



**CYPRESS CREEK TRI-RAIL STATION**

## **CASE STUDY**

**CMCE LIGHTNING SUPPRESSION SYSTEM**

# CASE STUDY

## Upgrading Lightning Protection for Critical South Florida Transportation Infrastructure

### Cypress Creek Tri-Rail Station – Fort Lauderdale, Florida

[Cypress Creek Tri-Rail Station](#) in Fort Lauderdale, Florida, is part of South Florida's regional commuter rail network, helping connect passengers throughout Broward, Miami-Dade, and Palm Beach counties. The station supports daily commuters and travelers with passenger rail service, free commuter parking, ticket vending machines on both platforms, and connections to Broward County Transit.

As an active public transportation facility, Cypress Creek Station **depends on reliable electrical, communications, ticketing, lighting, and other station infrastructure to keep passengers moving safely and efficiently.** In a region known for frequent thunderstorms and lightning activity, protecting those systems is an important part of supporting operational reliability.

### The Challenge: High Lightning Exposure in South Florida

Fort Lauderdale's South Florida location creates a significant lightning exposure. The National Weather Service identifies **lightning as a year-round hazard in South Florida**, with the greatest concern during the summer thunderstorm season, while NOAA data has **historically placed Florida among the most lightning-active areas** in the United States.

For a transportation facility such as Cypress Creek Station, **a lightning event can threaten more than the building itself.** Electrical systems, communications equipment, passenger services, lighting, ticketing infrastructure, and other operational components can all be vulnerable to lightning-related damage and disruption.

The station previously relied on a traditional lightning rod system. While conventional lightning protection is designed to intercept a strike and provide a path toward ground, **Cypress Creek Station elected to upgrade its approach with CMCE Lightning Suppression.**



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## The Solution: Upgrading to CMCE Lightning Suppression

Encore Land and Sea installed one CMCE-120 Lightning Suppressor on the roof of Cypress Creek Tri-Rail Station, strategically positioning the system to provide broad protection across the station and surrounding property.

The CMCE system takes a fundamentally different approach from the station's previous lightning rod system. Rather than relying on interception after a lightning attachment develops, CMCE Lightning Suppression is designed to eliminate the conditions necessary for lightning strike formation within its protected area.

The single CMCE-120 provides approximately:

- 500,000 square feet of total protection
- 393-foot protection radius
- Broad coverage from one rooftop-mounted system
- Continuous, passive lightning suppression
- A streamlined alternative to a traditional network of lightning rods

By upgrading from conventional lightning rods to CMCE technology, Cypress Creek Station implemented a more proactive approach to protecting critical transportation infrastructure from direct lightning strikes.

## Project Results

With the CMCE-120 installed on the station roof, Cypress Creek Tri-Rail Station now benefits from approximately 500,000 square feet of lightning suppression coverage.

The project helps protect the station building, passenger areas, electrical infrastructure, communications systems, and surrounding property while supporting the reliability expected from an important piece of South Florida's public transportation network.

For a facility serving commuters in one of the country's most lightning-active regions, the upgrade represents an investment not simply in equipment protection, but in operational continuity, passenger service, and infrastructure resilience.



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## Project Summary

**Property:** Cypress Creek Tri-Rail Station

**Location:** Fort Lauderdale, Florida

**Industry:** Public Transportation / Transit Infrastructure

**Previous Protection:** Traditional Lightning Rod System

**Solution:** CMCE Lightning Suppression

**Installation:** One CMCE-120 Lightning Suppressor

**Installation Location:** Station Rooftop

**Total Protected Area:** 500,000 square feet

**Protection Radius:** 393 Feet

**Primary Challenge:** Elevated lightning exposure from the property's beachfront location

**Objective:** Upgrade from traditional lightning rods to a proactive lightning suppression solution designed to protect critical station infrastructure and support uninterrupted transportation operations.

