



NATIONAL SAFE SKIES ALLIANCE

Program for Applied Research in Airport Security PARAS 0021 Project Summary

Project Title:	Utilization of Autonomous Vehicles for Security at Airports		
Program Officer:	Jessica Grizzle	865-738-2080	Jessica.Grizzle@sskies.org
Research Agency:	Lam Lha USA, LLC		
Principal Investigator:	Sean Cusson		
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BACKGROUND

Airport security in both public and restricted areas presents significant challenges for monitoring, detection, and response. These challenges include length and complexity of the perimeter, response times, and varied infrastructure. Some areas of the airport are isolated and away from the terminal while others are populated and have a lot of activity. Autonomous vehicles have the potential to serve a myriad of security and safety functions at airports and address these concerns.

Little is known about the benefits and challenges of deploying such devices in an airport environment. Industries such as agriculture, surface transportation, and construction are beginning to use autonomous vehicles to meet their varied operational needs. Airports can benefit from assessing lessons learned from other sectors.

A consolidated source of information regarding autonomous vehicles will assist airports in exploring their potential usages in an airport environment.

OBJECTIVE

The objective of this research is to create a consolidated source of information to assist airports of all sizes in the use of autonomous vehicles for airport security applications. At a minimum, the document should include:

- Evaluation of current and emerging technology (e.g., platforms, sensors, command and control, etc.)
- Overview of current usage and applications, including international and non-aviation industries
- Security and safety opportunities within landside, airside, public, and restricted areas
- Technology integration into existing airport systems
- IT/network security considerations
- Communication, data transfer, frequency spectrum, and interference considerations
- Terrain and climate considerations impacting performance
- Cost-benefit analysis, including maintenance and other potential parallel uses
- Safety, insurance, liability, and regulatory considerations

The list above is not exhaustive and is in no particular order. As autonomous vehicles are considered an emerging technology, proposers should address other topics that may be useful regarding the subject matter.