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HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES
U.S. HOUSE OF REPRESENTATIVES

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE
HOUSE ARMED SERVICES COMMITEE
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES
U.S. HOUSE OF REPRESENTATIVES

SUBJECT: AIR FORCE BOMBER/TANKER/AIRLIFT ACQUISITION PROGRAMS

STATEMENT OF: The Honorable William B. Roper, Jr.
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March 14, 2018

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Introduction

Chairman Wittman, Ranking Member Courtney, distinguished members of the subcommittee, thank you for the opportunity to provide you with an update on U.S. Air Force acquisition programs. Additionally, thank you for your leadership to bring fiscal stability back to our government departments and agencies. Stable, predictable funding levels are critical to arrest the readiness decline in the Air Force's Global Mobility and Bomber forces as we look forward to our future national security interests.

The new National Defense strategy is clear: inter-state strategic competition, not terrorism, is now the primary concern in U.S. national security. The Air Force is committed to regaining readiness soonest. We are examining a myriad of initiatives to mitigate the toll 27 years of global operations has taken on our Airmen, equipment, and infrastructure. Meanwhile, our adversaries leveraged this opportunity to advance their own capabilities and close the technological gap. We must modernize in the core missions of global strike and rapid global mobility in order to maintain our asymmetric military advantage.

Last year, our bombers flew 580 missions in the Indo-Pacific, strengthening security and stability in the region and reassuring our partners. Reinforcing NATO's eastern flank, American bombers flew 70 assurance and deterrence missions. Together, our nuclear and conventional bombers, in concert with our tanker aircraft, provide global power and global reach to ensure an effective deterrence. But both of these important fleets are aging. The average ages of the B-52 strategic bomber and the KC-135 tanker both exceed 50 years, and we will continue to use them for decades. The B-1 and B-2 bombers must continue to be modernized to ensure they remain viable and capable until we transition to the B-21. Our budget proposal supports the Defense

Department's principal priority to maintain a safe, secure, and effective nuclear deterrent that safeguards the homeland, assures allies, and deters adversaries. The budget improves our nuclear command, control, and communication systems, as directed in the Nuclear Posture Review, initiates development of B-52 replacement engines, and continues development of the B-21 bomber.

Rapid Global Mobility not only enables the bomber force to hold any target around the world at risk at any time, but also supplies the largest military logistic network in history. In 2017, Airmen transported nearly 1 million personnel and delivered over 738 million pounds of warfighting equipment and humanitarian supplies. At home, Airmen delivered 13,600 short tons of relief supplies following the string of record-setting hurricanes and helped combat multiple wild fires in the western United States. The tanker force extended joint power projection at intercontinental distances by passing more than 1 billion pounds of fuel in-flight. Tanker recapitalization remains a top acquisition priority. The multi-role KC-46 will be capable of refueling joint and coalition aircraft—with both boom and drogue in the same sortie—and augments the airlift fleet with improved cargo, passenger, and aeromedical evacuation capabilities. This budget proposes to buy 15 more KC-46 tankers in FY19 to recapitalize our aging fleet and extend the fight to our enemies.

The Air Force must build a more lethal and ready force, strengthen alliances and partnerships, and cost-effectively modernize to *compete*, *deter*, and *win* in any environment. Modernization is a multi-year effort, and the Air Force needs your continued support in the form of stable, predictable, and timely funding levels to prevent our adversaries from closing the technology gap. We remain committed to providing the most effective bomber and robust tanker forces possible to the nation.

Bombers

Over the past two decades our total bomber inventory has been significantly reduced. To provide perspective, in 1991 we had 290 aircraft available within the bomber fleet versus 158 B-1, B-52s, and B-2s today. Current operations, training, and readiness needs—and our deterrent posture—will be difficult to sustain with the current fleet.

B-21

The B-21 program remains one of the Air Force's top programs with regards to investment in research, development, test and evaluation with $2.7 billion for Engineering and Manufacturing Development in the Fiscal Year 2019 President's Budget. The B-21 continues to make measured, positive progress and remains on track to deliver its initial capability in the mid- 2020s.

