



SAABE TIMES

A Publication of the San Antonio Association of Building Engineers

December, 2000

You are cordially invited to the
SAABE Christmas Luncheon

Wednesday, December 20, 2000

11:30 a.m.

at Tex's Grill in the Airport Hilton

In addition to the luncheon, we will also hold elections for the SAABE board of directors and announce the winners of our Membership Drive contest.

Thank You, Prize Sponsors!

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- Industrial Systems, Inc.
- Bob Cherniss (personal donation)

First prize is \$500, second prize \$300, third prize \$100, fourth prize \$50 gift certificate to Ruth's Chris Steak House

Above the Ceiling

by Paul Thompson

Legend

What is there to say about Henry B. Gonzalez that hasn't already been said? He was proud, tough, honest, courageous — a highly principled man with deep-rooted convictions and never afraid to back them up. He was humane and tough, a public servant (in the best sense of the word) and family man, a maverick who would not sacrifice his principles. A champion and role model for the Mexican-American community.

Henry B. began his career in politics when he was elected to City Council in 1953. This was a time when segregation was not only accepted, it was law. And if you wanted to vote, you'd better be able to pay the poll tax. Henry B. sponsored legislation that ended segregation in San Antonio's recreation areas, including pools.

In 1956, he was elected to the Texas Senate — the first Hispanic sent to that chamber in over 100 years. On May 2, 1957 he and Senator "Chick" Kazen began a filibuster against segregation in Texas schools. They went on for 36 hours, the record held for years. "I appeal to the future for my vindication," he prophesized at the time.

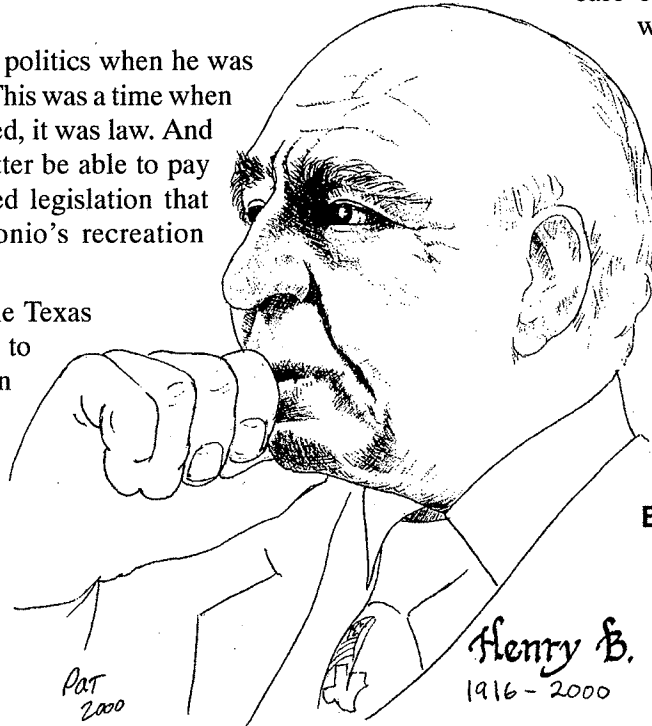
He was elected to the US House of Representatives in 1961, again blazing a trail as the first Mexican-American sent there from Texas. A firm supporter of John F. Kennedy's civil rights initiatives, Henry B. was in the Dallas motorcade when the shots were fired. He worked with fellow Texan Lyndon B. Johnson throughout his presidency and stood behind his Great Society programs to help the poor and minorities.

During his 37 years in Congress, Henry B. left his legacy; he pushed to abolish the poll tax, brought HemisFair to San Antonio in 1968, and helped San Antonio's bases, fought to keep BAMC and worked hard to provide housing and improve the lives of the poor — it was the last that he was the most proud of. In the 1980's, he warned against the coming Savings and Loan collapse. In 1989, he became Chairman of the House Banking Committee and was there to help pull the S&L industry back from the abyss. He probably didn't endear himself to a lot of Republicans when he sponsored legislation to impeach Ronald Reagan (in 1983 and 1987) and later George Bush in 1991. In 1998, in his last act in Congress before retiring, he voted against the

impeachment of Bill Clinton. He was a strong enemy and a strong friend.

