

MARYLAND TRANSPORTATION AUTHORITY POLICE COLLISION RECONSTRUCTION UNIT UNMANNED AERIAL SYSTEMS TEAM

Cpl. M. Lamont #1229

Commander

Collision Reconstruction Unit

Unmanned Aerial Systems Team



MARYLAND TRANSPORTATION AUTHORITY

COLLISION RECONSTRUCTION UNIT

- 2016 – UAS Program Research Began
 - Speaking with Other Agencies
 - Spoke with ACLU
 - COA
- 2017 – Product Research and Procurement
 - Draganfly XP4 Selected
 - Three Day Training in Grand Junction, CO
 - FAA Pilot License Training and Testing
 - First Deployment, September 9th

MARYLAND TRANSPORTATION AUTHORITY COLLISION RECONSTRUCTION UNIT

- 2018 – UAS Team Fully Operational
 - Six FAA Licensed UAS Pilots
 - Monthly Training

EAGLE ONE-DRAGANFLY XP-4

- 15-20 Minute Flight Time based on payload
- GPS Hold Capabilities
- Live Video
- Return to Home feature
- Pix4D Software Compatible
- Autonomous Flight



GROUND BASED VS. AERIAL MAPPING



GROUND BASED

- Takes time and Planning – 60 Minute to 120 Minute Scene Processing
- Incredible Detail
- Use of Reflective Targets and Laser
- Can be used at night
- Cannot be used in inclement weather

