MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND AVIATION ADMINISTRATION

# REQUEST FOR INFORMATION

# MAA-RFI-25-001

# July 16, 2025

**TO IDENTIFY A GROUND TRANSPORTATION MANAGEMENT SYSTEM AT**

**BALTIMORE/WASHINGTON INTERNATIONAL THURGOOD MARSHALL AIRPORT**

# TABLE OF CONTENTS

# I. INTRODUCTION & BACKGROUND

## A. INTRODUCTION

The Maryland Aviation Administration (MAA) is a modal agency of the Maryland Department of Transportation (MDOT), the principal transportation department of the executive branch of government of the State of Maryland (State). MAA is seeking information from the market regarding a Ground Transportation Management Systems (GTMS) to improve safety and security, mitigate curbside and roadway vehicle congestion, allow for the monitoring of commercial and private vehicle trip volumes and curbside dwell times, and facilitate automated tolling of and access management for private and commercial vehicles at Baltimore/Washington International Thurgood Marshall Airport. (referred to herein as “the Airport” or “BWI Marshall Airport”).

MAA invites the technology industry to introduce and showcase innovative technologies that provide solutions to curbside management, roadway congestion, and commercial vehicle management. Beyond improved safety and traffic flow, this Request for Information (RFI) seeks innovative technologies for monitoring commercial ground transportation activities, automating detection of traffic violations and motor vehicle incidents at the Airport’s curbside.

Please be advised that this RFI is not a formal solicitation for proposals. No contract will be awarded pursuant to this RFI. Submitting a response to this RFI has no bearing on future contracts or Requests for Proposals (RFPs). The information gathered through this RFI will be used to assist MAA in refining the scope and structure of a comprehensive program for an Airport Curbside & Ground Transportation Concession Management Service at BWI Marshall Airport. Any information received in response to this RFI will be safeguarded from unauthorized disclosure. The MAA will treat all information provided by the Respondent as confidential if requested. MAA will not disclose submissions outside of the MAA except as permitted by law.

MAA is committed to being a leader in cutting edge technology, transportation, and sustainability. To ‘be better,’ MAA has incorporated a collaborative business model to employ the expertise, services, and know-how of industry-leading companies. To support a reimagined Airport, MAA invites startups, manufacturers, and organizations with experience in Ground Transportation Management Systems, Intelligent Transportations Systems, Electronic Toll Collections Systems, Automatic Vehicle Identification Systems, Automated Traffic Violation Enforcement Systems, and Incident Detection Systems to participate in this RFI.

The intent of the RFI is to inform MAA of potential technology to use in a future RFP. The intent of the RFP is for a concession operator to collect per trip fees, manage the permitting process and fee collection, and monitor the roadway congestion.

## B. BACKGROUND

MAA is a customer-driven organization that prides itself in delivering safe, sustainable, intelligent, and exceptional transportation solutions to connect people to life's opportunities. Its vision is to 'be better.' MAA's goal is to provide excellent customer experience and service for the traveling public utilizing BWI Marshall Airport. To achieve its goal and vision, MAA continuously seeks innovative commercial programs to accommodate the needs of the traveling public in a safe, satisfying, efficient and convenient manner. Our motto is that we are the "Easy Come, Easy Go" Airport.

BWI Marshall is a world-class airport, providing invaluable access to destinations around the world and serves as the gateway to business and tourism in the Washington-Baltimore Region which includes the 7$^{th}$ (Washington, D.C) and 20$^{th}$ (Baltimore) largest metropolitan areas in the U.S. (Source: U.S. Census Bureau, March 2024). Paramount to the success of BWI Marshall Airport is the ability to manage growth and respond to the ever-changing passenger needs. The Airport has experienced substantial growth over the last five decades of its operation. Air passenger traffic at BWI Marshall Airport has burgeoned from 3.1 million in 1972 to 27 million in the year ending June 30, 2024, making it the 22$^{nd}$ busiest airport in the United States and busiest in the Washington-Baltimore Region. The Federal Aviation Administration Terminal Area Forecast (TAF) forecasts that the Airport will reach 30 million passengers by 2026. This growth strains the Airport's roadways and curbside systems. Thus, BWI Marshall Airport's continued success is ultimately anticipated to result in inevitable failure of its roadway and terminal curbside systems if not properly addressed.

