

NEW ROOF FOR FORTUNE 500



Charles Schwab's new headquarters in Westlake, Texas.

Chamberlin Roofing & Waterproofing installed a fully tapered PVC roofing system for Charles Schwab's new headquarters in Westlake, Texas. The 1.1 million-square-foot campus is spread across 70 acres within Hillwood's Circle T Ranch development. Designed by Corgan, it was built in two phases with the second finishing mid-2021.

The property encompasses numerous amenities such as outdoor water features including Turner Lake overlooked by the employee dining room. All stonework, wood and fabrics were sourced from Texas-based providers. The modern, ranch-themed campus can accommodate approximately 6,000 employees. Charles Schwab joins other Fortune 500 companies who have relocated their headquarters from San Francisco to North Texas.

Brought on by general contractor DPR Construction, Chamberlin faced considerable challenges throughout the project from weather to design and worked with the project team to offer sustainable solutions.

OUTSIDE THE BOX

The install began with two layers of adhered insulation followed by a full quarter inch per foot of adhered tapered insulation. Then, one layer of adhered DensDeck cover board was capped with adhered Sikaplan PVC membrane.

A concrete deck was the main substrate for the roof. Surrounding this was a metal deck overhang referred to as an outrigger deck. In between the

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GUEST COLUMN



Craig A. Hargrove, AIA, LEED AP
 Senior Vice President & Director, Architecture
 Hoffmann Architects

Reimagining the Plaza: Balancing Past and Present in Rehabilitation

A benchmark for the service life of building enclosures is 50 years, with 25 years being the standard for major capital improvements, according to the WBDG Whole Building Design Guide®. By these criteria, modern public spaces of the late 1960s and earlier are at the end of their service lives and many are in need of long-overdue rehabilitation. Even postmodern plazas are reaching the age where major renovations are necessary to extend their usefulness.

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metal and concrete decks was simply framing, leaving a gap for water to enter the building. None of the drawings or specifications clarified why the space was open or how to address water infiltration. Chamberlin met the challenge with some creative problem solving. First, the framing was boarded with plywood. Sika membrane was then installed on the plywood to prevent water intrusion.

The second part of the challenge was installing the insulation to seamlessly transition from the concrete deck to the metal deck. This took extra layers – up to 20 inches in some areas – and precise work with the tapering. For accurate installations one time, the first time, crew members started by loose laying the insulation boards to test the configuration before adhering to the substrate.

RAINY DAYS

A large portion of the roof deck was concrete, and excess rain leant to the project complexity. It delayed the project start as well as interior finish out. The substrate had to pass a moisture test of 5% or less for the materials to be able to be installed. Chamberlin made

sure to have a crew on standby ready to start immediately on the days where work conditions were questionable. The crew worked overtime to help make up production as well.

The rainy weather also resulted in a very muddy jobsite. This proved difficult for cranes to access the building. The general contractor's crane was removed before all of Chamberlin's materials were finished loading. Chamberlin worked with Davis Crane to find a location with enough dry soil to get close enough to the building, set up a new crane and finish loading the materials to the roof.

IMPORTANCE OF SAFETY

Chamberlin holds safety as its primary focus on every project they undertake. They believe that no project can be considered a success if one of their team members gets hurt. Chamberlin has a dedicated team of safety professionals, and their safety program and practices come from the top down. In preparation for the Charles Schwab project, a site-specific safety plan was developed as well as a Job Hazard Analysis (JHA) covering each task on the job, potential hazards



PVC roofing system installation in progress

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Photo 1: The horizontality typical of mid-20th century modernist plazas is expressed as a water feature at 1251 Avenue of the Americas, New York.

Rehabilitation of these historic public spaces presents unique opportunities. Communities are challenged to preserve midcentury plazas as integral to the context of the buildings that surround them while recognizing that how people use and experience plazas, and how those places contribute to the urban environment, have changed since their construction.

As Audrey Wachs observed in the December 2017 issue of *The Architect's Newspaper*, "Modern and late-modern landscapes in American cities are the least appreciated and least understood outdoor spaces... Despite their historic significance, these sites are constantly imperiled by bad maintenance, and the public antipathy that follows..."¹

The Historic Context

Because plazas and public spaces are inextricably attached to their parent buildings, an understanding of how the two coexist and support each other must be part of the conversation when these spaces require rehabilitation.

