

Private Airport Case Study: Entrance Mat Safety & Efficiency in High Traffic Zones

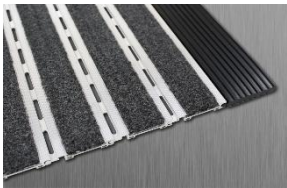
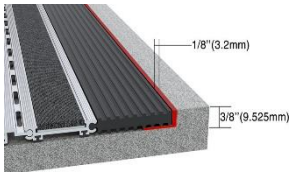


Introduction/Overview

Aluminum entrance mats are engineered for a variety of specialty locations, including airports, airstrips, aerodromes, hangars, aviation sites, and even private airports. These mats are specifically designed to enhance safety, cleanliness and overall aesthetics by minimizing the amount of moisture, dirt and debris entering high traffic footholds. Ronick Matting Systems specializes in entrance mats for all of these settings and more.

Project

Installing a new entrance matting system for a private airport in a Twin Cities suburb in Minnesota.

Private Aiport Product Specifics for this Case Study			
Product Type	Finish Type	Insert Type	Frame Type
			
BaseMat 300	Mill Finish	Heavy-Duty Carpet: Espresso	L3 Frame

Private Airport/Hangar Entrance Mat Details

- **Product:** BaseMat 300 (5 entrances total)
- **Approx Sizes:**
 - 11 feet wide by 10 feet in length (main)
 - 7 feet wide by 7 feet in length (alternate main)
 - 5 ½ feet wide by 9 ½ feet in length (tarmac)
 - 3 ½ feet wide by 9 ½ feet in length (entrance to hangar)
 - 5 ½ feet wide by 10 ½ feet in length
- **Carpet Insert:** Heavy-Duty Carpet
- **Finish Type:** Mill Finish
- **Frame:** L3 Frame
 - * For this project not all of the mats had the same frame- the different frames were chosen to best fit the existing conditions of each entrance mat installation area. The L3 Frame is the most common frame for this matting system and is being used as the featured photo for this case study. (All of the frames for this project were: L3 Frame, B2 Surface Mounted Frame, & the Surface Threshold Frame- for more information about the different frame options please visit Ronick.com)*



Close up view of the aluminum entrance rails for this project.

In 2024, a private airport upgraded their entrance matting system and opted for the BaseMat 300 to be installed at all of the entrances throughout the airport hangar.

This private airport is located in a Minneapolis suburb and can accommodate a variety of airplane sizes up to the 'Global 7000' which spans 111 feet in length, has a height of 27 ft and a wingspan of 104 feet. The entire bay is 22,000 square feet and also has two office suites This airport hangar is a part of a seven-airport system- acting as a reliever airport supporting one of the nation's largest airports, providing access to hotels, restaurants, shopping malls, sporting events and more. It has 2 runways and in 2025 it had 71,614 annual landings and takeoffs, or over 1,300 weekly visitors.

In an industry where safety is paramount, choosing the right entrance mat is crucial in ensuring that there are no trip and fall accidents and the safety of the patrons visiting the private airport is the top priority. The BaseMat 300 can handle 350 lbs. per wheel load. It was selected for its slip resistance, dirt trapping capabilities, and convenient light-weight roll-up design. This aluminum entrance mat is engineered to foster safety and cleanliness for all airport travelers and their luggage.



Original carpet tiles and mat before the new matting system was installed at the private airport.

Installation Process

Estimated Installation Time: 12 hours with 2 people. It is recommended to conduct maintenance during off-peak hours when minimal travelers and flight crews will be affected.

Materials Needed:



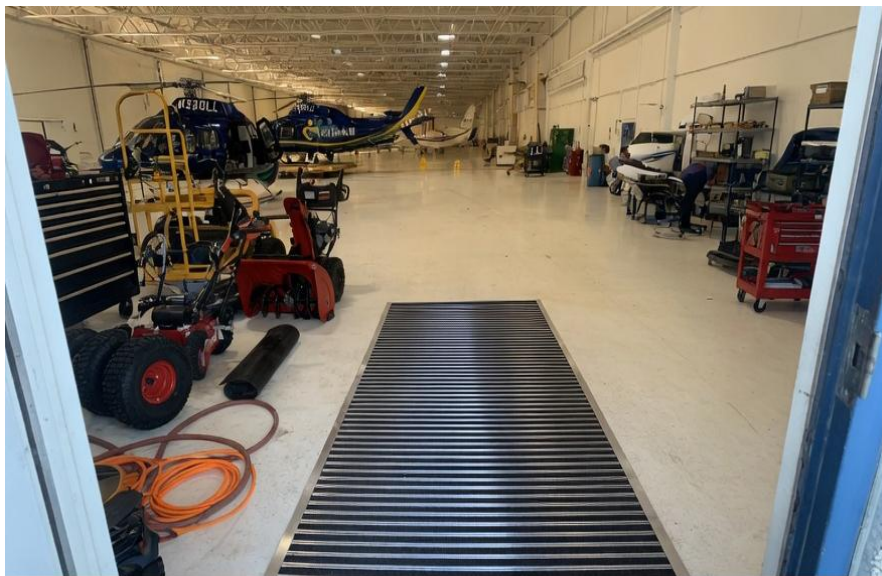
For this project, the team started by removing the existing carpet tile and luxury vinyl tile (LVT) from the recess.

