



Iconic Protection

YOUR TRUSTED PARTNER IN HISTORIC
PRESERVATION AND RESTORATION



Protecting, Preserving, and Restoring Icons through Roofing and Waterproofing

When a building is a symbol of culture and history, protecting it is more than a responsibility — it's a mission. One that requires a partner who understands how roofing, waterproofing, and building enclosure systems protect structures from the elements and extend their lifetime well into the future. It's also a mission that demands a partner well-versed in the Standards for Preservation and Restoration.



SIPLAST SOLUTIONS: A LAYERED APPROACH TO LASTING PERFORMANCE

Siplast brings a comprehensive portfolio of high-performance solutions tailored to the unique needs of preservation and restoration projects. Key products include:

Siplast Teranap® Waterproofing Membrane: Multi-ply SBS-modified bitumen for even water distribution, minimized wear, and long-term durability.

Siplast Paradiene® SBS Membrane System: Two-ply SBS-modified bitumen assembly with a flexible base ply and protective cap sheet, engineered for superior weather resistance, UV protection, and long-term roof performance.

Siplast Paraflex® Liquid-Applied System: Highly flexible, cold-applied waterproofing membrane that adapts to complex geometries, delivers seamless protection, and ensures long-lasting performance in restoration and new construction.

Siplast Accessories: Moisture-mitigation solutions for cantilevered slabs, ensuring proper adhesion and lasting protection.

Siplast Tapered Polyiso Design Solutions: Expert insulation design and services that optimize drainage, improve efficiency with pre-cut panels and load-and-label staging, and streamline installation for lasting performance.

Siplast Parapro® PMMA Flashing System: Prevents water infiltration and protects concrete and steel while preserving design intent.

Additional Siplast systems include Terapro® Pedestrian Waterproofing/Surfacing Systems, Paradiene® 20/30 Eco-Active Membranes, and Paradiene® 2-Ply SBS-Modified Bitumen Roof Membranes with Noxite® Depolluting Granules — all engineered to protect complex structures with precision and resilience.

Your Trusted Partner in Preservation and Restoration

At Siplast, our high-performance roofing, waterproofing, and building enclosure systems are designed to protect original substrates and assemblies without sacrificing the character or integrity of the building. Defending against the visible risks posed by snow, ice, and rain and invisible adversaries such as wind shear and microbial intrusion, we address threats across the spectrum that can lead to deterioration.

Siplast also offers consultative support and expert technical guidance throughout every phase of a project, from initial assessment to detailing, specifications, and installation. Our dedicated team collaborates directly with architects and consultants to navigate complex interfaces, phased construction schedules, and evolving code requirements — all while honoring the Secretary of the Interior's standards and any local historic guidelines.

Every great building has a unique story to tell. And whether it's preserving original roof assemblies or integrating new resilient solutions that respect period aesthetics, Siplast empowers you to meet the moment with confidence by protecting both the structure and its legacy for decades to come.