But for thousands in San Antonio, his constituents, the memories are more personal. If you needed help, he would be there... The Social Security check did not come, there was a problem with Medicare... call Henry B., he'll take care of it. He was a man of words — words that inspired thousands to follow their dreams and commit themselves to freedom. Whether you agreed with him or not, "Henry B. es un hombre de integridad."

Henry B. will always be a hero to the Mexican-American community. But he will also hold a special place in the hearts of all those who believe in the cause of freedom and justice.



Bits & Pieces

Election Time! Vote in December's meeting for your next President, 1st Vice President, 2nd Vice President and Treasurer. No recounts allowed, all ballots are final!

Christmas Party! This month's meeting will be at our old haunt, Tex's Grill at the Airport Hilton on December 20th. Membership Drive awards to be presented at this time. Good eats, good people, be there!

Invoices are in the mail — do you have yours? Prices remain unchanged from last year BUT from now on, Associate (vendor) members will be paying for their lunches (Engineers still free!). This was done to help limit the cost for meeting sponsors (due to the fact that we've grown so much). Talk about your growing pains...

Sorry to say that Mike Lusk, our Education Director, will be leaving at the end of this month. As you all know, Mike has done a great job in this capacity and his "Education Corner" has been a fixture on the front page of SAABE Times for years. We'll be missing you (and your jokes) Mike! Nominations to fill this position will be taken in December.

Lastly, but not leastly, a big SAABE thank-you to Dick Lux of Five Star Electric Motors for last month's great presentation on Variable Speed Drives!

SAABE Gives Back!



Mike Alvarez and Elena Castillo present a check in the amount of \$750.00 to Anita Contreras and Daniel Gomez of Sam Rayburn Middle School.



Lydia Martinez of Anson Jones Middle School and Mary Joe Chamberlin of the Communities in School program also accepted a donation of \$750.00

Halon Fire Extinguishers*

Stuart Thompson asks the question, "What options are available for discharged halon fire extinguishers?"

About six years ago, halon production was prohibited (similar to R-12) and many companies converted their systems at that time. Recovery equipment was available and Dupont produced and stockpiled halon in large quantities so that today these extinguishers can be recharged (about \$13.00 per pound). Eventually halon supplies will be depleted and the new product halotron will be its replacement along with several other new products. The difference is in product efficiency for extinguishing fires — a five-pound halon unit must be replaced with nine pounds of halotron at about a cost of \$200.00. The real budget buster is in recharge costs, \$65.00 per pound for halation. The companies listed below, which assisted in this article, believe there is no immediate shortage, but suggest plans for the future as supplies are depleted.

Southwest Fire Protection	366-8876	Johnny Campbell
Grinnell Fire Protection & Equipment	824-6324	Vincent Baker
U. S. Fire & Safety	680-8811	Gary Buchan
A1 Fire & Safety	342-5518	Clint Williams

*No longer available

Employment Opportunity

Engineer I position - La Mansion del Rio

POSITION QUALIFICATIONS (Requirements are representative of minimum levels of knowledge, skills and/or abilities.) Ability to satisfactorily communicate (verbal and written) in English with all contacts. Must be able to read and interpret documents such as safety manuals, operating and maintenance instructions and procedure manuals. Must be able to demonstrate a general knowledge of all areas of hospitality engineering including electrical systems and components, mechanical systems and components, plumbing, HVAC, kitchen equipment, and carpentry. Must be able to rapidly move about the property to respond to emergencies. Will be required to climb high ladders; enter into, work in, and egress confined spaces; perform work while positioned in awkward/difficult postures (such as bent over equipment or while laying under equipment). Fax resume to Carl Montgomery at 210-518-1076.