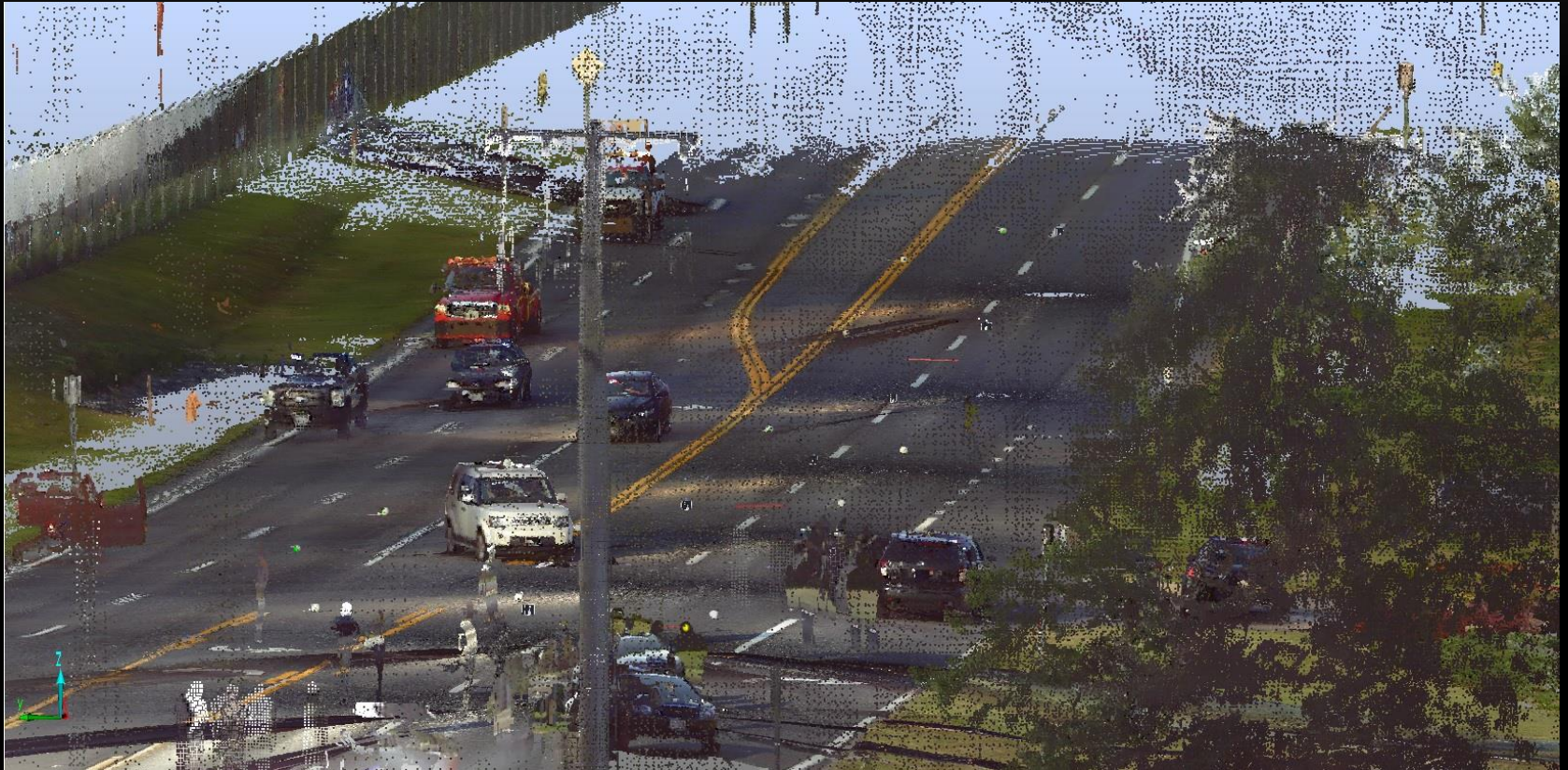
AERIAL MAPPING

- Incredible Detail – 10-15 Minute Collision Scene Mapping
- Time Saving
- Autonomous
- Can be used at night with required equipment
- Can be used in some inclement weather

POST COLLISION PROCESSING

- FARO Scene Software
- Pix4D
- FARO CADZONE Drawing Program
- Both the FARO Scene Software and Pix4D output .LAS/.LAZ files to FAROZONE CAD Drawing programs

