Provide required SOF-unique ground mobility capabilities and logistics to USSOCOM operators through rapid and focused acquisition.

2,804 SOF Modified vehicles Deployed Worldwide
# FOSOV Portfolio Overview

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LTATV</strong></td>
<td></td>
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</tr>
<tr>
<td>Polaris MRZR / MRZR-D</td>
<td>MRZR-D Production-Lifecycle Replacement</td>
<td>Acoustic Reduction Effort</td>
<td></td>
<td>Follow on LTATV Contract</td>
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<tr>
<td><strong>NSCV</strong></td>
<td></td>
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</tr>
<tr>
<td>Battelle / TLCs, Hilux, Ford Ranger</td>
<td>Purpose Built Evaluation</td>
<td>Purpose Built Contract Efforts</td>
<td></td>
<td>Purpose Built Production / Fielding</td>
<td></td>
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<tr>
<td><strong>GMV 1:1</strong></td>
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<tr>
<td>GD-Flyer M1288</td>
<td></td>
<td></td>
<td></td>
<td>Production / Fielding</td>
<td>Hybrid / Electric Evaluation</td>
</tr>
<tr>
<td><strong>GMV 1:0</strong></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>AMG M1165 HMMWV</td>
<td></td>
<td></td>
<td>Mechanical and C4ISR Reset</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATV</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Oshkosh M1245A1</td>
<td></td>
<td></td>
<td></td>
<td>Sustainment</td>
<td>Sustainment</td>
</tr>
<tr>
<td>MATV</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Purpose Built Efforts:**
- LTATV: MRZR-D Production-Lifecycle Replacement
- NSCV: Purpose Built Contract Efforts
- GMV 1:1
- AMG M1165 HMMWV
- Oshkosh M1245A1

**Sustainment Efforts:**
- LTATV: Acoustic Reduction Effort
- GMV 1:1
- MATV: Mechanical and C4ISR Reset
- Oshkosh M1245A1

**Production / Fielding Efforts:**
- LTATV: Follow on LTATV Contract
- NSCV: Purpose Built Production / Fielding
- GMV 1:1: Hybrid / Electric Evaluation
- Oshkosh M1245A1: Mechanical and C4ISR Reset (Second Phase)

**Other Notes:**
- **GMV 1:0**
- **NSCV II**
- **Hybrid / Electric Evaluation**
- **Follow on LTATV Contract Efforts**
Key Points / Attributes

- **MRZR2**
  - VCW: 1624 lbs.
  - Length: 115.4’, Width: 59.5”; Height: 73.6”
  - Unit Cost: $30,000
- **MRZR4**
  - VCW: 1937 lbs.
  - Length: 141.5’, Width: 59.5”; Height: 73.8”
  - Unit Cost: $32,000

System Description / Mission

- A modified commercial-off-the-shelf (COTS) 4x4, side-by-side seat All-terrain vehicle that is internally air transportable via V-22, H-53, and H-47.
- Additional modifications include litter carrying capability, run flat tires, IR light system, winch for self-recovery, and weapons mount.

Performance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>75 miles (T); 150 miles (O)</td>
</tr>
<tr>
<td>Speed</td>
<td>45 mph (T); 60 mph (O)</td>
</tr>
<tr>
<td>Internal Air Transport</td>
<td>V-22 / H-47 / H-53</td>
</tr>
<tr>
<td>Rollover Protection</td>
<td>115% Gross Vehicle Weight</td>
</tr>
<tr>
<td>Air Drop Certification</td>
<td>C-130 / C-17</td>
</tr>
<tr>
<td>Max Curb Weight</td>
<td>2,500 lbs (T); 2,000 lbs (O)</td>
</tr>
<tr>
<td>Payload</td>
<td>2-seater: 1,000 lbs / 4-seater: 1,500 lbs</td>
</tr>
<tr>
<td>Acceleration</td>
<td>0-30 MPH in 10 Sec</td>
</tr>
<tr>
<td>Water Fording</td>
<td>24 inches @ 5 mph</td>
</tr>
<tr>
<td>Environment (temp / elev)</td>
<td>-25 F to 120 F / 10,000 ft</td>
</tr>
<tr>
<td>Signature Management</td>
<td>@ idle: 100 m (T); 30 m (O)</td>
</tr>
<tr>
<td>(Gas/Diesel) inaudible to</td>
<td>@ 10 mph: 200 m (T); 100 m (O)</td>
</tr>
</tbody>
</table>
LTATV Business Opportunities

