

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force										Date: February 2019		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0207136F I Manned Destructive Suppression							
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	-	11.735	15.238	15.521	0.000	15.521	15.792	16.119	16.413	16.709	Continuing	Continuing
674595: F-16 HARM Targeting Sys	-	11.735	15.238	15.521	0.000	15.521	15.792	16.119	16.413	16.709	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Manned Destructive Suppression (MDS) program funds the development and sustainment of the Air Force's Suppression of Enemy Air Defenses (SEAD) and Destruction of Enemy Air Defenses (DEAD) capabilities. The F-16 HARM Targeting System (HTS) is currently the only programmed reactive SEAD capability and enables targeting the HARM missile in its most lethal 'range known' mode. The program provides F-16 Block 50/52 and Block 40/42 aircraft with the ability to employ the AN/ASQ-213 Pod. With the introduction of HTS Revision 7 (HTS R7) in 2007, the AN/ASQ-213 Pod now has a precision geo-location capability to target Precision Guided Munitions (PGMs) to destroy fixed and mobile enemy air defense elements. Additionally, by relocating the AN/ASQ-213 HTS R7 Pod to the aircraft's left inlet hard point, the F-16 can simultaneously carry the HTS R7 Pod and an Advanced Targeting Pod (ATP). HTS R7 fielding is complete and represents the Air Force's near-term solution for reactive time critical targeting for DEAD until this mission can be transferred to F-35 or a yet to be defined system. HTS R7 derived precision targeting data can be provided to all Joint Forces via Link-16. This effort continues preplanned product improvements (P3I) for the HTS and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program and HTS R7 development.

Funds may be used to address emerging and short-notice Diminishing Manufacturing Sources and Material Shortage (DMSMS) issues.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver MDS system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, 0605833F, and 0605898F.

As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the FY 2018 Air Force penalty total is \$14.373M. The calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.

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.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force				Date: February 2019			
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development		R-1 Program Element (Number/Name) PE 0207136F I Manned Destructive Suppression					
B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total		
Previous President's Budget	15.106	15.238	15.521	0.000	15.521		
Current President's Budget	11.735	15.238	15.521	0.000	15.521		
Total Adjustments	-3.371	0.000	0.000	0.000	0.000		
• Congressional General Reductions	0.000	0.000					
• 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	-2.934	0.000					
• SBIR/STTR Transfer	-0.437	0.000					
• Other Adjustments	0.000	0.000	0.000	0.000	0.000		
Change Summary Explanation							
FY18 reduction of \$0.437M for SBIR							
FY18 reduction of \$2.934M due to Below Threshold Reprogramming for higher AF priorities.							
C. Accomplishments/Planned Programs (\$ in Millions)			FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: P3I R7 Software Upgrade (SWUP)			11.735	12.838	13.121	0.000	13.121
Description: P3I R7 Software Upgrade (SWUP). HTS SWUP risk reduction and software development (EMD) efforts include software updates in support of F-16 OFP releases. These releases improve the capability of the pod in an evolving threat environment.							
FY 2019 Plans: HTS SWUP 3 risk reduction and software development efforts continue to include minor software updates (maintenance releases) in support of F-16 OFP M7.2 and M7.3, and candidate definition for the next SWUP upgrade. Mission support (i.e., program management for administrative and technical support) will continue. Down-selection of warfighter candidates for the next SWUP effort will occur, and risk reduction activities for subsequent SWUP upgrades will continue.							
FY 2020 Base Plans:							

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force				Date: February 2019		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development		R-1 Program Element (Number/Name) PE 0207136F I Manned Destructive Suppression				
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
HTS SWUP 3 continues from risk reduction to software development and preparation for flight testing. Mission support (i.e., program management for administrative and technical support) will continue. Risk reduction activities for subsequent SWUP 4 upgrades will continue. FY 2020 OCO Plans: N/A FY 2019 to FY 2020 Increase/Decrease Statement: Increase of \$283K to address inflation.						
Title: Flight Test Description: Conducts test planning, requirements derivation, and post-test data analysis and reporting. Provides test organization support to include test aircraft operations, threat/test range control and associated support, air refueling, and post-mission support. Ground testing such as anechoic chamber testing will also be accomplished as necessary. FY 2019 Plans: Government flight test operations will begin for SWUP 3. This funding also includes baselining requirements from actual test data during recent flight testing. FY 2020 Base Plans: Government flight test operations will continue for SWUP 3 and continue in planning for SWUP 4. This funding also includes baselining requirements from actual test data during recent flight testing. FY 2020 OCO Plans: N/A FY 2019 to FY 2020 Increase/Decrease Statement: No change		0.000	1.500	1.500	0.000	1.500
Title: Mission Planning Description: Joint Mission Planning System (JMPS). This effort includes continued development and testing of candidate upgrades and incremental engineering releases in support of HTS SWUP fielding. FY 2019 Plans:		0.000	0.900	0.900	0.000	0.900