Welcome New Member

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Grounding, Bonding and Water Pipes! (Part One of Two)

Even when it isn't done intentionally, a building's interior metal piping systems, including its sprinkler piping, become mechanically and electrically interconnected. A system's underground water supply main is exposed to circulating currents produced by exposure to the electrical utility and premises wiring that grounds the electrical system's transformers. Since the water main receives its supply from the area's main water supply, it too is in electrical contact. And electrical equipment with an equipment ground is in contact with the metal piping, inadvertently grounding it, as well.

Too often, the distinction between system grounding, grounding electrodes, and the unavoidable grounding connections which occur when electrical equipment comes in contact with other electrical equipment and with the water piping, is misunderstood. As a result, we have researched the 1999 National Electrical Code (NEC-NFPA 70), and NFPA 24 (The Installation of Private Fire Service Mains and Their Appurtenances) which led to more misunderstanding, so we will discuss "grounding" and "bonding".

Grounding

According to Article 100 of the NEC, a ground is "a conducting connection, whether intentional or accidental, between an electrical circuit or equipment and the earth, or to some conducting body that serves in place of earth."

There are several reasons for connecting the current-carrying conductor of an electrical system to the earth or to

some conductive element effectively connected to the earth. Grounding, or earthing, stabilizes voltage in relation to the earth or grounded objects so that the voltage measured between an ungrounded conductor, i.e.; the live wire, and a grounded object is always at the same potential. The voltage is thus stabilized. Should lightning strike power lines, a current-carrying conductor that's effectively grounded pulls the voltage down to the earth potential, reducing the shock and fire hazard. Where contact between high voltage and lower voltage conductors is likely, as it is in transformer windings or conductors on a pole, grounding the lower voltage system pulls the voltage down to the earth potential whenever a crossover occurs.

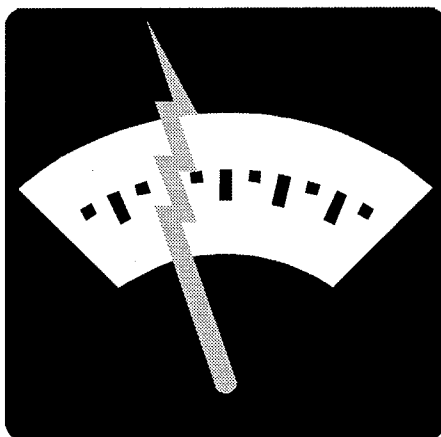
Grounding a system also reduces the stress on the system's electrical insulation. In a grounded three-phase, four-wire, 480/277 wye-connected system, the maximum voltage stress is 277 volts relative to earth or a grounded object. If the system were ungrounded, the voltage could likely be as high as 480 volts or more should a ground fault occur. Grounding also provides an additional ground fault return path, although it's not the main path for operating the over current device.


An electrical system is grounded by connecting one of the system's current-carrying conductors to a grounding electrode system through a grounding electrode conductor. According to Section 250-50 of the 1999 NEC, the components of a grounding electrode system include: a metal water pipe with at least 10 feet (3 meters) of pipe in the ground; the effectively grounded metal frame of a building; or a ground ring that consists of at least 20 feet (6 meters) of No. 2 awg bare copper wire buried at least 2.5 feet (0.8 meters) deep. Also suitable is a concrete encased electrode that consists of at least 20 feet of No. 4 awg bare copper wire encased in at least 2 inches (5 centimeters) of concrete at the bottom of the foundation footing. If these components aren't available, Section 250-52 identifies other types of electrodes that are allowed.

Next Month: Equipment grounding and bonding

Charlie's Law: You can't fall off the floor!


"Just a Maintenance Man"





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San Antonio, Texas 78216
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Ken Kee
861-5267 mbl.

Rhondo Jauer
219-8150 mbl.

Alvin Thompson
219-0813 mbl.

