

Alamo ASHRAE Squirrel Cage

March 1,2018



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March 1, 2018

Shake off those winter blues, brush up on your bracketology, and come get involved with your local ASHRAE chapter???

The Alamo chapter is very much at an inflection point. For several years now, we have operated shorthanded, with minimal volunteers, and scaled back our efforts accordingly. The Alamo chapter has over 250 dues paying members, but we have operated with typically 5-10 folks actively running the chapter. We can do more, and if we don't change the status quo, our chapter *will* fold and close up shop. Imagine having to drive up to Austin, or down to Corpus to attend a monthly chapter meeting (shrill screams off in the distance, "What about my PDHs?")...

However, this is not a doom and gloom message. The iceberg is dead ahead, but we've seen it coming for a while, and have time to avoid a collision. We're putting out the call, and asking for volunteers to finish out this year and continue operations into the future. We also have an opportunity next month to get volunteers trained right here in town.

This year we are hosting the Chapter Regional Conference (CRC). The conference will bring together all fifteen Region VIII chapters from throughout Texas, Oklahoma, Arkansas, and Mexico.

Each year incoming chapter volunteers are asked to attend the CRC, specifically the Saturday morning training workshops. During these training workshops volunteers are given all the information and resources needed to hit the ground running and be successful. Want to volunteer, but don't know what will be asked of you? Attend the CRC. Want to learn what other chapters are doing to be successful? Attend the CRC. Want an opportunity to network with other HVAC professionals, maybe with a margarita or anticucho in hand (CRC will coincide with FIESTA week, and is being held downtown at the Marriot Plaza)? Attend the CRC.

We have no excuse not to be well represented at the CRC, and to fix our chapter operations. See a description of various volunteer roles at the end of this newsletter.

Before I conclude for this month, I'd like to thank Mr. Bob Frick for his presentation last month on Psychrometrics. We had great attendances at the meeting, drawing in about 70 total, many of which were local engineers. Please keep the feedback coming, and let us know what brought you out, or what future meeting topics you'd like to see.

Best Regards,

Chris Delgado, PE

## UPCOMING EVENTS

### AMCA Conference- March 6-7, 2018

Air Movement and Control Association (AMCA) International Inc. is hosting the Air System Engineering and Technology (ASET) Conference – United States on March 6-7, 2018, at the Hyatt Regency San Antonio Riverwalk.

For more information and to register with the ASHRAE discount code of **ASETUSDISCOUNT2018**, visit [www.aset-us.com](http://www.aset-us.com). Net registration fee after ASHRAE discount is \$400.

### Chapter Meeting- Wednesday March 21, 2018

Chapter meeting at UTSA. The meeting will include two presentations and a facility tour. The meeting is open to ASHRAE members, UTSA ASHRAE student members, and guest with advanced registration.

Please register online: <http://alamoashrae.org/meetinginfo.php?id=47>

(If you can't register online, you can email: [sam.bush@hts.com](mailto:sam.bush@hts.com))

### Spring Golf Tournament- Thursday March 29, 2018

Spots are filling up fast... want to sign-up your team foursome or sponsor the event? Contact Brad Gilbert direct ([brad.gilbert@hts.com](mailto:brad.gilbert@hts.com)), or through registration link below.

Register online: <http://alamoashrae.org/meetinginfo.php?id=55>

### Chapters Regional Conference (CRC)- April 26-28, 2018

CRC (Chapter Regional Conference) the annual meeting for all 15 chapters in ASHRAE Region VIII. The CRC is a golden opportunity for all the chapters to come together and learn about and from each other. CRC ends with the big event of the awarding of the Golden Gavel to the best chapter of the year. The conference also gives everyone an opportunity to meet and fellowship together. Each year a different chapter hosts the CRC and opens their doors to the Region.

Please register online: <https://www.ashraeregion8.org/crc>



## **AMCA International Hosting Air Systems Engineering Conference Hyatt Regency San Antonio Riverwalk March 6-7, 2018**

Air Movement and Control Association (AMCA) International Inc. is hosting the Air System Engineering and Technology (ASET) Conference – United States on March 6-7, 2018, at the Hyatt Regency San Antonio Riverwalk.

The two-track conference features timely and practical topics on design, specification, installation, commissioning and operation of commercial and industrial air systems.

Track 1 focuses on systems and applications, including ASHRAE standards, energy efficiency, fire/smoke control, weather resiliency, indoor air quality, sizing/selection, and noise reduction.

