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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0102110F / MH-139A
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	581.945	15.913	15.922	25.737	0.000	25.737	9.057	9.796	0.000	0.000	27.144	685.514
672021: <i>MH-139A</i>	581.945	15.913	9.818	17.279	0.000	17.279	0.000	0.000	0.000	0.000	0.000	624.955
672023: <i>MH-139A PE/PI</i>	0.000	0.000	6.104	8.458	0.000	8.458	9.057	9.796	0.000	0.000	27.144	60.559

Program MDAP/MAIS Code: 562

A. Mission Description and Budget Item Justification

The MH-139A Grey Wolf will replace the Air Force fleet of UH-1N aircraft, and offers a significant capability increase in areas of speed, range, endurance, payload, and survivability. The Air Force will acquire 80 MH-139A helicopters, training devices, and associated support equipment. The replacement aircraft will provide vertical airlift and support the requirements of five Air Force major commands and operating agencies: Air Force Global Strike Command (AFGSC), Air Force Reserve Command (AFRC), Air Education and Training Command (AETC), Air Force District of Washington (AFDW), and Air Force Material Command (AFMC). AFGSC is the Air Force lead command and operational capability requirements sponsor. This program is an element of the Air Force's nuclear enterprise reform initiatives.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver the MH-139A weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY 2022, \$4.401 million was expended for civilian pay expenses in this program element, and in FY 2023, \$3.542 million is forecast for civilian pay expenses in this program element.

The FY 2024 funding request was reduced by \$2.208 million to account for the availability of prior year execution balances.

This requirement supports performance of a full financial audit as required by title 10 U.S.C. Chapter 9A, Sec 240-D.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force	Date: March 2023
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B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	16.132	17.922	27.945	0.000	27.945
Current President's Budget	15.913	15.922	25.737	0.000	25.737
Total Adjustments	-0.219	-2.000	-2.208	0.000	-2.208
• Congressional General Reductions	0.000	-2.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.219	0.000			
• Other Adjustments	0.000	0.000	-2.208	0.000	-2.208

Change Summary Explanation

FY 2023 funding was reduced by \$2.000 million due to Congressional Directed Reduction "PE/PI ahead of need."

FY 2024 funding request was reduced by \$2.208 million to account for the availability of prior year execution balances (under-execution).

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force										Date: March 2023		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0102110F / MH-139A				Project (Number/Name) 672021 / MH-139A			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
672021: MH-139A	581.945	15.913	9.818	17.279	0.000	17.279	0.000	0.000	0.000	0.000	0.000	624.955
Quantity of RDT&E Articles	6	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The MH-139A program will replace the Air Force fleet of UH-1N aircraft with modern helicopters that will close significant mission capability gaps associated with the current fleet of UH-1N aircraft. The replacement aircraft will provide vertical airlift and support the requirements of five Air Force major commands and operating agencies: Air Force Global Strike Command (AFGSC), Air Force Reserve Command (AFRC), Air Education and Training Command (AETC), Air Force District of Washington (AFDW), and Air Force Material Command (AFMC). AFGSC is the Air Force lead command and operational capability requirements sponsor. This program is an element of the Air Force's nuclear enterprise reform initiatives.

Program includes, but is not limited to, continued funding for four test aircraft and two System Demonstration Test Article (SDTA) aircraft, support equipment, Interim Contractor Support (ICS), training system devices, Type I training and course ware, extension of NDI integration as a result of Identification Friend or Foe (IFF) and security forces communication capability, cyber test articles, associated Government support activities, completion of Development Test (DT) and live-fire test and evaluation (LFT&E), and remedy of developmental test deficiencies.

The FY 2024 development efforts will conclude systems engineering efforts for civil certifications, systems engineering tasks, and management services. Execution begins for initial training, Initial Operational Test and Evaluation (IOT&E), and military type certificate. Government test and evaluations efforts will complete DT and LFT&E, and transition to Phase 5 IOT&E and IOT&E support execution.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver the MH-139A weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY 2022, \$4.401 million was expended for civilian pay expenses in this program element, and in FY 2023, \$3.542 million is forecast for civilian pay expenses in this program element.

