

Chamberlin Revitalizes Senior Living Community



Chamberlin restored forty-eight balconies at The Querencia senior living community in Austin, Texas, to remedy water infiltration.

Austin, Texas, is home to one of Senior Quality Lifestyles Corporation's luxurious senior living communities, The Querencia at Barton Creek. This 38-acre campus encompasses residences, a pool, art gallery, bistro dining and a multi-use fitness center. Their quality of living and resident care recently won recognition as a Masterpiece Living Certified Center for Successful Aging. Chamberlin's Querencia Balcony Repair project included waterproofing and restoring the exterior balconies and windows to rejuvenate the prestigious life care community.

While installing nearly 190,000 square feet of waterproofing products, Chamberlin met challenges such as terrain obstacles, unknown conditions and

time constraints. This scope was completed in 20 months with a total contract amount of nearly \$5,700,000. Teamwork, innovation and proactive planning made it possible to deliver a quality restoration job to this campus productively and on time to serve the facilities and their residents for years to come.

UNEXPECTED TURNS

As Chamberlin began their waterproofing scope, crews discovered damage and deterioration in the wooden balcony decks. French Engineering, a specialty engineering firm with 30 years of national consulting experience, investigated the issue and went to work to find a solution. They issued

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CONSULTANT'S CORNER



*By John Posenecker
Senior Associate,*

*Department Manager - Facilities Engineering
Building Exterior Solutions, A Terracon Company*

Why We Continue to Have the Same Recurring Problems

I have been very lucky in my life to have moved through several different professional careers beginning as a proud Auburn (War Eagle!) Mechanical Engineer in the commercial nuclear power industry supporting the startup and operation of various air containment and treatment systems. After 15 years I moved into commercial construction with a specialty noise control subcontractor and then with a roofing and waterproofing subcontractor. Another

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supplemental sketches detailing the resolution, and Chamberlin executed the plan.

Glulam beams in the decks of four stacks of balconies were so severely rotted that they needed to be completely demolished and rebuilt. After demolition, only the skeleton of steel beams remained in place. Since there was no deck left to stand on, a plan was created to allow crews to safely install the new decking while being tied off 100% of the time. Crew members working from scaffolding surrounding the balcony framework used multiple anchor points depending on their access point, such as the top of the building and the balcony structure above. Additionally, the balconies' framework was shored to prevent any possibility of the structure collapsing, as crew members had to move about on the steel beams as well. Despite the additional scope, Chamberlin was determined to keep on track and had up to 50 crew members working at once to meet the original schedule.

Chamberlin Waterproofing Assistant Project Manager Brett Schropp cites teamwork and safety as the main contributing factors to their success saying, "This project had unforeseen

obstacles that could have not only added time to the project but also created safety hazards for the crew. Our team was prepared for these challenges and stepped in to cover any extra time. With further deterioration to the base of the balconies, safety was the top priority for the crew and also the residents at The Querencia at Barton Creek."



Unforeseen extensive wood rot was found on the balcony decks.

