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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0401115F I C-130 Airlift Squadron							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	33.962	15.599	10.219	0.000	10.219	133.708	135.938	113.522	33.750	0.000	476.698
675248: C-130H Avionics Modernization Program (AMP) Increment 1	0.000	33.962	8.421	1.965	0.000	1.965	13.109	7.215	0.000	0.000	0.000	64.672
675250: C-130H Avionics Modernization Program (AMP) Increment 2	0.000	0.000	7.178	8.254	0.000	8.254	120.599	128.723	113.522	33.750	0.000	412.026
A. Mission Description and Budget Item Justification In FY 2017, C-130H Avionics Modernization Program (AMP) Increment 2 was a new start. The FY2018 funding was reduced by \$13.700M from "C-130H Avionics Modernization Program (AMP) Increment 1" to account for the availability of prior year execution balances and adjust to the FY17 Program Office Cost Estimate. FY2018 funding for C-130H AMP Increment 2 was also reduced by \$66.800M to adjust to the approved FY17 Program Office Estimate. The C-130H is a medium sized tactical transport aircraft providing multi-purpose theater support throughout the globe. The C-130H fleet supports several diverse Air Force roles, including but not limited to tactical and inter-theater airlift and airdrop support, Arctic resupply, special operations support, aeromedical evacuation, aerial spraying, firefighting duties, and natural disaster and humanitarian relief missions. C-130H AMP Increment 1 addresses modifications to meet airspace compliance mandates and safety requirements. RDT&E efforts will cover design, integration,developmental and operational test, trial kit buy and installation, Initial Spares, Peculiar Support Equipment, Type 1 training and C-130H aircrew and maintenance training systems and courseware development efforts. C-130H AMP Increment 2 includes digital avionics upgrades (e.g. Flight Management System, improved navigation), cockpit modernization (e.g. glass/engine flight displays) and resolves select obsolescence and Diminishing Manufacturing Source (DMS) issues. RDT&E efforts will cover software development,design, integration, developmental and operational test, trial kit buy and installation, technical order development validation and verification, Initial Spares, Peculiar Support Equipment, SIL development, Type 1 training and C-130H aircrew and maintenance training systems and courseware development efforts. 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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Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development		PE 0401115F I C-130 Airlift Squadron			
B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	33.962	15.599	90.697	0.000	90.697
Current President's Budget	33.962	15.599	10.219	0.000	10.219
Total Adjustments	0.000	0.000	-80.478	0.000	-80.478
• 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	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	-80.478	0.000	-80.478
Change Summary Explanation					
FY18 includes a reduction of \$13.7M from "C-130H AMP Increment 1" to account for availability of prior year execution balances and adjust to FY17 Program Office Estimate.					
FY18 includes a reduction of \$66.8M in "C-130H AMP Increment 2" to adjust to the approved FY17 Program Office Estimate.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron				Project (Number/Name) 675248 / C-130H Avionics Modernization Program (AMP) Increment 1			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
675248: C-130H Avionics Modernization Program (AMP) Increment 1	0.000	33.962	8.421	1.965	0.000	1.965	13.109	7.215	0.000	0.000	0.000	64.672
Quantity of RDT&E Articles	-	-	-	4	-	4	-	-	-	-		

A. Mission Description and Budget Item Justification

The C-130H AMP Increment 1 program performs modifications to meet airspace compliance and safety mandates; the mod includes automatic dependent surveillance-broadcast (ADS-B) Out, enhanced Mode S, 8.33 kHz radios, and cockpit voice recorder/digital flight data recorder (CVR/DFDR).

RDT&E efforts will include but not be limited to design, integration, developmental and operational test, trial kit buy and installation, Initial Spares, Peculiar Support Equipment, Type 1 training and C-130H aircrew and maintenance training systems and courseware development efforts (including MODE 5 effort for the trainers). Obsolescence and diminishing manufacturing sources (DMS) issues will be resolved with solutions that may include life of type buys or bridge buys. DMS efforts to include removal of end of-life software/hardware within simulators systems and move to a modular, common open system architecture that is sustainable and cyber-resilient. Implement requirements and standards defined under the Simulator Common Architecture Requirements and Standards (SCARS) initiative.

The C-130H AMP Increment 1 program modifies 176 aircraft (170x C-130Hs and 6x LC-130Hs) consisting of H3s, H2.5s, H2s and H1s; and includes 131 Air National Guard aircraft, and 45 Air Force Reserve aircraft. Potential of up to an additional 4 production kits (not included in the funding line) for National Science Foundation aircraft. The modification effort will have up to 6 prototype aircraft representative of variations in the mission designs and required for accomplishment of the C-130H AMP Increment 1 Engineering and Manufacturing Development (EMD) phase. The remaining aircraft will be modified in the production phase.