FALLINGWATER

NEW YORK STATE CAPITOL

**MECKLENBURG COUNTY DISTRICT
ATTORNEY'S OFFICE**

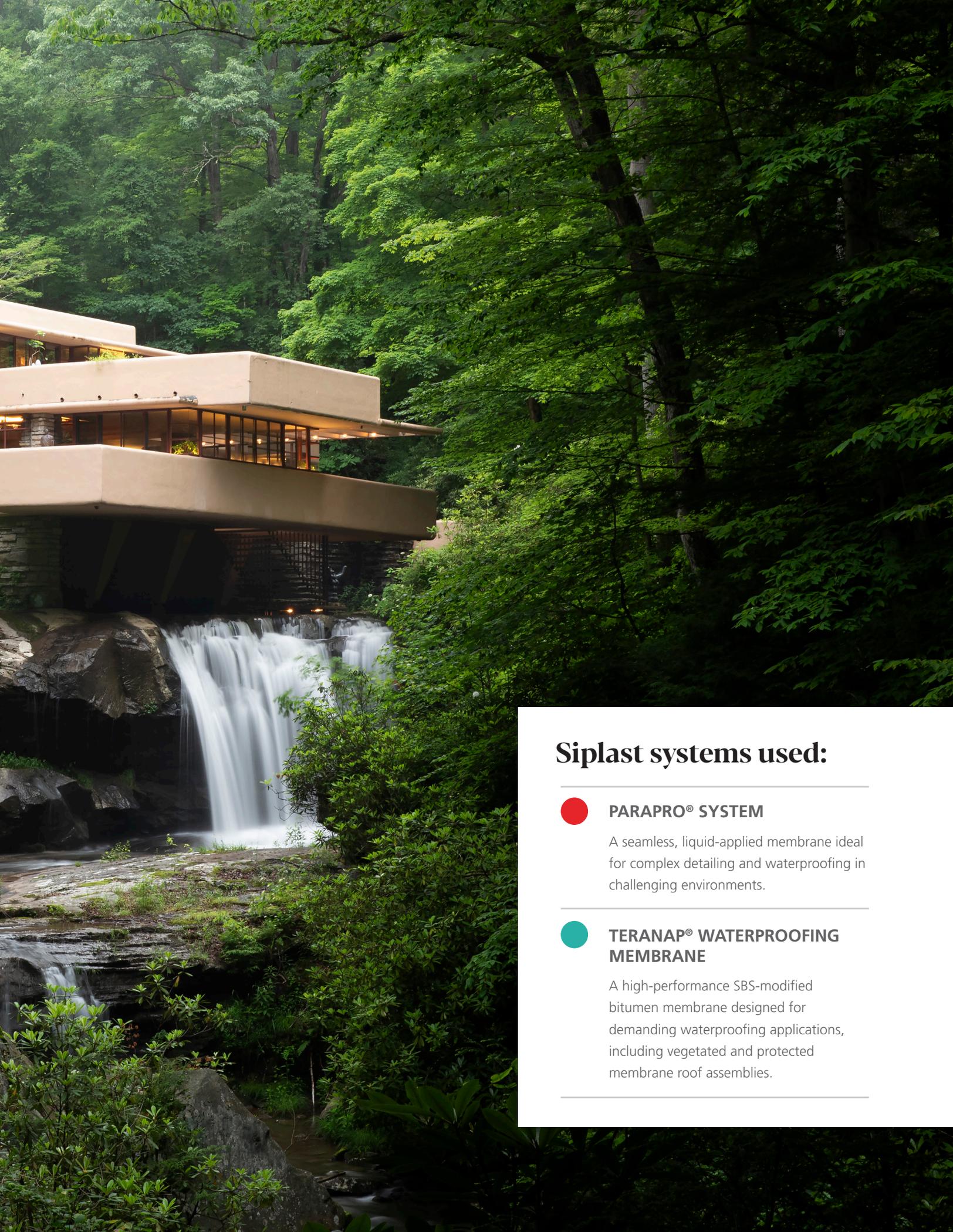
Cover Photos Courtesy of
Western Pennsylvania Conservancy
Greenwood Industries



RESTORING A MASTERPIECE

Fallingwater

PROTECTING THE INTEGRITY OF FRANK LLOYD
WRIGHT'S ARCHITECTURAL ICON



Siplast systems used:



PARAPRO® SYSTEM

A seamless, liquid-applied membrane ideal for complex detailing and waterproofing in challenging environments.



TERANAP® WATERPROOFING MEMBRANE

A high-performance SBS-modified bitumen membrane designed for demanding waterproofing applications, including vegetated and protected membrane roof assemblies.