The program successfully completed a Preliminary Design Review in 2017 demonstrating that the Air Force, along with its industry partners, are continuing to develop the design maturity of this platform. The development phase of the program is well on the path to detailed design.

The Air Force remains committed to a fleet size of a minimum of 100 B-21s. This fleet will provide capabilities necessary to meet future Combatant Commander requirements. The B-21 remains an absolute national defense priority, and we are grateful for your continued support of this critical program. Until the B-21 is fielded, it is equally important that we continue the commitment to modernize our legacy bomber fleet to maintain the ability of our Air Force to provide Nuclear Deterrence Operations, Nuclear Response, Global Strike, and Global Precision Attack.

B-1

The B-1B is a long-range, air-refuelable multirole bomber capable of flying intercontinental missions with the largest payload of guided and unguided weapons in the Air Force inventory. The Integrated Battle Station upgrade, $100 million across the FYDP, will provide enhanced situational awareness and precision engagement capabilities and is the B-1B's largest modernization effort since its production. The first aircraft with this upgrade was delivered in January 2014, and a total of 37 B-1s are currently modified with this capability. The B-1B will complete this modernization effort in 2020.

Other efforts to update the B-1B's navigation and radar systems were completed in early 2016. These efforts improve reliability and maintainability of these critical systems. Additionally, the Air Force has fully funded the Service Life Extension Program (SLEP) for B-1 engines. This funding will replace parts that have been degraded by nearly 15 years of combat and restore all 289 B-1 engines to their original specifications. Finally, ongoing testing is validating the B-1B's structural integrity to ensure that it remains viable through 2040.

The B-1B is the Air Force threshold platform for early operational capability of the Long Range Anti-Ship Missile, which is transitioning from a Defense Advanced Research Projects Agency (DARPA) demonstration to the Navy-led Offensive Anti-Surface Warfare Program. Integration of this weapon, coupled with the B-1B's long range, high speed and large payload capacity, will posture the B-1B for an important role in any conflict in the Indo-Pacific region.

B-2

The B-2 is the only long-range strike aircraft capable of penetrating and surviving advanced Integrated Air Defense Systems to deliver weapons against heavily defended targets.

Its unique attributes of intercontinental range, precision strike, large conventional or nuclear payloads, ability to penetrate defenses, and low observable profile allow it to execute Nuclear Deterrence Operations, Nuclear Response, Global Strike, and Global Precision Attack missions. The Air Force will continue to modernize the B-2 to ensure it remains effective as enemy defensive systems advance. Current efforts to modernize the Defensive Management System, $1.3 billion within the FYDP, will ensure the B-2 can continue to counter sophisticated air defense networks and operate in highly contested environments.

The Air Force will continue development efforts to re-host the Stores Management Operational Flight Program software in the Flexible Strike program, enabling the B-2 to take advantage of advanced digital weapon interfaces such as those used by the B61-12 nuclear weapon. The Air Force has completed development efforts and started procuring hardware for the Common Very-Low-Frequency / Low Frequency (VLF/LF) Receiver program and will begin fielding the system in FY2019. This program provides the B-2 with a VLF/LF receiver for secure, survivable strategic communications capability. Except for delivering spares hardware, the Air Force has completed fielding the Extremely High Frequency Satellite Communications and Computer Increment 1 program: a mid-life avionics upgrade to the flight management computers and digital storage and data buses. Other on-going B-2 programs address a two-part modernization effort. The first part entails needed avionics upgrades to meet global and Federal Aviation Administration (FAA)-mandated air traffic management standards, (i.e., Mode and Automatic Dependent Surveillance–Broadcast Airspace Compliance). The second piece of the modernization effort supports operational capabilities by enhancing the Identification Friend or Foe (IFF) system, Crash Survivable Memory Unit replacement, and hardware upgrades for the employment of the GBU-57 Massive Ordnance Penetrator as well as the B61-12 nuclear weapon.

