2018 Golden Hammer Application

**Golden Hammer Award Entry** — Outstanding Workmanship / Steep-Slope

**Project Owner** — TWU Texas Woman’s University
307 Administration Drive, Denton TX 76201

**Roofing Contractor** — Castro Roofing of Texas, LLC.
4854 Olson Drive, Dallas TX 75227

**Roofing Consultant** — Roof Technical Services Inc
1044 Handley Drive, Fort Worth TX 76132

**Other NTRCA Members Involved** — GAF Commercial Roofing Systems — ROOTTECH

**Commencement / Completion** — April 2017 through August 2017

**Project Size** — 54,000,804 SF (multiple roof systems)

**Project Amount** — $1,853,750.59

**Submitted by** — Ruben Amesquita
Marketing Director
Overview of Texas Woman’s University

With an enrollment of approximately 15,000 students, Texas Woman’s University (TWU) is the nation’s largest university primarily for women. TWU offers degree programs in the liberal arts, nursing, health sciences, the sciences, business and education. Its campuses in Denton, Dallas, and Houston are joined by an e-learning campus offering innovative online degree programs in business, education and general studies.

TWU serves the citizens of Texas in many ways. TWU graduates more new health care professionals than any other university in Texas. This high number of graduates greatly eases the teacher shortage by placing highly qualified professionals in the classroom.

TWU offers liberal arts-based curriculums that prepares students for success in a global society. It is one of the leading universities conducting research on prevention and treatment of childhood obesity, osteoporosis, stroke and diabetes.

Celebrating 117 years of excellence in education

Rich Texas History — Texas Woman’s University Famous Alumni

Carly Patterson
American Gymnast

Margo Jones
American Stage Director and Producer

Gaba Carlyle-Brown
American Journalist

Talita Douglas-Fattah
American Athlete

Louise Ritter
Olympic Athlete

Connie Douglas Reeves
National Cowgirl Museum and Hall of Fame
Carly Patterson
American Gymnast

Carly Patterson Caldwell was born February 4, 1988 and is a former American artistic gymnast. She was the all-around champion at the 2004 Olympics, the first all-around champion for the United States at a non-boycotted Olympics. Carly is a member of the USA gymnastics Hall of Fame.

Margo Jones
American Stage Director and Producer

Margo Jones lived from December 12, 1911 – July 24, 1955 and was an American stage director and producer best known for launching the American regional theatre movement and for introducing the theatre-on-the-round concept in Dallas, Texas. Jones worked for the American Professional Company when she pioneered Douglas 40’s Place, the first theater-in-the-round in the city. She founded the first regional professional company when she opened Theatre ‘47 in Dallas, Texas. Jones was the first woman to direct a new play on Broadway, and during her career Jones staged nearly 200 plays. Of the 85 plays Jones staged during her Dallas career, 57 were new, and one-third of those new plays had a continued life on stage, television and radio.

Helen Gurley Brown
American Author

Helen Gurley Brown lived from February 18, 1922 – August 13, 2012 and was an American author, publisher, and businesswoman. In 1965, Gurley took over as editor-in-chief of Cosmopolitan magazine and was in that position until 1997. Gurley was the editor-in-chief of Cosmopolitan magazine for 32 years. Brown revamped the magazine by taking it from a women’s magazine written by men, to one of the most widely read women’s magazines, now available in more than 100 countries.

Millie Hughes-Fulford
American Astronaut

Millie Elizabeth Hughes-Fulford was born December 21, 1945 and is an American medical investigator, molecular biologist and former NASA astronaut who flew aboard a NASA Space Shuttle mission as a Payload Specialist. She is a member of the National Academy of Sciences, the American Association for the Advancement of Science, and the American Society for Clinical Investigation. She is a member of the American Society for Bone and Mineral Research, the American Society for Cell Biology, and the National Geographic Society.

Louise Ritter
Olympic Athlete

Louise Dorothy Ritter was born February 18, 1958 in Dallas, Texas. Louise qualified for the 1980 U.S. Olympic team but was unable to compete due to the U.S. boycott of the 1980 Summer Olympics. Louise was the 1988 Olympic champion and world record-holder in the high jump event. She graduated from Texas Woman’s University in 1988, where she starred for U.S. Olympic coach Dr. Bert Lyle. She was inducted into the Texas Track and Field Hall of Fame in 2012.