The Airport occupies a 3,596-acre site in Anne Arundel County, Maryland, approximately 9 miles south of Baltimore, Maryland, and 32 miles northeast of Washington D.C. The Washington-Baltimore Region is served by two other airports, Ronald Reagan Washington National Airport and Dulles Washington International Airport, but BWI Marshall has surpassed each of these airports in total number of passengers. Currently, BWI Marshall Airport serves about 305 daily nonstop departures to 85 destinations (as of July 2025). Its economic impacts include $11.3 billion into the local economy, 107,066 jobs, $5.6 billion in total earnings and $782.5 million in total State and local revenue.

BWI Marshall Airport has one of the most integrated, intermodal ground access systems in the United States, with an on-Airport light rail station and a major rail station linked by a free and frequent shuttle bus operation. The current public transportation modes at BWI Marshall Airport include Amtrak/MARC, MTA Light Rail Transit, MTA local and regional public transit buses, MTA commuter buses, executive car, commercial shared ride services, Transportation Network Companies (TNCs) and the Airport's on-demand outbound taxicab services. The roadway is also used by BWI Marshall Airport's rental car shuttle buses with frequent and free service to the Rental Car Facility, hotel shuttles, airline crew shuttles, off airport parking shuttles, other taxis, and privately operated vehicles.

## 1. AIRPORT ROADWAY SYSTEM

Several major interstate highways and regional roadways serve BWI Marshall Airport. Major highways such as I-95, I-695, and I-195 connect travelers from the north and east, while I-70, I-695, MD-100, the Baltimore-Washington Parkway, and the InterCounty Connector provide access from the west and south. However, these roads handle both Airport traffic and non-Airport traffic, creating congestion concerns.

I-195 provides direct access to the BWI Marshall Airport's terminal roadway which is fashioned in a "horseshoe" configuration (See Exhibit 1-A/1-B). The terminal roadway provides access to the terminal curbsides, the Airport's Hourly Parking Garage, and will provide access to a future Ground Transportation Center (GTC). The terminal curbside roadway consists of a lower level (arrivals) and an upper level (departures) roadway:

- The lower-level arrivals roadway consists of seven lanes—the inner (two lanes wide) and outer (four lanes wide) lanes and an express bypass lane (one lane wide). The inner and outer lanes are separated by a 20-foot-wide raised island or pedestrian refuge curb. The 2,600 linear feet inner curbside is dedicated to authorized vehicles including 1) Airport on-demand taxicabs; 2) Airport public parking shuttle buses; 3) rental car shuttle buses; and 4) MAA operations, maintenance, and emergency response vehicles. On the inner curbside the Airport's public parking and rental car shuttle bus positions on the curbside occupy approximately 720 linear feet and the taxicab stands occupy approximately 260 liner feet (see Exhibit 1-A). The taxicab stand serves about 300,000 vehicle trips annually, while

5.78 million passengers annually use the Airport's parking and consolidated rental car shuttles. The 2,300 linear feet outer curbside is dedicated to passenger commercial vehicle boarding and private vehicle pickup.

The upper-level inner curb departures roadway contains two inner lanes and four outer lanes. The inner lanes are dedicated to authorized vehicles including public parking shuttle buses, rental car shuttle buses and other Airport Operations vehicles. The outer curbside lanes of the departure roadway are dedicated to private and commercial vehicle passenger drop-off, courtesy vehicle passenger drop-off, and TNC passenger drop-off and pick-up.

### 2. TERMINAL CURBSIDE TRAFFIC

The Airport terminal has five concourses, Concourses A through E. Southwest Airlines maintains approximately 70% of BWI Marshall Airport's passenger traffic with the majority of its operations located on Concourses A and B, at the entry of the terminal roadways. The uneven distribution of passenger traffic has caused an impactful magnitude of oversaturated traffic at the entry to the Airport's approach roadway and terminal curbsides. Law enforcement officers manage rights-of-way and the terminal curbside for unattended and dwelling private vehicles. The primary goal of the deployed law enforcement officers is to manage extreme peak flow conditions and associated extensive traffic at critical bottleneck locations. The Airport's unique roadway geometry is also a contributor to the level of congestion.

