

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 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 1206116F I Space Test and Training Range Development							
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	-	24.886	23.157	19.942	0.000	19.942	20.288	20.709	21.086	21.465	Continuing	Continuing
666156: Space Test and Training Range Development	-	24.886	23.157	19.942	0.000	19.942	20.288	20.709	21.086	21.465	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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 Advanced Threat Simulation Environment (ATSE) virtual range, is being developed to accomplish the STTR mission. ATSE integrates to a Distributed Mission Architecture, tying into cyber, air, and space 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. Additionally, the STTR Next Space Orbital Engagement (OE) range risk reduction projects will analyze, prototype, and demonstrate potential range systems that will be used to support the testing and training of new advanced development space systems, space operator orbital engagement maneuvers advanced training, and future exercises. These risk reduction activities will include on-orbit capabilities, ground components, communication between nodes, and other required infrastructure.

Space acquisition must respond with speed and agility to emerging adversary threats. Space & Missile Systems Center (SMC) is transforming the organization and implementation of space acquisition to an enterprise approach, maximizing innovation and resiliency, leveraging international, commercial, and mission partnerships, and managing program/project priorities according to an integrated unclassified/classified enterprise space architecture. Expanding the appropriate acquisition authorities and contract mechanisms to deliver capability sooner, SMC will strategically execute experimentation, prototyping, risk reduction, and other efforts to develop new or repurpose capabilities.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver STTR weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 1206392F and 1206398F.

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.

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 6: RDT&E Management Support		R-1 Program Element (Number/Name) PE 1206116F I Space Test and Training Range Development				
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.						
B. Program Change Summary (\$ in Millions)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget		25.773	23.254	19.942	0.000	19.942
Current President's Budget		24.886	23.157	19.942	0.000	19.942
Total Adjustments		-0.887	-0.097	0.000	0.000	0.000
• Congressional General Reductions		-0.029	-0.097			
• 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		-0.858	0.000			
• Other Adjustments		0.000	0.000	0.000	0.000	0.000
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2018	FY 2019	FY 2020
Title: Range Control				24.667	23.157	19.942
Description: Development and acquisition of mobile, transportable, virtual, and fixed range monitoring, emulation, and communications capabilities for the space range.						
FY 2019 Plans: Continue development and acquisition of mobile, transportable, virtual, and fixed range monitoring, emulation, and communications capabilities for the space range. Integrate STTR into the Air Force Range capabilities. Address Risk Management Framework (RMF) compliance, general obsolescence, outdated servers, database overhaul, Windows 10 migration, further hardening of hard drives, upgrade encryption, and software upgrades. Continue program office support and other related support activities that may include, but are not limited to studies, technical analysis, prototyping, etc.						
FY 2020 Plans: Continue development of virtual range integration with cyber and air ranges hosting precision emulators and other environments allowing tactics, techniques, and procedures (TTP) development and operational realistic testing, and enable more realistic exercises combining air, space, and cyber effects. Continue Interim Contractor Support (ICS) of virtual range 1.5. Complete development of last part of the mobile/ transportable range asset, and complete Linux migration. Continue risk reduction/mitigation efforts for Space Orbital Engagement Range Risk Reduction Projects which will analyze, prototype, and demonstrate potential range systems that will be used to support the live and virtual testing of new advanced development space systems, space operator orbital engagement maneuvers (OEM) advanced training, and future SPACE FLAG exercises using live and virtual						

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 6: RDT&E Management Support</i>		R-1 Program Element (Number/Name) PE 1206116F / <i>Space Test and Training Range Development</i>		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019	FY 2020
systems. Continue overhaul of fixed range capabilities, general obsolescence, outdated servers, and software upgrades. Provide significant enhancements to include the future integration into virtual environment. Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, experimentation, prototyping, etc.				
FY 2019 to FY 2020 Increase/Decrease Statement: FY 2020 decreased compared to FY 2019 by \$3.215M. Justification for this decrease is described in plans above.				
Title: Bandwidth Support Description: Provides for leased Satellite Communication (SATCOM) bandwidth for STTR operations. Previously provided required space range satellite communications bandwidth for exercises, tests, and training of both offensive and defensive space control systems of the space range. Relevant systems have completed bandwidth testing and thus this is no longer required. FY 2019 Plans: N/A FY 2020 Plans: N/A FY 2019 to FY 2020 Increase/Decrease Statement: N/A		0.219	0.000	0.000
Accomplishments/Planned Programs Subtotals		24.886	23.157	19.942
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.				