Track 2 focuses on the basics and fine points of air-system products, such as fans, dampers, and louvers.

Certificates for RCEP-accredited professional development hours (PDHs) will be provided.

The purpose of the conference is to help air-systems professionals improve engineering practice and stay on top of the latest equipment, technologies, standards, and specifications. Conference presenters are experts and educators in the field who will share their knowledge and first-hand experiences, including:

- Steve Taylor, PE, (Taylor Engineering);
- Jeff Boldt, PE, LEED AP, HBDP (IMBG/KJWW);
- Steve Wiggins, PE (Newcomb and Boyd & past-president of NEBB),
- Dan Int-Hout (Krueger), and
- David Sellers, PE (Facility Dynamics Engineering)

ASET–US 2018 will be held at the Hyatt Regency San Antonio Riverwalk.

ASHRAE members receive a \$50 discount toward the registration fee of \$450. Lunch and dinner on the first day, and breakfast and lunch on the second day are included.

For more information and to register with the ASHRAE discount code of **ASETUSDISCOUNT2018**, visit [www.aset-us.com](http://www.aset-us.com). Net registration fee after ASHRAE discount is \$400.



TO: All Region VIII Chapter Presidents and Officers

RE: Region VIII CRC Hotel Room Block Deadline Friday 3/23/18

Hello Fellow Region VIII Chapter Presidents,

Please encourage all of your members planning to attend the upcoming CRC to book their rooms by WEDNESDAY, MARCH 28<sup>th</sup>. The CRC will coincide with San Antonio's Fiesta week. It will be very difficult to find alternate hotel rooms in the downtown area near the CRC.

### **CONFERENCE HOTEL**

Marriott Plaza Hotel, 555 S Alamo St, San Antonio, TX 78205

Rate: 185.00 USD per night

Group Booking Link: [Book your group rate for ASHRAE Region VIII CRC Apr2018](#)

Direct Reservation Line: 888-236-2427

Last day to book: 3/23/18

### **CRC REGISTRATION**

To register for 2018 CRC, access the [registration page at ashrae.org](#). You will need your ashrae.org username and password to register.

If you are having problems with registration, try the below steps:

1. Go to ASHRAE.org and ensure you are logged OUT.
2. Access the registration page link: <https://goo.gl/zQDTCi>
3. Log IN to ASHRAE.org
4. It should direct you from there to the CRC registration page.

See you in San Antonio,

*Chris Delgado*

Alamo Chapter President, 17-18



### **The State of Women in Engineering**

***Classification: Basic***

#### **Professional Development: 1 PDH**

This presentation will cover both the current state of Women in Engineering, including both formal and informal research. The presentation will review current research and trends regarding basic data on women in engineering, gender bias, workplace culture, and more. The presentation will also cover a recent survey of female members of ASHRAE. The presenter will also provide anecdotes from her own career that put the research into perspective.

#### **Pam Duffy, P.E.**

**Lennox International  
Richardson, TX**

Pam Duffy, P.E. is a Senior Product Manager for Lennox International. As a product manager, Pam is responsible for strategic direction, product roadmaps, new product development, launches and sunsets, and ongoing product category support. She has a mechanical engineering degree from the University of Central Florida and earned her P.E. license in 2013.

Pam is a nationally-recognized advocate for VRF (Variable Refrigerant Flow) technology in North America. She has regularly contributed to formal publications, such as the NEWS, as well as more informal avenues such as LinkedIn. Pam has delivered hundreds of presentations on VRF technology at events such as ASHRAE society conferences. In addition, Pam contributes her expertise to technical groups. Some of her past involvement includes: ACCA Manual S voting member, ASHRAE T.C. 8.7 Corresponding Member, and a regular reviewer of ASHRAE Standards, Guidelines, and Addendums. Pam is an active volunteer in the Dallas Chapter of ASHRAE.

Previously, Pam served as President of the Atlanta Chapter in 2013-2014, for which the Chapter earned the Region's Rudy Ferguson (Chapter of the Year) award. Pam is also currently serving as a member of the Electronic Communications Committee (ECC) and previously served for on the Conferences and Expositions Committee (CEC).

Pam is a Life Member of the Society of Women Engineers (SWE) and has been named to both the Consulting-Specifying Engineer's list of 40 under 40 as well as the NEWS' 40 under 40.