A new effort beginning in Fiscal Year 2019 is the Radar Aided Targeting System software upgrade to enhance the accuracy of navigation data passed to the B61-12 nuclear weapon ($42.7 million total). Finally, the Air Force will continue to pursue a number of B-2 sustainment initiatives to improve aircraft supportability and increase aircraft availability.

B-52

The last B-52H Stratofortress entered service in the United States Air Force in 1962, and it remains our nation's oldest and most versatile frontline long-range strategic bomber. We expect to continue operating the B-52 through 2050 and will continue to invest in modernization programs to keep the platform operationally relevant with state-of- the-art updated capabilities. Major modernization efforts include the Radar Modernization Program (RMP), ($766 million across the FYDP), Combat Network Communications Technology (CONECT), ($163 million through the FYDP), and 1760 Internal Weapons Bay Upgrade programs, ($25 million within the FYDP). RMP will modernize the current Strategic Radar (AN/APQ- 166). The current radar is based on 1960s technology and was last modified in the 1980s. The radar upgrade will support platform viability through 2050. The FY19 PB also includes $1.56 billion for re-engining the B-52 with currently-available commercial engines: a great example of the Air Force looking to commercial technology to address sustainment challenges with the legacy TF33 engines before they become unsustainable in 2030.

CONECT provides an integrated communication and mission management system as well as a machine-to-machine interface for weapons retargeting for the entire fleet of 76 B-52Hs. The digital infrastructure and architecture provided by CONECT is the backbone for the 1760 Internal Weapons Bay Upgrade (IWBU) and future modification efforts. The 1760 IWBU provides internal J-series weapons capability through modification of Common Strategic Rotary

Launchers (CSRLs). Both increments of this program are fully funded and will significantly increase the B-52's capability to store and deliver the Joint Direct Attack Munition (JDAM), Laser-JDAM, Joint Air-to-Surface Standoff Missile (JASSM) and its extended range variant, and the Miniature Air Launched Decoy (MALD) along with its jamming variant. The Air Force is committed to modernization of the B-52 using modern technology to ensure the aircraft remains relevant through 2050+ as an important element of our nation's defense.

C-17

The C-17 is the only aircraft that combines tactical capability with strategic range to operate from austere airfields. The fleet of 222 aircraft completed fielding in September 2013 and provides our nation unmatched flexibility to conduct theater and inter- theater direct delivery, airdrop, aeromedical, and special operations airlift missions. In order to increase predictability of budget and schedule, our plan is to bundle modernization and sustainment activities. Agile and efficient software and hardware updates will ensure timely readiness, safety, and capability improvements, as this premier airlift platform contributes to our national security objectives.

The Air Force intends to use $125.1 million in FY19 procurement funds to continue critical sustainment, modifications, and upgrades to the C-17 fleet. This includes Automatic Dependent Surveillance-Broadcast (ADS-B) Out to satisfy FAA and civil airspace compliance mandates as well as IFF for the identification and control of military aircraft: essential for Command and Control. Additionally, $49.3 million of FY19 RDT&E funding will address obsolescence and flight safety issues. The development of a replacement heads-up display will address obsolescence of the current C-17 heads-up display and improve the system's availability, reliability, and maintainability. The beyond line-of-sight communication system effort modernizes multi-channel voice and data communication subsystems to ensure the C-17 keeps

pace with changes in DoD communication infrastructures.

C-5

The Air Force continues to modernize and enhance 52 legacy C-5 aircraft to a common configuration to ensure fleet viability and reliability to 2040. The C-5 reliability enhancement and re-engining program is a comprehensive effort to improve aircraft performance, reliability, maintainability, availability, and payload capability/cargo throughput. All 52 aircraft have been inducted as of January 2017, and the final aircraft is projected to complete modification in April 2018.