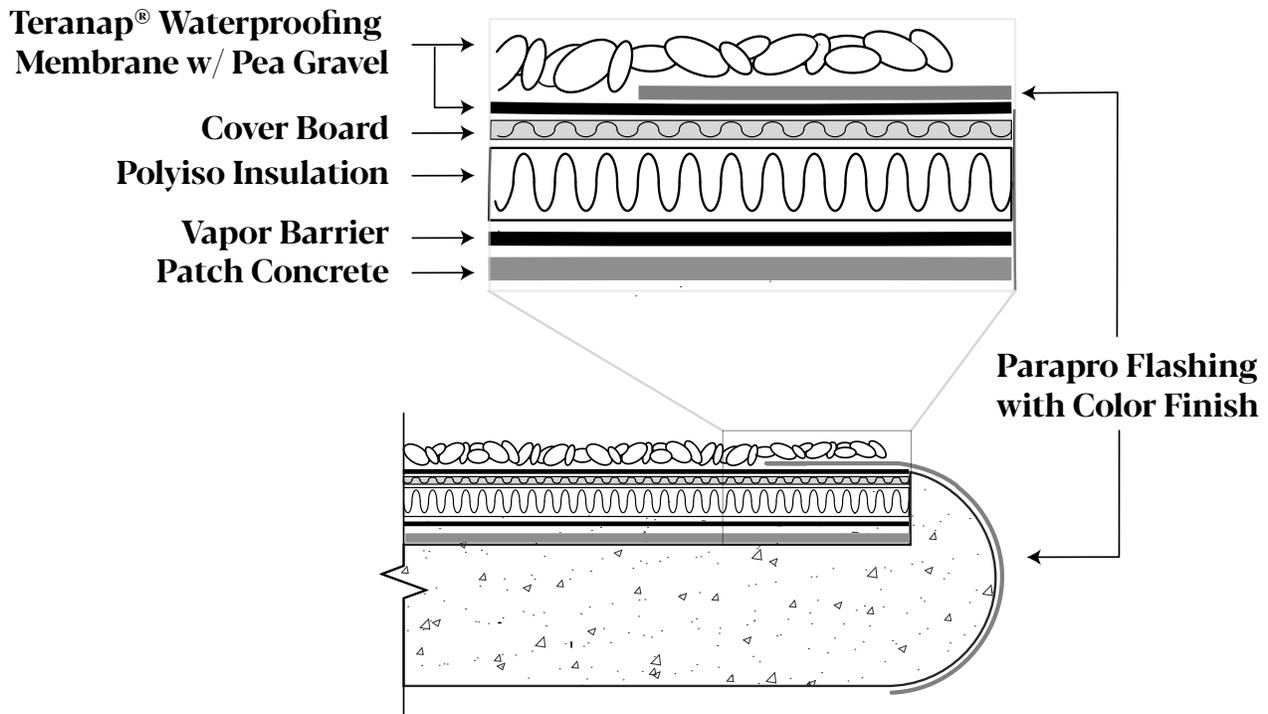
At A Glance

Ownership: Western Pennsylvania Conservancy (WPC)
Architect: Architectural Preservation Studio, DPC
Engineer: Matteo Ferran, Structural Engineers, PLLC
Contractor: Allegheny Roofing & Sheet Metal Co., Inc.

HISTORY

Tucked into the lush Laurel Highlands of southwestern Pennsylvania, Fallingwater is one of the most beloved works of American architecture. Designed by Frank Lloyd Wright in 1935 for prominent department store owners, the house served as a peaceful weekend retreat. The house was placed directly over the waterfall, rather than simply offering a view of it. This bold move reflected the belief that a building should exist in harmony with its surroundings. With its cantilevered terraces, locally quarried stone, and sweeping views, the house is situated as an extension of the landscape.

Fallingwater is admired for its seamless blend of art, nature, and design innovation. In 1963, the home was donated to the Western Pennsylvania Conservancy, which opened it to the public. Today, visitors from around the world come to experience the house and its serene setting. In 2019, Fallingwater received the honor of being inscribed as a UNESCO World Heritage Site.







Courtesy of Western Pennsylvania Conservancy

THE CHALLENGE:

Water as Inspiration and Intrusion

The home's organic design placed it directly over moving water, creating a deliberate physical connection between the structure and its surroundings. Even its name conjures the constant presence of cascading water. Yet behind its breathtaking beauty lies a poetic irony: the very element that defines it—water—has also created many challenges for the structure.

The house's sweeping terraces, rounded edges, minimal drainage and flashing have made it vulnerable to water infiltration, especially through its stone walls and along its curved edges, where moisture can run back toward critical transitions, such as windows and doors. The result is a historic site in need of waterproofing solutions that support the physical restoration and long-term preservation of the property—key necessities for it to retain its World Heritage designation.

The elimination of traditional room enclosures and emphasis on open indoor-outdoor spaces increased exposure to the elements. Fallingwater's ribbon windows—some of which also concealed structural elements—cantilevered balconies, and porous transitions did not use conventional waterproofing, eventually resulting in moisture related issues.