MH-139A funding also supports obsolescence solutions and innovation activities to include studies, analyses, requirements definition, and quick-reaction capability prototypes/demonstrations to accelerate planning for technology transition, technology insertion and future acquisition programs.

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

	FY 2022	FY 2023	FY 2024
Title: MH-139A Development	14.141	5.618	11.279
Description: Development of MH-139A helicopter and integration of non-developmental item (NDI) hardware, software, and other capabilities into aircraft system, training systems, support elements and technical/manufacturing baselines to achieve MH-139A operational capability requirements.			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0102110F / MH-139A	Project (Number/Name) 672021 / MH-139A

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>FY 2023 Plans: Continuing systems engineering efforts, government oversight, contractor and government systems engineering tasks and management services. Prepare for and successfully achieve Milestone C, and continue air worthiness certification.</p> <p>FY 2024 Plans: Will continue systems engineering efforts for civil certifications, systems engineering tasks, DT, LFT&E and management services. Includes extension of NDI integration as a result of Identification Friend or Foe (IFF) and security forces communication capability. Execution begins for initial training, IOT&E, and air worthiness certification.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increased due to re-phasing of developmental test program to account for previous contractor delays and extension to the test program.</p>			
<p>Title: MH-139A Government Test and Evaluation</p> <p>Description: System and subsystem test and evaluation and remedy of deficiencies of the MH-139A aircraft.</p> <p>FY 2023 Plans: Continuing LFT&E, DT, Operational Assessment (OA), and Operational Test (OT) support execution.</p> <p>FY 2024 Plans: Will conclude DT, LFT&E, and transition to Phase 5 IOT&E and IOT&E support execution.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increased due to re-phasing of developmental test program to account for previous contractor delays and extension to the test program.</p>	1.772	4.200	6.000
Accomplishments/Planned Programs Subtotals	15.913	9.818	17.279

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• APAF 04 Line Item H0106O: <i>UH-1N Replacement</i>	141.360	186.192	228.807	-	228.807	317.287	494.374	442.527	419.218	362.600	2,592.365
• APAF 06 Line Item H0106O: <i>UH-1N Replacement Initial Spares/Repair Parts</i>	0.000	11.253	20.314	-	20.314	34.330	28.528	23.907	24.405	41.900	184.637
• MILCON 0: <i>UH-1N Replacement - Primary Facility</i>	0.000	0.000	12.000	-	12.000	0.000	0.000	0.000	10.100	0.000	22.100

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force	Date: March 2023
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0102110F / MH-139A	Project (Number/Name) 672021 / MH-139A
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

D. Acquisition Strategy

The Air Force intends to procure an airworthiness-certified baseline helicopter that requires non-developmental item integration (e.g. Electro-Optical/Infrared Sensor, personnel recovery hoists, cockpit/cabin armor, etc.) and training systems to meet all operational capability requirements. The MH-139A acquisition approach is a single step to full capability. This provision is reflected in the acquisition strategy underpinning the basic contract and its pre-priced options. The current program scope is compliant with the requirements basis in the UH-1N Replacement Capability Production Document (CPD). The MH-139A program entered at pre-MS C to allow interested offerors an opportunity to integrate NDI into their existing, airworthiness-certified baseline Air Vehicle (AV) to meet all UH-1N Replacement requirements. The system will consist of non-proprietary or suitably licensed components and leverage non-developmental software to the extent possible within the constraints of the chosen system. Specific acquisition and contracting strategies for Research, Development, Test, and Evaluation (RDT&E) funded integration tasks and the test and evaluation program will be determined as part of the overall program strategy.

