Ballistic Protection

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19a. NAME OF RESPONSIBLE PERSON  
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**Mission**
- Mature Armor Systems from TRL 4 to TRL 6 to fulfill ground vehicle PM needs.

**Base Armor**
- Small Arms/Frag Opaque B-kits
- Medium Cal/Frag Opaque B-kits
- Transparent Armor

**Appliqué Armor (C-kit)**
- Passive Multi-Threat
- Reactive Multi-Threat
- Active Multi-Threat

**Design/Integration Enablers**
- Common & Modular Armor System Integration Performance
- Modeling & Simulation
- Survivable Structure Concepts
- Testing Capabilities
- Sensors
Applied research is being conducted to develop new materials for threat defeat and to improve existing materials.
Mechanism Research is required to develop and refine methods of defeating threats

- Requires an understanding of how the threat functions pre and post initiation
- Requires an understanding of how the enemy is employing the threat
- Can provide significant weight savings over “simple” material defeat
Advanced technologies exist at TRL 4+, but are high-priced

- Advances in manufacturing techniques/processes are required to reduce costs
  - Funding of Manufacturing Technology (MANTECH) efforts is a necessity
  - Better manufacturing techniques can enhance material performance
- Cost of equipment for large scale production is too great for private industry without known customer
  - “Catch-22” – Costs will not go down further without volume, but cost is too great to attract a customer initially
- Raw material costs are dictated by the market/demand
  - Can be reduced through research, however will eventually reach a price point that cannot be decreased