



# PROJECT MANAGER FORCE PROJECTION

## 2012 ENFORCE

COL Eric Fletcher  
Project Manager,  
Force Projection

UNCLASSIFIED: Distribution Statement A. Approved for public release.

# Report Documentation Page

Form Approved  
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE <b>16 APR 2012</b>		2. REPORT TYPE <b>Briefing</b>		3. DATES COVERED <b>01-04-2012 to 15-04-2012</b>	
4. TITLE AND SUBTITLE <b>2012 Enforce Project Manager Force Projection Briefing to ENFORCE</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) <b>Eric Fletcher</b>				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>U.S. Army TACOM,6501 East Eleven Mile Rd,Warren,Mi,48397-5000</b>				8. PERFORMING ORGANIZATION REPORT NUMBER <b>#22803</b>	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) <b>U.S. Army TACOM, 6501 East Eleven Mile Rd, Warren, Mi, 48397-5000</b>				10. SPONSOR/MONITOR'S ACRONYM(S) <b>TACOM</b>	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S) <b>#22803</b>	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES <b>Engineering Forces (ENFORCE) Conference at Fort Leonard Wood, MO</b>					
14. ABSTRACT <b>The LAGCC is a rapidly deployable/retrievable family of bridging assets and provides the capability to maintain freedom of maneuver through high tactical mobility.</b>					
15. SUBJECT TERMS <b>LOCB, DSB, BEB, IRB, CBT, MGB, IBC, BAP, LAGCC, M9ACE, JAB, AVLB, ABV, REBS, WOLVERINE, LOCB(ONS)</b>					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Public Release</b>	18. NUMBER OF PAGES <b>12</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			



# PEO CS&CSS Organization

UNCLASSIFIED

~350 Systems



**Deputy PEO**  
Mr. Thomas Bagwell, Jr.



**Program Executive Officer**  
Mr. Kevin Fahey



**Deputy PEO AL&T**  
COL Robert Schumitz



116 Systems

**Force Projection**

PM: COL Eric Fletcher  
DPM: Mr. Steve Roberts



87 Systems

**Joint Combat Support Systems**

PM: COL William Boruff  
DPM: Mr. Dennis Mazurek



50 Systems

**Mine Resistant Ambush Protected Vehicles**

PM: Mr. Carl Owens  
DPM: COL Jeffrey Carr



88 Systems

**Tactical Vehicles**

PM: COL David Bassett  
DPM: Mr. Tony Shaw



PdM Bridging  
LTC Benny Shepard



PdM Armored Security Vehicles  
LTC Steve Wall



PdM MRAP-ATV  
LTC Kevin Geisbert



PdM (s) Joint Light Tactical Vehicles  
Mr. Mark McCoy (USA)  
LtCol Michael Burks (USMC)



PdM Combat Engineer/Material Handling Equipment  
LTC Nelson Glenn Kerley, Jr.



PdM Sets, Kits, Outfits & Tools  
LTC Eric Rannow



PdM Joint Logistics  
LTC John O'Neill



PdM Light Tactical Vehicles  
Mr. Dennis Haag



PdM Force Sustainment Systems  
LTC James Tuten



PdD Test, Measurement, & Diagnostic Equipment  
Mr. George Mitchell



PdM MRAP Vehicle Systems  
LTC Andrew Oderkirk



PdM Medium Tactical Vehicles  
LTC Shane Fullmer



PdM Petroleum & Water Systems  
COL Dariel Mayfield



PdD Horizontal Technology Integration  
Mr. Fred Williams



PdM Assured Mobility Systems  
Mr. Kenneth Wojcik



PdM Heavy Tactical Vehicles  
LTC Paul Shuler



PdD Army Watercraft Systems  
Ms. Shannon Tighe



PdD Non Standard Vehicles  
LTC Graham Compton



# PEO CS&CSS Portfolio

UNCLASSIFIED

## 350+ Systems



### Force Projection

#### Bridging

- Bridges / Bridge Erection Boat
- Bridge Transporters
- M9 Armored Combat Earthmover / Assault Breacher Vehicle / Joint Assault Bridge