FAA certification approvals extended Developmental Test schedule and pushed Operational Test into FY 2024. Performance Enhancements and Product Improvement (PE/PI) efforts are beginning to solve deficiencies found throughout testing.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
3600 / 7				PE 0102110F / MH-139A				672021 / MH-139A							
Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
MH-139 weapon system integration and type/airworthiness certification	C/FFP	Boeing : Philadelphia, PA	473.550	7.266	Dec 2021	0.821	Dec 2022	6.807	Dec 2023	-		6.807	0.000	488.444	-
Subtotal			473.550	7.266		0.821		6.807		-		6.807	0.000	488.444	N/A
Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
MH-139 Other Government Costs	C/Various	Various : TBD	19.977	1.725	Jan 2022	1.255	Jan 2023	1.270	Jan 2024	-		1.270	0.000	24.227	-
MH-139 Direct Cite Authority CIV Pay	C/Various	Various : TBD	9.614	4.401	Jan 2022	3.542	Jan 2023	2.750	Oct 2023	-		2.750	0.000	20.307	-
Subtotal			29.591	6.126		4.797		4.020		-		4.020	0.000	44.534	N/A
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
MH-139 live fire, developmental, and operational test and evaluation, planning and technical support	Various	Various : TBD	38.069	1.772	Dec 2022	4.200	Dec 2022	6.000	Dec 2023	-		6.000	0.000	50.041	-
Subtotal			38.069	1.772		4.200		6.000		-		6.000	0.000	50.041	N/A
Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
MH-139 Program Support Costs	Various	Various : TBD	7.522	0.491	Dec 2021	0.000	Dec 2022	0.452	Dec 2023	-		0.452	0.000	8.465	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0102110F / MH-139A	Project (Number/Name) 672021 / MH-139A
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FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
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

<i>MH-139A Program</i>	
MH-139A NDI Contract	
Initial Operational Test and Evaluation	
Developmental Test and Evaluation	
Live Fire Test	
Milestone C	
Subsystem Integration and Air Worthiness	

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0102110F / MH-139A	Project (Number/Name) 672021 / MH-139A

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>MH-139A Program</i>				
MH-139A NDI Contract	1	2022	4	2025
Initial Operational Test and Evaluation	2	2024	3	2025
Developmental Test and Evaluation	1	2022	4	2024
Live Fire Test	1	2022	4	2024
Milestone C	2	2023	2	2023
Subsystem Integration and Air Worthiness	1	2022	3	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0102110F / MH-139A				Project (Number/Name) 672023 / MH-139A PE/PI			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
672023: MH-139A PE/PI	0.000	0.000	6.104	8.458	0.000	8.458	9.057	9.796	0.000	0.000	27.144	60.559
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The MH-139A program will replace the Air Force fleet of UH-1N aircraft with modern helicopters that will close significant mission capability gaps associated with the current fleet of UH-1N aircraft. The replacement aircraft will provide vertical airlift and support the requirements of five Air Force major commands and operating agencies: Air Force Global Strike Command (AFGSC), Air Force Reserve Command (AFRC), Air Education and Training Command (AETC), Air Force District of Washington (AFDW), and Air Force Material Command (AFMC). AFGSC is the Air Force lead command and operational capability requirements sponsor. This program is an element of the Air Force's nuclear enterprise reform initiatives.

The MH-139A Performance Enhancements and Product Improvements Program is for the development of solutions to solve capability gaps found during the development and test of the MH-139A to include communication and gun systems deficiencies, improve mission planning capability, resolve usability concerns, and other critical capabilities, and includes associated Government test and support activities.

The program office will utilize the additional flight test aircraft in support of modernization efforts to address emerging threats and evolving mission needs.

During FY 2024 the MH-139A program plans to continue performance enhancement efforts to include gun system deficiencies, Joint Mission Planning System (JMPS), capability improvements, resolving usability concerns and other critical capabilities, establishing government oversight, contractor and government systems engineering tasks, non-recurring engineering, and demonstrations on various capability upgrades. FY 2024 will also include the beginning of test planning in support of capability upgrade efforts.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver the MH-139A weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY 2022, \$0.000 million was expended for civilian pay expenses in this program element, and in FY 2023, \$0.000 million is forecast for civilian pay expenses in this program element.