Plazas that support skyscrapers—such as the Seagram Building, One Chase Manhattan Plaza and 1251 Avenue of the Americas in Manhattan (see Photo 1)—are typified by wide expanses that serve as a platform for these modern structures. How this was accomplished varied. The Seagram Building (see Photo 2) and One Chase Manhattan plazas are fields of granite while 1251

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(NEW ROOF continued from pg. 2)

associated with those tasks and how to prevent those hazards from causing an accident.

Chamberlin provides their employees with the tools and knowledge to perform their jobs safely and effectively. Any specialized training needed was performed and evaluated, and all equipment was inspected by a competent person daily before use. Full-time Chamberlin safety professionals made frequent jobsite inspections and recorded their

observations on site with an electronic safety management system.

A CUT ABOVE

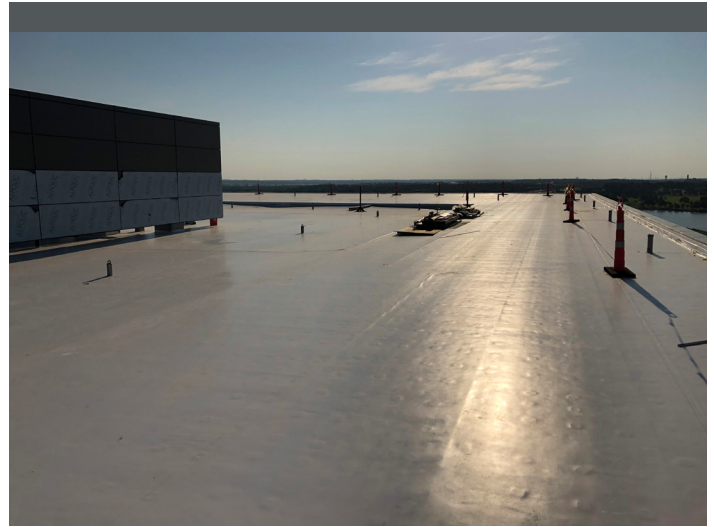
In the beginning, Chamberlin noticed an inconsistency with the Sarnacol AD adhesive. The material is a two-part system requiring a 50/50 ratio of each part to perform correctly. The parts are each dispensed from a pace cart machine and combined on the substrate. However, initially the materials weren't pouring evenly causing adhesion issues.

After a visit from the Sika representative, it was determined the machine needed to be replaced. In just a couple of days, a new machine was located, ordered and crane loaded to the site.

Chamberlin performed QA/QC checks throughout the project. Daily checks for proper adhesive bead spacing and test welds were performed. Sika Sarnafil also performed QA/QC site visits throughout the projects. The result of Chamberlin's workmanship was a high quality, watertight installation. ■



Chamberlin crew members installing membrane over cover board



Completed PVC roofing system

(PLAZA continued from pg. 2)

Avenue of the Americas uses a large pool and fountain on its major elevation to establish the horizontality that dominates the style.

The Manhattan House, on the other hand, has public space and portes-cochere intended to emulate country roads and gardens and establish a counter-point to the white glazed brick residential high-rise they surround. Lever House in Manhattan and Freeway Park in Seattle are examples of a marriage of these two themes. The inset plaza of the Lever House is a modernist hardscape internalized and secluded from the street plane (see Photo 3), while Freeway Park is a "blending of the urban and natural environment," according to the nonprofit Project for Public Spaces (PPS).

The context in which these spaces were created cannot be ignored. A plaza like that of the Seagram Building was more than just an opportunity to introduce public space to an urban setting. Here, plaza and building served as a statement about previous skyscrapers. Earlier structures often occupied entire sites, ignoring the street plane and providing little relationship to the city at that scale. In contrast, the modern plaza served as a transition between street and building, marrying the skyscraper to its environment at a personal level.²

Today, communities view public spaces differently than they did 50 years ago. People interact with them differently and expectations have changed.



