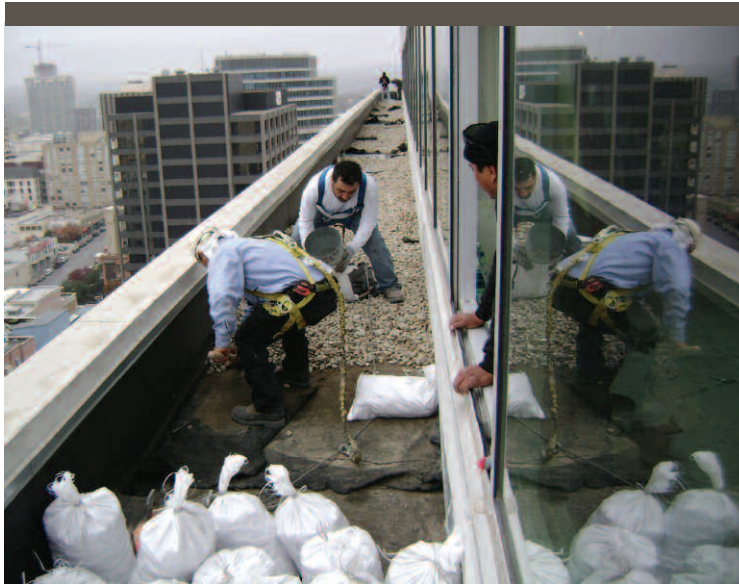


Capitol Tower Strives for LEED-EB with Roof Replacement Project



Capitol Tower



Chamberlin crew removing ballast from existing EPDM roof system.

Capitol Tower is a commercial office building built in 1986. The eight-story office building and 10-level parking garage is conveniently located in the heart of Austin's central business district, near the state capitol and is within walking distance of restaurants and businesses on Congress Avenue.

After more than 20 years, the 120,000 square foot Capitol Tower office building was in desperate need of a new roof. In January 2009, Chamberlin began to execute roof renovations for Capitol Tower Investments, LP. Project goals included finishing the renovations in a tight timeline and achieving LEED-Existing Building Platinum status. LEED certification recognizes high performance buildings in the areas of environmental impact, occupant health and financial return.

Chamberlin began work with the removal of the existing ballasted EPDM roof system. It was replaced with a TPO single-ply membrane system. Compared to other typical single-ply membranes made of EPDM, PVC and TPO, the TPO roofing membrane applied to this project provides the benefits of all three materials combined in a single roofing membrane — low installed cost, heat welded seams and no liquid plasticizers.

As an added bonus, the white reflective color of the energy efficient membrane reflects more solar radiation than the typical black EPDM membranes. This significantly reduces heat load. This "cool" roof will promote lower cooling requirements and ultimately save the owner as much as 20 percent in energy costs.

(Continued pg. 2...see CAPITOL TOWER)

GUEST COLUMN:

By: *Ralph Velasquez, Director, Sustainable Technologies Group, Tremco, Inc.*



Rooftop Solar Installations

In this column I want to tackle the issue of roofing as it relates to Photovoltaic installations. Better known as PV or solar, these installations have taken on new importance as the new administration has settled in. Legislation and economics around the country have begun to make these types of sustainable options more economical. This column will not focus on whether this makes sense or not, but will focus on the less glamorous side of the house, dealing with these issues as they relate to roofing in solar applications.

(Continued pg. 2...see SOLAR ROOF)



INSIDE this issue

Capitol Tower Strives for LEED-EB with Roof Replacement.... 2

Rooftop Solar Installations..... 2 - 4

Jerroul McMellon Receives National Award..... 4 - 5

Employee Profile..... 5

Projects in Progress... 6

(CAPITOL TOWER Continued from pg. 1)

The new energy efficient, fully adhered roofing system is just part of the multifaceted process required to attain LEED certification for the building. In addition, Chamberlin followed the U.S. Green Building Council's detailed Green Building Guidelines throughout the installation process.

A sampling of the guidelines followed include recycling 80 percent of old roofing materials, recycling 140 tons of ballast into roadway base material, recycling 28,000 square feet of expanded polystyrene Styrofoam into insulated CMU masonry blocking, donating 1,000 concrete pavers to Habitat for Humanity for re-use, and increasing the roof insulation thermal resistance from a value of R-6 to R-24.

While closely following the Green Building Guidelines took great care and thoughtful planning, Chamberlin's biggest challenge on the job was material staging and scheduling. Because work was being conducted during normal business hours on a populated office space, special attention was required in order to minimize disruptions. "We adjusted our crew's working hours, sometimes working nights and weekends, in order to meet the changing schedule," said Project Superintendent Danny Taft.