Further complicating matters, the use of natural materials with the site's existing topography meant that Fallingwater was not merely placed on the landscape—it was of the landscape. Built from native sandstone and positioned around existing rock formations, the house required solutions that accommodated irregular geometries and balanced them against materials shaped by nature over millennia. Adding to this were the aesthetic concerns. Any visible waterproofing elements had to be virtually invisible — both physically and in spirit.

Areas behind the stonework that were originally filled with rubble during construction have settled over its ninety-year lifespan, creating hidden voids that create paths for water to collect and seep inward. This ongoing infiltration now threatens the interior finishes and original design elements, making discreet, high-performance waterproofing both an urgent and sensitive undertaking.



Courtesy of Western Pennsylvania Conservancy

Preservation and Trusted Partnership

As part of a \$7-million effort to address water infiltration issues, the Western Pennsylvania Conservancy enlisted Architectural Preservation Studio, DPC (APS), one of the nation's leading historic preservation firms. Having collaborated with Siplast on previous projects, APS once again specified Siplast to develop materials and detailing solutions for complex roofing and waterproofing challenges.

This team spearheaded an exhaustive study of the building's failures, documenting issues such as aging materials that have left the structure increasingly vulnerable to water infiltration. While Matteo Ferran Structural Engineers, PLLC, and Pittsburgh-based Allegheny Roofing & Sheet Metal Co., translated preservation recommendations into practical applications, carefully navigating the building's irregular geometry and integrating the new system without compromising the integrity of the design.

Throughout the process, field investigations revealed extensive voids within the stone walls and cracks in the concrete parapets, requiring highly specialized interventions. The team employed non-polymer-modified concrete repair mortar to maintain compatibility with the original materials as well as with the fluid-applied flashing system, while coping stones were carefully reset on through-flashing and stone walls grouted to fill voids. Additionally, the team addressed moisture vulnerabilities at the iconic stone chimney by grouting, removing 1980s-era lead flashing, and preparing for the installation of ventilated chimney caps designed to be as unobtrusive as it is functional.

With a mandate to preserve the architectural authenticity and integrity of Fallingwater, the team approached every technical solution with care. The waterproofing strategy had to meet modern performance standards without disrupting the organic interplay of structure, stone, and stream that defines this global icon.

Prototype Testing and Collaboration

The guest house at Fallingwater served as the testing ground for the entire system. In an iterative process each material was validated for performance, thickness, and compatibility with the historic structure. This collaboration ensured the solution was functional while sensitive to Fallingwater's original design intent. Following the successful implementation at the guest house, the same system is now being carefully applied to the main house, preserving the integrity of the iconic design while addressing critical waterproofing needs.

SIPLAST SOLUTIONS:

A Layered Approach to Lasting Performance

The preservation team identified multiple roof and terrace areas in need of intervention. Siplast's role was pivotal in designing a multilayered system capable of addressing the site's specific vulnerabilities:

- **Siplast Teranap® Waterproofing Membrane:** a premium multi-ply SBS-modified bitumen waterproofing system, was selected for its proven performance. The new Teranap system provides the appropriate surface, even water distribution, and minimizes wear under aggregate.
 - **Siplast Parapro® PMMA Flashing System:** A modern-day solution to unique flashing conditions that presented significant water infiltration challenges in the past. The self-terminating qualities provided appropriate waterproofing and concrete protection on the bullnose edges without sacrificing the visionary design intent. This prevented water from reversing into the structure by naturally forming a drip edge, guiding water down and away from the building, which previously created significant deterioration of both the concrete edges and steel window elements.
 - **Siplast Accessories:** Siplast provided solutions for moisture mitigation within the concrete cantilevered slabs. These proven systems addressed the design team's concerns regarding moisture drive and appropriate membrane adhesion, which were identified during the initial forensic investigations conducted by APS. This modern technology, which was not available during the previous restoration, will now help ensure long-term durability and effective protection for the new waterproofing system.
 - **Siplast Select Contractors:** Expert craftsmanship provided by Allegheny Roofing & Sheet Metal Co., Inc., enabled the system to be efficiently installed. Siplast's select contractors led a collaborative effort with a thorough understanding of the house's existing problems and proposed solutions. By creating an ideal working relationship, they and the team at Allegheny Roofing & Sheet Metal Co., Inc. were able to implement the system as it was designed.
 - **Siplast Customization:** To preserve the visual integrity of the structure, Siplast provided custom ProColor PMMA matte finishes for exposed flashing areas, ensuring that even visible elements of the waterproofing system blended seamlessly into the natural palette. All color-matching efforts were carefully vetted to meet both functional and aesthetic requirements. The Siplast ProColor PMMA color finish, as opposed to standard paint finishes, forms a covalent bond with the Parapro flashing system, providing a long-term and renewable solution.
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The Legacy Lives On