Photo 2: New York's Seagram Building at 375 Park Avenue is a leading example of the use of wide expanses of hardscape as a platform for a modern structure. It is typical of modernist plazas in the mid-20th century.

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(PLAZA continued from pg.3)

We now require our public places not just to serve the community as gathering place, but to improve the environment.

Technical Considerations for Rehabilitation

While the philosophical and social aspects of plaza rehabilitation have long been debated, the technical considerations are no less daunting. They include the following:

Thermal Efficiency: Energy efficiency was not a governing principle 50 years ago, and many historic plazas were constructed with little, if any, insulation. For commercial buildings, the 2015 *International Energy Conservation Code (IECC)* requires that plazas located over occupied, conditioned spaces include continuous insulation with an R-value ranging from 20 to 35, depending on the climate zone. In a rehabilitation project, adding insulation to an existing plaza presents a challenge when establishing the overall thickness of the new assembly, given the need to meet existing conditions at the perimeter of the space, such as sidewalks and building entrances.

Creative use of insulation of varying thicknesses can achieve an area-weighted R-value that meets the energy code while mitigating potential height issues. Such strategies can also serve a dual purpose by providing positive pitch to drains to remove storm water from the hardscape. Assembly pitches of between $\frac{1}{8}$ inch and $\frac{1}{2}$ inch per linear foot are sufficient to move water without negative impacts on user comfort.

Depending on how a plaza is used and maintained, introduction of insulation boards may adversely affect the ability of a new assembly to resist compressive loads from equipment and small vehicles. High-density insulations that can achieve compressive strengths of up to 100 pounds per square inch can be used in the new assembly to address this design consideration.

Alternatively, the 2015 *IECC* does allow exemption for historic buildings if the code “would threaten, degrade, or destroy the historic form, fabric, or function of the building.”

Heat Island Effect: Urban heat island effect occurs when the built environment uses an abundance of materials that absorb and retain heat (hardscapes, sidewalks, streets and building claddings). According to the U.S. Environmental Protection Agency (EPA), such choices are having an increasingly adverse impact on climate in general and cities specifically.³

Historic modern plazas, with wide expanses of concrete and stone hardscape, have become significant contributors to the heat island effect. Several strategies can reduce the impact without compromising the original design intent.

The use of low-lying native or adaptive plants in lieu of hardscape can introduce low-maintenance landscaping that requires no irrigation, reduces heat island effect and preserves the horizontality of the original design.



Photo 3: A modernist hardscape is internalized and removed from the street plane at Lever House, 390 Park Avenue, New York.

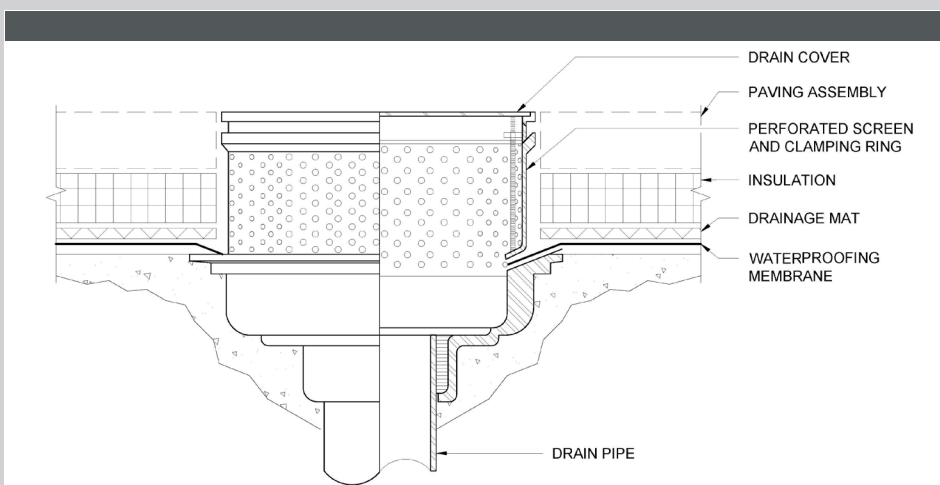
Alternatively, replacement of heat-absorbing paving materials with more reflective products having a solar reflective index (SRI) of 29 or more can dramatically reduce heat island effect.⁴