Chamberlin crew installing new, energy efficient TPO roofing system.

Due to the fact the building has several roof levels that can only be accessed through tenant office spaces, Chamberlin mechanics made sure they were not only quiet but also had all necessary materials on hand to avoid disruptions due to multiple trips through office areas.

To further limit tenant disruption, the staging for the entire roofing project was located on the top level of the parking garage, which is just below the first floor of the office building. Two hundred tons of roof debris was removed from the highrise building by hand, and all of

the new roof materials were transported to the roof deck via the freight elevator.

"This was not the standard roof replacement project," said Project Manager Andy Seagraves. "It provided a lot of unique challenges. We have enjoyed the opportunity to work with Stream Realty at Capitol Tower, as well as the other trades on the project, to ensure that it not only followed LEED guidelines, but that we also stayed within budget and within Chamberlin's strict safety guidelines."

(SOLAR ROOF Continued from pg. 1)

Maintaining Roof Watertightness

There are a few key things to consider when weighing the option of going solar. The first is the issue of roof watertightness. In other words, making sure you keep the roof from leaking or being damaged during or after the installation of bright new, shiny energy panels. There are two basic technologies to consider: panels and thin film adhered to the membrane. First let's review panel installations.

When panels are installed, keep in mind the multiple penetrations that will be required in order to support the panel and the racks they sit upon. The preferred solution is to have a professional roofing contractor install a proper curb and flashing system. The second best alternative is to install a pitch pocket with a rain hat as detailed in the National Roofing Contractor's Association (NRCA) roofing manual. A third option is to install a pipe wrap flashing of some type. This third option is the least costly and the least desirable. Since flashings are typically where roofs leak first, it makes sense to call upon professionals to build the best flashing detail possible with high quality materials. Anything less than good design, quality materials and professional workmanship will only be a source for leaks, damage, headaches and, in the worst case, a court case in everyone's future.

When you are considering the use of a building integrated Photovoltaic system, known as a BIPV installation, then flashings on curbs are replaced by critical tie-in seams of some type.

Somewhere in the installation, the BIPV cell must interface to the ply or sheet good and be adhered to the roof membrane below. In some applications the roof below is cut so that the wiring can be passed through to the underside of the deck, here the outside seam tie-in to the roof is even more critical to be watertight. Though non-penetrating solar applications will not be addressed in this column, note they also have interface requirements. Nothing put on a roof is devoid of interface requirements and issues.

Weight Loads

In addition to flashings, it is important to consider the weight loads that these types of systems will impose on the roof deck and the membrane. Panel systems and their support structures can add significant weight and considerations must be given to potential deck deflection. If deflection occurs, then stress to the roof membrane will be experienced. Deck deflection can cause water to collect and pond, causing a host of roof challenges and, of course, in the worst case situation, a roof collapse could occur. By design, BIPV systems are much more lightweight, but they still add some weight.

(Continued pg. 3...see SOLAR ROOF)



Building Integrated Photovoltaic System (BIPV).

Therefore, it's important to make sure you are aware of how much a system weighs and what, if any, impact this will have on the roofing system.

Wind Loads

Panels will obviously be more likely to catch the wind. Therefore another important consideration is the wind loads that solar panels will impose on the roof system. The system chosen must be carefully evaluated for this impact, especially when looking at ballasted systems. There have been cases where the ballasted system did not stay in place under less than advertised designed wind conditions. There can also be problems for thin film applications if adhesion of the film is inadequate for the wind zone of the installation. Any panel system not properly anchored can become a sail. So, pay close attention to the force of wind on your selected PV system.

Foot Traffic and Ongoing Maintenance

Consider the issue of foot traffic required for servicing of the PV array. Mechanics will be required periodically to access the roof to maintain the PV array. How will they do this? Where will they walk? How often? What tools will they bring and can these tools cause damage to the roof system? In addition to PV maintenance, think about how you are going to conduct roof maintenance with the PV array in place? The roof will require ongoing maintenance and now you will have something in the way. So, have a plan on how to handle this anticipated work.

A related issue is the idea of heat build-up. What doesn't generate power will generate heat and where does this go? If attached as in a BIPV installation it could be driven into the roof system and therefore

require the roof to be maintained more often, as heat and UV is an enemy of all roof systems. Panel applications are also impacted by heat build-up, just not as much, since they are elevated. They also put various strains of hot and cooler shaded spots on the roof, causing various levels of roof expansion and contraction. Ballasted systems are also closer to the roof surface and have higher heat impact on the roof membrane. The bottom line is that it's important to plan for how you are going to address these variables.