CREATING A DIRECT PATH

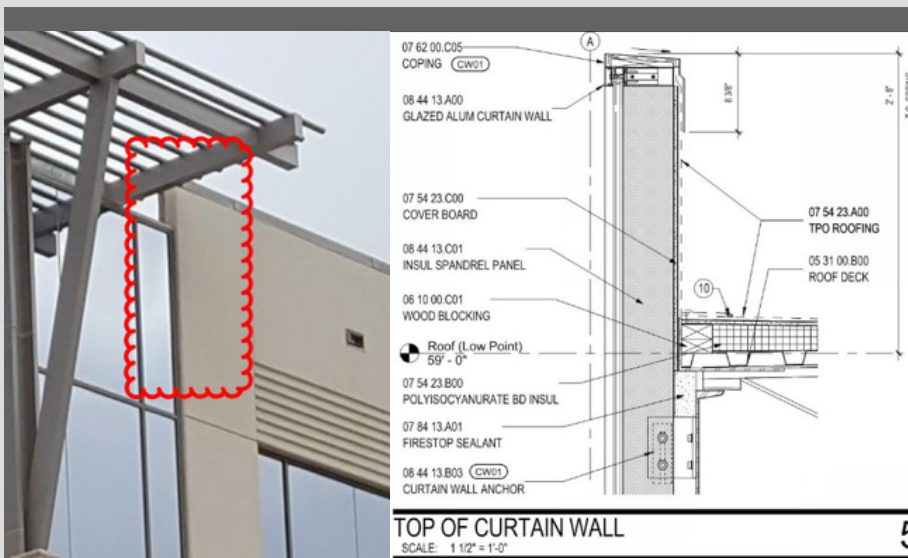
To minimize disruption, Chamberlin's on-site job trailer and parking location for the crew was located on the opposite end of the 38-acre campus from the residential facilities. In between the jobsite and the trailer



Four stacks of balconies had to be completely demolished and rebuilt.

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(RECURRING PROBLEMS Continued from pg. 1)



An example of typical conditions that have complex transitions between different systems and materials. This results in layering of materials from different manufacturers installed by different contractors at various times during the construction sequence. This shows the transitions from curtain wall to concrete tilt panel and single-ply roofing membrane.

15 years passed, and I moved back into the engineering world as a building enclosure consultant. This work history in both design and construction of enclosures allows a unique perspective for explaining recurring issues associated with building enclosures.

Watching building enclosure presentations at conferences across the country, one notices a focus on very similar problems. Owners, designers, contractors and manufacturers generally agree that transitions, terminations and penetrations are where most of enclosure problems occur. Problems with the building enclosure reportedly account for between 60 to 80 percent of all construction litigation. These problems are typically identified as water intrusion through the building enclosure and are rarely identified as air leakage or energy loss. One of the most prevalent recurring building enclosure problems occurs at the roof to wall transitions.

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were hiking trails for the residents and a beautiful landscape of trees, valleys and creeks. This terrain made it difficult to reach further areas of the jobsite.

Chamberlin was approved to utilize other paths and entrances to reduce mobilization time to and from the jobsite trailer and material storage yard. Since the terrain is rather hilly, the walk from the jobsite to the trailer approximated 10-15 minutes. Using a van to shuttle crew members to and from the jobsite saved up to ten man-hours per day in production time. This also allowed Schropp to be readily available to observe, oversee and mentor the crew when needed within minutes from the on-site trailer. Furthermore, the material storage area was made out of crushed limestone called caliche that is biodegradable and will break down on its own over time.

ON TIME, ON BUDGET

The Querencia was still a functioning and active senior living facility during the renovations. Chamberlin was conscious of the residents' schedules and strove to keep interruptions to a minimum. Work only commenced from 8:00 a.m. to 6:00 p.m. daily. Crews began their work by sealing the windows on the exterior side with window film to help mitigate dust penetrating the tenants' living space. When

needed, insulation was added to muffle noise as well.

Weekly progress meetings were attended by Chamberlin, French Engineering and the owner's representative. During these meetings, the upcoming week's schedule was broken down daily, the residents' event schedule was reviewed and work was planned accordingly to maintain comfort for the residents. Chamberlin also presented a productivity schedule for the next six weeks. The jobsite plan was posted in the facilities to make residents aware of the project progress.

In June of 2017, lumber costs in the United States skyrocketed 17% (CNN Money). Chamberlin Project Estimator James Clements stays informed of anticipated fluctuation in material pricing and was prepared for this development. Chamberlin bought lumber and pavers in bulk prior to the increase, avoiding the 17% rise, and also negotiated discounted pricing for buying in bulk. Likewise, Chamberlin implemented material buydowns to reduce the interest rate for the materials bought in bulk.