#### Combat Engineer/Material Handling Equipment

- Container Handling Equipment
- Loaders
- Cranes
- Dozers
- Excavators

#### Force Sustainment Systems

- Cargo Airdrop Systems
- Combat Feeding Systems
- Field Service Systems
- Force Provider & Base Camps
- Shelter Systems & Heaters
- Mortuary Affairs Equipment

#### Petroleum & Water Systems

- Fueling Systems
- Water Systems

#### Army Watercraft Systems

- Causeway Systems
- Barge Derricks
- Tugs
- High Speed Vessels
- Lighterage



### Joint Combat Support Systems

#### Sets, Kits, Outfits & Tools

- Sets, Kits & Outfits
- Engineer Combat Support Eq
- Diving Equipment
- Shelter Mounted Sets, Kits & Outfits
- Shop Set Equipment

#### Test, Measurement, & Diagnostic Equipment

- Integrated Family of Test Equipment (IFTE) At Platform Test Systems
- Common Embedded Diag.
- Calibration Sets (CALSETS)
- IFTE Off Platform Automatic Test Systems
- General Purpose Electronic Test Equipment (GPETE)
- Maintenance Support Device (MSD-V3)
- Next Generation Automatic Test Station (NGATS)

#### Non-Standard Vehicles

- Light Tactical Vehicles (LTV)
- Medium Tactical Vehicles (MTV)
- Sport-Utility Vehicles (SUV)
- Buses
- Trailers

#### Armored Security Vehicles

- Armored Security Vehicle



### Mine Resistant Ambush Protected Vehicles

#### Assured Mobility Systems (Army Program)

- Buffalo (MPCV)
- JERRV/Cougar
- Husky (Vehicle Mounted Mine Detector (VMMD))
- RG31
- RG-33/Panther (MMPV)

#### MRAP All Terrain Vehicle (Joint Program)

- M-ATV

#### MRAP Vehicle Systems (Joint Program)

- Navistar MaxxPro
- GDLS RG-31
- BAE-TVS Caiman
- BAE RG-33 SOCOM
- BAE RG-33 SOCOM AUV
- BAE HAGA
- BAE RG-33L
- FPI Cougar (Cat I & II)
- FPI Buffalo

#### Joint Logistics & Sustainment (Joint Program)

- MRAP/M-ATV Logistics



### Tactical Vehicles

#### Joint Light Tactical Vehicles

- Technology Development phase
- 3 prototype contracts
- Engineering & Manufacturing Development (EMD) Phase
- MS B-2011

#### Light Tactical Vehicles

- HMMWV Family of Vehicles
- UAH Safety Enhancements
- HEAT Trainer

#### Medium Tactical Vehicles

- Family of Medium Tactical Vehicles (FMTV)
- Tractor Trailer

#### Heavy Tactical Vehicles

- Heavy Expanded Mobility Tactical Truck (HEMTT)
- M915 Family of Vehicles & Trailers
- Heavy Equipment Transport (HETS)
- Container Handling Unit (CHU)
- Palletized Load System (PLS)
- Joint Recovery And Distribution System (JRADS)



