Construction in Austin, Texas has been booming for the last several years, but few buildings have been more impressive or anticipated than the JW Marriott Hotel and Conference Center. This luxury hotel sits atop a three-level parking garage, has more than 1,000 guest rooms and has attained LEED Silver certification and a two-star Austin Energy Green Building rating.

In October of 2012, groundbreaking took place on the 1.2 million square foot hotel making it the largest JW Marriott in North America. With many anticipating its arrival, more than 520,000 room nights were reserved through 2021 before its official grand opening in February of this year. The general contractor on this 34-story hotel, a joint venture between Hunt Construction Group and Hardin Construction, chose Chamberlin to provide multiple services in order to bring this new landmark to the city.

From the Ground Up

Chamberlin started work on the project by preparing their waterproofing scope on the underground parking garage. In order to prepare for the garage, a hole was dug five stories into the ground and wood lagging, or a barrier wall, was put into place on the interior to protect workers. Due to the hole being so deep, there were areas at the lowest points in the excavation where ground water would surface. It was a challenge to continuously pump out water.

(Continued pg. 2...see JW MARRIOTT)

Who is ABAA and What It Means to You!

The ABAA (pronounced eh-baa) is the Air Barrier Association of America; it was incorporated in March 2001 by then and current Executive Director, Mr. Laveme Dalglish. In the last 14 years it has become international in its membership. The ABAA consists of a wide variety and cross section of industry members including air barrier applicators, general contractors and construction managers, air barrier material manufacturers, design professionals, testing and inspection agencies, consultants

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while simultaneously prepping for waterproofing installation.

Chamberlin applied a drainage board over the wood lagging followed by blindside waterproofing. Overall, 45,000 sq. ft. of vertical waterproofing was applied throughout the parking garage as well as 25,000 sq. ft. of underslab waterproofing which included elevator pits and 15,000 sq. ft. of cold fluid-applied waterproofing at the ramps directly under the valet.

**Pool Plaza Amenity Deck**

On the level five pool plaza amenity deck, Chamberlin installed an air barrier membrane and hot-applied waterproofing in order to dry in the building to allow interior finish out on level four. Usually, once the plaza deck waterproofing is installed, it is immediately covered. In this case, work was still being done, and the pavers could not be installed until the entire project was complete. A UV protection board was applied in order to protect the waterproofing from the sun and ongoing construction until the pavers could be installed at a later date.

The method in which the pool and planters were designed made it challenging to install the hot-applied waterproofing in some areas. Some of the planters had structural walls that were six feet tall. On one particular planter located on the outside of the pool, the workers used a ladder to get down and inside with only two-and-a-half feet of room to work. Other Chamberlin crew members prepared and heated the material on the upper level, then lowered the hot-applied to the crew members waiting to install it.

“This was done one bucket at a time and required the utmost safety precautions to carefully transport the 375 degree material,” said Chamberlin General Superintendent Dave Edwards.

**Joint Sealants**

Chamberlin also applied 60,000 linear feet of double seam joint sealants to the Marriott. Because the hotel is so tall, Chamberlin caulked the lower third of the building in order to dry it in for the work taking place on the interior. The challenge was going around the

For the occupants to be comfortable, air is conditioned in buildings. In summer or in cooling climates, the air is normally cooled and dehumidified to a lower temperature and humidity than the exterior environment. In winter or heating climates, air is normally heated and humidified to a higher temperature and humidity than the exterior. When this conditioned air leaks out of a building and unconditioned air leaks into a building, additional energy is used to then condition this air. Air leakage can result in an increased use in energy costs of up to 30-40% in heating climates and 10-15% in cooling costs according to the National Institute of Standards and Technology (NIST). Buildings which have a properly installed air barrier system can operate properly with a smaller HVAC system as the mechanical engineer does not have to compensate for a leaky building. In some cases, the reduction in mechanical equipment size and cost can offset the cost of the air barrier system.

Air barrier systems also provide a barrier to pollutants entering either the building or the building enclosure. Water vapor, suspended particulates, dust, insects, smells, etc., are all pollutants that are to be kept out of either the building in general or the building enclosure.

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Another challenging scope was applying pedestrian traffic coating on the concrete, decorative canopy that sits 35 feet above the mechanical penthouse on the 34th floor. The structure and design of the canopy made the installation quite a challenge, as Chamberlin had never worked on anything like it before. The safety departments of Chamberlin and the general contractor worked together to come up with a plan that would best work in the situation. A specialized horizontal life line and yoyo system was installed requiring the workers to be tied off at all times.