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

	FY 2016	FY 2017	FY 2018
Title: C-130H AMP Increment 1	33.962	8.421	1.965
Description: Refined and completed the requirements definition phase of the program, followed by integration planning, and the Engineering and Manufacturing Development (EMD) phase activities.			
FY 2016 Accomplishments: Developed documentation, Request for Proposal (RFP) developed and released, began source selection and ramped up Engineering and Manufacturing Development (EMD) phase activities.			
FY 2017 Plans: Continuation of EMD activities including Milestone B, Contract Award, design and integration, Preliminary and Critical Design Reviews.			
FY 2018 Plans:			

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Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron				Project (Number/Name) 675248 / C-130H Avionics Modernization Program (AMP) Increment 1				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Continuation of EMD activities including design & integration, trial kit assembly and installations on test aircraft, peculiar support equipment and initial spares buy, technical order development and validation/verification, development and operational testing.												
Accomplishments/Planned Programs Subtotals										33.962	8.421	1.965
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• APAF: BA05: Line Item # C13000: C-130	70.000	0.000	15.500	0.000	15.500	51.543	15.261	3.878	4.329	0.000	189.582	
• APAF: BA06: Line Item # 000999: Initial Spares/Repair Parts	0.000	0.000	2.814	0.000	2.814	8.221	6.401	6.516	6.633	0.000	30.585	
Remarks C-130H AMP Increment 1 Procurement funding begins in FY18; however, the program also received a congressional add of \$70M APAF in FY16.												
D. Acquisition Strategy C-130H AMP Increment 1 acquisition strategy (30 Sept 2015) is to conduct a full and open competitive source selection for ADS-B Out and Enhanced Mode S followed by a Federal Acquisition Regulation (FAR) Part 15 contract award. Current efforts are primarily focused on the execution of Engineering and Manufacturing Development (EMD). Contract awarded in 2nd quarter FY17.												
E. 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.												

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Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron				Project (Number/Name) 675250 / C-130H Avionics Modernization Program (AMP) Increment 2			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
675250: C-130H Avionics Modernization Program (AMP) Increment 2	0.000	0.000	7.178	8.254	0.000	8.254	120.599	128.723	113.522	33.750	0.000	412.026
Quantity of RDT&E Articles	-	-	-	-	-	-	-	3	1	-		

A. Mission Description and Budget Item Justification

The C-130H AMP Increment 2 upgrades the C-130H fleet with comprehensive avionics and cockpit modernization which replaces aging unreliable equipment and adds combat capability enhancements. It also addresses select obsolescence and diminishing manufacturing sources (DMS) issues with solutions that may include life of type buys or bridge buys. DMS efforts to include removal of end-of-life software/hardware within simulators systems and move to a modular, common open system architecture that is sustainable and cyber-resilient. Implement requirements and standards defined under the Simulator Common Architecture Requirements and Standards(SCARS)initiative.

RDT&E efforts include but are not limited to software development, design, integration, developmental & operational test, trial kit buy and installation, technical order development validation and verification, Peculiar Support Equipment, Initial Spares, SIL development, Type 1 training, and C-130H aircrew and maintenance training systems and courseware development efforts.

The C-130H AMP Increment 2 program modifies a minimum of 176 aircraft (170x C-130Hs and 6x LC-130Hs) consisting of H3s, H2.5s, H2s and H1s; and includes 131 Air National Guard aircraft, and 45 Air Force Reserve aircraft. Potential of an additional 4 production kits (not included in funding line above); for National Science Foundation aircraft. The modification effort will have up to 8 prototype aircraft representative of variations in the mission designs and required for accomplishment of the Engineering and Manufacturing Development (EMD) phase. The remaining aircraft will be modified in the production phase.

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

	FY 2016	FY 2017	FY 2018
Title: C-130H Avionics Modernization Program (AMP) Increment 2	0.000	7.178	8.254
Description: Refined and completed the requirements definition phase of the program, followed by integration planning and the Engineering and Manufacturing Development (EMD) phase activities.			
FY 2016 Accomplishments: N/A			
FY 2017 Plans: EMD activities including market research, documentation development, Request for Proposal (RFP) issuance, Source Selection and Milestone B preparation.			
FY 2018 Plans:			

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Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0401115F / C-130 Airlift Squadron				Project (Number/Name) 675250 / C-130H Avionics Modernization Program (AMP) Increment 2				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Continuation of EMD phase activities including Source Selection and Milestone B preparation.												
Accomplishments/Planned Programs Subtotals										0.000	7.178	8.254
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• APAF: BA05: Line Item # C13000: C-130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	58.114	160.989	Continuing	Continuing	
• APAF: BA06: Line Item # 000999: Initial Spares/Repair Parts	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.555	14.952	Continuing	Continuing	
Remarks												
The C-130H Avionics Modernization Program (AMP) Increment 2 procurement funding begins in FY21.												
D. Acquisition Strategy												
C-130H AMP Increment 2 acquisition strategy intends to conduct a full and open competitive source selection followed by contract award. Current efforts are primarily defining the program requirements and pre-contract efforts in preparation for the Engineering and Manufacturing Development (EMD) source selection. The current schedule reflects EMD contract to be awarded in 1st quarter FY19.												
E. 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.												