

U.S. Army's Initial Maneuver, Short-Range Air Defense (IM-SHORAD) System

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The Current State of Army SHORAD

The Army [defines](#) SHORAD as:

Dedicated air defense artillery (ADA) and non-dedicated air defense capabilities that enable movement and maneuver by destroying, neutralizing or deterring low altitude air threats to defend critical fixed and semi-fixed assets and maneuver forces.

The Army summarizes the [recent history and current state](#) of Army SHORAD in the following section:

Short-range air defense artillery units were historically embedded in Army divisions, providing them with an organic capability to protect their critical assets against fixed-wing and rotary-wing aircraft. However, in the early 2000s, these ADA units were divested from the Army to meet force demands deemed more critical at that time. Decision-makers accepted the risk that threat aircraft might have on maneuver forces and other critical assets because we believed the Air Force could maintain air superiority. **Thus, the short-range ADA force post-2005 was reduced to two battalions of active component Avenger and counter-rocket, artillery and mortar batteries and seven National Guard Avenger battalions; none of which are organic divisional elements. Defense against air threats in maneuver forces is currently limited to that provided by organic weapons and maneuver personnel.**

Renewed Emphasis on SHORAD

Since 2005, there has been a dramatic increase in air and missile platforms that could threaten U.S. ground forces. The use of unmanned aerial systems (UASs) has increased exponentially, and UASs have been used successfully by both sides in the Russo-Ukrainian conflict. Furthermore, fixed-wing aircraft, attack helicopters, and cruise missiles continue to pose a significant threat to U.S. ground forces. In its 2015 report to the President and Congress, the [National Commission on the Future of the Army](#) noted, among things, there were unacceptable modernization shortfalls in SHORAD and those major shortfalls caused other concerns across a wide range of contingencies, including in Europe and the Korean peninsula.

IM-SHORAD

While Initial Maneuver, Short-Range Air Defense (IM-SHORAD) is primarily intended to defend maneuver forces against air threats, it also has the capability to engage a range of ground targets.

The Army has [requested](#) \$17 million in FY2019, \$72.7 million in FY2020, \$152 million in FY2021, \$443 million in FY2022, and \$291 million in FY2023 for IM-SHORAD procurement. IM-SHORAD is an [Army directed requirement](#) to address the urgent need to support Operation Atlantic Resolve to provide air and missile defense protection of Stryker and Armored Brigade Combat Teams. IM-SHORAD is the Army's "initial" solution, and new weapons systems and weapons carriers might be incorporated into future variants. The Army reportedly plans to procure 144 IM-SHORAD Systems, with the objective to equip the first and second battalions with 36 systems apiece by FY2021 and a third and fourth battalion with 36 systems each by FY2022. The [House](#) and [Senate](#) Armed Services Committees have recommended fully funding the Army's FY2019 IM SHORAD budget request. The [House Appropriations Committee](#) also recommends fully funding the FY2019 request, and the Senate Appropriations defense subcommittee has yet to markup its version of the FY2019 appropriations bill.

The Army reportedly categorizes IM-SHORAD as a [rapid acquisition system](#) and is not scheduled to go through a standard defense acquisition development cycle, but is to be developed under the Other Transaction Authority (OTA) contracting process. IM-SHORAD uses the M-1126 Stryker combat vehicle as its chassis. The weapons and radar packages will [reportedly](#) be put together by Leonardo DRS and then installed on the Stryker by General Dynamics Land Systems (GDLS)—the vehicle's original manufacturer. The Leonardo DRS–developed multi-purpose unmanned turret reportedly will include

- two Hellfire missiles capable of hitting ground and air targets;
- four Stinger missiles for less-well armored aerial targets in a launcher configured by Raytheon;
- a 30mm automatic cannon;
- a 7.62mm machine gun;
- an electronic warfare (EW) package to counter selected enemy systems; and
- a Rada (Israeli) multi-mission radar capable of tracking both ground and air targets.

Potential Issues for Congress

- The Army describes IM-SHORAD as an "initial" or "[short term](#)" capability to address the lack of air defense capability in maneuver forces. If the Army eventually opts to not adopt IM-SHORAD as the long-term solution for maneuver force air defense, what are the Army's subsequent plans for this potentially \$1 billion plus program? Would this capability be realigned to protect other Army assets, inactivated and placed in storage, or would it be made available to other countries under Foreign Military Sales?
- While IM-SHORAD has the capability to engage ground targets and threats, given the criticality of the potential air threat to maneuver forces and the somewhat limited number of IM-SHORAD systems available, is having a ground attack capability in the Army's best interest?
- Will the wheeled IM-SHORAD system have sufficient mobility and survivability to provide air defense protection to Armored Brigade Combat Teams that consist primarily of heavily armored and tracked M-1 Abrams tanks and M-2 Bradley Infantry Fighting Vehicles?
- Do IM-SHORAD's Stinger missiles have sufficient capability to destroy armored attack helicopters and ground attack fixed-wing aircraft or would some other type of weapon be better suited to address these "heavier" threats? If so, could another weapon be easily integrated into the current IM-SHORAD configuration?
- While IM-SHORAD has a limited organic onboard capability to detect, track, and engage enemy air threats, it is also expected to be part of the Army's overall integrated air and missile defense architecture. As such, how will IM-SHORAD integrate with and depend upon the Army's Integrated Air and Missile Defense Battle Command System (IBCS)—a program that has experienced noteworthy [developmental challenges](#)?
- What are some of the benefits and risks associated with the Army's decision to procure IM-SHORAD under an Other Transaction Authority (OTA) contracting process?