Chamberlin was also contracted to install a below-grade cementitious coating inside the underground sedimentation tank. Before this work could take place, Chamberlin crew members received specialized confined space safety training. Since the cementitious coating installation was completed inside confined conditions, Chamberlin was required to use a tripod safety device, air monitoring equipment and a pump to regulate fresh air. The tripod device sits above the confined space area requiring crew members to wear a harness, so in case there is a life-threatening emergency, they can attach their harness to the life line cable connected to the tripod and be pulled out of the hole by the site monitor.

“Although the work executed at the JW Marriott was in Chamberlin’s wheelhouse, two of the scope items required significant pre-planning prior to execution,” said Patrick Halaszyn, Chamberlin Waterproofing Department Operations Manager. “The coating in the sedimentation tank and the traffic coating on the canopy required full-time safety personnel on site during installation. We completed this work as planned – safely and with zero incidents.”

Chamberlin also applied traffic coating to multiple mechanical rooms spread out on several different levels as well as in the parking garage and penthouse. Coordinating with other job-site trades was challenging and important because certain work had to follow a specific sequence. In rooms that contained a generator, Chamberlin installed the traffic coating before the generator was lifted into place and walls were then built around it.

Once all of the work was complete and the hotel was applying its final touches, Chamberlin returned to the hot-applied waterproofing on the pool plaza amenity deck and installed 10,000 square feet of pavers. After all was said and done, Chamberlin was able to finish the scope a few hours before the building was handed over to the owner just in time for its official grand opening.

[Image 1x-0 to 565x35]

Chamberlin crew members apply traffic coating in the electrical room.

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Water vapor that leaks into the building enclosure (from the inside in heating climates and from the outside in cooling climates) can condensate and form liquid water – a key ingredient to corrosion and the potential development of mold.

**ABAA Certification**

Certification is one of the keystones of the ABAA. Materials and contractors are trained, rigorously tested and continually educated on air barrier technology. Is certification of products and contractors important? Yep it sure is! Ms. Kimberly Kayler, CPSM, Board of Directors of ACI recently wrote in the Construction Specifier Magazine, June 2015, “Certification in the construction industry provides good ROI and market differentiation, as well as improves safety and quality by establishing best practices. The benefits include increased safety, less material waste, and early identification of design and construction challenges, as well as creating a pool of extremely qualified and trained individuals well-suited for your project.”

Manufacturers Evaluated Assemblies that are listed on the ABAA web site (airbarrier.org) have undergone rigorous third party testing evaluation, not only for their air barrier properties, but for their entire performance in an assembly in tests such as crack bridging ability, fastener sealability, adhesion to substrates and several other architectural/engineering properties that are necessary for good performance on the wall. The listing on the ABAA web site is constantly updated and if a manufacturer isn’t listed then they either haven’t submitted their tested materials or they are engaging in what I euphemistically call “information enhancement”. Any air barrier materials that are ABAA evaluated should arrive at your job site prominently bearing the ABAA label.

An ABAA Accredited Contractor is undoubtedly one of the more experienced and robustly trained and educated contractors on your building. To become an ABAA Accredited Contractor a company must provide proof of financial viability and employ at least one ABAA Level 3 Certified Installer and sign an Accredited Contractor Licensing Agreement. The firm that is issuing this newsletter, Chamberlin, has several Certified Installer personnel on staff. The constant training and continuous education of these personnel requires contractors to lay out several tens of thousands of dollars a year.

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ABAA Quality Assurance Program (QAP)

The QAP encompasses a variety of initiatives that include prequalification requirements of contractors and installers, training and education, a method for installers to self-test their work, a paper trail of the entire installation process, an independent auditor to confirm compliance with the QAP program and ABAA specifications, and a process to deal with the loss of license by an individual participating in the program. This program has been developed for all parties involved including architects, engineers, building owners, contractors and material manufacturers.

The Auditors are all from an independent third party agency and have no affiliation with the general contractor, the ABAA accredited installer or the manufacturer. Their reports are reviewed by the Technical Staff at ABAA and corrective action, if required, is implemented. All reports are filed with the ABAA Accredited Contractor, the general contractor, the architect, the building owner and the materials manufacturer. Nothing is hidden, and complete transparency is the standard of care.

So, how does this all work to benefit all involved?