Scheduled for completion in 2026, Fallingwater is a contemporary approach to historic preservation, demonstrating how advanced modern materials, combined with thoughtful design, can offer innovative solutions to age-old restoration challenges. Siplast has been a trusted partner from early assessments to system design support and on-site implementation—bringing technical expertise and innovative solutions to protect one of modern architecture's most iconic works.



New York State Capitol

A MONUMENT INSPIRED BY THE RENAISSANCE

At A Glance

Ownership: Office of General Services

Architecture: Bell & Spina Architects-Planners, PC

Fabricator and Installer: Greenwood Industries, Inc.

General Contractor: VMJR Companies

Restoring a New York Icon

Completed in 1899 after more than three decades of construction, the New York State Capitol Building remains a pillar in the heart of Albany today and is listed on the National Register of Historic Places. This architectural masterpiece was one of the most expensive government buildings of its time and one of the only Capitol buildings without a domed roof. The building not only secured Albany's role as the state capital but also represented the wealth and strength of New York.

The ambitious project began in 1867 and cycled through five teams throughout its construction, beginning with British architect Thomas Fuller, who laid the foundation with a Renaissance-inspired design. By 1875, Fuller was replaced by American architects Leopold Eidlitz and Henry Hobson Richardson, whose dramatically different approaches introduced Romanesque and French Renaissance influences to the building. Frederick Law Olmsted, famed for designing New York City's Central Park, joined the project in 1874 to advise on the Capitol's expansion. However, in 1876, the Advisory Board assumed control of the design, declaring that the Capitol should be "an architectural monument worthy of the grandeur of the Empire State." They proposed ornate additions, including balconies and dramatic staircases, to enhance the building's civic stature.

Behind its façade lies a richly ornamented interior, much of it designed by Eidlitz and Richardson. Among the Capitol's most striking features are the 25 murals by William de Leftwich Dodge in the domed Governor's Reception Room. Another key highlight is the Capitol's central courtyard features an extraordinary open-air passage and a restaurant roofed and clad with eye-catching copper.

Siplast systems used:

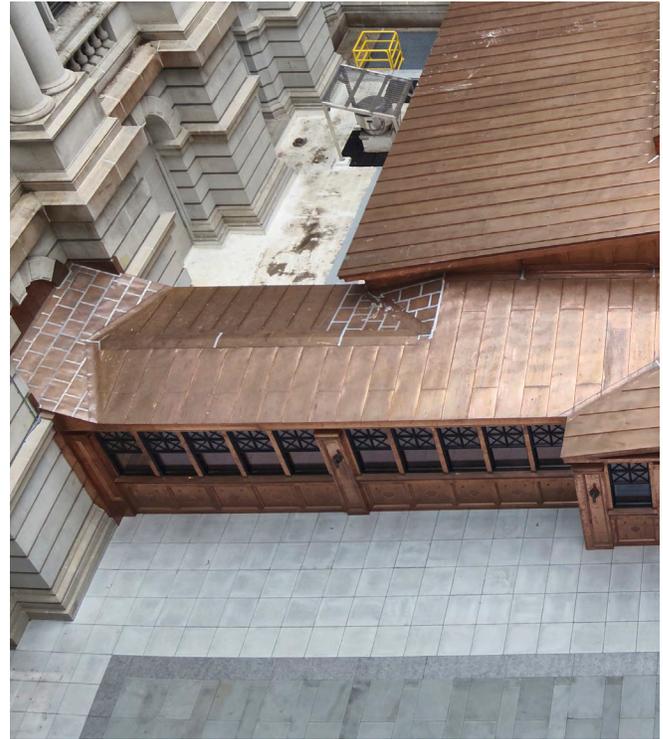


PARAFLEX LIQUID MEMBRANE

A seamless, liquid-applied membrane ideal for complex detailing and waterproofing in challenging environments.