# PM Force Projection Support to MSCoE

UNCLASSIFIED

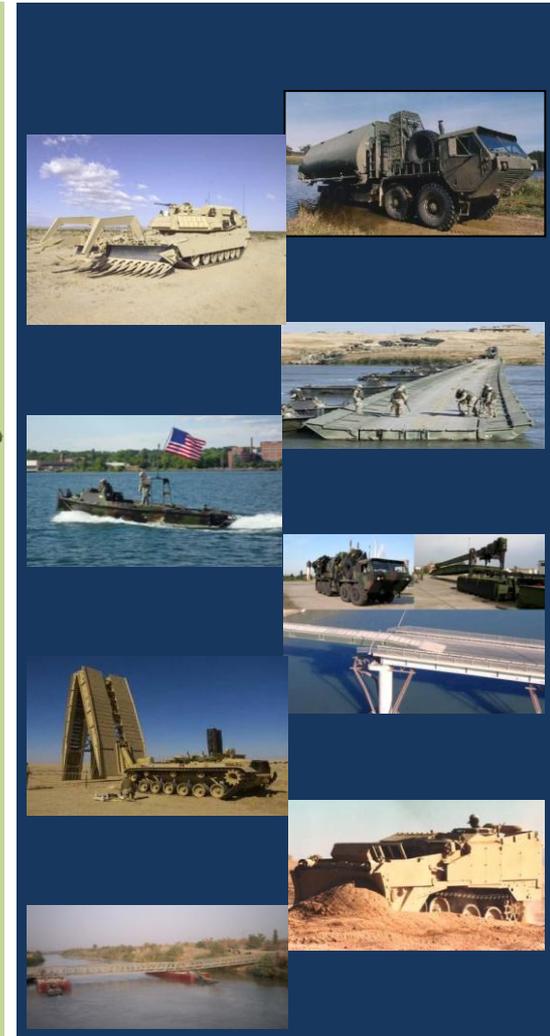
## PdM CE/MHE



## PdM SKOT



## PdM Bridging





# Product Manager Bridging

PM – LTC Benny Shepard

DPM – Don Paskulovich



LOCB • DSB • BEB • IRB • CBT • MGB • IBC • BAP • LAGCC • M9ACE • JAB • AVLB • ABV • REBS • WOLVERINE • LOCB (ONS)





# Bridging ~ *Product Manager*

UNCLASSIFIED



## *Product Manager*

**LTC Benny L. Shepard Sr.**

*Deputy PM:* Mr. Don Paskulovich

### MISSION

The PM Bridging Team is committed to develop, acquire, field, and sustain, gap crossing solutions that meet the Warfighters requirements.

### VISION

The recognized world class leader in providing innovative cap crossing capability to the Warfighter.

### SYSTEMS

- Assault Breacher Vehicle (ABV)
- Armored Vehicle Launched Bridge (AVLB)
- Bailey Bridge
- Bridge Adapter Pallet (BAP)
- Bridge Erection Boat (BEB)
- Common Bridge Transporter (CBT)
- Dry Support Bridge (DSB)
- Improved Boat Cradle (IBC)
- Improved Ribbon Bridge (IRB)
- Joint Assault Bridge (JAB)
- Line of Communication Bridging (LOCB)
- Medium Girder Bridge (MGB)
- M9 Armored Combat Earthmover (ACE)
- Rapidly Emplaced Bridging System (REBS)
- Standard Ribbon Bridge (SRB)
- Wolverine Heavy Assault Bridge





# Assault Bridging Systems

UNCLASSIFIED



**Joint Assault Bridge (JAB):** Provide the Army Heavy Brigade Combat Team with a survivable, deployable and sustainable heavy assault bridging capability.

**Performance:** Mobility, transportability, survivability and force protection similar to M1A1 Abrams tank . Utilizes the 19 meter, MLC70 Armored Vehicle Launched Bridge (AVLB) scissor bridge. Crew: 2 Soldiers.



**Assault Breacher Vehicle (ABV):** Provide an in-stride breaching capability to the HBCT that can keep pace with the armored maneuver force and provide force protection for a 2-man crew. Breach complex and explosive minefields and obstacle belts to allow follow-on of all HBCT assets through the breach. New capability in HBCT 2<sup>nd</sup> Generation Engineer Companies

**Performance:** M1A1 chassis, with Tiger Engines, Linear Demolition Charge systems (capable of firing two MICLICs), Lane Marking Systems (LMS), Front End Equipment (Full Width Mine Plow, Combat Dozer Blade), Integrated Vision System (IVS) for day / night . Crew: 2 Soldiers.



**Rapidly Emplaced Bridge System (REBS):** Provide expedient, highly mobile gap-crossing capabilities to Stryker Brigade Combat Teams (SBCT) in theater, supporting strategic military assault and tactical traffic.

**Performance:** Has a 4.3 meter roadway width and requires little or no site preparation. 13 meter gap span. Supports up to MLC 50 caution wheeled/tracked vehicles. Launch Time: 10 minutes (daylight). Crew: 2 Soldiers (Build or Retrieve)



**M104 Wolverine Heavy Assault Bridge:** The M104 Wolverine is an armored vehicle designed to carry, emplace, and retrieve an assault bridge capable of crossing 24 meter gaps and supporting loads up to the M1A2 SEP main battle tank.