MH-139A funding also supports obsolescence solutions and innovation activities to include studies, analyses, requirements definition, and quick-reaction capability prototypes/demonstrations to accelerate planning for technology transition, technology insertion and future acquisition programs.

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

	FY 2022	FY 2023	FY 2024
Title: MH-139A Performance Enhancements	0.000	4.104	6.458

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0102110F / MH-139A	Project (Number/Name) 672023 / MH-139A PE/PI

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>Description: Development and integration of MH-139A helicopter solutions to solve capability gaps found during development and test to include communication and gun system deficiencies, JMPS, improve capability, resolve usability concerns and other critical capabilities.</p> <p>FY 2023 Plans: Begin systems engineering efforts including but not limited to communication and gun system deficiencies, JMPS, improve compatibility, resolve usability concerns and other critical capabilities. Establish government oversight, contractor and government systems engineering tasks, non-recurring engineering (NRE) and trial kit demonstrations on various capability upgrades.</p> <p>FY 2024 Plans: Continue systems engineering, integration and retrofit efforts to include but not limited to communication and gun system deficiencies, JMPS, improve capability, resolve usability concerns and other critical capabilities. Will continue government oversight, contractor and government systems engineering and integration tasks, non-recurring engineering (NRE), test and evaluation and production cut-in on various capability upgrades.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increased for implementation of deficiency solutions.</p>			
<p>Title: MH-139A Government Test Planning, Test and Evaluation</p> <p>Description: Planning for system and subsystem test and evaluation and remedy of deficiencies found during testing of the Performance Enhancement and Product Improvement solutions.</p> <p>FY 2023 Plans: Begin test planning in support of capability upgrade efforts.</p> <p>FY 2024 Plans: Will support continued expertise at lead DT organization, continue test planning, and begin test execution in support of capability upgrade efforts.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: N/A</p>	0.000	2.000	2.000
Accomplishments/Planned Programs Subtotals	0.000	6.104	8.458

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• APAF 04 H01060: MH-139A	141.360	186.192	228.807	-	228.807	317.287	494.374	442.527	419.218	362.600	2,592.365

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force	Date: March 2023
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0102110F / MH-139A	Project (Number/Name) 672023 / MH-139A PE/PI
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APAF 06 H0106O: UH-1N Replacement Program	0.000	11.253	20.314	-	20.314	34.330	28.528	23.907	24.405	41.900	184.637
• MILCON UH-1N Replacement: Primary Facility	0.000	0.000	12.000	-	12.000	17.000	0.000	0.000	10.100	0.000	39.100

Remarks

D. Acquisition Strategy

Acquisition and contracting strategies for RDT&E funded integration tasks and the test and evaluation program to be pursued as follow on programs with the acquisition strategies deemed most appropriate. Critical capability improvements will be planned for installation in future production lots or planned for integration into operational aircraft.

FAA certification approvals extended Developmental Test schedule and pushed Operational Test into FY 2024. Performance Enhancements and Product Improvement (PE/PI) efforts are beginning to solve deficiencies found throughout testing.

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0102110F / MH-139A	Project (Number/Name) 672023 / MH-139A PE/PI

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>MH-139A Performance Enhancements and Product Improvements</i>				
Deficiency Reports Resolution	1	2023	3	2026
Test Planning	1	2024	4	2025
Gun Systems Upgrade Planning and Contract Award	1	2023	2	2024
Gun Systems Upgrade Development and Integration	2	2024	4	2025
Gun Systems T&E	1	2025	4	2025
JMPS Upgrade Planning and Contract Award	3	2023	2	2024
JMPS Upgrade Development and Integration	1	2024	3	2025
JMPS Upgrade T&E	2	2025	1	2026