Courtesy of Greenwood Industries



Courtesy of Greenwood Industries

Protecting History Through Vulnerabilities

Despite its grandeur, the Capitol has not been immune to calamity. A massive fire in 1911 destroyed nearly half a million books and historic manuscripts. Even earlier, a large stone had fallen from the Assembly Chamber ceiling, missing an assemblyman by inches. Years later, water damage led to the concealment of two murals behind a new wooden ceiling, which remains blocked off from the public. Even today, the building has contended with persistent maintenance challenges—a reminder that history, however monumental, is still vulnerable to time.

By 2023, the New York State Capitol Building's central courtyard required updates to its roofing and cladding. Initially crafted over 120 years ago, the copper elements and membrane roofing were identified for replacement as part of a restoration effort. Bell & Spina Architects-Planners, PC, a Syracuse, NY-based building enclosure design firm, led the project, collaborating with fabricator and installer Greenwood Industries, Inc. The project scope included replacing the existing 4,400-square-foot courtyard roof while maintaining historical accuracy and providing long-term performance. This process involved removing the previous flat roof areas down to the existing brick vaults and addressing areas of water infiltration.

Modern Solutions, Timeless Vision: The Siplast Difference in Action

A 21-month process, this comprehensive \$2.6-million project demanded meticulous planning and precise execution. The copper cladding and roofing featured intricate details, including flat seams, standing seams, ornate rosettes, egg-and-dart trim, and scrollwork, requiring careful replication. Additionally, all materials, including six tons of copper, were transported through a single entrance without cranes to accommodate site constraints.

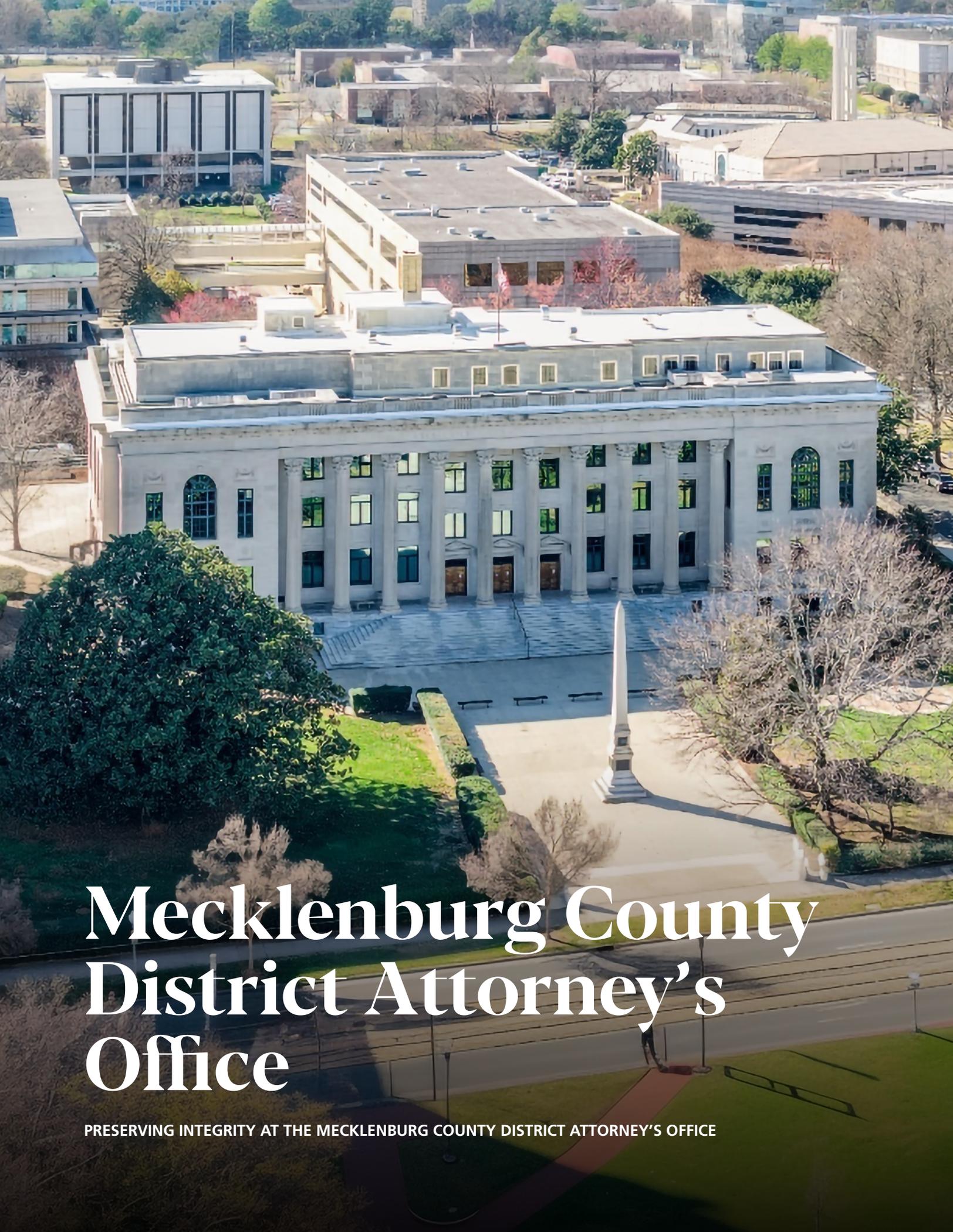
To achieve this remarkable renovation, Greenwood Industries tapped the roofing specialists at Siplast, aiming to honor the building's rich history while implementing modern roofing solutions to safeguard its future. Siplast's Paraflex roof membrane system proved to be an excellent solution for this challenging project. The torch-applied and liquid-applied system provides exceptional waterproofing. A 1.5-inch layer of concrete was poured over the existing brick vaults, followed by a lightweight insulating concrete base layer installed by David Miorelli & Co. The Siplast Paraflex system was then applied, creating a seamless, monolithic barrier to address the water leakage issues. Afterward, bluestone, granite, and concrete pavers—envisioned by the original architect in 1873—followed by the copper cladding were installed following the building's historic design.



