2026 WINNER

WEISS/MANFREDI

Longwood Reimagined
Kennett Square, PA

WEISS/MANFREDI
Architecture / Landscape / Urbanism

LPI

MOST INNOVATIVE DESIGN AWARD

Commercial / NEW BUILD

ABOVE ALL . . .
. . . YOU NEED LIGHTNING RODS



Photos: Albert Vecerka

Collaboration and Creativity
Hide a Lightning Protection System in Plain Sight!

From historical structures to modern high rises, the design and implementation of a lightning protection system is a team effort.
The LPI wants to recognize those individuals and firms who work with our LPI Members to successfully design and integrate lightning protection systems into commercial and residential structures.

“Protecting” a Glass Landmark in Plain Sight.

LPI Member Warren Lightning Rod Company in Collaboration with WEISS/MANFREDI Architecture.

Longwood Reimagined is the most ambitious transformation in the history of Longwood Gardens, reshaping its conservatory grounds across 17 acres. At its center is the new West Conservatory: a 32,000-square-foot glasshouse of pleated glass peaks that appears to float on a pool of water.

This year’s LPI Most Innovative Design Award showcases an architect and a lightning protection contractor solving problems together, during design, to protect an all-glass greenhouse with no visible hardware other than the air terminals.



Photo: Warren Lightning Rod

About Longwood Reimagined

Opened to the public in November 2024, the project expands the central grounds of Longwood Gardens in Kennett Square, PA. WEISS/MANFREDI served as lead designer with landscape architects Reed Hilderbrand.

The Glasshouse Design

WEISS/MANFREDI designed the West Conservatory as a “living, breathing” building, with operable glass walls and roof vents, slender branching steel columns, and water features inside and around the structure. Every one of those features became a lightning protection challenge.



Photo: Sahar Coston-Hardy

CHALLENGES | SOLUTIONS

1. Ridge-Top Mounting

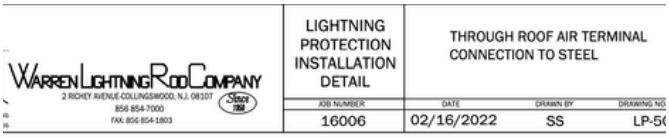
Challenge – Attach lightning rods to a glass roof where vent panels open/close and the metal thickness of the mullion extrusions were insufficient to act as an attachment point for the lightning rods.

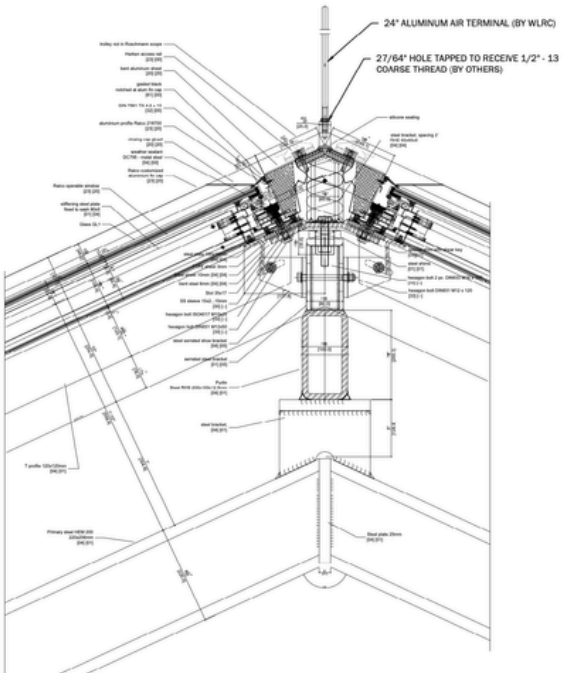
Solution – Architect organized a call with the German steel fabricator; custom ridge fittings were pre-drilled overseas. WLRC shipped matching drill bits and taps so its 24-inch aluminum air terminals (½"-13 thread) installed cleanly.



Above: The West Conservatory's pleated roof of glass peaks, where the air terminals sit.

The result: attachment points built right into the steel.



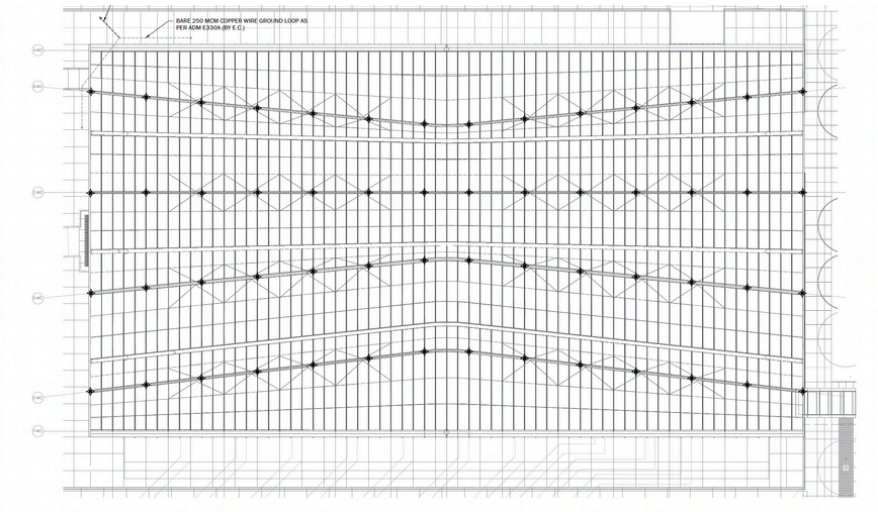


2. Invisible **Grounding**

Challenge – Bond structural steel columns without any visible connectors

Solution – WLRC recommended using the structural steel framing as the down conductor.The architect accepted the idea of bonding the steel anchor bolts inside the concrete. This entailed designing a special fitting out of existing Lighting Protection components.This fitting not only allowed for attachment to the grounding system after the concrete was poured, but was also waterproofed.

Left: WLRC's through-roof air terminal connection to steel detail, showing the custom ridge fitting. Drawing courtesy of Warren Lightning Rod Company.



Above: WLRC's drawing showing air terminal placement.

The Result

A fully code-compliant lightning-protection system with zero visible hardware (besides the discrete air terminals) that preserves the greenhouse's transparent beauty—**proof that collaboration works!**

Collaboration

At the Lightning Protection Institute, we have seen the value of collaborating within our own industry as well as with other industries to create positive momentum and outcomes for everyone involved.

Have a challenge or a project that you want to work with us on? Contact the LPI at lpi@lighting.org or Find a Local Contractor at https://lightning.org/about/find-a-contractor/.

For More Information on the LPI Award winners:

WEISS/MANFREDI Architecture

New York, NY
weissmanfredi.com

In collaboration with LPI Member

Warren Lightning Rod Company

Lightning Protection Contractor
Collingswood, NJ
Founded in 1950



The Lightning Protection Institute (LPI) is a national organization that leads the way in establishing the highest standards and guidelines for the design, installation, and inspection of lightning protection systems.
https://lightning.org/