Maintaining the Roof Warranty

Let's move on to roof warranty issues. If the roof is an existing assembly, then contact the holder of that warranty before you install the PV array to make sure you do not violate the terms of that warranty. The manufacturer will have very specific ways they want you and the contractor to treat this roof if you want to keep your warranty intact. It goes without saying to get everything in writing. Make sure you are clear on maintenance requirements and who is responsible for what if something on the roof is damaged by a component of the PV array.

Take into consideration unusual weather events such as hail, tornados, hurricanes, earthquakes, high winds, etc. How does your roof warranty handle these issues and how will it handle them if a PV array is installed?

Codes and Safety

Simple statement here: make sure your array meets all current standards for fire, wind and electrical. How do these codes interface with your roof code requirements? Make sure the PV and roofing installer follow OSHA requirements.

(Continued pg. 4...see SOLAR ROOF)

Chamberlin Roofing and Waterproofing Superintendent, Jerroul McMellon, Receives National Recognition



Jerroul McMellon (right) receiving his MVP award from Alliance President, Bob Bueche.

During NRCA's 122nd Annual Convention in Las Vegas early this year, The Roofing Industry Alliance for Progress announced the winners of its 2009 Most Valuable Player (MVP) Awards. Chamberlin Roofing and Waterproofing Superintendent, Jerroul McMellon, was one of just 10 honored recipients.

Winners were formally honored and presented with awards during the NRCA cocktail and awards reception on Wednesday, February 4. The Roofing Industry Alliance for Progress' MVP Awards Program annually identifies and honors outstanding roofing workers.

(Continued pg. 5...see AWARDS)

(SOLAR ROOF Continued from pg. 3)

Be "Roof Ready"

A big issue in the marketplace is that in the rush for solar installations, as desirable as this is, there are many buildings where the building is not "roof ready." In other words, PV arrays are being installed over roof systems that will not last anywhere near as long as the array will last. The NRCA publishes that the average commercial roof lasts 17 years, while the average PV array today will last 20-30 years. Even the old PV arrays lasted 20-25 years so we have a mismatch here.

I have talked to owners who want to put a PV array on roof systems that will not make it five more years, let alone 20, and they have not considered the costs of upgrading their roofs before they install the array. If you think roofing is expensive now, think what the cost of that roof removal will be in three, five or 10 years when the entire array will need to be removed or at best worked around, as the old roof has to be removed. Think of the damage that could be done to PV equipment that needs to be removed from the roof, set aside and re-installed later. Experience tells me that a lot of damage could occur and then the roof replacement project will get real interesting at that point.

To avoid this, make sure you have a quality roof, preferably with redundancy built in to the system. Make sure the roof is designed to accommodate maintenance and future removal if the array outlasts the roof system selected. If you are considering a PV installation on an existing roof, have a roof professional examine the roof to look for instances of damaged membrane, water intrusion into the insulation

layer, flashing deterioration, poor drainage or any number of concerns that would need to be addressed before an array should be installed.

If you are in a state where PV still does not make economic sense, then take this opportunity to get your roof "PV ready" so that when the incentives, the technology or the cost of energy makes it viable, you are ready to pounce on the opportunity without the added costs of dealing with the roof at the same time.

So what if PV is never a good choice for you and you got your roof "PV ready?" Then all you did was make an incredibly good economic decision to extend the life of your roofing asset, lessened the impact on landfills, promoted the use of less virgin resources required for a new roof, probably increased energy efficiency through removal of wet insulation or reflective coatings and kept your building dry for less cost per year. Sounds like a pretty sustainable thing to do in my book!

Reprinted by permission of Greenroofs.com.

Ralph Velasquez is the Director of the Sustainable Technologies Group for Tremco Roofing and Building Maintenance. He has been involved in the construction industry for over 30 years. During his career, Ralph has worked on millions of square feet of roofing and roof replacement projects nationwide, as well as a large number of building envelope restoration projects. He has been involved with ASTM subcommittee for Sustainability since 2003 and the Green Roof task force group. Ralph also chairs the subcommittee for Life Cycle Costing, established by the Green Roofs for Healthy Cities. Ralph can be reached at 877-510-2681 or rvelasquez@tremcoinc.com.