### **Integrating Renewable Energy Systems into Buildings**

***Classification: Basic, Intermediate***

#### **Professional Development: 1 PDH**

This presentation introduces technical opportunities, means, and methods for incorporating renewable energy (RE) technologies into building designs and operations. The speaker will give an overview of RE resources and available technologies used successfully in the USA to offset building electrical and thermal energy loads. Methods for applying these technologies in buildings and the role of building energy efficiency in successful RE projects will be addressed. The speaker will discuss issues related to connecting RE systems to existing electrical grids and offer tips for implementing successful RE projects. Finally, the speaker will summarize ASHRAE activities related to and/or in support of RE applications in buildings.

### **SHEILA J. HAYTER, P.E., FASHRAE**

National Renewable Energy Laboratory  
Golden, Colorado

Sheila Hayter is the Project Assessment and Development Section Manager within the Integrated Applications Center (IAC) of the U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) in Golden, Colorado. In this capacity, she leads a team of technical and policy experts who support federal, state, and local entities on energy efficiency (EE) and renewable energy (RE) topics with the goal to make significant reductions in non-renewable energy consumption through energy efficiency and increased use of RE technologies. Sheila's work includes serving as the IAC partnership development lead and managing key accounts for the IAC and NREL, including serving as the NREL Key Account Manager for the U.S. Department of Homeland Security. Sheila's past activities include leading DOE's Solar America Cities technical assistance activities for Boston and New York City, with the goal to assist these municipalities incorporate strategies into policies, procedures, and specific projects that will result in widespread application of solar technologies. Since joining NREL in 1992, Sheila's work has included serving on the Organizing Committee and leading the subjective judging component of the 2002, 2005, and 2007 DOE Solar Decathlons, managing sustainable buildings activities funded by the DOE Federal Energy Management Program, managing the Photovoltaics (PV) for Buildings activities funded by the DOE Solar Program, evaluating building performance during the design and monitoring phases to support the DOE High Performance Buildings Program, and writing papers, giving conference presentations, and developing/giving training related to high-performance buildings. Sheila is registered professional engineer in the State of Colorado.

Sheila served on the ASHRAE Board of Directors as a vice president (2009 – 2011) and also as a Director at Large (2005 – 2008). She chaired the Publications and Education Council, has served on Technology Council, Finance Committee, Planning Committee Society Rules Committee, Research Activities Committee (chair 2004 – 2005), Continuing Education Committee (chair 1998 – 1999), and ASHRAE Program Committee. She chaired the Greening ASHRAE Meetings and Exposition presidential ad hoc committee (2006 – 2008), and was a member of the Building Energy Labeling, ASHRAE Logo, Globalization Roadmap, and Strategic Plan IV ad hoc committees as well as served as a member of the Advance Energy Design Guide Steering Committee. In addition, Sheila has served in leadership roles of many technical committees.

Sheila received a 2007 NREL Staff Award for outstanding performance, 2007 Professional Progress Award from Kansas State University's College of Engineering, and an ASHRAE Technology Award in 1999. She received the ASHRAE Distinguished Service Award in 2001 and the Exceptional Service Award in 2011 and was named an ASHRAE Fellow in 2008.



**Standard 90.1- Past, Present and Future**

***Classification: Basic, Intermediate***

**Professional Development: 1 PDH**

Standard 90.1 is ASHRAE's flagship standard focused on energy efficiency in commercial buildings. The standard is cited in U.S. federal energy legislation and forms the basis for many of the state and local building codes. This presentation will focus on the evolution of Standard 90.1 from its inception in 1975 through the current version. The presenter will then turn attention to development of the 2013 version of the standard. Insights into the standards development process will be provided as well the perspective on standards of a previous chair of the 90.1 development committee. The presenter served as the Chair of the committee that wrote the 1999 version of Standard 90.1.

**RONALD E. JARNAGIN**

**Staff Scientist**

**Pacific Northwest National Laboratory  
Richland, WA**

Mr. Jarnagin has been involved in energy-related research and development activities for over 35 years. His background is diverse, including work in the areas of fluid flow, power plants, automotive and transportation systems, HVAC systems, energy use in buildings, smart grid activities and energy standards development. Mr. Jarnagin has served on numerous utility, government and business advisory boards, lending his expertise to solving their respective energy problems. He served on the faculty in the Department of Mechanical Engineering at the University of Florida for 10 years, and has been with Pacific Northwest National Laboratory for the past 20 years.