Storm Water Retention: Many municipalities now have regulations that mandate how building owners manage storm water on their properties. The goal of these regulations is to prevent runoff from leaving a site along impervious surfaces, thereby restricting the volume of water that can enter the municipal storm system. ■

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To continue reading this article and for references cited please visit www.chamberlinltd.com/reimagining-the-plaza-balancing-past-and-present-in-rehabilitation

Craig A. Hargrove, AIA, LEED AP is Senior Vice President and Director, Architecture with Hoffmann Architects (www.hoffarch.com), an architecture and engineering firm specializing in the rehabilitation of building exteriors. As director of the firm's New York office, he oversees demanding building envelope projects, leading project teams in developing cost-effective solutions for roofs, facades, windows, and plazas that meet energy performance and resiliency goals. He may be reached at c.hargrove@hoffarch.com.



A detail shows bi-level drainage, which is often a consideration in the design of plazas constructed over occupied spaces.

Importance of Safety & Training



Chamberlin was awarded ABC STEP Platinum for 2021

Chamberlin is dedicated to delivering high quality, competitively priced roofing and waterproofing services that are completed safely, with a spirit of teamwork and on time. An important aspect of Chamberlin's quality initiative is Chamberlin University. Chamberlin 'U' was developed and implemented as part of their strategy to train and educate their workforce. Educating Chamberlin team members on safety, technical skills and soft skills empowers them to deliver quality, cost-effective projects.

Some recently graduated Chamberlin U classes included a traffic coating waterproofing apprenticeship course where those who completed the course received their Level I Certification. A Supervisor's Program offered training on safety responsibilities, crises management, personnel management, client interaction, cost control, personal budgeting and more. Chamberlin employees also participated in English classes and GED classes that met three times a week.

The classes completed with Chamberlin University help employees keep safety as a primary focus every day. This focus led Chamberlin

to achieve STEP Platinum for 2021. The STEP program measures participating ABC member firms on their safety processes and policies in 20 key components with the goal of implementing or enhancing safety programs that reduce jobsite incident rates. Chamberlin's safety practices also earned them the Gold Level Commitment to Safety by the American Subcontractors Association – Houston Chapter for 2021 – 2022. ■



Traffic coating waterproofing apprenticeship

Employee Profile

Megan Deitschel
Marketing Coordinator
Austin, Texas



Background:

Working for Chamberlin was Megan's introduction to the A/E/C industry. She took a leap of faith and applied for a position at Chamberlin, and they took a leap of faith in hiring her. It has been a learning experience for her from that moment.

Outlook:

Safety always comes first for Megan. Part of her job is to visit jobsites to capture photos and videos of Chamberlin's work. Sometimes that requires her climbing scaffolding or gaining roof access. While there, she only gets a glimpse of what the field endures every day, but it is clear safety must be the top priority for everyone to return home at the end of the day.

Favorite part of Chamberlin:

Megan enjoys her fellow employees the most at Chamberlin. Not only are they a great group to spend a lot of time with, but she can truly be herself around them. She believes they all work great as one team.

Outside the office:

She enjoys spending time doing anything with her dog Sadie and boyfriend Josh. She also likes to paint, travel, camp, explore wineries and snow ski.

Advice from mom:

"Kill them with kindness." Her mom taught her that from a young age. Never bring your own character down because of someone else's actions. Great advice.

We asked Megan to choose her favorites from this random list of things as a way to get to know her a little better:

MEGAN'S LIST:

Zoo

Aquarium

Tea

Coffee

Seinfeld

The Office

Bacon

Sausage

Action Movies

Dramas

LOCATIONS:

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HYATT CENTRIC - AUSTIN, TX

New Construction Waterproofing and Roofing
Contract Amount: \$900,000 (approx.)
Owner: McWhinney and Hyatt Hotels Corporation
Architect: Nelson Partners
General Contractor: Katerra
Scope of Work: Installation of wall panels, wood blocking, TPO roofing, flashing and sheet metal, soffit panels, traffic coatings, air barrier, metal flashing, joint sealants, site sealants and expansion control
Project Description: Stylish boutique hotel