Courtesy of Greenwood Industries

Preserving History for the Future

The restored courtyard seamlessly integrates the historical charm of the original design with expert copper craftsmanship and modern functionality. The new roof system replicates the original architect's vision and helps protect the infrastructure, proving that respecting the past and embracing the future aren't mutually exclusive goals. As water damage and time once threatened to damage parts of this architectural legacy, skilled craftspeople and innovative roofing technology can help protect the building's infrastructure, securing the Capitol's legacy for generations.



Mecklenburg County District Attorney's Office

PRESERVING INTEGRITY AT THE MECKLENBURG COUNTY DISTRICT ATTORNEY'S OFFICE

At A Glance

Engineer: REI Engineers, Inc.

Installer: Interstate Roofing Co.

Ownership: Mecklenburg County

Hybrid Roofing Solutions for a Historic Civic Landmark

Erected in 1928 as the Mecklenburg County Courthouse, this historic building now serves as the Mecklenburg County District Attorney's Office and remains one of Charlotte's most recognizable civic landmarks. Designed by architect Louis H. Asbury, the property was added to the National Register of Historic Places in 1979 and designated a local historic landmark in 1983.

When leaks began appearing across several roof sections, the Mecklenburg County Asset and Facility Management Department sought a solution that could preserve the structure's integrity. The building's roofing deck consisted of multiple systems—light-weight insulating concrete (LWIC), metal decking, and structural concrete—each varying in age and condition. Over time, some areas began to show signs of wear, and leaks became increasingly common.

REI Engineers, a North Carolina-based building enclosure consulting firm, designed the roof replacement. Interstate Roofing Co., a prominent commercial roofing contractor based in Charlotte, was awarded the contract and elected to utilize Siplast materials. A key priority was ensuring that renovations did not disrupt daily operations. Because the building remained fully active throughout construction, careful coordination, noise management, odor mitigation, and safety protocols were essential. REI Engineers were made aware of complaints from the building occupants about odor, and an alternative, low-VOC adhesive was then approved for use.