Mr. Jarnagin is active in standards development activities, both nationally and internationally. He chaired ASHRAE's Standard 90.1 committee for 4 years, providing the leadership to successfully complete a comprehensive revision to that standard in 1999. In addition, he chaired the International Standards Organization (ISO) TC 205, Building Environment Design. He chaired a multi-disciplinary team made up of members of four organizations that produced the first Advanced Energy Design Guide (AEDG) for Small Offices which won 3 national awards from sustainability organizations in the U.S. In addition, he served as chair or vice chair of 3 additional AEDGs. Mr. Jarnagin is active in ASHRAE, having served on the Board of Directors as a Director-at-Large, and served as an ASHRAE Vice President as well. He also served as the Chairman of ASHRAE's Technology Council, which has stewardship for all of ASHRAE's research, standards, and technical committees.

Mr. Jarnagin has received the Distinguished Service Award from ASHRAE, was recognized as the 2004 NSPE Engineer of the Year in Tri-Cities, WA, received 2003 AEE Special Recognition award for service to industry and 1999 Presidential Award from IESNA. He holds graduate degrees in Mechanical Engineering from the University of Florida and Accounting from Louisiana State University. He is also a decorated U.S. Navy veteran of Vietnam having served with the river patrol forces there.





# General Meeting

UTSA Expansion Presentation & Tour

By: Rene Colunga & Dr. Bing Dong



March 21, 2018

11:30 – 12:30 Presentation & Lunch

12:30 – 1:15 South Thermal Plant Tour



UTSA Main Campus – Harris Room (HUC 2.212)

Parking in Ximenes Garage

Meeting Registration: <http://alamoashrae.org/meetinginfo.php?id=47>

# Detailed Information

**Date:** Wednesday March 21, 2018

**Event Description:** The local American Society of Heating Refrigeration and Air-conditioning Engineers (ASHRAE) will be holding it's March 21, 2018 chapter meeting at UTSA. The meeting will include two presentations and a facility tour. The meeting is open to ASHRAE members, UTSA ASHRAE student members, and guest with advanced registration. Registration for the meeting can be found on: <http://alamoashrae.org/meetinginfo.php?id=47>

## **UTSA Research Projects Presentation (30min)**

UTSA Assistant Professor Bing Dong 's has more than ten years of research in building energy efficiency, occupant behavior, big data analytics, intelligent building operation and optimization. Research projects include funding from National Science Foundation (NSF), CPS Energy and Department of Energy (DOE).