QUALITY IS KEY

French Engineering and Chamberlin worked together on quality control to successfully deliver watertight balconies

with a refreshed look for The Querencia at Barton Creek. Each week, the engineering consultant conducted quality assurance inspections and Chamberlin completed any outstanding items discovered. This process was noted in reports exchanged between the engineering consultant and contractor, totaling 75 throughout the course of the project. In addition, Chamberlin conducted their own daily quality control inspections to be proactive and meet the owner's needs. In the end, The Querencia representatives were extremely pleased with Chamberlin's quality work delivered professionally in a timely manner. ■



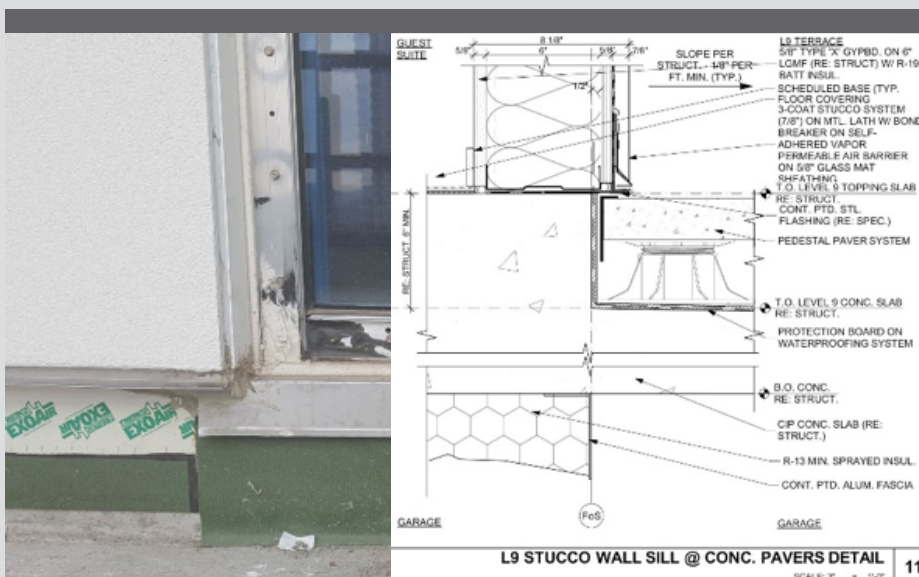
Safety is the primary focus at Chamberlin. Work areas were secured with signs and barriers to prevent residents from entering a work zone.

(RECURRING PROBLEMS Continued from pg. 2)

Is it reasonable to expect the field foremen from six to eight subcontractors and the general contractor to figure out the best method to install an air and watertight barrier at these intersections?

The building enclosure is very complex. Think of the building enclosure as a system just like the HVAC, electrical power, lighting or plumbing systems. The building enclosure is one of the most complex systems and provides several barrier functions that can be thought of as continuous control layers that limit the movement of bulk water, water vapor, air, heat, light and noise.

In simple geometric terms the building enclosure can be simplified to a six-sided box with four walls, a top and a bottom. In reality, the world is much more complicated. Most building enclosures are comprised of a variety of different subsystems. These subsystems



Another example of typical conditions that have complex transitions between elevated deck waterproofing, curtain wall and stucco wall cladding.

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are comprised of individual components in various configurations produced by a variety of manufacturers and installed by several different subcontractors. The majority of building enclosure problems occur at the transition between these different components.

The typical design, bid, build process used for projects does not lend itself to quality, efficiency or value as it relates to the building enclosure. In simple terms, contributors to this process can be grouped into four basic categories that are owner/developers, designers, contractors and manufacturers. In reality, contributors become much more numerous and tend to have conflicting goals and incentives that are not always focused on the ultimate quality of the building.

Owners have a set of requirements that designers transform into a set of construction documents. As financing has become more complex and difficult, a focus on reducing construction cost and schedule tend to trump other factors when making value decisions for the building enclosure. Often an owner's financial model does not assume the owner retains the building long term resulting in value decisions being made for a relatively short life expectancy of buildings.