**Performance:** Wolverine is an M1A2 SEP tank chassis with a bridge launch mechanism instead of a turret, it shares virtually all of the parent vehicle's speed, mobility and survivability. Launch time: < 5 minutes, retrieval time < 10 minutes. Crew: 2 Soldiers



**Armored Vehicle Launched Bridge (AVLB):** Provides the heavy armor maneuver force an in-stride assault bridging capability for natural and man-made gaps of up to 18 meters.

**Performance:** M48A5 or M60 A1 chassis, 19 meter scissors launched bridge (MLC 60 and MLC 70 versions), MLC 70 bridge being upgraded to MLC 85. Chassis with the Hydraulic and Electrical Upgrade (HEU) provide faster launch and retrieve times, increased reliability & maintainability, eliminates hydraulic system obsolescence problems. Crew: 2 Soldiers



**M9 Armored Combat Earthmover (ACE):** Mobility, Counter mobility, Survivability digs fighting positions, breaches berms, prepares anti-tank ditches, prepares combat roads and access routes, removes roadblocks.

**Performance:** Highly mobile, fully tracked armored earthmover. Hull is welded aluminum. Front of vehicle features an 8.7 cubic yard bowl, apron, and dozer blade. Utilizes hydro-pneumatic suspension. Crew: 1 Soldier





# Tactical Bridging Systems

UNCLASSIFIED



**M1977A2 Common Bridge Transporter (CBT):** The CBT is used to transport, launch and retrieve all float bridge equipment and transport all dry spanned bridging equipment. Also transports the Rapidly Emplaced Bridge System (REBS).

**Performance:** HEMTT mobility and C-130 Transportable. Launch time for float bridge < 1 minute. Launch time for bridge erection boat < 5 minutes. Interfaces with the Palletized Load System Trailer (PLST) with Draw bar extension, Bridge Adapter Pallet (BAP), Improved Boat Cradle (IBC) and the M3 Container Roll-in/Out Platform (CROP) for multi-mission flexibility.



**Bridge Erection Boat (BEB):** Provides propulsion and maneuver capability during wet gap crossings. Assembles and propels ribbon bridge rafts. It also provides short-term anchorage, (holding full-closure bridges in position for maneuver force crossings), soldier transport, diving and river patrol operations.

**Performance:** 27 foot aluminum hull boat (new design dependent), twin engine, twin jet propulsion. Launched and retrieved from CBT using an improved boat cradle. Launch time < 5 minutes. Provide temporary anchorage using IRB and/or SRB. Crew: 2 Soldiers (operator and crewman)



**Improved Ribbon Bridge (IRB):** Provide a continuous roadway of up 210 meters or raft capable of crossing assault or tactical vehicles within the maneuver force over non-fordable wet gaps. The bridge bays (interior and ramp) are the major components of the IRB System.

**Performance:** The IRB system is a modular, aluminum alloy, continuous floating raft/bridge system consisting of Interior & Ramp Bays that are transported, launched and retrieved by a CBT with a Bridge Adapter Pallet. ~ One bay is 22-foot section of bridge



**Dry Support Bridge (DSB):** The DSB system provides a highly mobile, truck-mounted (CBT), horizontally launched bridge system that supports up to MLC 100 (wheeled) or MLC 80 (tracked) vehicles over gaps up to 40 meters.

**Performance:** Requires little or no site preparation. Has a 4.3 meter roadway width. Launch time is under 90 minutes. Crew: 8 Soldiers (build or retrieve)



**Line of Communication Bridge (LOCB):** Restore and Maintain Line of Communication routes in theater, supporting both civilian and military traffic.

**Performance:** 0 – 300 meter (m) gap span, both dry gap and float configurations and a 4.2 meter roadway width. MLC 85(track)/100(wheel) capacity, launch time is 50 m/8 hours and requires MHE or power tools to construct. Transportable by land, sea or air, including US military cargo aircraft. Crew: 29 Soldiers





## **Bridging Future Opportunities**





# Light Assault Gap Crossing Capability (LAGCC)

UNCLASSIFIED

## Mission

The LAGCC is a rapidly deployable/retrievable family of bridging assets and provides the capability to maintain freedom of maneuver through high tactical mobility.