## **UTSA TEP Presentation (30min)**

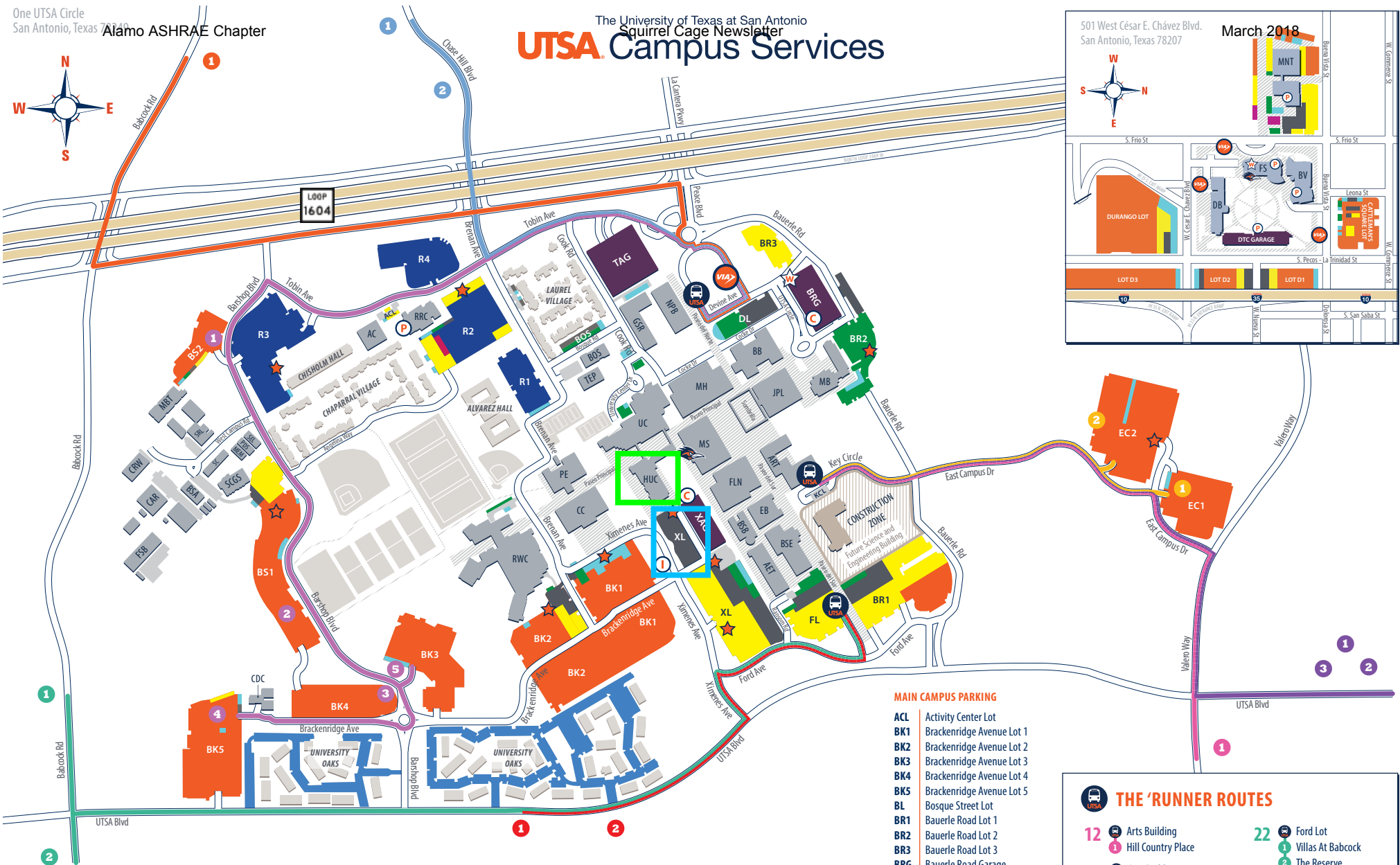
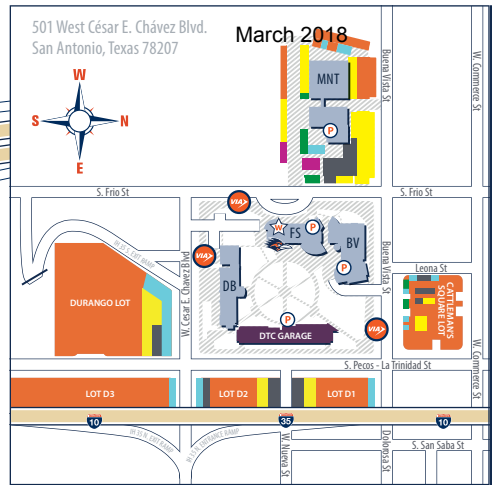
Rene Colunga (UTSA Office of Facilities) will present an overview of both South and North Thermal Energy Plants (TEP). UTSA TEPs provide both chilled and heating hot water for campus buildings. Both plants have a combined capacity of 13,000 ton Chilled Water, and 1,200 boiler HP heating hot water, and 110,000 lbs/hr of steam. The meeting will conclude with a tour of the South Plant.

## **Agenda:**

11:00-11:30- MEETING SIGN-IN

11:30-12:30- PRESENTATIONS AND LUNCH

12:30-1:15- SOUTH TEP TOUR



<span style="color: orange;">■</span> COMMUTER C PARKING	<span style="color: orange;">★</span> MOTORCYCLE PARKING
<span style="color: blue;">■</span> RESIDENT H PARKING	<span style="color: orange;">★</span> HOURLY PARKING PAY STATION
<span style="color: blue;">■</span> RESIDENT U PARKING	<span style="color: orange;">★</span> WELCOME CENTER
<span style="color: lightblue;">■</span> DISABLED PARKING	<span style="color: orange;">★</span> INFORMATION BOOTH
<span style="color: green;">■</span> RESERVED PARKING	<span style="color: orange;">★</span> GARAGE CASHIER STATION
<span style="color: grey;">■</span> EMPLOYEE A PARKING	<span style="color: orange;">★</span> CAMPUS SERVICES
<span style="color: yellow;">■</span> EMPLOYEE B PARKING	<span style="color: orange;">★</span> VIA BUS STOP
<span style="color: purple;">■</span> SHORT-TERM HOURLY PARKING	
<span style="color: purple;">■</span> GARAGES <small>(Garage Permit, Short-Term, &amp; Disabled Parking Only)</small>	

