ENCORE
LAND AND SEA

MCFADDIN-WARD HISTORIC HOUSE

CASE STUDY

CMCE LIGHTNING SUPPRESSION SYSTEM

CASE STUDY

Protecting a Texas Landmark with CMCE Lightning Suppression

McFaddin-Ward Historic House Museum - Beaumont, Texas

Project Overview

The **McFaddin-Ward House Museum** is one of Southeast Texas' most treasured historic landmarks. Located in Beaumont, Texas, the property features a magnificent **12,800-square-foot, three-story Beaux-Arts Colonial Revival residence** designed by architect **Henry C. Mauer** and constructed between **1905 and 1906**.

Today, the museum preserves the history, architecture, furnishings, and cultural legacy of the McFaddin family while serving as an educational resource for visitors from across Texas and beyond. Protecting this historic property requires safeguarding not only the structure itself, but also the surrounding grounds, infrastructure, collections, and operational systems that support its mission.

When repeated lightning activity raised concerns about the potential for future damage, museum leadership sought a proactive solution designed to help prevent lightning strikes from occurring over the property.

The Challenge

Located on the Texas Gulf Coast, Beaumont experiences frequent thunderstorms and high lightning activity throughout the year. The McFaddin-Ward House had experienced lightning-related concerns in the past, creating a need for a more comprehensive approach to protecting the historic campus.

For a property of this significance, the risks associated with lightning extend far beyond structural damage. A single lightning event can impact electrical systems, HVAC equipment, communications infrastructure, security systems, and other critical building assets. More importantly, damage to a historic landmark can be difficult—or impossible—to fully restore.

The museum sought a solution that would:

- Protect the historic residence and surrounding grounds
- Reduce the risk of lightning-related damage
- Preserve valuable building systems and infrastructure
- Maintain the property's historic appearance
- Support long-term preservation efforts

Traditional lightning protection systems are designed to manage lightning after a strike occurs. The McFaddin-Ward House sought a more proactive approach focused on reducing the conditions that lead to lightning attachment in the first place.

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The Solution

To provide comprehensive protection across the property, **two CMCE-120 Lightning Suppressors** were installed to protect approximately 1 million square feet of museum grounds and facilities.

The CMCE is designed to address the root cause of lightning attachment–the electrical imbalance between cloud and ground–rather than simply managing the strike after it occurs.

The future installation of the CMCE was designed to:

- Balance atmospheric electrical charge
- Eliminate upward streamer formation
- Minimize conditions that lead to lightning strikes
- Protect critical building systems and infrastructure

Unlike traditional systems that react after a strike, the CMCE is engineered to help prevent strike formation within the protected zone.

Because the McFaddin-Ward House is a historically significant property, the installation was carefully planned to respect and preserve the site's architectural integrity.

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Preservation-Focused Installation

The project was executed with careful consideration for the property's historic character:

- Minimal visual impact to preserve the building's appearance
- Strategic placement to maximize protection while remaining unobtrusive
- Integration with existing infrastructure where applicable
- Compliance with preservation considerations and site requirements

This approach enhanced protection without compromising the architectural significance or visitor experience of the historic site.

Project Results & Benefits

Following the installation of two CMCE-120 Lightning Suppressors, the McFaddin-Ward House benefits from an expanded layer of protection designed to support both preservation and operational continuity.

The property can now continue its mission of preserving history and serving the public with reduced exposure to lightning-related risk.

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Operational Protection

- Reduced risk of lightning-related electrical disturbances
- Enhanced protection of HVAC and mechanical systems
- Increased resilience of critical building infrastructure
- Additional protection for museum operations and visitor facilities

Risk Mitigation

- Lower exposure to costly downtime and repairs
- Improved protection for historic structures and property assets
- Reduced risk to electrical and mechanical equipment
- Supports long-term asset preservation strategies

Strategic Value

- Demonstrates proactive risk management
- Aligns with modern building resilience initiatives
- Supports responsible stewardship of a nationally significant historic property
- Provides broad-area protection across approximately 1 million square feet

Why It Matters

Historic properties face unique preservation challenges. Unlike modern facilities, damage to original architecture, historic materials, and irreplaceable collections can have consequences that extend far beyond repair costs.

The McFaddin-Ward House represents an important chapter in Texas history. Protecting the property requires solutions that prioritize preservation, operational reliability, and long-term resilience.

By implementing CMCE Lightning Suppression technology, the museum has taken a forward-looking approach to protecting one of Beaumont's most iconic landmarks while helping ensure its legacy endures for future generations.

CASE STUDY

Key Takeaway

Historic properties require more than standard protection—they require thoughtful, proactive solutions that prioritize preservation as much as performance.

By implementing CMCE technology, the McFaddin-Ward House has adopted a modern lightning risk mitigation strategy designed to help protect the structure, infrastructure, and surrounding property while preserving the site's historic integrity for years to come.

Project Summary

Facility: McFaddin-Ward House Museum
Location: Beaumont, Texas
Building Type: Historic House Museum
Architectural Style: Beaux-Arts Colonial Revival
Architect: Henry C. Mauer
Size: 12,800-square-foot, three-story residence
Year Built: 1905–1906
Challenge: Lightning-related risk to a historic landmark and surrounding infrastructure
Solution: Installation of two CMCE-120 Lightning Suppressors
Coverage Area: Approximately 1,000,000 square feet
Objective: Prevent lightning strikes over the property while supporting long-term preservation and operational resilience

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