Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force											Date: February 2016	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 6: *RDT&E Management Support*					R-1 Program Element (Number/Name) PE 0606116F / *Space Test and Training Range Development*							
COST ($ in Millions)	**Prior Years**	**FY 2015**	**FY 2016**	**FY 2017 Base**	**FY 2017 OCO**	**FY 2017 Total**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**Cost To Complete**	**Total Cost**
Total Program Element	-	22.724	18.940	18.528	0.000	18.528	19.317	19.721	20.083	20.439	Continuing	Continuing
666156: *SPACE TEST AND TRAINING RANGE DEVELOPMENT*	-	22.724	18.940	18.528	0.000	18.528	19.317	19.721	20.083	20.439	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY2015, PE 0606116F, Space Test and Training Range Development, Project 666156 Space Test and Training Range Development efforts were transferred from PE 0603438F, Space Control Technology, Project 64A007, Space Range in order to provide transparency in acquisition funding.

A. Mission Description and Budget Item Justification

Supports the development of Space Test and Training Range (STTR) capabilities critical for developmental and operational test, training, exercises and tactics development for Space Control systems and Joint National Space architecture. Includes development, demonstration and delivery of test assets, special test equipment, capabilities and systems required to test, validate, and verify performance of integrated space control systems. Provides a safe, secure, controllable and repeatable environment for the testing and training of Space Control mission systems and operators that is both realistic and relevant. Additionally, this program develops test range assets for both the fixed node Space Range Operation Center (SROC) at Schriever AFB and a deployable capability to support complex Joint and AF exercises. The virtual range as part of the Family of Systems (FoS), called Big Top, is being developed to accomplish the STTR mission. Big Top integrates to a Distributed Mission Architecture, tying into both the Information Operations (IO) and Air ranges for increased realism and complexity required to prepare space operators for real-world threats. This technology will allow for the first-ever use of a realistic signal environment to increase the realism and efficiency of space control squadron training.

This program is in Budget Activity 6, RDT&E Management Support, because this budget activity includes research, development, test and evaluation efforts and funds to sustain and/or modernize the installations or operations required for general research, development, test and evaluation.

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B. Program Change Summary ($ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	19.512	18.997	19.167	0.000	19.167
Current President's Budget	22.724	18.940	18.528	0.000	18.528
Total Adjustments	3.212	-0.057	-0.639	0.000	-0.639
• Congressional General Reductions	0.000	-0.057			
• 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	3.212	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	-0.639	0.000	-0.639

C. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Title: Range Control	22.224	18.022	17.583
Description: Development and acquisition of mobile, transportable, and fixed range monitoring and communications capabilities for the space range. ***FY 2015 Accomplishments:*** Completed SROC technical refresh activities for Spiral 0. Continued development and completed initial deliveries of advanced live, virtual and constructive environment and closed loop training capabilities and advanced software simulation tools. ***FY 2016 Plans:*** Finalizing test activities for Spiral 1 capability Developmental Testing (DT) and Operational Testing (OT). Continue development and deliveries of advanced live, virtual and constructive environment, closed loop training and advanced software simulation tools. ***FY 2017 Plans:*** Development and acquisition of mobile, transportable, signal monitoring and communications capabilities. Continue advanced live virtual and constructive environment, closed loop training and advanced software for the Space Test and Training Range.			
Title: Bandwidth Support	0.500	0.918	0.945
Description: Provides for leased SATCOM bandwidth for STTR operations. ***FY 2015 Accomplishments:***			

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Provided required space range satellite communications bandwidth for exercise, testing and training of both offensive and defensive space control systems on the space range. FY15 added an additional band required in the testing of Spiral 1 capabilities, increasing overall bandwidth requirements. ***FY 2016 Plans:*** Provide required space range satellite communications bandwidth for exercise, testing and training of both offensive and defensive space control systems on the space range. Small amounts of Ka bandwidth will be utilized at the end of FY15 for testing. More extensive testing to be accomplished in FY16. ***FY 2017 Plans:*** Provide required space range satellite communications bandwidth for exercise, testing and training of both offensive and defensive space control systems on the space range.			
Accomplishments/Planned Programs Subtotals	22.724	18.940	18.528

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

All contracts funded in this program element will be awarded using competitive procedures to the maximum extent 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.

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