Designers receive minimal education regarding options and detailing of the building enclosure. Many designers view the building enclosure as a large risk for errors and omissions and tend to

push detailing down to the contractor or manufacturer. This is where we have seen the gray area between design detailing by the designer and means and methods of the contractor.

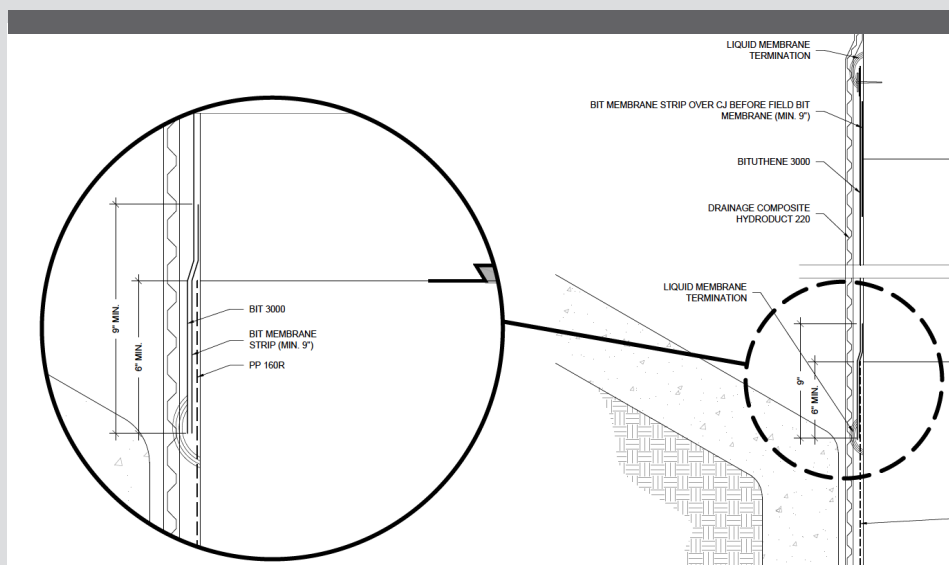
Contractors also receive minimal education regarding the building enclosure and recognize (many times from painful litigation) that the building enclosure is a large liability. They attempt to push this liability and detailing responsibility down contractually to the installing subcontractor and to the manufacturer.

Subcontractors have the most potential to impact the quality of the building enclosure. Ultimately their application of materials in a manner that is consistent with the designer's intent is what really matters. Subcontractors are the contributors that must understand the required detailing, material limitations, proper sequencing and exposure limitations. Unfortunately, the subcontractor is one of the last to be involved in a project and is pushed to perform with the least paid participants on an expedited schedule.

Manufacturers have continued to respond to the industry's needs by developing new high-performance systems that are more demanding of the installing contractor with more restrictions and tighter tolerances that result in less forgiving installation requirements. Manufacturers have also become more creative with warranties that extend their traditional system boundaries and demand their systems be installed

by certified contractors. Many times, this results in contractors extending their installation from the framing/sheathing and exposed cladding systems to include the air, water and/or thermal layers.

So, how do we overcome the conflicting incentives of the many contributors? Find participants dedicated to the building enclosure that are removed from the financial and schedule pressures impacting the individual contributors. Professional organizations that independently review and certify materials and contractors can be one source. For instance, the Air Barrier Association of America (ABAA). ABAA independently evaluates building enclosure barrier systems and provides training and certification to contractors for their installation. Another source may be independent building enclosure consultants that provide oversight to the entire process. This quality assurance process is now often referred to as Building Enclosure Commissioning or BECx. Building enclosure consultants have the ability to influence all of the contributors and can participate from the initial programming discussions to the final testing that confirms the performance of the completed building enclosure. ■



This detail shows the transition from below-grade waterproofing to above-grade waterproofing with a minimum requirement of a six-inch overlap.