In order to create a clean, secure, smooth base for the new matting system; the team deep-cleaned each area by scraping off any dirt, debris, or hardened material on the concrete and removed excess rubble fragments with a broom.



Removing the carpet tiles and prepping the space for the new matting system.

Once the different zones were prepped, the new aluminum matting system was rolled out flat and positioned firmly into place and the different frames/transitions were installed at each entrance matting location, creating a stable, slip-resistant surface equipped for everyday use - coupled with an aesthetically pleasing design/view.



Completed installation at the airport hangar.

The Outcome

Aluminum entrance mats effectively trap dirt, debris, and moisture at the entrance. By curtailing these fragments from being trailed throughout the private airport, they help uphold the appearance of the space while also adding to the heightened safety, especially in high-traffic zones where slip and fall accidents are more likely to occur.

The heavy-duty carpet inserts are a combination of polypropylene and nylon, with monofilament fibers. They have a rigorous brushing action that eliminates dirt, debris and particle fragments from traveler's luggage and footwear while also soaking up moisture at the same time. Perforations in this matting system allow dirt, debris, and moisture to collect

in the recess below for future cleaning. Additionally, these carpet fibers are designed to absorb moisture quickly, preventing water from being tracked throughout the facility.

For this airport, the carpet inserts were chosen to enhance both slip resistance and dirt control. The desired color blend—70% brown and 30% black—was carefully crafted to efficiently hide dirt, debris, sand, salt and other particles tracked in from the outside, keeping the entrance clean and safe even in high-traffic settings.



Completed entrance mat at the main entrance of the private airport.

This set of aluminum entrance matting systems has proven highly effective, with an estimated 18 pounds of dirt being retained annually in the recess wells of the airport entrances. This level of dirt retention contributes to a cleaner, safer, and more aesthetically pleasing setting, while also reducing maintenance efforts and improving the overall visitor experience.



New transition frame for this airport entrance.

Product Recommendations for this Industry

Aluminum entrance matting isn't just about maximizing safety conditions; it also plays a key role in maintaining clean surroundings. The Carpet and Rug Institute (CRI) states that a correctly installed entrance mat 15-25 feet in length can prevent 75% to 90% of dirt, debris, and rubble fragments from being traced throughout a facility.

In addition to minimizing dirt, aluminum entrance mats also present notable cost savings. The International Sanitary Supply Association (ISSA) approximates that corporations can save roughly \$600 in maintenance costs for every pound of debris blocked from entering the private airport. This includes cost savings in cleaning materials, labor charges, and even the prolonged existence of flooring conditions.

For airports, this not only means a cleaner, safer atmosphere for airport visitors, but also a more cost-effective approach to facility maintenance and enriched design aesthetics.

Private Airport Case Study Overview						
Location	Foot Traffic	Mat Type	Dimensions	Dirt Collected	Time to Install	Cost Savings
Large Private Airport	Entire bay: 22,000 sq ft with 2 runways. 71,614 annual landings and takeoffs in 2025 or over 1,300 weekly visitors	BaseMat 300	5 mats total: 302 square feet	18 pounds of dirt and debris per year	Team of 2, about 12 hours	\$600 per pound of dirt trapped or \$10,800 per year

Summary of Findings

5 entrance matting systems + over 1,300 weekly visitors = 18 pounds of dirt and debris collected annually.

In large airport settings, safety and cleanliness are vital, especially when it comes to the entrance areas. Airports, airstrips, aerodromes, hangars, aviation sites, and even private airports see a variety of customers and guests from all over the world. Visitors wear an assortment of footwear and there is a large volume of foot and wheeled traffic, which means that having an entrance mat that is ADA compliant and strong is vital for measuring up to the demands of a popular airport location.

One solution that meets these needs is the BaseMat300, a durable, ADA compliant, slip-resistant matting system specifically designed for high-traffic areas.

Aluminum Entrance Matting
Case Study: Private Airport



*Completed
Installation at the
private airport
Mat Installed:
BaseMat 300*