1701 MARKET ROSS RE-ROOF ROOF C - DALLAS, TX

Re-Roof
Contract Amount: \$350,000 (approx.)
Owner: New York Life
Architect: Wiss Janney Elstner Associates, Inc.
General Contractor: Wiss Janney Elstner Associates, Inc.
Scope of Work: Removal of coating and installation of SBS roofing, subroof, flashing and sheet metal
Project Description: Multi-tenant office spaces

COMAL COUNTY SHERIFF'S OFFICE - SELMA, TX

New Construction Roofing
Contract Amount: \$1,000,000 (approx.)
Owner: Comal County
Architect: HDR Architects
General Contractor: SpawGlass
Scope of Work: Installation of sheet metal flashings, wall panels and metal roof panels
Project Description: Law enforcement building

CHILDREN'S PLANO - RE-SKIN - DALLAS, TX

Remedial Waterproofing
Contract Amount: \$1,100,000 (approx.)
Owner: Children's Medical Center
Architect: Wiss, Janney, Elstner Associates, Inc.
General Contractor: Chamberlin Roofing & Waterproofing
Scope of work: Removal and reinstallation of composite panels, stucco replacement, installation of air barrier, joint sealants, sheet metal flashing and trim, stone and window replacement
Project Description: Medical center for children

QUENTIN MEASE RENOVATION - HOUSTON, TX

Roof Replacement
Contract Amount: \$200,000 (approx.)
Owner: Quentin Mease Hospital
General Contractor: Linbeck Group, LLC
Scope of work: Removal of TPO roofing and installation of TPO roofing, vapor barrier, flashing and sheet metal
Project Description: Five-story outpatient clinic facility

HOUSTON HOUSE APARTMENTS - HOUSTON, TX

Remedial Waterproofing
Contract Amount: \$5,000,000 (approx.)
Owner: Colrich
General Contractor: Chamberlin Roofing & Waterproofing
Scope of work: Concrete repair and installation of balcony handrails, traffic coatings, flashing and sheet metal, joint sealants and wet glazing
Project Description: Thirty-one-story apartment complex

UVALDE MEMORIAL HOSPITAL - UVALDE, TX

New Construction Waterproofing
Contract Amount: \$350,000 (approx.)
Owner: Uvalde County Hospital Authority
Architect: Perkins+Will
General Contractor: Hoar Construction
Scope of work: Installation of hot-fluid rubberized asphalt waterproofing, sheet waterproofing, cold fluid-applied waterproofing, thermal insulation, air barrier, firestopping, joint sealants, flashing and sheet metal, site and paving sealants and expansion control
Project Description: Healthcare facility

WPX ENERGY ABOVE GRADE - TULSA, OK

New Construction Waterproofing and Roofing
Contract Amount: \$1,600,000 (approx.)
Owner: Devon Energy
Architect: BB+M, PLLC
General Contractor: Flintco, LLC
Scope of work: Installation of hot-fluid rubberized asphalt waterproofing, traffic coating, flashing and sheet metal, roof pavers, firestopping, joint sealants, site and paving sealants, cementitious and reactive waterproofing, TPO roofing, metal flashing and trim
Project Description: 11-story office tower

For a complete list of specialty contracting services, visit www.chamberlinltd.com.

ROOFING/SHEET METAL

- Modified Bitumen/BUR
- Single ply
- Reflective coatings
- Vegetative roofing
- Metal standing seam
- Roof related sheet metal
- Tile

WATERPROOFING/CAULKING

- Joint sealants
- Membrane waterproofing
- Elastomeric wall coatings
- Traffic coatings
- Expansion joints
- Dampproofing/flashing
- Water repellents/metal flashing

BUILDING/GARAGE RESTORATION

- Concrete/Masonry restoration
- Exterior cleaning & coating
- Epoxy & grout injection
- Bearing pad replacement
- Structural repair
- Paver repair & replacement

ROOF MAINTENANCE/LEAK REPAIR

- Roofing & waterproofing expertise
- Leak repair specialists
- Preventative roof maintenance plans
- Roof & building envelope surveys
- Proactive Roof Asset Management
- On-call service 24 hours/365 days a year
- Free estimates