Vehicle traffic patterns on the Airport's roadways and terminal curbside, parallel air passenger traffic. In typical demand periods, there are an average of 14,125 daily private and commercial vehicle trips on the outer roadway on the upper-level roadway, and an average 13,083 daily vehicle trips on the lower-level roadway. An August 2024 study surveyed curbside vehicle volumes. (See Exhibit 3.)

## II. FUTURE OBJECTIVES

MAA requests that each Respondent outline how they would provide solutions for the objectives listed below. Additionally, Respondents are encouraged to highlight where solutions utilize generative AI or machine learning to enhance the effectiveness of their offering. (Refer to State of Maryland guidance for the use of AI tools: Interim GenAI Guidance):

1. Monitor and manage traffic operations on the Airport's roadway network and terminal curbsides.

2. Streamline (i.e., improve efficiency of) curbside and roadway operations and management to mitigate congestion and improve safety and security.
3. Employ technology (e.g., AVI, RFID, LPR, HID, LiDAR, computer vision, V2I, GTMS solutions) that, when implemented, will accurately monitor and manage all commercial vehicle activities (inbound and outbound), automate calculation of Airport fees due, and facilitate the collection of Airport fees from commercial ground transportation operators.
4. Use technology that enables or facilitates automated vehicle tolling and access management for private and commercial vehicles, the issuance of curbside citations, and automated issuance of permits, renewals, and enforcement citations.
5. Provide dwell time alerts and citation enforcement for extended curbside idle or dwell times.
6. Integrates with MAA's financial management systems and/or business intelligence systems for revenue and data analysis.
7. Provide real-time access to data supporting MAA's ability to manage and enhance its business and operations.

## III. INSTRUCTIONS & FORMAT OF RFI SUBMISSIONS

### A. FORMAT OF RFI SUBMISSION

Responses submitted to this RFI shall be on 8 ½" x 11" paper and limited to twenty (20) pages in length excluding any supporting material (photos), product specifications and/or documents. Responses shall be single-spaced, 12-point letter size, and Times New Roman font.

Responses must be submitted in accordance with Section III, Instructions & Format of RFI Submission and Section IV, Submission Instructions. The format for submissions and file naming convention shall be as follows:

1. The following file naming convention shall be used:

   MDOT MAA-RFI-25-001 - Company Name – Firstinitial_Lastname.doc

   **Example:** Jane Doe of ABC Concession, Inc. would name her file:
   **MDOT MAA-RFI-25-001-ABCCorporation-JDoe.pdf**
2. Authorized file format: **Adobe Acrobat (pdf)**.
3. Product video format: **MOV, WMV, or MP4 file format**.

## B. INFORMATION TO BE SUBMITTED

Respondent's information response must, at a minimum, provide the following information in the order listed below. Respondents must insert a set of tabs that corresponds to the numbers in the list below (e.g. "TAB 1," "TAB 2"). The information response for each section must correspond to the information required for its tab. All tabs must be labeled. No tabs may be omitted. Tabs do not count toward page limits.

### TAB 1 – TRANSMITTAL LETTER & EXECUTIVE SUMMARY

1. Company Information
    - i. Respondent's Legal/Registered Name;
    - ii. Respondent's mailing and physical address(es), business website, phone number;
    - iii. Name and title of Respondent's primary point of contact ("Representative");
    - iv. Representative's mailing address, email address, and phone number;
2. A synopsis of Respondent's background, experience and comprehensive corporate history, corporate leadership team.
3. Demonstration video if applicable.

### TAB 2 – CONFIDENTIALITY STATEMENT

1. Information that Respondents considers to be confidential should be identified here. Respondents shall reference the page number(s) in their submission where such material can be found. Respondents should give specific attention to the identification of those portions of its submission which it deems to be trade secrets or confidential commercial information. The Respondent should provide a reason such information should not be disclosed by MAA, upon request under the Maryland Public Information Act, Maryland Code Ann. General Provisions, 4-101 et seq.

### TAB 3 – INFORMATION STATEMENT

1. Describe and provide at least three examples of Respondent's capabilities and past performance in projects with comparable demands and framework as BWI Marshall Airport. Outline the capabilities of the proposed technology offering and how it meets demands comparable to those of the BWI Marshall Airport and responds to MAA's objectives. The Respondent's references may include Large Hub and Medium Hub

airports or entities serving comparable volumes of passengers or customers as BWI Marshall Airport (e.g., seaports, municipalities, transit agencies and other transportation-related sectors). For each reference provide the full name, title, telephone number and email address of the contact person familiar with the Respondent's performance.