**MAIN CAMPUS BUILDINGS**

<b>AC</b> Activity Center	<b>ACL</b> Activity Center Lot
<b>AET</b> Applied Engineering and Technology	<b>BK1</b> Brackenridge Avenue Lot 1
<b>ART</b> Arts Building	<b>BK2</b> Brackenridge Avenue Lot 2
<b>BOS</b> Bosque Street Building	<b>BK3</b> Brackenridge Avenue Lot 3
<b>BSB</b> Biosciences Building	<b>BK4</b> Brackenridge Avenue Lot 4
<b>BSE</b> Biotechnology Sciences & Engineering	<b>BK5</b> Brackenridge Avenue Lot 5
<b>BB</b> Business Building	<b>BL</b> Bosque Street Lot
<b>BSA</b> Business Services Annex	<b>BR1</b> Bauerle Road Lot 1
<b>CAR</b> Center for Archaeological Research	<b>BR2</b> Bauerle Road Lot 2
<b>CRW</b> Central Receiving & Warehouse	<b>BR3</b> Bauerle Road Lot 3
<b>CDC</b> Child Development Center	<b>BRG</b> Bauerle Road Garage
<b>CC</b> Convocation Center	<b>BS1</b> Barshop Boulevard Lot 1
<b>EB</b> Engineering Building	<b>BS2</b> Barshop Boulevard Lot 2

<b>FSB</b> Facilities Services Building	<b>RRC</b> Roadrunner Café
<b>FLN</b> Flawn Sciences Building	<b>RWC</b> Recreation Wellness Center
<b>GSR</b> Graduate School and Research Building	<b>SC</b> Sculpture & Ceramics
<b>HUC</b> H.E.B University Center/Ballroom	<b>SCS</b> Sculpture & Ceramics Graduate Studio
<b>JPL</b> John Peace Library	<b>SEL</b> Science & Engineering Lab
<b>MB</b> Main Building	<b>TEP</b> Thermal Energy Plant
<b>MBT</b> Margaret Batts Tobin Laboratories	<b>UC</b> University Center
<b>MEM</b> MEMS Lab	
<b>MH</b> McKinney Humanities Building	
<b>MS</b> Multidisciplinary Studies Building	
<b>NPB</b> North Paseo Building	
<b>PDS</b> Power & Dynamic Systems Lab	
<b>PE</b> Physical Education Building	

<b>BV</b> Buena Vista Building	<b>DL</b> Devine Avenue Lot
<b>10B</b> Durango Building	<b>EC1</b> East Campus Lot 1
<b>FS</b> Frio Street Building	<b>EC2</b> East Campus Lot 2
<b>MNT</b> Monterey Building	<b>FL</b> Ford Lot
	<b>KCL</b> Key Circle Lot
	<b>R1</b> Resident Lot 1
	<b>R2</b> Resident Lot 2
	<b>R3</b> Resident Lot 3
	<b>R4</b> Resident Lot 4
	<b>TAG</b> Tobin Avenue Garage
	<b>XAG</b> Ximenes Avenue Garage
	<b>XL</b> Ximenes Avenue Lot

**MAIN CAMPUS PARKING**

<b>ACL</b> Activity Center Lot	<b>BK1</b> Brackenridge Avenue Lot 1	<b>BK2</b> Brackenridge Avenue Lot 2	<b>BK3</b> Brackenridge Avenue Lot 3	<b>BK4</b> Brackenridge Avenue Lot 4	<b>BK5</b> Brackenridge Avenue Lot 5	<b>BL</b> Bosque Street Lot	<b>BR1</b> Bauerle Road Lot 1	<b>BR2</b> Bauerle Road Lot 2	<b>BR3</b> Bauerle Road Lot 3	<b>BRG</b> Bauerle Road Garage	<b>BS1</b> Barshop Boulevard Lot 1	<b>BS2</b> Barshop Boulevard Lot 2	<b>DL</b> Devine Avenue Lot	<b>EC1</b> East Campus Lot 1	<b>EC2</b> East Campus Lot 2	<b>FL</b> Ford Lot	<b>KCL</b> Key Circle Lot	<b>R1</b> Resident Lot 1	<b>R2</b> Resident Lot 2	<b>R3</b> Resident Lot 3	<b>R4</b> Resident Lot 4	<b>TAG</b> Tobin Avenue Garage	<b>XAG</b> Ximenes Avenue Garage	<b>XL</b> Ximenes Avenue Lot
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**THE 'RUNNER ROUTES**