Duct Tape Knows No Rival - Even in Space

The average American has a lot in common with the astronauts - they, too, rely on duct tape in a jam. According to Ohio-based Manco ... which makes *Duck®* (brand) *Tape* ... astronaut and former senator John Glenn sang the praises of duct tape in a recent speech. Glenn told the audience he didn't know "if we could conduct a (space) mission without duct tape." He said it's used by astronauts to defy the effects of gravity ...allowing them to post mission notes and even eat a meal on the space shuttle.

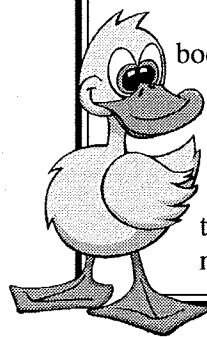
Other astronauts agree. In 1997, Jerry Linenger spent 132 days aboard the Mir space station . . . during which he and his fellow cosmonauts faced numerous life-threatening events, including systems failures and collisions. Linenger says duct tape was used on Mir for repairs as well as for gravity defiance. He has said that his Russian counterpart told him, "the best thing you ever brought on board was duct tape."

You can also witness Duct Tape saving the day in the *Apollo 13* movie where it was used to convert a CO2 filter from the command module to the LEM - which prevented the astronauts from dying from their own exhalation during their journey home.

(for more fascinating information on duct tape, visit www.octanecreative.com/ducttape)

Duct vs. Duck

Is it Duct or Duck? We don't want you to be confused, so we will explain. The first name for Duct Tape was DUCK. During World War II the U.S. Military needed a waterproof tape to keep the moisture out of ammunition cases. So, they enlisted the Johnson and Johnson Permacel Division to manufacture the tape. Because it was waterproof, everyone referred to it as "duck" tape (like water off a duck's back). Military personnel discovered that the tape was good for lots more than keeping out water. They used it for Jeep repair, fixing stuff on their guns, strapping equipment to their clothing... the list is endless.



After the War, the housing industry was booming and someone discovered that the tape was great for joining the heating and air conditioning duct work. So, the color was changed from army green to the silvery color we are familiar with today and people started to refer to it as "duct tape." Therefore, either name is appropriate.

a name you can trust



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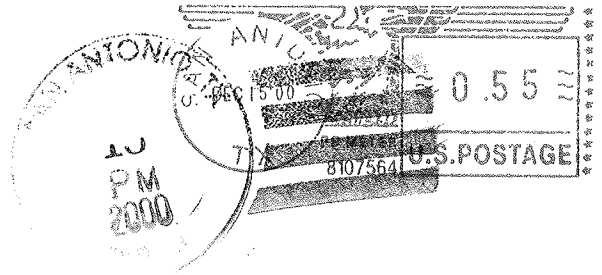
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San Antonio TX 78230

SAABE TIMES
December Issue

Final Thought —

Spel chekers, hoo needs em? - Alan James Bean

2000 Board of Directors

Paul Thompson, SMA President	524-9285
Elena Castillo 1st Vice President	495-2195
Tom Lasater 2nd Vice President	828-9829
Bill Blackford Secretary	967-8766
Cesar Alvarado Treasurer	357-2258
Mike Lusk Education Director	340-2533
Mike Alvarez Vendor Representative	824-9581

Lynn Forester (830) 981-5223
Association Coordinator

**Luncheon Fees and
Sponsorship Cost**

Earlier this year, we surveyed our Associate Members about the concept of paying to attend SAABE luncheons. Due to a positive response on the idea, all Associate Members and non-member guests attending SAABE luncheons will be charged \$10.00 each, beginning in January 2001. Regular Members will continue to be free, in recognition of the fact that they do not have employer-sponsored expense accounts. This change is being made so that we can keep the cost of sponsoring a lunch affordable. Our growing membership brings with it a larger luncheon attendance which has significantly driven up the cost of paying for all the lunches. In 2001, the cost of sponsoring a luncheon will be a flat \$500.00. To schedule your company's sponsorship of a luncheon next year, please contact Mike Alvarez at 210-872-9832.

The SAABE Times is produced monthly for the San Antonio Association of Building Engineers by:



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