FARO POST PROCESSING



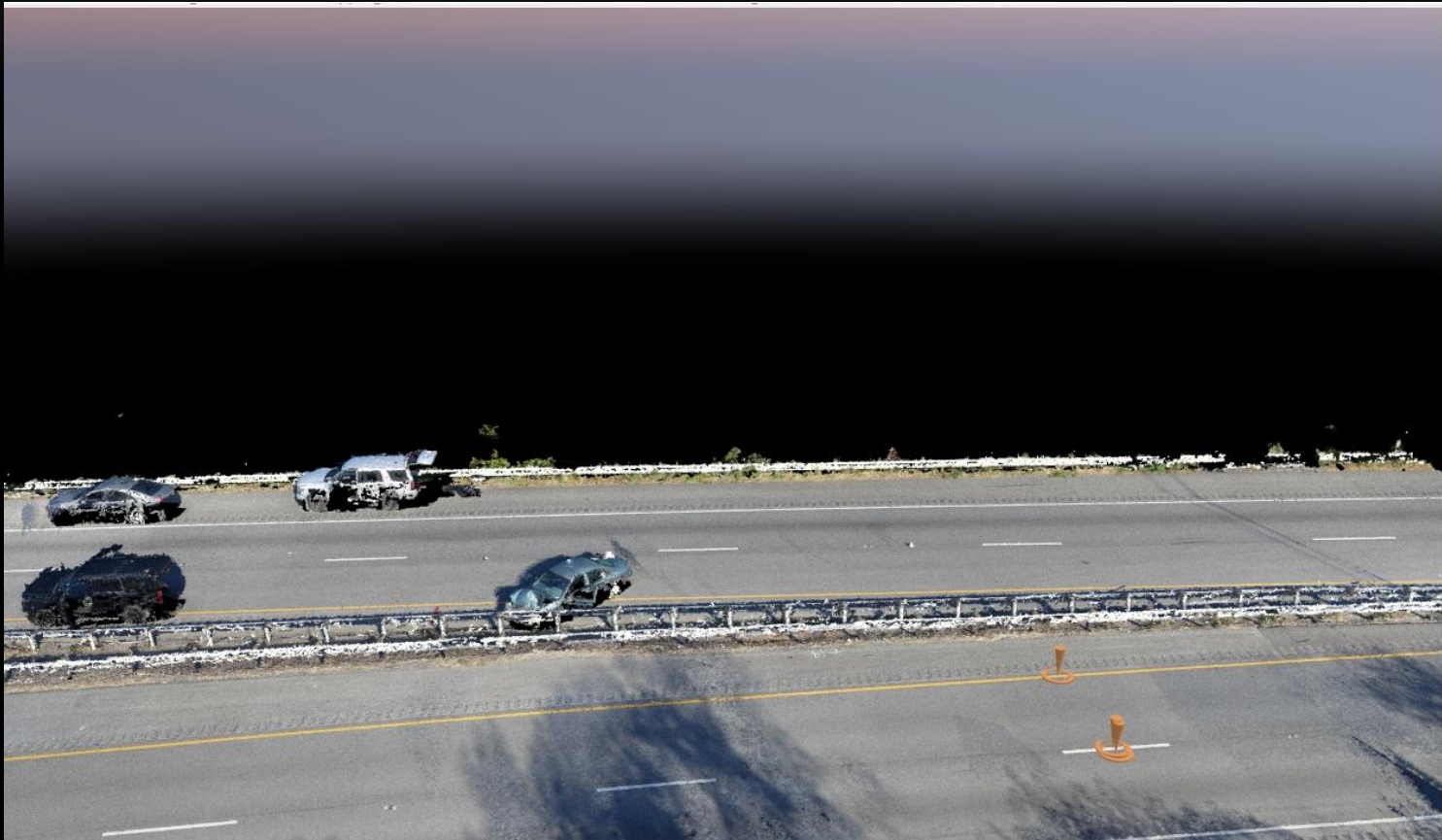
FARO POST PROCESSING



FARO POST PROCESSING



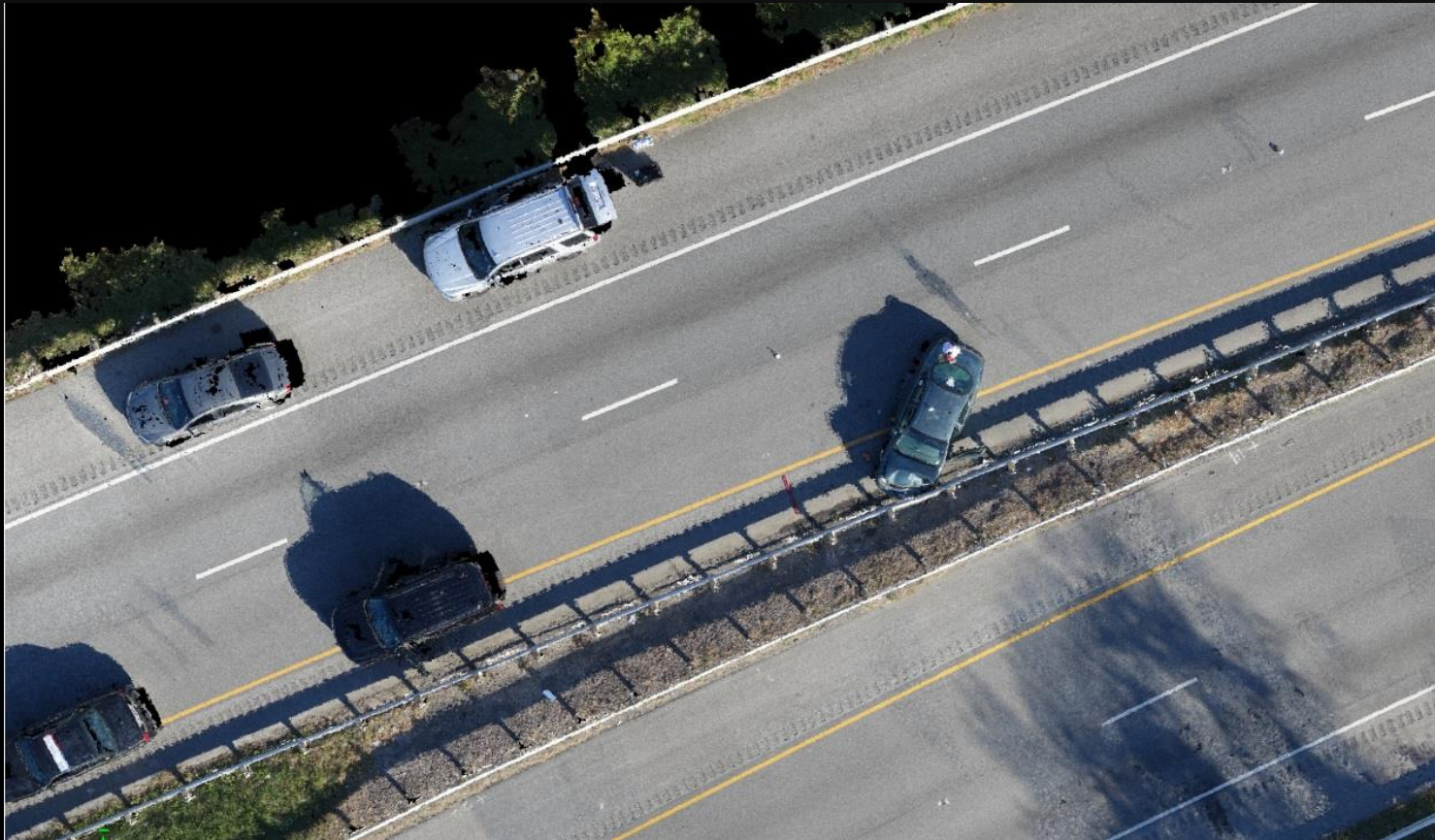
UAS POST PROCESSING



UAS POST PROCESSING



UAS POST PROCESSING



UAS POST PROCESSING



CHALLENGES FOR LAW ENFORCEMENT

- Fast Changing Technology
- MDTA UAS Team – Part Time
 - 6 Members with 6 Different Schedules and Responsibilities
- Procurement Challenges
- Maintenance of Aircraft
- Aircraft Challenges
- Public Viewpoint/Big Brother

MDTA POLICE UAS TEAM – WHAT'S IN STORE

- Processing the Procurement of Two New Law Enforcement Geared UAS Units
- Training of Additional Pilots
- Deployment Changes-Additional Equipment
- Night Time Flying

QUESTIONS