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Program Executive Office  
Missiles And Space

# SHORT AND INTERMEDIATE EFFECTORS FOR LAYERED DEFENSE (SHIELD) PROJECT OFFICE

Huntsville Aerospace Marketing Association (HAMA)

12 JULY 2024

**DISTRIBUTION STATEMENT A:** Approved for public release; distribution is unlimited. PEO-24-081.



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Project Manager  
SHIELD Project Office



SHIELD SS 300 as of 01 April 2024



U.S. ARMY

# SHIELD MISSION AND VISION



## Mission Statement:

SHIELD enables US and Allied Forces' layered defense against Air and Missile threats by developing, integrating, fielding, and sustaining superior effector systems using innovative acquisition strategies to deliver capability at the speed of need.

## Vision Statement:

The SHIELD team attracts, develops and retains adaptive, cross-trained acquisition professionals determined to shape evolutionary, modular and integrated effector systems within a joint multi-domain fires architecture.



44 PROGRAMS OF RECORD

15 ACAT I 10 ACAT II 12 ACAT III

1 Pre-Acquisition Program

6 Middle Tier Acquisition



IFCN Relay

RIG-360



PATRIOT GSE



FAAD C2



IBCS



AMDPCS



IBCS EOC



COL Hill



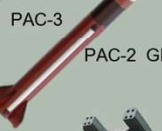
COL Tate



COL Lunoff



PAC-3 MSE



PAC-2 GEM-T



Avenger



M-SHORAD Inc-1



Stinger



NASAMS



AN/TPQ-53



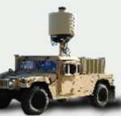
Sentinel A3



LTAMDS



Sentinel A4



AN/TPQ-50



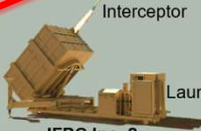
ALPS



RRRP



LPWS



IFPC Inc. 2



IDDS-A

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# PORTFOLIO



A / B Plug & Fight Interface Kits



C-UAS



Gulf Defense System



COL Yelverton



Theater Sense & Warn



Integrated Development Environment



Mr. Holliday



PrSM



GMLRS



MLRS



ATACMS



HIMARS



PDS & BOC



Effectors SM-6 & Tomahawk



COL Farrell



Mr. Mitchell



BOC



JAGM



JAVELIN



Guided & Unguided Rockets



Transporter Erector Launcher (TEL)

All Up Round (AUR)



Mr. Riedel



CCMS-H



TOW 2 M220/ITAS



SPIKE NLOS



IBAS



M299 Launcher



LMAMS



M260 / M261 Launchers



LWCLU



PFM



CWS

## SYSTEM ENGINEERING INTEGRATED FIRES



**MISSION:** Develop, field, and sustain Defensive and Offensive Integrated Fires Capabilities in support of all phases of Joint and All-Domain operating environments by 2030 and continuing beyond



# LOWER TIER INTERCEPTORS (LTI) AND LAUNCHERS



## System Description & Capabilities

- The PATRIOT Family of Missiles (PfoM) provide critical air and missile defense for US and coalition assets against an array of enemy threats: including tactical ballistic missiles, cruise missiles, and aircraft
- The M903 launcher can launch the entire PfoM—including the PATRIOT Advanced Capability-2 (PAC-2) Guidance Enhanced Missile-Tactical and the PATRIOT Advanced Capability-3 (PAC-3) Cost Reduction Initiate/Missile Segment Enhanced to meet the mission
- Integrates with the PATRIOT, Integrated Air and Missile Defense Battle Command System and THAAD weapon systems providing capability to current and future forces
- Critical to Joint All-Domain Operations, specifically in competition, for countering adversary Anti-Access / Area Denial by defending forces against tactical missiles and advanced air breathing threats
- Allied and Partner interoperability, critical to successful system employment for critical asset defense

### Prime Vendor(s):

- Lockheed Martin
- Raytheon

### Recent Events:

- **1QFY2023:** PDB-8.1 OT-3 flight test
- **4QFY2023:** PDB-8.1 DT-1d flight test
- **1QFY24:** Second Source Exciter Program Kickoff
- **1QFY24:** PATRIOT Romania Live Fire Exercise 2
- **2QFY2024:** Completion of Bahrain M903 Launcher Station Production

### Near Term Events:

- **3QFY24:** FY24-26 LM production contract award
- **3QFY24:** Raytheon Launcher production contract award
- **3QFY24:** PAC-3 FSP flight test
- **1QFY25:** Increase annual missile production



