

Major airline protects ground crews and productivity from lightning with Sferic Siren



Maximizing safety and business continuity in the face of severe storms

OVERVIEW

There are a few core airlines that form the backbone of domestic travel in North America, and AEM is proud to be a weather safety and services partner for several of them. This case study illustrates the work we've done with a carrier that's known at over 100 airports nationwide for great hospitality and reliability.

In recent years, this airline found that severe weather - particularly lightning - was becoming a major threat to ground crew operations at several key strategic airports. In order to keep their workers safer without false alarms that would unduly delay work, this leading carrier partnered with AEM to create a new lightning safety alerting system.

Overcoming evolving industry challenges

Since lightning threatens all work done on the tarmac, our domestic air carrier wanted to build a comprehensive approach that would ensure total safety by providing actionable advance warnings. To maintain their reputation as an industry leader and minimize the impact of lightning on operations, the airline required a solution that would:

1
PROTECT GROUND
CREW WORKERS
FROM LIGHTNING

The company needed to provide unmistakable alerts that would support their weather safety protocols.

2
CREATE A TWO-ALARM
SYSTEM FOR MAXIMUM
CLARITY

The airline wanted an 8-mile strobe alert for approaching lightning and a 3-mile audible emergency siren with its own strobe.

3
BUILD SOMETHING
SCALABLE &
RELIABLE

The carrier needed a solution that could be deployed reliably in the face of various regional weather challenges.

SCALING SOLUTIONS TO SITE-BASED NEEDS

Weather safety is paramount in the aviation industry when it comes to protecting business, reputation, and customer experience. With that said, weather challenges are evolving in unexpected ways that are challenging industry paradigms.

That's why this airline needs partners that understand how to assess each airport on a project-based level while establishing best practices that can be replicated easily at scale for other sites in the future. AEM first engaged with this industry giant in 2023 and has grown into a trusted provider.



The solution: Custom-configured Sferic Sirens backed by the Earth Networks Total Lightning Network®

AEM worked with the major airline's operations team to build a custom configuration of the Sferic Siren that met their exact goals and specifications. The system was installed at two key airports in June of 2023, creating a pilot that has been rapidly replicated at 20+ airports across North America, with approximately 30 more installations planned. The solution includes:



AUDIBLE & VISIBLE LIGHTNING SIRENS WITH TWO THRESHOLDS

 Custom-built indoor and outdoor Sferic Siren alerting modules provide airline employees with an "approaching" warning and "weather emergency" alert.

SFERIC MAPS FOR LIGHTNING INTELLIGENCE

 Sferic Maps allows operations leads to track approaching storms and study lightning activity in their area to continuously improve weather safety.

INSTALLATION SERVICES AND ON-SITE SUPPORT

 Our AEM team of field service technicians installed each siren system by hand while training in-house stakeholders on use and maintenance.

Weather resilience for airports around the world

Now, thousands of airline employees across North America are better protected from lightning than ever before, and their employer has the capacity to lead proactively and decisively in the face of increasing severe storms. By working with AEM, this aviation giant was able to embrace a science- and safety-minded solution that addressed all their needs.



Why AEM?

AEM's purpose is to empower communities and organizations to survive – and thrive – in the face of escalating environmental risks. A big part of that is supporting airports and airlines around the world so they can power the global supply chain and economy while continually adopting safer practices and operating better in tune with growing weather and climate challenges.

If you're in the aviation industry – anywhere in the world and at any scale – we'd love to have a chat about our:

1. AVIATION INDUSTRY EXPERTISE

We support airports and airlines all over the globe. We understand the space and have an established record of success.

2. NEEDS-BASED WEATHER RESILIENCE

We can scale a weather and natural hazard monitoring solution for any site and tailor it based on hyperlocal challenges.

3. END-TO-END SOLUTIONS

We can serve as a transformational multi-hazard risk management partner or help you get over the next hill – whatever you need.