Consider this scenario: As the owner of my own firm I decide to build my brand new Global Intergalactic Headquarters office. I hire an architectural firm, Real Good Architects LLP, who are known for their energy efficient building design. They prepare documents and specifications that reflect their specialty and they use ABAA Guidelines for the basis of design. The project goes out for bid and the low general contractor, Super Good Building Contractors LLC is the apparent low bidder but they are over budget. I hit the roof at being over projections so I begin to discuss the value engineering opportunities with my construction team and we land on the air barrier section. Yes, this is the section and specification that pays for itself via an up to 40% reduction, according to NIST/DOE, in energy costs over the life of the building. It also keeps buildings dry by blocking both rain and water vapor from entering the building and has been tested to be able to bridge cracks and seal around the brick tie fasteners.

We look at the three low bidders:

• Ed’s Airline, Flight Insurance, Storm Door and Awning Firm has heard about this new air barrier stuff and wanted to get in to it so they bid the job. BID: $95,000

• Lower Bid Air Barrier Company has done two Air Barrier jobs this year. They are pretty sure that they followed ABAA Guidelines, but couldn’t swear to it. None of their personnel are a Certified Level 3 installer and if I really want that QAP thingy they will have to add more money. BID: $99,999.99 plus that QAP thing, if you really want it and we could qualify to get it.

• Waterproofing Professionals, Inc. has been an ABAA Accredited Contractor for years spending tens of thousands of dollars on ABAA Certification and training, their bid includes experienced, trained ABAA Certified personnel, continuing education, hundreds of jobs in place and the cost of the QAP Program. BID: $105,000

So what are the building owner, architect and general contractor to do? The building is slightly over budget, decision time is closing in. As the owner, I make the executive decision. I throw out the left-hand polished 400 year-old Venetian pink marble that lined the outside of the two story elevator shafts and had the general contractor hire The Waterproofing Professionals, Inc. Long-term value and building performance decisions are easy to make once you know the facts. Learn more at airbarrier.org.

Roy Schauffele, FCSI, CCPR, LEED Green Assoc., is an internationally published author and speaker in the fields of insulation, roofing, waterproofing and fluid applied air barrier systems with over 40 years of experience in all things related to the building envelope and construction Division 7. In addition to giving AIA HSW rated and GBCI CMP lectures at Architectural Schools and Universities, Mr. Schauffele is an on-going CEU provider at AIA, BEC, CSI and RCI Chapters. Founder and benevolent dictator of 28 year old Division 7 Solutions, Inc., he currently serves as the Chairman of the Board of ABAA (3rd term) and Technical Advisor to Build San Antonio Green and can be reached at 210-859-3749 or roy@division7.com or LinkedIn.
About 15 years ago Chamberlin committed some long-held values to writing. Acknowledging and writing down the things we value is very important. Written values remind us of the fundamentals that have led to our successes. And, even more importantly, our values act as guideposts when critical decisions need to be made. One of the Chamberlin values that we have talked about everyday within Chamberlin is the importance of “Safety, Quality & Productivity.”

As time has passed, we have begun to see the word “Productivity” not only as it pertains to our field operations, but also as it relates to efficiency throughout all departments in the company. Over the years it became more and more apparent that it really and truly is TEAMWORK that makes all of us the most productive in our daily work. Working together, each department and each person working toward common goals respecting what each individual brings to the team has been a critical element in our collective success at Chamberlin. True teamwork makes for a great place to work because when we work as a team, more can be accomplished. Everyone has the opportunity to contribute according to their talents and be recognized for a job well done. When true teamwork is in action, each member can readily see their part in a successful job and know that others aren’t thinking only about themselves but are working toward a common goal with the entire team.

“Safety, Quality, Teamwork” applies to all aspects of what we do in every part of our business: accounting, estimating, marketing, operations, safety, training, etc. You name it and safety, quality and teamwork is what drives our success.

From our clients’ point of view, we know our clients expect Chamberlin to be good team members with which to work. Here are some of the ways we work to be good teammates with our clients:

- Be problem solvers. Find ways to make the work we do go smoother when challenges arise.
- Perform quality work.
- Perform our work safely.
- Keep the jobsite clean and organized.
- Be cooperative in the office and in the field. Be easy to work with no matter the situation.
- Be a positive, can-do partner/team member.
- Communicate often and honestly.
- Look for and be open to new and better ways of getting the job done whether it is in the office or on a project.