The increased reliability and performance of the C-5 Super Galaxy exemplifies our Global Reach. During the first week of March 2017, an upgraded C-5 Super Galaxy flew a cargo mission from Travis Air Force Base, California to Yokota Air Base, Japan without stopping or refueling, skipping a layover at Joint Base Pearl Harbor-Hickam, Hawaii, or Joint Base Elmendorf-Richardson, Alaska. This range and payload capability saves time, fuel, and money.

The FY19 PB requests $80.6 million in procurement funds, predominately for C-5 core mission computer/weather radar system equipment. Additionally, the FY19 PB requests $25.1 million in RDT&E funding to support communications, navigation, surveillance/air traffic management upgrades, including ADS-B Out modifications required for global airspace compliance. The C-5 core mission computer/weather radar system replaces an antiquated radar system with diminishing manufacturing sources and upgrades the core mission computer processor to meet the demands of future software modifications. Finally, the FY19 PB continues the buy back of C-5Ms from Backup Aircraft Inventory (BAI) to Primary Aircraft Inventory

(PAI) as determined during FY18 PB development. The Air Force buys back 2 C-5Ms from BAI to PAI in FY19.

Tankers

Comprised of 396 KC-135 Stratotankers and 59 KC-10 Extenders, our tanker fleet provides the backbone of rapid U.S. global operations. Delivery of 179 KC-46 Pegasus aircraft by 2028 will replace less than half of the current tanker fleet and leave the Air Force with 300 aging KC-135s awaiting recapitalization. Tankers are the lifeblood of our joint force's ability to respond to crises and contingencies quickly and are essential to keeping our Air Force fueled as a global force.

KC-135 and KC-10

The average KC-135 is 55 years old. Both the KC-135R and KC-10 fleets are frequently challenged by aircraft parts obsolescence and diminishing manufacturing source issues. However, with the help of both organic Air Force depots and industry, we are able to maintain these platforms as effective and safe weapon systems for the warfighter. We are executing several key modernization, safety and compliance initiatives to ensure our legacy tanker fleet remains viable through 2057.

The FY19 PB requests $69.4 million to continue KC-135 modernization efforts. The primary modernization effort for KC-135 is the Block 45 program, which addresses supportability, reliability, and maintainability issues with legacy flight and engine instruments by integrating a digital flight director, autopilot, radio altimeter, and electronic engine instrument display for our operators.

Furthermore, the FY19 PB also requests $60 million through the FYDP to continue

upgrading and sustaining our KC-10 fleet through its planned sunset, which includes funding for service bulletins, low cost modifications, and IFF Mode 5 and ADS-B Out upgrades. Mode 5 is a development effort to complete a DoD-mandated upgrade to the IFF systems on aircraft planned for implementation in FY20. The FY19 PB also funds ADS-B Out avionics modifications on 45 KC-10 aircraft to comply with the FAA airspace mandate. The Air Force intends to recapitalize the KC-10 fleet as part of its legacy tanker recapitalization strategy with KC-10 retirements beginning no earlier than FY19 depending on KC-46A delivery schedules.

KC-46

While we continue to sustain our current tanker capability, building our future tanker fleet remains one of our top acquisition priorities. After a successful Milestone C decision in August 2016, the Air Force exercised contract options for aircraft Lots 1 and 2: 19 aircraft, 4 spare engines, and 10 wing aerial refueling pod shipsets. The Air Force awarded Lot 3 (15 aircraft) on January 27, 2017 under the authorization of an anomaly in the FY17 Continuing Resolution and plans to award Lot 4 (15 aircraft and associated spares and support equipment) in third quarter of FY18.

We are conducting a schedule risk assessment in partnership with Boeing. The Air Force continues to support Boeing's efforts towards delivery. Boeing is a valued partner and remains fully committed to the program. The Air Force will continue to work closely with Congress and continue to provide updates as appropriate on program status.

In the FY19 PB, the Air Force requests $88.2 million in RDT&E funding for the ongoing KC-46 engineering and manufacturing development and post production modification efforts. The FY19 PB also requests $2.9 billion in procurement funding to award low rate initial

production Lot 5 (15 aircraft) in January 2019. The procurement of these aircraft continues the Air Force's plan to acquire 179 KC-46s by FY28. Stability of requirements and funding are the keys to KC-46 program success and will enable the Air Force to deliver this new tanker ready for employment on day one.