Connie Douglas Reeves
National Cowgirl Museum and Hall of Fame

Connie Douglas Reeves lived from September 26, 1901 – August 17, 2003 and was believed to be America’s oldest cowgirl. She was the oldest member of the National Cowgirl Museum and Hall of Fame, and one of the first women to study law at a Texas law school. In 1998, the National Cowboy and Western Heritage Museum awarded Reeves the Chester A. Reynolds Memorial Award for her contributions to the Western way of life. She was one of only two women to have earned the award, the other being Holden Texaswoman. The daughter of the family of Reeves Reeves.

client introduction

Mike Hughes-Fulford
American Astronaut

Millie Elizabeth Hughes-Fulford was born December 21, 1945 and is an American medical investigator, molecular biologist and former NASA astronaut who flew aboard a NASA Space Shuttle mission as a Payload Specialist. She is a member of the National Academy of Sciences, the American Association for the Advancement of Science, and the American Society for Clinical Investigation. She is a member of the American Society for Bone and Mineral Research, the American Society for Cell Biology, and the National Geographic Society.

Louis Ritter
Olympic Athlete

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client introduction

TWU Blagg-Huey Library Roof Project

Located close to the center of the TWU Denton campus on Administration Drive, the Blagg-Huey library was originally built in 1986 and endeavors to present opportunities to facilitate an array of information to assist both students and staff.

The library assists both students and researchers worldwide. With the use of "The Gateway to Women’s History" the Blagg-Huey library provides online source materials from the University’s Women’s Collection of irreplaceable treasures and historical documents.

In addition, the digital image collection includes materials from the official archives of the Women’s Airforce Pilots (WASP) of World War II and more than 500 Denton County historical collection items dating back to the 1920s.

The Library also houses a cookbook collection considered one of the five largest culinary collections in the United States.
**General Information**

**Roof System Types:**
- **Modified Bitumen Roof System** — 4,789 SF over four different wings
  - **Roof Assembly:**
    - Metal Deck
    - Base Layer — Loose laid
    - 75 mil Tamko Metal and Tile underlayment
    - Securock Recovery Board — Mechanically attached
    - Duraweld 4S APP Base Sheet
    - Duraweld 4MFR APP Cap Sheet
  - **Composition Shingle Roof System** — 44,735 SF on 9/12 roof pitch
    - **Roof Assembly:**
      - Wood Deck (Note: Metal deck below)
      - 75 mil Tamko Metal and Tile underlayment
      - GAF Camelot lifetime design shingles mechanically attached
  - **Copper Standing Seam @ Below Copula and Two Half Round Roofs areas** — 3,480 SF
    - **Roof Assembly:**
      - Wood Deck (Note: Metal deck below)
      - 75 mil Tamko Metal and Tile underlayment
      - Double lock Copper Standing Seam Roof System
  - **Interlocking Copper Shingles @ Copula** — 1,800 SF (Note: Metal deck below)
    - **Roof Assembly:**
      - Wood Deck
      - 75 mil Tamko Metal and Tile underlayment
      - Copper interlocking shingles
  - **Interlocking Copper Round Dormer Shingles @ 14 Dormers** — 1,500 SF (Note: Metal deck below)
    - **Roof Assembly:**
      - Wood Deck
      - 75 mil Tamko Metal and Tile underlayment
      - Radiused Interlocking Copper Shingles — Soldered

**Other Interesting Facts:**
- Provided and installed professionally designed fall protection systems
- Removed and reinstalled lightning protection
- Enclosed entire project with fencing and added access points as needed
- Provided a scaffolding system to access both shingle roof and modified bitumen roof systems
- Overhead protection was added at multiple locations
- Special scaffolding was added around center copula
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- Waterproof masonry at eight chimney locations

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Roof System Types:
The TWU Blagg-Huey Library had multiple unique characteristics most of which was the centerpiece of the entire building – an unreachable copper clad copula. Therefore, a scaffolding system was erected to encompass the entire copula to allow the workers to safely have access to the area. The old copper shingles were removed and new custom-sized copper interlocking shingles were installed. The copula surface was not “flat/even-planed” but rather “radiused,” thereby adding an even-greater level of difficulty.