From left: Geoff Craft, MVP Task Force chairman; Millard Wright; Dan Williams; Robert Morneau; Isael Casas; Chad Chambers; Eugena Madeley; Roua Elliott; Jerroul McMellon; Jesus Andres; Raymundo Jimenez; and Bob Bueche, Alliance president

These individuals serve as role models and demonstrate higher work-related and personal goals to which others may aspire.

“Jerroul takes pride in his craft and industry,” said Chamberlin Senior Project Manager Bob Edwards, “He leads by example and his actions have earned my deepest respect. He represents our company well and we are all proud of this well-deserved recognition.”

Jerroul is a 10-year veteran of the roofing industry. He works with integrity and professionalism in the roofing department of Chamberlin’s Houston location. He values the relationships he shares with both coworkers and clients, and strives to keep his team motivated and on track for success on each project they undertake. Jerroul’s

work ethic and positive attitude are major contributions to the success of his crew and Chamberlin as a whole.

As an MVP award winner, Jerroul received two complimentary airfares and hotel accommodations during the Las Vegas convention. He also received a complimentary conference registration and exhibit hall pass, two tickets to the NRCA Cocktail and Awards Reception and a \$100 American Express Gift Certificate.

Jerroul, along with his fellow MVP award winners from across the United States, was further recognized in *Professional Roofing* magazine, NRCA’s *For Members Only* newsletter and on www.roofingindustryalliance.net.



As an MVP award winner, Jerroul received complimentary airfare and hotel accommodations during the Las Vegas convention.

Employee Profile



Miguel Sanchez
Superintendent —
Waterproofing & Caulking
Dallas, TX

Miguel’s coworkers describe him as a kind, thoughtful and extremely knowledgeable person. He is revered as a true Chamberlin professional and one of the best individuals with whom to work. He constantly goes above and beyond the call of duty to help a client or fellow employee. Here is a little more about the man that is admired by many at Chamberlin.

Experience:

Miguel came to work for Chamberlin 18 years ago. “I was working at a restaurant at that time and applied for a job in Chamberlin’s roofing department,” said Miguel. He was hired as a roofing mechanic and moved to waterproofing operations a few years later. Today, one of his proudest accomplishments is working his way up to a waterproofing superintendent.

A Day in the Life:

Miguel spends his days organizing and inspecting work taking place on various waterproofing projects throughout the D/FW area. Safety is one of his top priorities, so he holds weekly toolbox safety meetings to discuss possible job hazards and precautions to make sure his men get home safely at the end of the day.

Outlook:

Miguel is customer focused in everything he does. “Our customers are the most important people,” he said, “because of them, we have jobs to do.”

He teaches his team the importance of safety, quality and productive installations. “Safe, productive, quality work makes for happy customers who will continue to utilize us again and again for their projects and keep us in business for many years to come,” Miguel said.

Outside the Office:

On the weekends you can find Miguel spending time with his family. He is also an avid volleyball player and enjoys a good, competitive game.

We asked Miguel to choose items from this list of random things to learn a little more about him:

MIGUEL’S MIX

Rambo

Rocky

Chicken

Fish

Wrench

Screwdriver

Blue

Green

St. Augustine

Astro Turf

PROJECTS IN PROGRESS

CHAMBERLIN

Roofing & Waterproofing

LOCATIONS:

Call the nearest local office
or 1-800-749-1432

HOUSTON

7510 Langtry
Houston, Texas 77040
Ph. (713) 880-1432
Fax (713) 880-8255

DALLAS/FT. WORTH

2346 Glenda Lane
Dallas, Texas 75229
Ph. (214) 273-9110 / (817) 237-1927
Fax (214) 273-9120 / (817) 237-2676

AUSTIN

1515 Dungan Lane, Ste. 210
Austin, TX 78754
Ph. (512) 275-1600
Fax (512) 275-1603

SAN ANTONIO

9035-A Aero St.
San Antonio, TX 78217
Ph. (210) 822-6536
Fax (210) 822-8211

OKLAHOMA CITY

2620 South Meridian Ave.
Oklahoma City, OK 73108
Ph. (405) 680-0506
Fax (405) 680-0508

Also licensed in
Arkansas and Louisiana

CAPITOL TOWER – Austin, TX

Roof Replacement

Contract Amount: \$750,000 (approx.)
Owner: Capitol Tower Investments, LP
Property Manager: Stream Realty
Architect: L.M. Holder III, FAIA
General Contractor: Chamberlin Roofing & Waterproofing
Scope of Work: Removal of existing roofing system and installation of TPO roofing, sheet metal & elastomeric coating
Project Description: Eight-story office building with 10-level parking garage