C-130

The C-130 fleet is diverse and consists of legacy C-130H and C-130J aircraft, as well as special mission aircraft (AC/LC/EC/MC/HC/WC-130s). The C-130Hs and C-130Js are medium-size transport aircraft capable of completing a variety of tactical airlift operations across a broad range of missions. The fleet delivers air logistics support for all theater forces, including those involved in combat operations.

The Air Force is modernizing the C-130H fleet through a four-pronged approach emphasizing aircraft safety, compliance, modernization, and partial recapitalization. Firstly, we are ensuring the C-130H is safe to operate by keeping the aircraft structurally sound through programs such as center wing box replacement. This program is a critical safety effort as it will replace center wing boxes whose service life will soon expire. Secondly, we are focused on meeting U.S. and foreign airspace compliance mandates through the C-130H avionics modernization program (AMP) increment 1. Thirdly, C-130H avionics modernization program increment 2 will improve the fleet's maintainability and reliability by providing a new digital avionics suite that mitigates pending obsolescence and diminishing manufacturing source issues.

The FY19 PB requests $106.0 million in RDT&E and $22.7 million in Aircraft Procurement, Air Force (APAF) to support the legacy C-130H fleet. The Air Force intends to

partially recapitalize or modernize each of the Air National Guard and the Air Force Reserve Command C-130H units. The Air Force also intends to continue recapitalizing Air Force Special Operations Command's special operations C-130Hs with C-130Js (AC/MC-130Js).

The C-130J aircraft provides extra cargo carrying capability, longer range, and better fuel efficiency for our combat delivery mission when compared to legacy C-130s. Special mission variants of the C-130J conduct airborne psychological operations and offensive electronic warfare (EC-130J), weather reconnaissance (WC-130J), search and rescue (HC-130J), and special operations (MC-130J and AC-130J). Current modification efforts include center wing box replacement, large aircraft infrared countermeasures, and avionics upgrades to become compliant with ADS-B Out capabilities in order to meet emerging global airspace requirements as part of the C-130J Block 8.1 upgrade. The FY14 National Defense Authorization Act authorized multi-year procurement for the C-130J. As part of the multi-year contract, the Air Force is procuring 72 C-130Js (all variants) through FY18. The FY19 PB requests $15 million for C-130J RDT&E and $177 million for C-130J modification efforts. The FY19 PB also requests $33 million for HC/MC-130J RDT&E and $1,344 million for HC/MC-130J procurement and modification efforts.

VC-25B

The VC-25B program, formerly known as the Presidential Aircraft Recapitalization program, will replace VC-25A in 2024 via a highly-tailored acquisition program. The Air Force Presidential VC-25A fleet faces capability gaps, rising maintenance costs, and parts obsolescence as it reaches the end of its planned 30-year life cycle. The Air Force will deliver a new fleet of aircraft to enable the President of the United States to execute the duties of Head of State, Chief Executive, and Commander in Chief. The Boeing 747-8 commercial aircraft will be uniquely

modified to provide the President of the United States, staff, and guests with safe and reliable air transportation with the equivalent level of communications capability and security available in the White House. Modifications to the aircraft will include electrical power upgrades, a mission communication system, a medical facility, executive interior, a self-defense system, and autonomous ground operations capabilities. The FY19 PB requests $673 million to complete the preliminary design and begin engineering and manufacturing development for two Boeing 747-8 commercial aircraft.

Conclusion

The USAF remains committed to providing the most effective bomber and robust tanker forces possible to the nation. In the midst of the challenges ahead, we will aim to keep these programs on track and deliver these systems-not only as a vital capability to our forces-but also as a best value to our taxpayer. These systems will provide the future capabilities necessary to operate effectively in the warfighting environment of tomorrow.