<b>12</b> Arts Building 1 Hill Country Place	<b>22</b> Ford Lot 1 Villas At Babcock 2 The Reserve
<b>13</b> Arts Building 1 East Campus Lot 1 2 East Campus Lot 2	<b>40</b> Campus Oval 1 Tetro Village
<b>14</b> Arts Building 1 The Parq 2 Broadstone 3 The Luxx	<b>42</b> Campus Oval 1 High View Place 2 Maverick Creek
<b>20</b> Ford Lot 1 The Outpost 2 Avalon Place	<b>43</b> Campus Oval 1 Barshop Blvd Lot 2 2 Barshop Blvd Lot 1 3 Brackenridge Lot 4 4 Brackenridge Lot 5 5 Brackenridge Lot 3

## ASHRAE Volunteers Description of Roles:

### Treasurer

1. Working the cash box at all chapter mtgs and events
2. Bringing the cash box to each mtg with the required amount of money in appropriate denominations for each event
3. Depositing all cash and check collected to the bank in a timely manner
4. Reviewing the bank accounts monthly for accuracy
5. Documenting each check written by keeping proper notes in the checkbook

### Secretary

1. Taking notes at each chapter board mtg
2. Making sure the newsletter is published each month
3. Maintain chapter records, like being able to run reports from ASHRAE.ORG and providing to each committee chair.
4. Keeping current copy of chapter roster
5. Sending emails to regional each month detailing chapter activities

### President Elect

1. CTTC chair-person, ultimately responsible for everything related to chapter mtgs
2. Stepping in for president if not available
3. Attending President Elect Training

### Chapter Technical Transfer Committee (CTTC)- “Basically planning the chapter mtgs”

1. PA Speaker, Mic, Projector & Screen-
  - a. Bring all equipment to each chapter mtg
  - b. Setup and teardown all equipment for each guest speaker presentation
  - c. Assist with loading speakers presentation if needed
  - d. Coordinate if speaker will be using their own laptop, or if a laptop needs to be supplied
2. Guest Speakers and Distinguished Lecturer
  - a. Select each month's planned speaker and mtg topic
  - b. Email/Call each guest speaker, and confirm their presentation topic, time, date, for each mtg
  - c. Get a short bio and mtg summary from each speaker
  - d. Collecting speaker evaluation forms at each mtg
  - e. Coordinating with each Distinguished Lecturer
  - f. Create a calendar with all meetings, speakers, presenters, venue, etc. for the year
  - g. All meetings should be set no later than 30 days prior to the planned mtg date, and the entire year should be planned by October 30
3. Venue Coordination/Mtg Attendance/Name Tags
  - a. Sending out each mtg invitation
  - b. Confirming number of people registered for each mtg, by checking on Alamo ASHRAE website
  - c. Coordinating with mtg venue on headcount for each mtg, and revising if needed.
  - d. Printing registered people's name tags from the website
  - e. Brining name tags to each mtg, and setting out on sign in table
  - f. Brining list of registered names, printed from website
  - g. Providing list of registrants to treasurer and/or whoever is working cashbox

- h. Coordinating sign-in at each mtg, and adding any people who walk up and aren't pre-registered.
- i. Making sure Treasurer charges appropriate fee for those who those who are registered but not paid (\$25 member, \$30 non member), and those who are not registered and not paid (\$30 member, \$40 non member).

### **Membership Promotion**

1. Helping to grow the chapter by contact members who's dues are expired, reaching out to new potential members, etc.
2. Running reports from ASHRAE.ORG showing current members, past due, upcoming renewals
3. Contacting employers to encourage their employees to join ASHRAE

### **Student Activities**

1. Running the student chapter(s) primarily at UTSA
2. Holding events for student members highlighting HVAC industry and ASHRAE
3. Advising student design teams

### **Historian**

1. Taking pictures at chapter meetings and events
2. Contributing content for the newsletter, such as interviews of long time members or local historical buildings/manufacturers, etc.