• Signature Management
  Reduction of Visual, Audible and Thermal Signatures

• Mobility
  Hybrid / Electric / Fuel Cell Advanced Powertrain Technology
  - Silent LTATV Rodeo projected in FY18
  Drive By Wire Capability
  Longer Lifecycle or Recapitalization
  Light Vehicle Safety Improvements and Accessories

• C4ISR
  Modular, Reconfigurable C4ISR

**ACQUISITION STRATEGY**
- 5-Year IDIQ Contract
- Single Vendor Award

**PERIOD OF PERFORMANCE**
- 5 Years
- July 2015 – July 2020

**MILESTONES**
- Contract Award: July 2015
- Start Fielding LTATV-Diesel: FY17

**POINT OF CONTACT**
- 813.826.9482 (TILO)

**FUNDING**
- $6.5M/Year

**CURRENT CONTRACT/OEM**
- Polaris Defense (Medina, MN)
Ground Mobility Vehicle 1.0

Key Points / Attributes

- Configurations up to 7 operators
- Continues to be employed in contingency operations
- Currently in sustainment
- Potential opportunities for future;
  - RECAP
  - Capability improvements
  - Equipment exchange agreements

System Description / Mission

- The Ground Mobility Vehicle 1.0 (GMV 1.0) is a medium class High Mobility Multipurpose Wheeled Vehicle (HMMWV) with Special Operations - Peculiar (SO-P) modifications.
- Currently there are three variants that make up the enduring GMV 1.0 fleet;
  - M1165A1 w/B3 designed for maximum protection
  - M1165A1 Ultralight provides maximum range and mobility
  - M1113 provides maximum transportability; MH-60 airlift capable.
- ACAT III program; CPD 2009

Performance

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>350 Miles (Ultralight)</td>
</tr>
<tr>
<td>Speed</td>
<td>65 MPH</td>
</tr>
<tr>
<td>Internal Air Transport</td>
<td>C-130 (CH-47 w/ Modifications)</td>
</tr>
<tr>
<td>Payload</td>
<td>3,120 – 5,880lbs variant dependent</td>
</tr>
<tr>
<td>Net Ready</td>
<td>Incorporates SOCOM C4ISR Suite</td>
</tr>
</tbody>
</table>
Ground Mobility Vehicle 1.1

Key Points / Attributes

- 7 Operators for SOF
- Fielding to SOF units began in Mar 2016
- SOF Gross Weight (GVWR): 13,000lbs
- Length 182", Width 79", Height 72.00"

System Description / Mission

- An ACAT III, Program of Record, for High Mobility, cross country, Joint SOF medium mobility missions
- Internally Air Transportable in a C/MH-47
  - Depending on payload, one or two vehicles can fit in a C/MH-47
- Scalable armor (NATO STANAG Level I w/Frag)
- SOF Full Operational Capability: 1297 vehicles

Performance

<table>
<thead>
<tr>
<th>Performance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tractive Effort</td>
<td>Ability to climb &gt;= 60% slope</td>
</tr>
<tr>
<td>Internal Air Transport</td>
<td>C/MH-47 &amp; C-130 or larger</td>
</tr>
<tr>
<td>Vehicle Characterization</td>
<td>Capable of re-configurations for various missions w/ built-in interface controls and the use of kits</td>
</tr>
<tr>
<td>Survivability</td>
<td>Provide integrated structure with crush resistant roof to support 100% GVW</td>
</tr>
<tr>
<td>Net Ready</td>
<td>Incorporates SOCOM C4 suite</td>
</tr>
<tr>
<td>Operational Availability</td>
<td>95%</td>
</tr>
</tbody>
</table>
GMV 1.1 Business Opportunities

- **Survivability**
  2nd Source for Armor Mod Kits – Potential sub-contract effort

- **Signature Management**
  Signature Reduction technologies and coatings

- **Mobility**
  Tire technology and non-pneumatic efforts
  Suspension technology
  Drivetrain and locking differentials
  Brake technology

### ACQUISITION STRATEGY
- Full and Open Competition
- Single Vendor Award
- Produce and Evaluate Test Vehicles
- Full-Rate Production Decision

### PERIOD OF PERFORMANCE
- Aug 2013 – Aug 2020
- 2 Year Production Validation
- 5 Years Production

### MILESTONES
- Contract Award: Aug 2013
- Start of Test : Feb 2014
- First Unit Equipped: Mar 2016

### POINT OF CONTACT
- 813.826.9482 (TILO)

### FUNDING
- $50 M/Year (Average)

### CURRENT CONTRACT/OEM
- General Dynamics Ordinance and Tactical Systems (St. Petersburg, FL)
MRAP All-Terrain Vehicle (M-ATV)

