

Sentinel Weapon System

SENTINEL

The United States Air Force Sentinel weapon system is a critical modernization of the ground-based leg of the strategic nuclear triad, the bedrock of U.S. national security. Sentinel replaces the aging Minuteman III Intercontinental Ballistic Missile (ICBM) system, which has been in service for over 50 years.

The U.S. fielded the Minuteman III ICBM land-based leg of the nuclear triad in the 1960s. The system was only intended to have a lifetime of 10 years, and it has lasted much longer – largely due to the dedicated sustainment and modernization efforts of both industry and the government.

Delivering on this capability is a Northrop Grumman-led industry team, comprised of 500+ suppliers, responsible for designing and producing a technologically advanced ICBM system designed to stay on alert to 2075. Sentinel is modern, powerful and adaptable to the evolving threat.

(Current as of 19 March 2026)

COMMAND & LAUNCH INFRASTRUCTURE

Sentinel is a vast system-of-systems. Sentinel overhauls every aspect of the Minuteman III system, including everything from missiles and their launch silos, transport vehicles and computer networks, to brick-and-mortar buildings. While the LGM-35A missile brings unprecedented performance in accuracy, range, and flexibility, Sentinel's advanced infrastructure improves resiliency, maintainability and modularity to upgrade the system over its lifecycle.

The Sentinel network is the backbone of the weapon system. Moving from large, copper cable networks to a fiber optic network will improve security, speed, quantity and reliability of data moving throughout the nuclear command and control network.

KEY ELEMENTS

- 450+ LGM-35A missiles
- 450 hardened missile silos
- 24 launch centers
- 3 Wing Command Centers
- 16 Secondary Launch consoles
- 5,200 miles of fiber optics
- 100+ maintenance vehicles + support equipment
- 90 training devices

DIGITAL ECOSYSTEM

Sentinel is the nation's first ICBM system designed in a digital ecosystem. Northrop Grumman is creating the foundation for decades of performance through modular open systems architectures and improved reliability and maintainability. Sentinel's digital ecosystem has proved out design maturity of the missile early, helping us meet performance milestones.



PROGRAM PROGRESS

The Sentinel weapon system is one of the most rigorous and thoroughly tested defense programs in modern history. The significance of the deterrence mission, along with the complexity of a once-in-a-generation modernization effort, requires Northrop Grumman to ensure each component of the Sentinel program meets requirements and is resilient for the warfighter from Initial capability through 2075. This requires vigorous testing, not only in the digital space but in real life testing environments.

Sentinel is gaining momentum as it has already moved from digital designs into prototyping, assembly and test, paving the way for the first flight test. The U.S. Air Force and Northrop Grumman have successfully prototyped and tested each stage of the Sentinel missile, along with several critical components of the weapon system. Testing proves digital modeling, reduces risk, matures designs and helps accelerate the program to production and initial capability by the early 2030s. Below are a handful of examples where our digital designs have become tangible hardware and have tested successfully:

“The Sentinel program is moving forward with purpose and momentum. We have the right strategy, we are proving the technology, and we will deliver on our promise to provide our Airmen with the modern, credible system they need to deliver the unwavering deterrence our nation requires.”

- **General Dale White**

Director, Critical Major Weapons Systems
U.S. Air Force



Shroud Fly-off Test

October 2023

Tested and validated the design of the shroud, which is a protective cover for the missile's payload.



Stage I Static Fire

March 2023 - March 2025

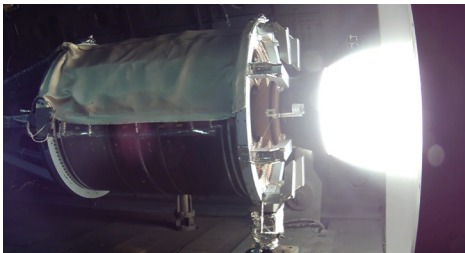
Validated the motor's design, paving the way for production.



Stage II Static Fire

January 2024 - July 2025

Assured the rocket motor meets the Air Force's exacting standards for quality and reliability.



Stage III Static Fire

March 2024

Validated the motor's design and performance.



Launch Support System (LSS) Critical Design Review (CDR)

October 2025

Paved the way for system build, test and qualification for Sentinel's digital command & control infrastructure.



First Assembled Booster

October 2025

Advanced design maturity and readiness ahead of flight testing.