

## Joint Assault Bridge (JAB)

### Executive Summary

- The Army conducted the Joint Assault Bridge (JAB) IOT&E at Fort Bliss, Texas, April 2 – 29, 2019. Poor system reliability limited availability of JAB systems during the IOT&E. The result was insufficient data for DOT&E to determine operational effectiveness.
- The Army is developing a plan to correct deficiencies identified during and following the IOT&E. The Army has scheduled a second IOT&E in 3QFY20 at Fort Riley, Kansas.
- In FY19, the Program Office implemented several JAB design changes to mitigate some of the vulnerabilities identified during the JAB LFT&E in 2018. The Army is on schedule to start follow-on live fire testing in 1QFY20 to evaluate the effect of these changes on vehicle survivability.

### System

- The JAB replaces the Wolverine and M48/M60 chassis-based Armored Vehicle Launched Bridge systems in the Armored Brigade Combat Team (ABCT) Brigade Engineer Battalions and in Mobility Augmentation Companies supporting ABCT operations.
- The JAB was designed to support M1 Abrams-equipped units in Marine Air Ground Task Forces (MAGTF). The Army assumed the lead for the JAB program in 2010 after the Marine Corps canceled the program due to cost and performance concerns. The Marine Corps remains involved and is seeking to procure 28 JAB systems in conjunction with the Army.
- The design concept includes an M1A1 Abrams chassis with M1A2 heavy suspension, and a contractor-designed, integrated hydraulic bridge launch mechanism for the Military Load Classification-95 Bridge.
- The Services intend JAB to improve survivability and provide improved mobility ensuring freedom of maneuver, improved



supportability, and enabling use of common battlefield communication suites.

- The JAB is an Acquisition Category II program. The overall Acquisition Objective for JAB is 365 items. The Army will purchase 337 assets. The Marine Corps will purchase 28 assets.

### Mission

Commanders employ JAB to enable the ABCT and MAGTF to close with and destroy the enemy by maneuvering over natural and man-made obstacles that would otherwise prevent freedom of maneuver.

### Major Contractor

Leonardo DRS Technologies, Inc. – St. Louis, Missouri

### Activity

- All testing was conducted in accordance with the DOT&E-approved Test and Evaluation Master Plan and test plans.
- The Army conducted the JAB IOT&E at Fort Bliss, Texas, April 2 – 29, 2019. The test unit consisted of Armored and Engineer elements from 2nd Brigade, 1st Armored Division. Test events included combined-arms and in-stride breaching operations. The Army conducted a cybersecurity Adversarial Assessment.
- The JAB LFT&E program completed in March 2018, and included Automatic Fire Extinguishing System tests, armor tests, controlled damage experiments, components/system-level and full-up system-level tests

against underbody blast mine threats and direct- and indirect-fire threats.

- In FY19, the Program Office developed several vehicle design changes to mitigate some of the vulnerabilities found during the LFT&E program. The Army is expected to complete the follow-on testing in 1QFY20 to determine the effect of these changes on vehicle survivability and force protection.

### Assessment

- Poor system reliability limited availability of JAB systems during the IOT&E. The result was insufficient data for DOT&E to determine operational effectiveness.

# FY19 ARMY PROGRAMS

- The Army is developing a plan to correct deficiencies identified during and following the IOT&E. The Army has scheduled a second IOT&E in 3QFY20 at Fort Riley, Kansas. Preliminary JAB survivability analysis identified several vehicle design vulnerabilities that could adversely affect crew survivability and the ability of the unit equipped with JAB to continue to execute their mission. The Program Office is working with the vendor to develop and incorporate design changes intended to improve the JAB survivability in combat.
- A combined operational and live fire report is planned for 2QFY20. The details of the survivability and force protection

evaluation of the JAB will be available in the classified section of the report.

## **Recommendations**

The Army should:

1. Continue to correct vulnerabilities identified in live fire test to increase the ability of the unit equipped with JAB to continue to conduct its mission after a combat engagement.
2. Correct deficiencies identified during IOT&E and validate those fixes and mitigation techniques in test.