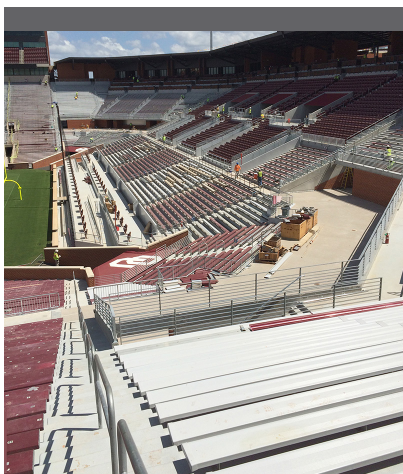
Mr. Posenecker joined Building Exterior Solutions, Inc. (BES) in March of 2015. He is a registered engineer in the State of Texas. His experience includes the design, construction, testing and forensic investigation of building envelope systems. He specializes in waterproofing and cladding systems associated with the building envelope. He is an active member in several professional organizations including the Austin Building Enclosure Council (BEC), National Institute of Buildings Sciences (NIBS), and the International Concrete Restoration Institute (ICRI). Mr. Posenecker can be reached at 512-827-3332 or jposenecker@besgrp.com. www.besgrp.com www.terracon.com

Want to share your building envelope expertise?

Contact Cristina Kinney to submit an article for Chamberlin Roofing & Waterproofing's guest column.

ckinney@chamberlinltd.com

Industry Honors Chamberlin's Workmanship



The expansion of the Gaylord Family Oklahoma Memorial Stadium enclosed the formally U-shaped stadium into a complete bowl.

Chamberlin was a proud recipient of CoatingsPro's 1st place award in the Commercial Concrete category for their work on the Gaylord Family Oklahoma Memorial Stadium. This program recognizes projects that demonstrate excellence in the field of high-performance coatings. Project submissions are rated by CoatingsPro's Editorial Advisory Group, composed of industry experts.

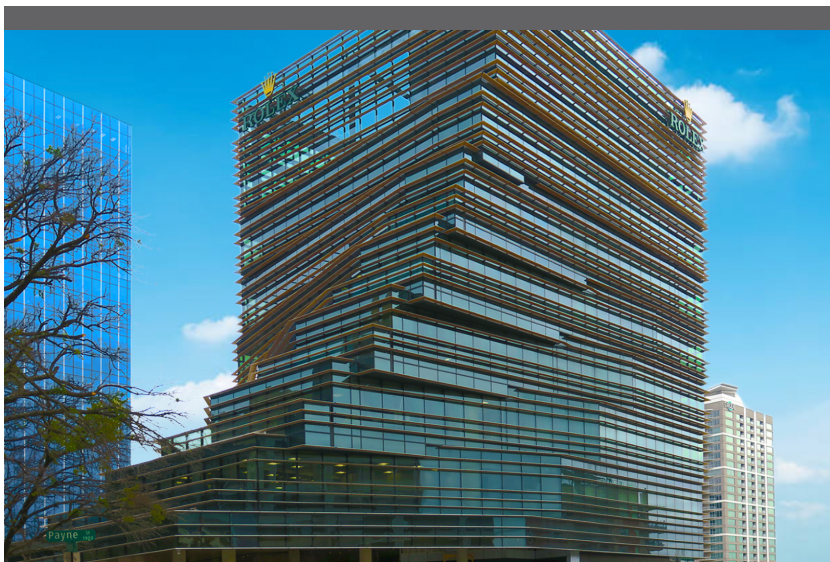
The Gaylord Family Oklahoma Memorial Stadium expansion included adding nearly 8,000 seats to the south end zone connecting the east and west stands, enclosing the formally U-shaped stadium into a complete bowl. Additional restrooms, concessions, a 46,000-square-foot plaza, a covered upper concourse and a redevelopment of the Barry

Switzer Center were also parts of this extensive expansion.