# INDIRECT FIRE PROTECTION CAPABILITY INCREMENT 2 (IFPC INC 2)



## System Description & Capabilities

- The IFPC Inc 2 is a mobile, ground-based weapon system designed to defeat Cruise Missiles, Group 2 and 3 Uncrewed Aerial Systems, and other aerial threats
- The Army's Sentinel A4 radar serves as the IFPC Inc 2 Platoon sensor, while the Army's Integrated Air and Missile Defense Battle Command System (IBCS) provides the IFPC Inc 2 Platoon Mission command functionality as well as Service and Joint connectivity

### Prime Vendor(s):

- Dynetics

### Recent Events:

- **1QFY24:** Contractor Risk Reduction Flight Demonstration
- **1QFY24:** USG Accepts First Launchers
- **2QFY24:** Began USG Qualification Testing
- **2QFY24:** Began USG Developmental Testing

### Near Term Events:

- **2-3QFY24:** USG Qualification Testing
- **2QFY24-1QFY25:** USG Developmental Testing
- **3QFY24:** New Equipment Training
- **4QFY24:** Integrated Fires Test Campaign 24 Collective Training
- **3-4QFY24:** Contractor Insensitive Munitions Testing
- **4QFY24-1QFY25:** Operational Assessment





# MANEUVER-SHORT RANGE AIR DEFENSE INCREMENT 1 (M-SHORAD INC. 1)



## System Description & Capabilities

- M-SHORAD Battery in support of Multi-Domain Operations
- M-SHORAD Inc. 1 delivers the capability to provide air defense protection to maneuvering formations, which allows Brigade Combat Team's freedom of maneuver
- Defeat Rotary Wing (RW), Fixed Wing (FW) limited to threat close air support (CAS) capable aircraft and Group 3 Uncrewed Aerial System (UAS) threats
- Onboard radar sensor supports Independent or Autonomous Method of Control
- Interoperable with Forward Area Air Defense Command, Control (FAAD C2) for mission command

## Prime Vendor(s):

- General Dynamics Land Systems

## Recent Events:

- **2QFY24:** A Battery NET/NEF
- **2QFY24:** GDLS PMR
- **2QFY24:** B Battery NET/NEF
- **2QFY24:** M-SHORAD/ Regimental Commander's Sync
- **2QFY24:** Notification of ARSTRUC decision (ARNG BN 5-8)
- **2QFY24:** MTA-RF ADM signed by AAE
- **2QFY24:** DIVAD WFF

## Near Term Events:

- **3QFY24:** UMR update (SW v1.9)
- **3QFY24:** C Battery NET/NEF
- **3QFY24:** Joint Capabilities Board and JROC Brief
- **3QFY24:** Operational Utility Assessment (OUA), Poland



# MANEUVER-SHORT RANGE AIR DEFENSE INCREMENT 3 (M-SHORAD INC. 3)



## System Description & Capabilities

- Maneuver-Short Range Air Defense (M-SHORAD) Increment 3 provides Next Generation Short Range Interceptor (NGSRI) with increased range and lethality over Stinger
- Increment 3 will also integrate a new 30mm Multi-Mode Proximity Airburst (MMPA) ammunition (developed by PM Maneuver Ammunition Systems) onto the M-SHORAD platform
- NGSRI program will utilize the Middle Tier of Acquisition (MTA) Rapid Prototyping pathway to achieve Initial Operational Capability in FY28
- Compatibility with the existing M-SHORAD Inc.3 platform/SVUL; must maintain Soldier Portable Capability for dismounted air defense; 30mm capability to counter smaller UAS (Groups 1-2)

### Prime Vendor(s):

#### OTA Competition Awardees:

- Raytheon
- Lockheed Martin

### Recent Events:

- **1QFY24:** DMR 1 and Soldier Touchpoint 1 w/ Raytheon
- **2QFY24:** Lockheed Martin IBR
- **2QFY24:** Raytheon IBR

### Near Term Events:

- **3QFY24:** Design Maturity Reviews
- **3QFY24:** Program Management Reviews
- **3QFY24-1QFY25:** Subsystem Technology Demonstration
- **2QFY25-4QFY25:** System-Level Technology Demonstration
- **FY26-27:** Developmental Testing
- **4QFY27:** Operational Assessment
- **1QFY28:** Milestone C and transition to Major Capability Acquisition



# STINGER MISSILE



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## System Description & Capabilities

- Provide maneuver forces and point defense assets with low-altitude air defense against Fixed (FW) and Rotary Wing (RW) aircraft, Uncrewed Aerial Systems (UAS), and Cruise Missiles (CM)
- Army's only Short-Range Air Defense (SHORAD) missile
- Fire and Forget; Combat proven
- Infrared and Ultra-Violet (IR/UV) guidance
- "Wooden round" – No maintenance
- Employed for Homeland Defense