### **STEM (Science, Technology, Engineering, Math)**

1. Coordinating events with local elementary, middle, and high schools with a STEM focus
2. Collaborating with Student Activities committee

### **Sustainability**

1. Coordinating events with a sustainability theme, at chapter meetings or stand alone events
2. Highlighting out of town locally designed, or local high efficiency designed buildings

### **GGAC (Grassroots Government Advocacy Committee)**

1. Function as the liaison between ASHRAE and local government entities, such as COSA/School Districts/Higher Education facilities/Etc
2. Coordinating events highlighting ASHRAE codes and standards to local government

### **YEA (Young Engineers in ASHRAE)**

1. Coordinating events targeting engineers under age 35
2. Collaborate with Student Activities committee

### **Refrigeration**

1. Coordinating events focused on refrigeration

### **Webmaster**

1. Updating the website monthly

**February 20,2018 Alamo ASHRAE Mtg Attendance Record**

No.	Name	Last Name	Company
1	William F Arnold, III	Arnold	PHI Service Agency, Inc.
2	Kalib Brignac	Brignac	Trane San Antonio
3	Todd Buck	Buck	Mitsubishi Electric Cooling & Heating
4	Gavin Button	Button	The Brandt Companies
5	Mike Calahan	Calahan	MEP Engineering
6	Rene Colunga	Colunga	University Of Texas At San Antonio
7	Gentry DeVon Colvin	Colvin	
8	John Delgado	Delgado	
9	James Drewry	Drewry	
10	Mike Fauver	Fauver	Texas Air Products
11	Francisco Gomez	Gomez	Merrick
12	Aaron Heaps	Heaps	Cleary Zimmermann Engineers
13	Zac Stevenson	Stevenson	Cleary Zimmermann Engineers
14	Ron Martinez	Martinez	HMG and Associates
15	Frederick W Gleeson	Gleeson	Addison
16	Wesley Harvey	Harvey	Testing Specialties, Inc.
17	Jon Hermann	Hermann	Mechanical Reps, Inc.
18	Jonathan Houston	Houston	
19	John D Hunter	Hunter	Oslin Nation Co.
20	Jason D Kardos	Kardos	Trane
21	Tarah NH Kim	Kim	The Brandt Companies LLC
22	Michael Kyler	Kyler	
23	Matt Larcom, PE	Larcom	NIKA Solutions
24	Troy David Mason	Mason	DBR
25	Richard W McHugh	McHugh	YATES Company
26	Brandon L. Moreno	Moreno	
27	Chelsea N Moussouni	Moussouni	Friedrich Air Conditioning Co.
28	Jeff Neumann, PE	Neumann	RS&H, Inc.
29	Justin Scantlan	Scantlan	RS&H
30	Jorge Olivares	Olivares	Jose I. Guerra, Inc.
31	Anand P S Parihar	Parihar	Texas Department of Transportation
32	Steven C Richey	Richey	Automated Logic Corporation
33	Preston Sartain	Sartain	Brandt Companies LLC
34	Robert J Schrader	Schrader	MEP Engineering Inc
35	Bruce C Smith	Smith	ESA Mechanical & Electrical Engineering, Inc.
36	Doug Starasininc	Starasininc	Honeywell
37	Clifford S Tilbury	Tilbury	Energy Squared Texas LLC
38	William M Wurzbach, Jr	Wurzbach	CFC Engineering, LLC
39	Wes Weissgarber	Weissgarber	
40	Taylor Rose	Rose	
41	Joe Carreon	Carreon	Kineties Consulting
42	Tula		guest of Matt Larcom
43	Mark Maltern	Maltern	LWA
44	guest of Mark Maltern		
45	Randall Bloomquist	Bloomquist	Mech Reps
46	Chris VillaSana	Villasana	
47	Jaryn Barcheers	Barcheers	
48	John Faultersach	Faultersach	
49	Ben		
50	Mario Mijiangos	Mijangos	
51	Matt Freund	Freund	
52	Ying Yang	Yang	
53	Justin Bruni	Bruni	DBR

**February 20,2018 Alamo ASHRAE Mtg Attendance Record**

No.	Name	Last Name	Company
54	Ed Garcia	Garcia	
55	Urial Melendez	Melendez	
56	Emmanual Ayala	Ayala	
57	Mauricio Melgar	Melgar	
58	Maria Jackie Chang	Chang	DBR Engineering Consultants
59	William B. Crook	Crook	
60	Jon Hermann	Hermann	Mechanical Reps, Inc.
61	Matt Koch	Koch	Cleary Zimmermann Engineers
62	Travis L. McLeod	McLeod	Silber & Associates Consulting engineers, Inc.
63	Tim O'Banon	O'Banon	Munters
64	Jennifer Tobias	Tobias	Johnson Controls
65	Ben Villafuerte	Villafuerte	DBR Engineering Consultants