A new west stadium concourse nearly doubled the existing fan space in that area while media, broadcast and game operations areas on the west side of the facility were completely reconstructed, adding more than 32,000 square feet to those areas equipped with the latest technology.

TEXO, The Construction Association recognized Chamberlin Roofing & Waterproofing with a Merit award in their 2018 Distinguished Building Awards competition for their roofing and waterproofing installation on the new Rolex building in downtown Dallas. The Distinguished Building Awards embody the skill, commitment and passion that TEXO members have for construction. This award qualifies Chamberlin for the Associated Builders and Contractors' (ABC) National Excellence in Construction Awards competition.

The new Rolex Building, designed by HDF Architects and Japanese architect Kengo Kuma, features a unique blend of innovative architecture and gardens. The building forms a twisted tower that allows for more outdoor space on each floor, which is filled with a series of planted terraces. The ground floor also boasts a Japanese-inspired garden with a reflecting pool and cascading waterfall. ■



The new eight-story Rolex building serves as additional office space for the Swiss watchmaker in Dallas, Texas.

Employee Profile

Lyle Coston
Vice President —
Waterproofing & Caulking
Houston, Texas



Experience:

Lyle's experience in the construction industry started when he was in college, working for his father in Austin, Texas, installing waterproofing and caulking. After two and a half years in the field, the owner decided to utilize Lyle's experience to estimate projects. It was during this time he was introduced to Chamberlin and was eventually contacted by a recruiter. He decided to make a trip to Houston to meet with Executive Vice President Art Canales and President/CEO John Kafka.

As he did not have a computer at the time, Lyle brought a hand-written resume to his interview, which Art still holds a copy of after 18 years. Lyle started his career with Chamberlin in 2000 and never looked back.

A Day in the Life:

On any given day, you can find Lyle reviewing estimates and negotiating contract terms and conditions. His position also involves seeking out work opportunities and maintaining and developing client relationships. Furthermore, Lyle supports his great team of Chamberlin employees and does what he can to help them excel.

Outlook:

"Everything at Chamberlin starts with safety, so we have adopted a safety moment at the start of meetings to keep this on everyone's mind," Lyle said. He continued, "Construction is an industry that has its challenges, and it is how we handle those challenges that will propel us to the next level."

Outside the Office:

Outside of the office, you can find Lyle spending time with his son, Cole, and his daughter, Kenley. His wife has supported his career path, and he cherishes her encouragement throughout the years. The family enjoys going to the Frio River, bay fishing, live music and getting to spend quality time together. ■

We asked Lyle to choose his favorites from this random list of things as a way to get to know him a little better:

LYLE'S LIST:

Dog Cat

Rocky Rambo

Beach Mountains

Coffee Tea

Football Baseball

LOCATIONS:

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ST. ANDREWS EPISCOPAL CHURCH – FORT WORTH, TX

Roof Replacement

Contract Amount: \$400,000 (approx.)
Owner: St. Andrews Episcopal Church
General Contractor: Prim Construction
Scope of Work: Removal of existing roof system and installation of hot modified roofing, TPO roofing, flashing and sheet metal
Project Description: Gothic Revival church

JUNIOR LEAGUE – AUSTIN, TX

New Construction Waterproofing

Contract Amount: \$350,000 (approx.)
Owner: Junior League of Austin
Architect: STG Design
General Contractor: HC Beck
Scope of Work: Installation of sheet waterproofing, traffic coating, water repellent, air barrier, flashing and sheet metal, joint sealants, site and paving sealants and expansion control
Project Description: Community Impact Center