WEATHERFORD REGIONAL MEDICAL CENTER – Weatherford, TX

New Construction Roofing

Contract Amount: \$400,000 (approx.)
Owner: Weatherford Texas Hospital Company, LLC
Architect: Perkins & Will
General Contractor: Turner Construction
Scope of Work: TPO roofing system, sheet metal, flashing & coping
Project Description: Two four-story buildings added to existing medical facility

IAH TERMINAL C INTERIOR RENOVATIONS PROJECT 490K – Houston, TX

New Construction & Remedial Roofing & Waterproofing

Contract Amount: \$525,000 (approx.)
Owner: The City of Houston
Architect: Parsons
Construction Manager: Gilbane – NIC Global Management
General Contractor: SpawGlass Construction Corporation
Scope of Work: Partial tear-off of existing roofing system and installation of EPDM roof, new TPO roofing system, split slab waterproofing, expansion joints, traffic coating and site sealants
Project Description: Interior terminal and parking garage renovation

CHANNELVIEW HIGH SCHOOL – Channelview, TX

Roof Replacement

Contract Amount: \$675,000 (approx.)
Owner: Channelview Independent School District
Consultant: PBK Facility Consulting Division
General Contractor: Chamberlin Roofing & Waterproofing
Scope of Work: Partial tear-off of existing roofing and installation of new EPDM roof system
Project Description: Damaged roof replacement on campus buildings

NEILSON HALL – Norman, OK

Remedial Waterproofing

Contract Amount: \$70,000 (approx.)
Owner: The Board of Regents of the University of Oklahoma
Architect: J.W. McSorley Architect
General Contractor: Sun Construction
Scope of Work: Concrete restoration, caulking repair
Project Description: 100-year-old OU science research building

TEXAS CHILDREN'S HOSPITAL NEUROLOGICAL RESEARCH INSTITUTE – Houston, TX

New Construction Roofing & Waterproofing

Contract Amount: \$1,000,000 (approx.)
Owner: Texas Children's Hospital
Architect: Perkins + Will
Consultant: Ulrich Engineers
General Contractor: Tellepsen Builders
Scope of Work: SBS modified membrane roofing system, sheet metal and flashing, elastomeric waterproofing, basement and tunnel roof waterproofing, air and vapor barrier, fire caulking, precast and granite joint sealants, elevator pit waterproofing, expansion joints
Project Description: Research facility with two-story underground parking

BANK OF AMERICA WYNDAM – Richardson, TX

New Construction Waterproofing

Contract Amount: \$200,000 (approx.)
Owner: Bank of America Corporation
Architect: Page Southerland Page, LLC
General Contractor: Turner Construction
Scope of Work: Waterproofing, sealants, sheet metal flashing, metal coping and flashing
Project Description: New addition to existing data center

SHERATON AUSTIN 3RD FLOOR – Austin, TX

Remedial Waterproofing

Contract Amount: \$30,000 (approx.)
Owner: HEI Austin Hotel, LP
General Contractor: Chamberlin Roofing & Waterproofing
Scope of Work: Demolition, deck coating, painting and stucco repair
Project Description: 13-story hotel

SAM VIERSEN GYMNASIUM CENTER – Norman, OK

New Construction Waterproofing

Contract Amount: \$140,000 (approx.)
Owner: The University of Oklahoma
Architect: Krittenbrink Architecture LLC
General Contractor: Landmark Construction
Scope of Work: Underslab and below-grade waterproofing, joint sealants
Project Description: Gymnastic facility addition

MEMORIAL HERMANN HVI, CULLEN ATRIUM & JONES PAVILION – Houston, TX

Roof Replacement

Contract Amount: \$3,200,000 (approx.)
Owner: Memorial Hermann Hospital System
Architect: Curry Boudreaux Architects
Consultant: Building Exterior Solutions
General Contractor: Manhattan Construction Company
Scope of work: Emergency repairs and roof stabilization, removal of existing roofing system, and installation of new SBS modified membrane system, removal and replacement of sheathing, membrane underlayments, internal gutters and Spanish tile roofing system
Project Description: Emergency repairs and roof assembly replacement due to hurricane Ike damage

SPECIALTY CONTRACTING SERVICES:

ROOFING / SHEET METAL

- BUR
- EPDM
- Modified Bitumen
- PVC/TPO Thermoplastic
- Metal standing seam
- Roof related sheet metal
- Gutters/downspouts

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
- Roof & waterproofing surveys
- Custom roof maintenance plans
- Maintenance budgeting assistance
- Service 24 hours/365 days a year
- Free estimates