## Prime Vendor(s):

- Raytheon

## Recent Events:

- **4QFY23:** Awarded \$14.1M to Lockheed Martin to replace government-furnished test equipment
- **1QFY24:** Received Tranche 19 Funding; \$41.2M for missiles / \$39M for obsolescence and test equipment
- **1QFY24:** Restart Block I SLEP at McAlester Army Ammunition Plant, OK
- **2QFY24:** Completed RMP Missile Refurbishment effort at MCAAP
- **2QFY24:** Definitize Raytheon production contract

## Near Term Events:

- **3QFY24:** Stinger PROX Conditional Materiel Release
- **4QFY25:** Stinger Supplemental production delivery start (468 Blk 1s)
- **4QFY25:** Missile Production Capacity increase from 40 to 60 per month





## System Description & Capabilities

- Avenger Air Defense System is a lightweight, highly mobile, short-range, surface-to-air missile and gun weapon system mounted on an M1097 series High Mobility Multi-Purpose Wheeled Vehicle (HMMWV)
- Modification program is needed to ensure Avenger maintains operational capabilities and is sustainable to FY31, when Avenger leaves the force
- Equipped with 8 Stinger Missiles, .50 Cal machine gun; Day/Night Target Tracking, Shoot on the move capability and adverse weather capable
- A portion of the fleet has Digital Slew-to-Cue (STC) to enable faster target detection and engagement

### Prime Vendor(s):

- Boeing

### Recent Events:

- **2QFY24:** AEC Safety Release for the Avenger A-PNT Assessment Exercise (PNTAX)
- **2QFY24:** Avenger Mod-SLEP Fielding 1/57<sup>th</sup> ADAR EUCOM

### Near Term Events:

- **2QFY24:** A-PNT prototype hardware delivery
- **3QFY24:** Avenger AFCC and TC SMR
- **3QFY24:** NCR AFCC and TC SW Test Support
- **4QFY24:** 6-52 ADA Camp Casey AFCC Fielding
- **4QFY24:** A-PNT PNTAX



# LAND-BASED PHALANX WEAPON SYSTEM (LPWS)



## System Description & Capabilities

- LPWS is a Point Defense System designed to intercept inbound threats via a 310-degree arc using a 20-mm Gatlin gun capable of onboard target acquisition and fire control
- Integrated search and track radars and a Forward Looking Infrared (FLIR) camera detect and track a wide range of indirect fire and Uncrewed Aerial System threats
- Provides short-range Counter Uncrewed Aerial System (C-UAS) and Counter- Rocket, Artillery, Mortar (C-RAM) capability to the Indirect Fire Protection Capability/Avenger battalion

### Prime Vendor(s):

- Raytheon

### Recent Events:

- **2QFY24:** 3-133rd Texas Army National Guard handover to 1-118th Georgia Army National Guard of Task Force Defender Mission
- **2QFY24:** 1-144th FA California National Guard Mission Orientation Briefing
- **2QFY24:** 2-218th FA Oregon National Guard Mission Orientation Briefing

### Near Term Events:

- **3QFY24:** LPWS Software Spiral 7.1 record test
- **3QFY24:** 2-44th ADA Table VIII Certification
- **3QFY24:** 2-44th ADA Table XII Gunnery
- **4QFY24:** Award L3 Harris FLIR contract
- **4QFY24:** Commence 2-218th FA Oregon/ 1-144th FA California combined National Guard deployment training



# FUTURE ACTIVITIES

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## Lower Tier Future Interceptor (LTFI)



- LTFI provides the AIAMD System of Systems (SoS) long range defense of critical assets against current and emerging threats
- LTFI complements the Army's inventory of interceptors in the Joint and Army air and missile defense architectures
- Sep 2023: AROC approved the LTFI Abbreviated Capabilities Development Document (A-CDD)

## IFPC Inc 2 - 2<sup>nd</sup> Interceptor



- The IFPC 2nd Interceptor will provide increased capability against advanced threats, to include in priority order Supersonic Cruise Missiles, Groups 2 & 3 Uncrewed Aerial Systems, and Large Caliber Rockets
- Program will consist of an interceptor in an AUR-M, Weapons Interface Controller, Software (SW), Magazine Interface Controller, and Engagement Calculator SW. IFPC 2nd Interceptor Acquisition Shaping Panel 2 with the Army Acquisition Executive is scheduled for 9 May 2024.

## M-SHORAD Increment 4



- Proposed M-SHORAD Light Version
- Requirements are under development with user community
- Timelines are currently TBD

## M-SHORAD Increment 5



- Proposed M-SHORAD Heavy Version
- Requirements are under development with user community
- Timelines are currently TBD



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# QUESTIONS