LBJ ANNEX CLADDING REPAIR – AUSTIN, TX

Remedial Roofing & Waterproofing

Contract Amount: \$800,000 (approx.)
Owner: Texas Facilities Commission
Architect: WJE
General Contractor: Balfour Beatty
Scope of Work: Epoxy injection, rebar and structural repairs, corrosion inhibiting coatings and galvanic anodes, concrete repairs, granite replacement, stucco replacement, acrylic coating, concrete deck cleaning and sealing, site sealants, modified bituminous roofing, joint sealants, wet glazing and power washing
Project Description: Lyndon B. Johnson State Office Annex building

UNIVERSITY OF HOUSTON – VICTORIA – STUDENT CENTER & LEARNING – VICTORIA, TX

New Construction Waterproofing

Contract Amount: \$350,000 (approx.)
Owner: University of Houston
Architect: Gensler
General Contractor: BE&K Building Group
Scope of Work: Bentonite waterproofing, thermal insulation, air barrier, sheet metal flashings and trim, flexible flashing, joint sealants and site and paving sealants
Project Description: Comprehensive resource center for students

CYPRESS FAIRBANKS HOSPITAL ROOF REPLACEMENT – CYPRESS, TX

Roof Replacement

Contract Amount: \$300,000 (approx.)
Owner: HCA Management Services, L.P.
Consultant: RTD Associates
General Contractor: Chamberlin Roofing & Waterproofing
Scope of Work: Removal of existing BUR roofing system and installation of base wall and curb flashings, PVC membrane roofing, flashing and sheet metal
Project Description: Medical center providing health care to the Northwest Houston community

THE VILLAGE TOWN CENTER – DALLAS, TX

New Construction Waterproofing

Contract Amount: \$5,850,000 (approx.)
Owner: The Village Town Center
Architect: HKS, Inc.
General Contractor: Manhattan Construction Company
Scope of Work: Installation of dampproofing, hot fluid-applied waterproofing, sheet waterproofing, traffic coating, air barrier, roof pavers, firestopping, site and paving sealants, joint sealants, sheet metal flashing and trim
Project Description: Thirty-four acre, mixed-use development

CAPITOL TOWER PHASE 4 – HOUSTON, TX

New Construction Roofing

Contract Amount: \$950,000 (approx.)
Owner: SCD Capitol Tower of Houston, LLC
Architect: Gensler
General Contractor: Skanska
Scope of Work: Installation of TPO roofing system, sheet metal, cap wall and curb flashings
Project Description: Thirty-five story, mixed-use high-rise

OKLAHOMA STATE CAPITOL – OKLAHOMA CITY, OK

Remedial Waterproofing

Contract Amount: \$200,000 (approx.)
Owner: State of Oklahoma
Architect: Architectural Design Group
General Contractor: JE Dunn
Scope of Work: Joint sealant replacement
Project Description: Capitol building housing branch offices

UNIVERSITY OF TEXAS SAN ANTONIO LARGE SCALE TESTING FACILITY – SAN ANTONIO, TX

New Construction Waterproofing

Contract Amount: \$150,000 (approx.)
Owner: The University of Texas at San Antonio
Architect: Alamo Architects
General Contractor: Turner Construction
Scope of Work: Installation of below-grade waterproofing, below-grade term bar, insulation, air barrier, flashing, fire stopping, joint sealants and site sealants
Project Description: Facility for testing real-size structural systems and components

KC – 46A 2-BAY DEPOT MAINTENANCE HANGAR – OKLAHOMA CITY, OK

New Construction Waterproofing

Contract Amount: \$200,000 (approx.)
Owner: USACE Tulsa District
Architect: Burns & McDonnell
General Contractor: Walsh Federal/Alberici JV
Scope of Work: Installation of sheet waterproofing, air barrier, firestopping and joint sealants
Project Description: Hangar to house KC-46 Pegasus tanker fleet

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

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- Vegetative roofing
- Metal standing seam
- Roof related sheet metal
- Tile

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- Membrane waterproofing
- Elastomeric wall coatings
- Traffic coatings
- Expansion joints
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