2. Provide a detailed outline of how the Respondent's offering meets some or all of the Primary Objectives as described in Section II:

   a. In comprehensive detail, describe the advantages and benefits of Respondent's technology platform and services.

   b. For each Primary Objective, provide the required physical requirements and/or technological infrastructure, if any, needed to properly deploy the Respondents proposed technology offering.

   c. Describe and provide examples of data captured by the Respondent's proposed solution in the format of reports, including data visualizations and other business intelligence tools specific to proposed technology offering.

   d. Provide information on the following, as applicable, to ensure the proposed solution meets MAA's requirements for secure payment processing, data protection, and integration with existing systems:

      - PCI-DSS Compliance
      - Cloud or SaaS
      - Third Party Payment Processing
      - Application requirements (desktop, mobile, portals)
      - Data Security
      - Cybersecurity best practices
      - Integration capabilities with financial systems, web-based portal, and other applicable software and hardware components as described by the Respondent.

   e. Respondents should describe how their solution supports the following use cases. For each applicable scenario, provide a narrative that addresses capabilities and relevant hardware or software components and any analytics tools or enforcement mechanisms.

      - **Permitted and Unpermitted Commercial Activity Detection:** Describe how Respondent's technology identifies commercial activities conducted by known and/or unknown for-profit business operating on Airport property and how it can assess approved Airport charges and fees based on the business' activities.

- **Vehicle Tolling:** Describe how Respondent's technology can charge tolling fees to each vehicle entering the Airport's terminal roadway.
- Provide a narrative as to how Respondent's technology can identify moving violations and excessive dwell times at curbside; and charge standard rates and fees for moving violations.
- **Congestion Detection & Mitigation**: Describe how Respondent's technology can identify roadway and/or curbside congestion and deploy near real-time communication systems to mitigate vehicle congestion.

Respondent may submit any other information it deems relevant to assist MAA in determining or understanding Respondent's product or service.

## IV. SUBMISSION INSTRUCTIONS

Respondents are advised that all costs associated with preparation and delivery of responses to this RFI shall be borne entirely by the Respondent. MAA will not compensate Respondents for any expenses incurred as a result of this RFI process. Responses are to be submitted to the Deputy Director, Office of Commercial Management via email at **MAAOCM@bwiairport.com**.

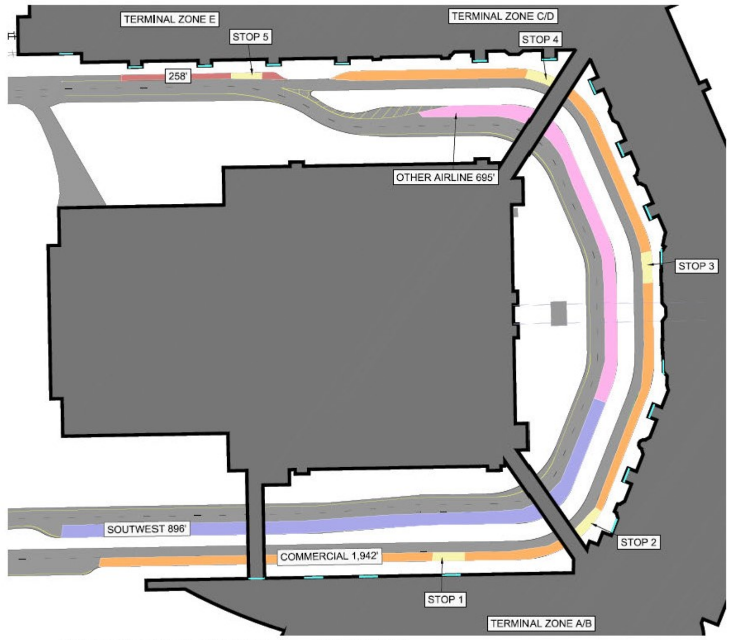
All submissions received in response to this RFI may be considered public information pursuant to the Maryland Public Information Act and may be potentially subject to disclosure pursuant to General Provisions Code Ann. Section 4-101*, et seq*.