There were also three other copper covering styles installed depending on the location and particular attributes needed for waterproofing and aesthetic considerations. The stair scaffolding was also unique. Access via the stair scaffolding was not only to reach the roof levels edge at the composition roof but also to go up the composition roofs steep grade to the flat modified bitumen roof at its apex. In addition, the front main entrance had multiple pedestrian overhead protection scaffolds erected to allow pedestrian traffic during library operations.
Uniqueness (continued)

Storm Hawks | Castro Roofing’s Commercial Special Storm Division

At Castro Roofing, we’ve perfected the art of damage detection and repair for the TWU Blagg Huey library project, the insurance company offered $800,000.00 to repair hail damage. After Storm Hawks were contacted to perform forensic analysis by TWU, additional storm damage was documented and provided as proof. TWU used the information to obtain over $2,800,000.00.

Online Project Management (OPM)

Castro Roofing’s OPM system provided online, weekly updates regarding project schedule and photographic, detailed representation during the entire project cycle. Owner, design professional and owner’s representatives were able to view updated, detailed progress reports 24/7.

OMM system provided online project schedule, percent completion, areas worked and photo documentation of progress.
The TWU Blagg-Huey Library had multiple roof systems that had to be integrated:

Composition Shingles – Existing flat cementitious shingles were removed. The challenge was that all the trash had to be bagged and deposited into a special lined dumpster. An air monitoring company was contracted to ensure no airborne contaminants were present. If the monitoring revealed contaminants, a different removal method would be required. Some of the roof areas could only be reached via telescopic forklift with appropriate baskets. Since, at the perimeter, a custom round copper gutter system was prescribed, several courses of shingles were left uninstalled to allow for undamaged gutter installation and then integrated the missing shingle courses afterwards. The GAF Camelot shingle has a very specific application protocol to ensure proper appearance. These protocols had to be followed for proper alignment particularly difficult on a very steep roof with long runs both vertically and horizontally.

Modified Bitumen Roof System – Location of the roofs presented a challenge. These were located on about a nine foot corridor (forming a cross when aerially viewed at four different locations) along the highest point of the composition roofs, spreading out from the center section where the cupola is located. Old roof system had to be removed and safely discarded into dumpsters. Then the new full tapered system and the two ply torch modified bitumen roof system installed.

- Composition Shingle Roof System — 44,735 SF on 9/12 roof pitch
- Modified Bitumen Roof System — 4,789 SF over four different wings
The TWU Blagg-Huey Library had multiple roof systems that had to be integrated:

Copper Copula – The old copper shingles were removed and new custom-sized copper interlocking shingles were installed. The copula surface was not “flat/even-planed” but rather “radiused,” thereby adding an even greater level of difficulty. Note: Copula could only be reached via customized scaffolding.

Copper Double Lock Standing Seam Roof System – Two half round standing seam roofs – one at Northeast and one at Southwest side of building. The standing seam panels were tapered to form the radius. With the panels wider at the bottom and thinner at the bottom. The entire width had to be calculated in order to ensure all panels were basically the same size from left to entire. Special care was taken to not bend the copper or unduly mark for aesthetic reasons.
Safety Innovation

Fall Protection System—All different areas had to be designed to meet OSHA and other requirements. Many meetings were held during the design phase to determine the proper system for a particular application. These design decisions were then submitted for approval. More meetings to change some design aspects were held and then final approval was achieved. These different fall-protection methodologies had to be integrated to the various roof systems and structural conditions encountered on the project.
December 15, 2017
Mr. Rudy Rodriguez
Castro Roofing
Dallas, Texas 75227

I want to take this opportunity to commend your company for 23 years to provide successful results to our mutual clients. I consider the drive for excellence is apparent by the policies and procedures that have been implemented to improve client and conscientious. Your desire to provide You are able to handle the technical aspects of a project Construction is always challenging. Castro's conflict management skills are exceptional. Rather than speaks volumes about integrity and personal values.

The TWU Library project was difficult from a programming, technical, and logistical perspective and it required this one of our greatest compliments. Castro’s management skills are exceptional. Rather than a nightmare, the project was successful. The detailed work is truly a work of art. We look forward to our continued working relationship with Castro Roofing.

Sincerely,

Cindy L. Chadwell, AIA, RRC
Rooftech, CEO/President
Project Photos

Seeing is believing - Please enjoy the many facets of the Castro Roofing TWU Blagg Huey Library project through the lens of many of our marvelous employees and administrative staff members.