System Description / Mission
- The Mine Resistant Ambush Protected (MRAP) family of vehicles in the SOCOM fleet currently consists primarily of the MRAP All Terrain Vehicle (M-ATV), and a few remaining RG-33 SV, RG-33A1, and RG-33AUVs.
- Vehicles are modified to meet SOF unique requirements including the integration of a Remote Weapons Station, SOF specific C4ISR systems, SOF specific jamming devices, Long Range GMVAS, emergency egress lighting, and HEEDS bottles.
- ACAT IC Army program in sustainment; CPD 2009

Key Points / Attributes
- Crew of up to 5 Operators
- TAK-4 suspension for greater off-road mobility
- TACOM / Navy sustained enduring fleet starting FY17 (APS and HST)
- SOCOM continues to sustain a deployed fleet
- Potential opportunities;
  - Equipment exchange agreements
  - Future SO-P capability improvements
  - Value engineering efforts to reduce future sustainment costs

Performance
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>320 Miles</td>
</tr>
<tr>
<td>Speed</td>
<td>65 MPH</td>
</tr>
<tr>
<td>Internal Air Transport</td>
<td>C-17 (C-130 w/ major modifications)</td>
</tr>
<tr>
<td>Net Ready</td>
<td>Incorporates SOCOM C4ISR Suite</td>
</tr>
<tr>
<td>Payload</td>
<td>4,000lbs</td>
</tr>
</tbody>
</table>
Non Standard Commercial Vehicles (NSCV)

System Description / Mission

- The NSCV provides SOF with a Low Visibility vehicle capability to conduct operations in politically or operationally constrained permissive, semi-permissive, or denied areas.
- The current NSCV is based on commercial vehicle platforms:
  - Toyota Hilux, Land Cruiser 79, Ford Ranger (Trucks)
  - Toyota Land Cruiser 76, 78, 200 series (SUVs)

Key Points / Attributes

- Seven Year IDIQ Contract valued at $170M for up to 556 NSCVs and Logistics Packages (Awarded July 16)
- Basis of Issue (BOI):
  - Full Operational Capability (FOC): 603 NSCVs
  - 179 CONUS / 424 OCONUS
- NSCV Lifecycle Replacement Rate:
  - 3 years OCONUS / 5 years CONUS

Performance

<table>
<thead>
<tr>
<th>Payload</th>
<th>2,500 lbs (Unarmored Variants)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,200 lbs (Armored Trucks)</td>
</tr>
<tr>
<td></td>
<td>2,000 lbs (Armored SUVs)</td>
</tr>
<tr>
<td>Internal Air Transport</td>
<td>H-47 (trucks), C-130 and above (all)</td>
</tr>
<tr>
<td>Mission Profile</td>
<td>10% Primary Roads, 40% Secondary Roads, 45% Trails, 5% Cross Country</td>
</tr>
<tr>
<td>Performance / Durability</td>
<td>HD Suspension, HD Brakes, Frame Reinforcements, Skid Plates, Blackout/IR, Dual Alternator, Drive Train, Tires</td>
</tr>
<tr>
<td>Upgrades</td>
<td>C4ISR (LoS, SATCOM, ECMS/CREW, GPS)</td>
</tr>
</tbody>
</table>
NSCV Business Opportunities

- **Survivability**
  Lightweight Transparent and Opaque Armor

- **Mobility**
  Purpose Built NSCV for High Durability and Longer lifecycle
  High Output Alternators at Low Idle (i.e. 300+ amps at 700RPM)
  Modification Cost Reduction Efforts (Brakes, Suspension, etc.)

- **C4ISR**
  Affordable Low Profile Antennas for Line of Sight, SATCOM, and ECMS technology

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**ACQUISITION STRATEGY**
- Full and Open Competition
- Single Vendor Award
- Produce and Validate Test Vehicles

**PERIOD OF PERFORMANCE**
- 7 year IDIQ
- July 16 – July 23

**MILESTONES**
- Production Qualification Testing
  4QFY17 – 3QFY18

**POINT OF CONTACT**
- 813.826.9482 (TILO)

**FUNDING**
- $22.5M/Year (Average)

**CURRENT CONTRACT/OEM**
- Battelle Memorial Institute
  (Columbus, OH)
PM FOSOV: We are the bridge between great ideas and affordable, superior SOF ground mobility.
We Support Our Nations Very Best!
Break-Out Discussions

Stage

- Weapons
- Ammo
- VAS

- Mobility
- Soldier Survival
The Iron Triangle

Protection Added At Expense Of Size And Off-road Mobility
Performance & Payload

Performance & Payload At The Expense Of Protection

Research & Development Funds To Pivot Quickly And Focus On New Technology