**General:** The LAGCC enhances the performance of all vehicles in the IBCTs and the MACs by providing the only tactical employed gap crossing capabilities. Supports decisive actions in terrain ranging from open to urban and complex. There are no current systems organic to the BCTs or MACs that would provide these capabilities.

- **Type I: (*infantry foot bridge*)**

- Dry span: 20m(T) – 50m(O); Wet span: 30m(T) - 50m(O)
- Load capacity to support the crossing of 3ea Soldiers (1,200 lbs)
- Launched/retrieved with a crew of 6ea soldiers within 30 minutes

- **Type II (*vehicle launched, light assault bridge*)**

- Span 1.5m – 8m (T); 1.5m – 16m (O)
- Load capacity of MLC 50(T) – 70(O)
- Launched/retrieved with a crew of 3ea Soldiers within 15 minutes

- **Type III (*amphibious bridge and raft system*)**

- Span gaps up to 18 meters as single system and 100m with no more than six vehicles
- Load capacity of MLC 85 Tracked / 120 Wheeled (T); MLC 95 Track/130 Wheel (O)
- Raft vehicles in currents up to 6 feet per second (T); 8 feet per second (O)

## Status

- 2QFY12: Released 2<sup>nd</sup> round of Market Survey Questionnaires.
- 3QFY12: MSCoE revise CPD in coordination with PM-Bridging based on MSQ results
- Future: CPD approved through HQDA





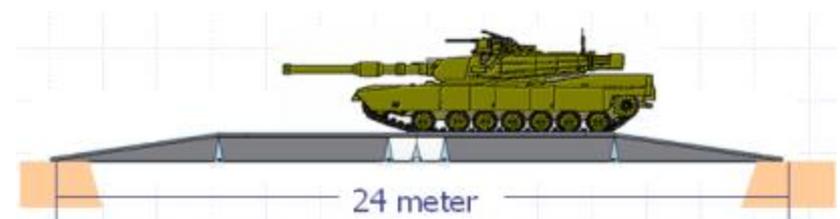
# Lightweight Composite Bridge

UNCLASSIFIED

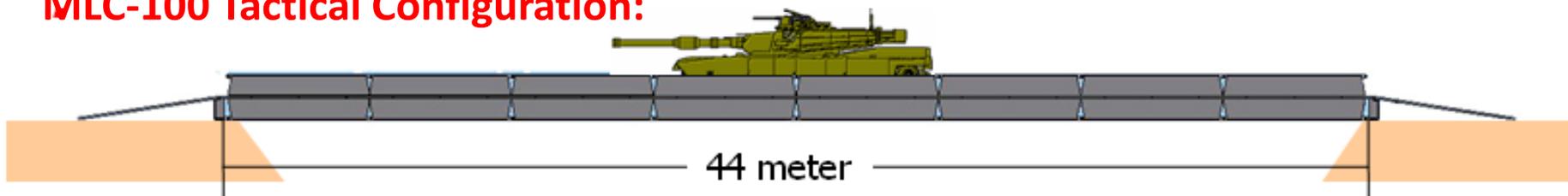
## Benefits of Composites

- Lightweight
- Reduced burden on transport vehicles (highway/ air/ sea)
- Improved Launcher Durability
- High Strength-to-Weight/ Stiffness-to-Weight Ratio
- Lighter than metallic bridge of same design while maintaining a potentially greater MLC
- Higher "Fatigue Life" than metallic's

**MLC-100 Assault Configuration:**



**MLC-100 Tactical Configuration:**





# QUESTIONS?

**LTC Benny L Shepard**  
**PM Bridging Systems**

[Benny.l.shepard.mil@mail.mil](mailto:Benny.l.shepard.mil@mail.mil)

586-282-7690 DSN 786-7690

**Don Paskulovich**  
**DPM Bridging Systems**

[Donald.r.paskulovich.civ@mail.mil](mailto:Donald.r.paskulovich.civ@mail.mil)

586-282-7641 DSN 786-7641

