product Development</p>	-	-	352.912

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Army		<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev	<b>Project (Number/Name)</b> EV8 / Mobile Protected Firepower

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
<p><b>Description:</b> Funds provided to support Engineering Manufacturing and Development (EMD) contract awards</p> <p><b>FY 2019 Plans:</b> Mobile Protected Firepower (MPF) milestone B (MS B) approval is scheduled for 1Q FY2019 followed by EMD contract awards with up to 2 vendors with prototypes (24), ballistic hulls (4), and test assets. Conduct start of work meeting, Design Maturity Review (DMR), and contractor/government program management reviews. Planning activities associated with delivery of prototypes, ballistic hulls and test assets in FY 2020. As well as developmental tests will begin in 1QFY2020 with a soldier vehicle assessment. Concurrently, planning for logistics assessments, technical manual development, and provisioning conferences.</p> <p><b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> Increase from FY18 to FY19 is for the EMD contract award support costs.</p> <p><b>Title:</b> Other support costs</p>			
<p><b>Description:</b> Funds provided to other support costs (designs, software) associated with EMD contract</p> <p><b>FY 2019 Plans:</b> Other support costs include support equipment. Support equipment includes the costs of design and development of deliverable items and associated software required to support and maintain the system. It includes equipment and tools unique to the system used to fuel, service, transport, hoist, repair, overhaul, assemble, disassemble, test, inspect, or otherwise maintain the mission equipment this includes Government Test preparation costs.</p> <p><b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> Increase from FY18 to FY19 other EMD contract support costs to include support equipment</p>	-	-	19.813
<b>Accomplishments/Planned Programs Subtotals</b>	9.306	36.242	393.613

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• G80820: G80820	-	-	0.000	-	0.000	-	-	311.007	307.438	5,202.655	5,821.100

**Remarks**

**D. Acquisition Strategy**  
Mobile Protected Firepower (MPF) Materiel Development Decision (MDD) occurred on 1QFY2017. The AAE approved the MPF program to enter the Material Solution Phase and begin the Analysis of Alternative (AoA) to assess the operational effectiveness, suitability, and life-cycle cost of potential materiel solutions that satisfy requirements contained within the MPF Initial Capabilities Document (ICD) and the draft Capability Development Document (CDD). Materiel Solution Analysis will

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev	Project (Number/Name) EV8 / Mobile Protected Firepower

support a future decision to enter at Milestone B in 1QFY2019. MPF strategy is to pursue through development and integration of existing mature subsystems into a MPF platform. EMD phase is scheduled to begin in FY 2019 and last thru FY 2022 with an anticipated MS C by 3QFY2022.

**E. Performance Metrics**

N/A

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 5				PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev				EV8 / Mobile Protected Firepower							
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Office	RO	Government Warren MI; : Various	-	9.306	Dec 2016	15.219	Dec 2017	20.888	Dec 2018	-		20.888	Continuing	Continuing	-
105MM Risk Assessment	RO	Government Picatinny Arsenal, NJ, Watervliet Arsenal, NY, Rock Island Arsenal, IL : Various	-	-		21.023	Aug 2018	-		-		-	0.000	21.023	-
<b>Subtotal</b>			-	9.306		36.242		20.888		-		20.888	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor 1 Product Development	C/TBD	TBD : TBD	-	-		-		176.456	Oct 2018	-		176.456	0.000	176.456	-
Contractor 2 Product Development	C/TBD	TBD : TBD	-	-		-		176.456	Oct 2018	-		176.456	0.000	176.456	-
<b>Subtotal</b>			-	-		-		352.912		-		352.912	0.000	352.912	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Support Cost	RO	TBD : TBD	-	-		-		19.813	Apr 2019	-		19.813	0.000	19.813	-
<b>Subtotal</b>			-	-		-		19.813		-		19.813	0.000	19.813	N/A
<b>Project Cost Totals</b>			-	9.306		36.242		393.613		-		393.613	Continuing	Continuing	N/A



**UNCLASSIFIED**

<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2019 Army</b>		<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev	<b>Project (Number/Name)</b> EV8 / Mobile Protected Firepower

Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Alternative of Analysis (AoA) / Army Requirements Oversight Council (AROC)			▲3																									
			AoA AROC																									
Acquisition Strategy Panel (ASP)		▲1																										
		ASP																										
AROC Capabilities Development Document (CDD)		▲2																										
		CDD AROC Approved																										
Joint Requirements Oversight Council (JROC) CDD							▲4																					
							Expected CDD JROC Approval																					
Request for Proposal (RFP)						■																						
						RFP																						
Risk Reduction of Large Caliber Weapon System																												
Source Selection Eval Board (SSEB) / Paper Proposals & Bid Samples																												
Milestone (MS) B																												
Contract Award (EMD)																												
MPF EMD																												
MPF Prototype Deliveries (24 Prototypes and 4 BH&Ts)																												
Pre-Production Test																												
Soldier Vehicle Assessment (SVA)																												

**UNCLASSIFIED**

<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2019 Army</b>			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev	<b>Project (Number/Name)</b> EV8 / Mobile Protected Firepower	

Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023											
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4								
Limited User Training (LUT)																					■ LUT															
Milestone (MS) C																													▲ 7 MS C							
MPF LRIP Option #1 Award																													▲ 8 MPF LRIP Option #1 Award							
MPF LRIP Delivery ((26)																																	■ M			



**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2019 Army		<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604645A / <i>Armored Systems Modernization (ASM) - Eng Dev</i>	<b>Project (Number/Name)</b> EV8 / <i>Mobile Protected Firepower</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Alternative of Analysis (AoA) / Army Requirements Oversight Council (AROC)	3	2017	3	2017
Acquisition Strategy Panel (ASP)	3	2017	3	2017
AROC Capabilities Development Document (CDD)	3	2017	3	2017
Joint Requirements Oversight Council (JROC) CDD	2	2018	2	2018
Request for Proposal (RFP)	1	2018	1	2018
Risk Reduction of Large Caliber Weapon System	3	2017	2	2019
Source Selection Eval Board (SSEB) / Paper Proposals & Bid Samples	2	2018	4	2018
Mileston (MS) B	1	2019	1	2019
Contract Award (EMD)	1	2019	1	2019
MPF EMD	1	2019	3	2022
MPF Prototype Deliveries (24 Prototypes and 4 BH&Ts)	1	2020	4	2020
Pre-Production Test	2	2020	4	2021
Soldier Vehicle Assessment (SVA)	4	2020	3	2021
Limited User Training (LUT)	3	2021	4	2021
Milestone (MS) C	3	2022	3	2022
MPF LRIP Option #1 Award	3	2022	3	2022
MPF LRIP Delivery ((26)	4	2023	1	2025