Siplast systems used:



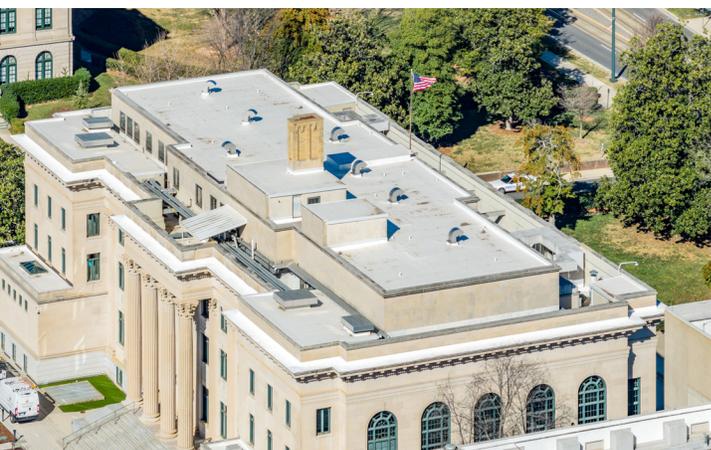
PARATECH GLASS BASE TG

A torch-applied SBS-modified bitumen base ply engineered for strength, flexibility, and reliable adhesion across varied substrates.



80-MIL PARASOLO TPX FLEECEBACK

A high-performance TPO membrane with fleeceback reinforcement, delivering exceptional durability, secure attachment, and long-term waterproofing for demanding roof assemblies.



Siplast's technical knowledge made them an ideal partner for the District Attorney's Office roofing project. Siplast provided a roof system in accordance with REI Engineer's design: a hybrid system combining Paratech Glass Base TG, a torch-applied SBS-modified bitumen base ply, with 80-mil Parasolo TPX Fleeceback, a high-performance TPO membrane. This system provided proven durability while accommodating the District Attorney's Office's varied roof substrates. To help ensure a durable and visually consistent transition at flashing areas, Siplast applied its patented liquid flashing detail with the TPX roof membrane. This process involves installing the TPX fleeceback membrane upside down, welding the white cap to the field membrane so the fleece faces upward. The fleece then receives a base coat of Parapro Flashing, into which Pro Fleece Reinforcement is embedded. A top coat is applied to complete the detail, providing a clean, reinforced, and cohesive finish.

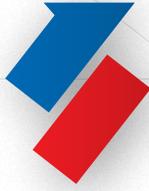
To address complaints over odor in the occupied building, Siplast collaborated closely with REI Engineers to substitute the standard Parasolo Bonding Adhesive with LV50 Adhesive, a low-VOC option. This adjustment minimized fumes on-site while maintaining full system performance and warranty compliance, ensuring a safe and efficient installation in the active environment.

With its upgraded roof system, the Mecklenburg County District Attorney's Office now benefits from a cohesive and warrantied solution designed for longevity and reduced maintenance, underscoring the value of Siplast's commitment to innovation and partnership in complex renovation projects.

Siplast representatives provided hands-on technical support throughout this project, assisting with product selection, detailing, and on-site troubleshooting. Their involvement helped ensure the system met both the county's performance standards and demanding schedule. Interstate Roofing praised the collaboration, noting that Siplast's knowledge of modified roofing systems and comprehensive approach helped simplify the installation. Their proactive, forward-thinking solutions contributed to a smoother process and a cleaner final result.

While the project did not involve a historic review board, maintaining the Mecklenburg County District Attorney's Office's visual character was essential. The new roof system blends durability and modern waterproofing technology with minimal visual change, preserving the building's civic identity while extending its service life.





Preserve the Past. Innovate for the Future.

Preservation and restoration work is about more than maintaining architecture. It's about sustaining the meaning of an iconic structure by honoring the legacy of those who built before us and ensuring that their work continues to serve, inspire, and endure.

At Siplast, we take that responsibility seriously. Our mission is to safeguard the irreplaceable by eliminating compromise through rigorous science, premium building design systems, and unwavering partnership. Across cultural landmarks, civic institutions, and healthcare facilities, we deliver innovative solutions backed by proven performance and built to withstand the most demanding environments.

When a building is truly precious, its protection becomes deeply personal. At Siplast, we understand that. Which is why for projects of the highest priority, we're the preservation and restoration partner you can count on every step of the way.

CONNECT WITH OUR TEAM.

WWW.SIPLAST.COM