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force				Date: February 2019	
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 0207136F <i>I Manned Destructive Suppression</i>		
C. Accomplishments/Planned Programs (\$ in Millions)			FY 2018	FY 2019	FY 2020 Base
Continue mission planning in support of HTS SWUP 3 and future P3I upgrades.					
FY 2020 Base Plans: Continue mission planning in support of HTS SWUP 4 and future P3I upgrades.					
FY 2020 OCO Plans: N/A					
FY 2019 to FY 2020 Increase/Decrease Statement: No Change					
Accomplishments/Planned Programs Subtotals			11.735	15.238	15.521
D. Other Program Funding Summary (\$ in Millions) N/A					
Remarks					
E. Acquisition Strategy The HTS R7 Software Update Program (SWUP) is underway to keep the HTS pod capable in a growing threat environment. The SWUP 3 Risk Reduction (RR) contract was awarded in Dec 15 as a Cost-Plus-Fixed-Fee (CPFF) contract type. This development effort will complete in Feb 19. The SWUP 3 Engineering & Manufacturing Development (EMD) and SWUP 4 RR contract is planned to award in Mar 19 as a CPFF contract type and is a 36 month total effort. The SWUP 3 EMD portion includes plans for two releases to the field, Builds A and B. The SWUP 4 RR portion will mature candidates for future software builds by addressing findings from the field, incorporating requested improvements from the warfighter, and implementing other software changes to keep the HTS pod as effective as possible.					
F. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.					

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Air Force												Date: February 2019			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0207136F / Manned Destructive Suppression				Project (Number/Name) 674595 / F-16 HARM Targeting Sys					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
HTS R7 SWUP/P3I	SS/CPIF	Raytheon Systems Co. : Tucson, AZ	-	9.852	Feb 2018	10.803	Mar 2019	11.031	Feb 2020	-		11.031	Continuing	Continuing	-
JMPS	SS/CPIF	Multiple : Multiple	-	0.000	Sep 2018	0.900	May 2019	0.900	May 2020	-		0.900	Continuing	Continuing	-
Subtotal			-	9.852		11.703		11.931		-		11.931	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Government Test	PO	412 TW : Edwards AFB, CA	-	0.000	Sep 2018	1.500	May 2019	1.500	Aug 2020	-		1.500	Continuing	Continuing	-
Subtotal			-	0.000		1.500		1.500		-		1.500	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Program Management Administration	C/Various	Multiple : Eglin AFB, FL	-	1.883	Mar 2018	2.035	Mar 2019	2.090	Mar 2020	-		2.090	Continuing	Continuing	-
Subtotal			-	1.883		2.035		2.090		-		2.090	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			-	11.735		15.238		15.521		-		15.521	Continuing	Continuing	N/A
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force										Date: February 2019									
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0207136F / Manned Destructive Suppression					Project (Number/Name) 674595 / F-16 HARM Targeting Sys									

	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
	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>Manned Destructive Suppression</i>																												
SWUP 3 Risk Reduction																												
SWUP 3 Build A																												
SWUP 3 Build B																												
SWUP 4 Risk Reduction																												
SWUP 4 Build A																												
SWUP 4 Build B																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force			Date: February 2019
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207136F / <i>Manned Destructive Suppression</i>	Project (Number/Name) 674595 / <i>F-16 HARM Targeting Sys</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Manned Destructive Suppression</i>				
SWUP 3 Risk Reduction	1	2018	2	2019
SWUP 3 Build A	2	2019	2	2020
SWUP 3 Build B	2	2019	2	2021
SWUP 4 Risk Reduction	2	2019	2	2022
SWUP 4 Build A	2	2020	2	2022
SWUP 4 Build B	2	2021	2	2023