**All submissions must be received by the MAA no later than 4:00 p.m. (local time) August 14, 2025.**

# APPENDICIES

*Exhibit 1-A: UPPER-LEVEL ROADWAYS*

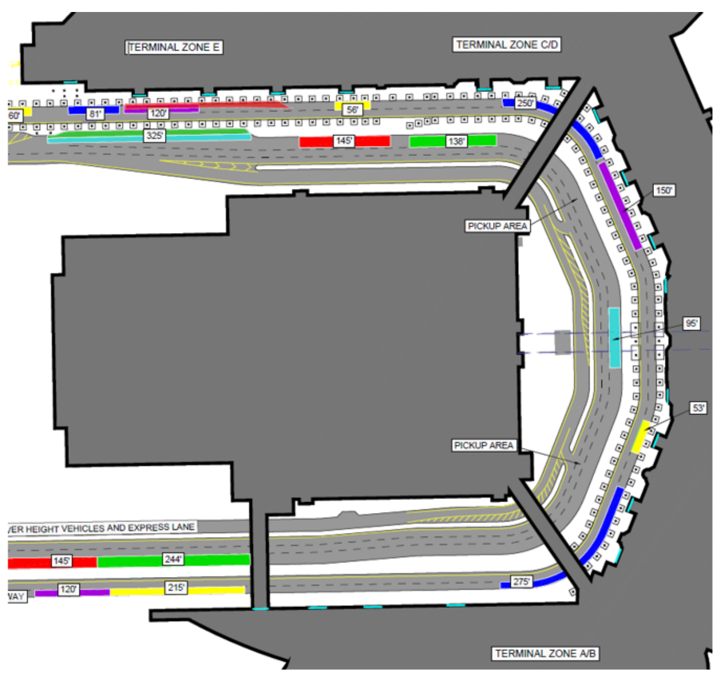
| LEGEND | |
|---|---|
| SOUTHWEST CURBSIDE DROP-OFF | |
| OTHER AIRLINE DROP-OFF | |
| SHUTTLE BUS STOP | |
| COMMERCIAL | |
| COMBINED COMMERCIAL AND OTHER AIRLINE | |




No date indicated from exhibit source  Source: MAA/HNTB/DCI

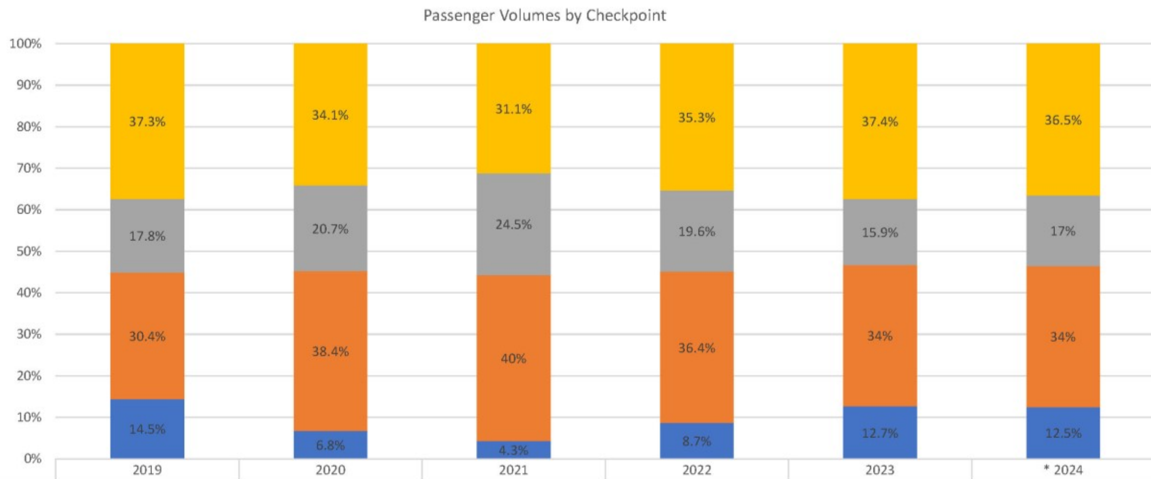
*Exhibit 1-B: LOWER-LEVEL ROADWAYS*

| LEGEND | |
|---|---|
| AIRPORT PARKING SHUTTLE STOP | |
| TAXI STAND | |
| HOTEL SHUTTLE STOP | |
| OFF-SITE PARKING SHUTTLE STOP | |
| RENTAL CAR SHUTTLE STOP | |
| MARYLAND TRANSIT ADMINISTRATION | |