As we evaluate ourselves and ask how we can be good teammates with our clients, we encourage you to let us know what we could be doing better to be a good teammate with you on your projects or at your building. Because it is a three-legged stool, safety and quality depend upon teamwork. For Chamberlin, no project can be considered a success without real Safety, Quality and Teamwork!
PROJECTS IN PROGRESS

Brazos Tower Phase II –
HOUSTON, TX
New Construction Roofing
Contract Amount: $1,200,000 (approx.)
Owner: Brazos Presbyterian Homes, Inc.
Architect: THW Design
General Contractor: Land Lease Construction
Scope of Work: Fully adhered TPO roofing system, metal roofing, sheet metal counter flashing and coping
Project Description: 14-story retirement and assisted living facility

Texas School for the Deaf – AUSTIN, TX
Roof Replacement
Contract Amount: $350,000 (approx.)
Owner: Texas Facilities Commission
Architect: GESC Architects
Consultant: Holland Cannon Group, LLC
General Contractor: Kiewit Building Group
Scope of Work: Removal and replacement of SBS modified roofing system, sheet metal and flashing
Project Description: State-operated primary and secondary school

Consolidated Rental Car Facility –
OKLAHOMA CITY, OK
New Construction Waterproofing
Contract Amount: $150,000 (approx.)
Owner: Oklahoma City Airport Trust
Architect: Guernsey
General Contractor: Manhattan Construction
Scope of Work: Waterproofing, air barrier, traffic coating and joint sealants
Project Description: Rental car facility at Will Rogers World Airport

Rosewood Crescent Hotel – DALLAS, TX
Roof Replacement
Contract Amount: $550,000 (approx.)
Owner: Dallas Crescent Hotel, LLC c/o CFM Development, LLC
General Contractor: Chamberlin Roofing & Waterproofing
Scope of Work: Removal of existing roof system and installation of fully adhered fleeceback PVC membrane roofing system
Project Description: Luxury hotel building envelope repair in Uptown Dallas

UT Moore-Hill Dormitory – AUSTIN, TX
Remedial Waterproofing
Contract Amount: $100,000 (approx.)
Owner: University of Texas Systems
Architect: Pfluger Architects
Consultant: Structures PE
General Contractor: Turner Construction
Scope of Work: Structural concrete repairs
Project Description: University of Texas dormitory repair

Parkland Medical/Surgery Clinic Core & Shell –
DALLAS, TX
New Construction Roofing & Waterproofing
Contract Amount: $930,000 (approx.)
Owner: Dallas County Hospital District DBA Parkland Health & Hospital Systems
Architect: VAI Architects
General Contractor: Rogers O’Brien/ JE Dunn, A Joint Venture
Scope of Work: Installation of two-ply modified bitumen torch-applied roofing system, fabrication and installation of aluminum coping, below-grade waterproofing, vertical waterproofing, tunnel repairs, sealants and air barrier
Project Description: New 18-story, 2,000,000 sq. ft. hospital

Unit Corporation – TULSA, OK
New Construction Waterproofing
Contract Amount: $250,000 (approx.)
Owner: Unit Corporation
Architect: Kinzlow, Keith and Todd
General Contractor: Crossland Construction
Scope of Work: Below-grade waterproofing, air barrier and joint sealants
Project Description: New facility for Unit Drilling Company

Enclave Place – HOUSTON, TX
New Construction Roofing
Contract Amount: $350,000 (approx.)
Owner: Piedmont Office Realty Trust
Architect: Gensler Architects
General Contractor: Tellepsen Builders
Scope of Work: Fully adhered TPO roofing system, sheet metal counter flashing and coping
Project Description: 11-story office building

North Richland Hills Municipal Complex
CITY HALL – NORTH RICHLAND HILLS, TX
New Construction Waterproofing
Contract Amount: $900,000 (approx.)
Owner: City of North Richland Hills
Architect: Brinkley Sargent Architects
General Contractor: Balfour Beatty Construction
Scope of Work: Fluid-applied air barrier, insulation, flashing, joint sealants, expansion joints, water repellent, below-grade sheet waterproofing, cold fluid-applied waterproofing
Project Description: Complex to house the city hall, police department and municipal court

Great Hearts Primary Academy – SAN ANTONIO, TX
New Construction Waterproofing
Contract Amount: $100,000 (approx.)
Owner: Great Hearts America
Architect: HKS Architects
General Contractor: Crossland Construction
Scope of Work: Dampproofing, sheet waterproofing, membrane flashing, joint sealants and air barrier
Project Description: Charter school

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

LOCATIONS:

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Houston, Texas 77040
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Fax (713) 880-8255

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Farmers Branch, TX 75234
Ph. (214) 273-9110
Fax (214) 273-9120

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Austin, TX 78754
Ph. (512) 275-1600
Fax (512) 275-1603

SAN ANTONIO
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San Antonio, TX 78217
Ph. (210) 822-6536
Fax (210) 822-8211

OKLAHOMA CITY
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