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VH-92 Presidential Helicopter

The Marine Corps operates a fleet of helicopters to provide transportation for the President, Vice President, and other senior officials. These aircraft are known as “Marine One” when the President is aboard. The VH-92 program is intended to provide 23 new helicopters to replace the current fleet of aging VH-3D and VH-60N presidential helicopters.

Figure 1. VH-92A



Source: U.S. Marine Corps photo by Sgt. Hunter Helis.

An earlier replacement program, the VH-71, was terminated in 2009 following substantial cost growth and schedule delays. Following that termination, in FY2010, the Obama Administration proposed a new presidential helicopter program, called the VXX Presidential Helicopter Program, which became today’s VH-92 program.

Of the 23 VH-92 helicopters the Marine Corps plans to acquire, six were acquired through research and development funding for development and test prior to 2019, and four of those are to be outfitted to join the operational fleet. Congress appropriated \$649 million for six production VH-92s in FY2019 and \$641 million for another six in FY2020. The Administration’s FY2021 budget request proposes \$610 million for the final five helicopters. The total program acquisition cost, including development and procurement, is projected at \$4.9 billion, 5.6% less than initially estimated in 2014. Delivery of the 17 production VH-92s is scheduled to begin in April 2021.

Mission of Presidential Helicopters

Presidential helicopters are operated by a Marine Corps squadron called Marine Helicopter Squadron One (HMX-1), headquartered at Marine Corps Airfield Quantico, VA. The Department of Defense (DOD) states that HMX-1’s helicopters are “to provide safe, reliable, and timely transportation for the President, Vice President, Foreign

Heads of State, and other official parties as directed by the Director of the White House Military Office.” In addition to providing that transportation, presidential helicopters are equipped with specialized self-defense features and communications systems that permit the President to carry out critical command functions while aboard. Presidential helicopters need to be large enough to carry a certain number of passengers and mission equipment, but small enough to operate from the White House lawn.

The fleet of executive helicopters are known as “White Tops” for their distinctive paint scheme; other helicopters operated by HMX-1 that carry cargo and support staff are called “Green Tops.” VH-92s are being procured only for the White Top role.

Figure 2. VH-3D “Sea King”



Source: U.S. Air Force photo by Airman 1st Class Perry Aston.

Existing Presidential Helicopters

The existing presidential helicopter fleet includes 11 VH-3D helicopters that achieved Initial Operational Capability (IOC) in 1975, eight VH-60N helicopters that achieved IOC in 1989, and four test and training helicopters. The helicopters have had their service lives extended and have been regularly upgraded over time. (Examples of upgrades include more effective main rotor blades, improved communications, and better cockpit displays.)

Figure 3. VH-60N “Whitehawk”

Source: U.S. Navy photo by Photographers Mate 2nd Class Daniel J. McLain.

Program History and Particulars

The VH-71 program, an earlier attempt to replace the Presidential helicopter fleet, began in 2005 and was terminated on April 6, 2009, after schedule delays, requirements growth, and other issues led to the projected cost more than doubling from initial estimates. Those issues also resulted in public criticism from both 2008 presidential candidates.

The Navy, on behalf of DOD, subsequently established the VXX Presidential Helicopter Replacement Program. Initially, two teams expected to compete for the program, but the team of AgustaWestland and Northrop Grumman withdrew in 2013, leaving Sikorsky the only bidder. Subsequently, DOD accelerated the program by waiving the typical requirement for competitive prototyping. On May 7, 2014, the Navy awarded a fixed-price incentive development contract to Sikorsky for VH-92s.

The VH-92 had also been a contender for the previous program. Based on the S-92 civilian helicopter, each VH-92

seats 12 passengers in administrative lift configuration, with a crew of two.

The VH-92 prime contractor is Sikorsky Aircraft, a subsidiary of Lockheed Martin, in Stratford, CT. The flying airframes are to be built in Coatesville, PA, and subsequently modified in Stratford, after which mission systems are to be added in Owego, NY. Each VH-92 has two engines, made by General Electric of Lynn, MA.

The first VH-92 test aircraft was transferred to the government in July 2018, and a second in December 2018. They underwent operational assessment testing from March 1 to April 9, 2019. The main issues observed during the trial concerned the mission communications system aboard the VH-92 rather than issues with the aircraft itself. Rectification of the communications system issues is expected in late summer 2020. As a result, the development program has taken three months longer than planned, and the current program anticipates an April 2021 first fielding, with a full fleet in place by January 2023.

Another issue is the inability of the VH-92 to operate from the White House landing area without damaging the lawn. A variety of approaches, including changes in procedures, aircraft design, and lawn treatments, are being evaluated to mitigate this issue.

A Milestone C production decision, approving the VH-92 acquisition strategy, was announced on May 30, 2019. That strategy consists of three low-rate production lots to complete the program. The production contracts are to be firm-fixed-price.

VH-92 operational testing is expected to begin imminently, with completion scheduled for September 2020.

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