No date indicated from exhibit source  Source: MAA/HNTB/DCI

*Exhibit 2: ANNUAL PASSENGER VOLUMES BY CHECKPOINT*




| | 2019 | 2020 | 2021 | 2022 | 2023 | * 2024 |
|---|---|---|---|---|---|---|
| D/E Checkpoint | 4,015,560 | 1,411,997 | 2,168,784 | 3,032,882 | 3,641,585 | 3,474,811 |
| C Checkpoint | 1,909,061 | 854,826 | 1,709,303 | 1,688,094 | 1,544,430 | 1,613,874 |
| B Checkpoint | 3,272,819 | 1,590,705 | 2,783,939 | 3,134,658 | 3,316,886 | 3,231,642 |
| A Checkpoint | 1,554,332 | 280,320 | 301,761 | 746,510 | 1,238,325 | 1,191,759 |

A Checkpoint  B Checkpoint  C Checkpoint  D/E Checkpoint

Source: MAA/HNTB/DCI
*2024 data only though Nov.

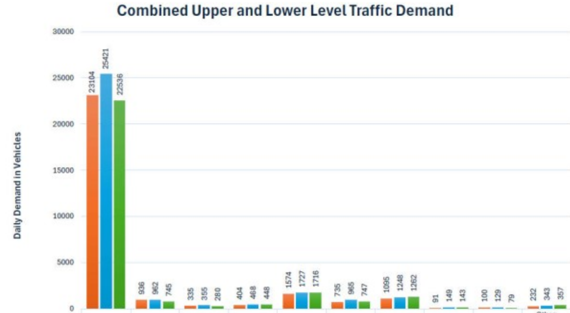
*Exhibit 3: ROADWAY TRAFFIC VOLUMES*

# Traffic Volumes

- Data based on survey conducted between August 17, 2024, through August 23, 2024.
- Peak Period:
  - Sunday - 16:30-18:30
  - Monday – 18:30-20:30
  - Friday – 19:45 – 21:45
- Overall percentage of cars has increased since last survey (2014), but most classifications have decreased in volume compared to last survey

| | Upper Level Roadway | | Lower Level Roadway | |
|---|---|---|---|---|
| Vehicle Classification | % | Avg. Daily Volume | % | Avg. Daily Volume |
| Cars | 85 | 15,269 | 73 | 8418 |
| Taxis | 1 | 192 | 6 | 689 |
| TNC/App Based Rideshares | 2 | 314 | <1 | 9 |
| Limos | 2 | 300 | 1 | 140 |
| BWI Buses | 4 | 795 | 8 | 878 |
| Hotel Shuttles | 3 | 480 | 3 | 335 |
| Off-Airport Parking Shuttles | 2 | 417 | 7 | 785 |
| MTA & Other Buses | <1 | 11 | 1 | 117 |
| Airline Crew Shuttles | <1 | 84 | <1 | 18 |
| Other: Police/EMS, BWI Work Vehicles | <1 | 170 | 1 | 141 |

**Combined Upper and Lower Level Traffic Demand**




| | Cars | Taxis | TNC/App Based Rideshares | Limos | BWI Buses | Hotel Shuttles | Off-Airport Parking Shuttles | MTA & Other Buses | Airline Crew Shuttles | Other: Police/EMS, BWI Work Vehicles |
|---|---|---|---|---|---|---|---|---|---|---|
| Sunday, 8/18/2024 | 23104 | 936 | 335 | 404 | 1574 | 735 | 1095 | 91 | 100 | 232 |
| Monday, 8/19/2024 | 25421 | 962 | 355 | 468 | 1727 | 965 | 1248 | 149 | 129 | 343 |
| Friday, 8/23/2024 | 22536 | 745 | 280 | 448 | 1716 | 747 | 1262 | 143 | 79 | 357 |

Source: MAA/HNTB/DCI

**DEFINITIONS**

AVI – Automatic Vehicle Identification

GTC – Ground Transportation Center

GTMS – Ground Transportation Management System

ITS – Intelligent Transportation Systems

Lidar – Light Detection and Ranging

LPR – License Plate Recognition

MAA - Maryland Aviation Administration

MDOT– Maryland Department of Transportation

RFID – Radio Frequency Identification

TAF – Terminal Air Forecast

V2I – Vehicle to Infrastructure