



DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

OFFICE OF THE SECRETARY

22 November 2022

MEMORANDUM FOR DACOWITS

FROM: HQ USAF
1720 Air Force Pentagon
Washington DC 20330-1720

SUBJECT: DAF DACOWITS RFI 5

QUESTION #5

In 2018, the Committee recommended that, “The Secretary of Defense should require all Military Services, including the Reserve/Guard, provide servicewomen with gender appropriate and properly fitting personal protective equipment (PPE) and gear for both training and operational use.” Though the Military Services have made strides in improving PPE and combat gear for women, the Committee remains interested in the development, procurement, and timelines servicewomen must navigate to obtain gender appropriate and properly fitting PPE, combat gear, and uniforms.

The Committee requests a briefing from the Army, Navy, Marine Corps, Air Force, Space Force, National Guard, and Coast Guard on the following:

a. What process is currently being applied to evaluate the effectiveness of PPE and combat gear for women?

- To aid with studies, the Air Force Life Cycle Management Center (AFLCMC) utilizes an Anthropometric Lab specifically equipped to conduct a variety of anthropomorphic measurements and studies on all types of PPE, Aircrew Flight Equipment, and aircrew stations. All focused on determining the best fitment solution for all Airmen and Guardians.
- We work closely with the other military services to share anthropomorphic data to identify joint female fitment solutions where applicable.

i. Provide date of last anthropometric study used to develop PPE and combat gear for women.

- In 2019, AFLCMC’s Human Systems Division (AFLCM/WNU) conducted a study for Air Force Security Forces to better determine the proper fitment of body armor for female Defenders. The study utilized female volunteers and consisted of taking traditional body measurements by hand, body scans, and active movement scans with gear on to determine where modifications were required for better female fitment while also preserving the protective nature of the equipment.

- The study allowed AFLCMC/WNU to identify an interim body armor solution for female Defenders that could be procured quickly until the Army's Modular Scalable Vest (MSV) came online in FY21.

ii. Provide any additional technology/studies utilized to improve PPE and combat gear for women.

- AFLCMC/WNU utilizes 3D scanning technologies, in addition to traditional measurements techniques, to enable fitment for a wider anthropomorphic range. More importantly, this capability is shared with other services to develop the largest possible sample sizes.
- The creation of a baby bump for our female burn manikin, at Combat Capabilities Development Command Soldier Center, enabled us to characterize the performance of maternity fire-resistant clothing by quantifying injuries in accordance with the industry standards. The removeable front pregnancy panel, reflect the core maternity specs for the bust and the belly.

b. What is the current timeline and process to procure equipment via existing supply channels?

- When possible, AFLCMC/WNU will award Low-Rate Initial Production contracts to enable initial fielding of equipment. This gets capability to the field sooner and allows the Defense Logistics Agency (DLA) the standard 18-24 months to award larger production and sustainment contracts.

c. What is the current timeline and process to procure alternative equipment (e.g., unique fit) not obtainable via existing supply channels?

- The female body armor effort is an example of how we can quickly evaluate commercial off the shelf solutions to get capability to the field quickly. Female body armor took 20 months from contact award to fielding of 7,600 units to Active, Guard, and Reserve units. However, the speed at which we accomplish this is dependent upon the type of equipment needed and readily available solutions.
- To enable responsiveness to female fitment requirements, AFLCMC/WNU utilizes an Indefinite Delivery/Indefinite Quantity (IDIQ) contract vehicle dubbed Tri-Decide-Buy (TDB). TDB has 11 small businesses on the ready to find COTs solutions to fitment gaps found in fielded equipment.

d. Provide an update on modifications to or the development of gender specific PPE, combat gear, and uniforms since June 2018, to include:

i. Updates/modifications to maternity uniforms.

- The Air Force Uniform Office (AFUO) developed a three-phased approach to outfit the pregnant aircrew:

- Phase 1: Modified female flight suits in-house at the AFUO from August 2020 through June 2022 for female aircrew members.
- Phase 2: AFUO developed permanent one-piece maternity flight suit while developing materials for two-piece maternity flight suit. In June 2022, the AFUO completed Low-Rate Initial Production (LRIP) with 2,000 maternity uniforms fielded.
- Phase 3: AFUO completed wear testing of two-piece maternity flight suit and is finalizing product specification that will be used by DLA for contract award estimated for 4th quarter 2023.
- New maternity service dress shirts (long/short sleeve) include a) new polyester/cotton herringbone fabric, b) redesigned neckline and collar for improved fit/comfort, as well as replaced back pleat with darts for improved shape/fit, c) realigned buttons for improved modesty, d) lengthened shirt body for accommodation through all trimesters, as well as adding lengths for height differences, e) re-engineered armhole and shoulder for improved mobility.
- New maternity service dress ensemble (i.e., Maternity Wrap Dress, Maternity Dress Coat, slacks and skirt with a 360 degrees belly panel) will replace current maternity service dress ensemble (i.e., Maternity Jumper, slacks and skirt) o/a Sept 2023. New ensemble addresses documented issues with manufacturing, fit and appearance.

ii. Updates/modifications to grooming standards.

- All Airmen are authorized to wear hair in a natural color regardless of their natural born hair color.
- Increased hair bulk standards for women from 3.5 inches to 4 inches from scalp.
- Authorized ponytails, braids, and equivalent hairstyles.
- Hair pulled back and secured behind the head, radius will not exceed 6 inches from point where the hair is gathered i.e., no more than 6 inches to the left and 6 inches to the right, 12 inches total width and 6 inches protruding from where hair is gathered
- Bangs may touch eyebrow.
- Removed “faddish” and any reference to complexion (e.g., hair, nail polish, shoes, glasses, etc.).

iii. Information related to studies conducted to improve female flight suits.

- Air Force Uniform Office (AFUO) executed development of female-specific sizing/configuration of the Advanced Aircrew Combat Uniform – Female (A2CU-F) and facilitated rapid procurement of 16,000 two-piece female flight duty uniforms through DLA.

- Completed build of first-ever female burn manikin to test for flash flame burns.
- Provided 4,500 female aircrew with proper fitting uniforms for improved safety and comfort.
- Air Force, Army, and Navy will all use new female specific two-piece female flight suit.

e. Provide an onsite visual display that depicts new gender specific PPE and combat gear developed for women.

