Dear AZITE Member,

Thank you for electing me as your President for 2004-2005! I would like to thank Sarath Joshua for serving as President during 2003-2004; he did a great job as President and he exhibited excellent leadership in dealing with many issues, especially, the lead/lag left turn traffic signal issues!

There will be numerous transportation engineering activities available for our members during the next 12 months. We will continue to have monthly ITE Arizona Section luncheon/meetings. On October 2nd, the ITE Arizona Section sponsored a Professional Traffic Operations Engineer (PTOE) Exam Review Course. On October 27th, the ITS Arizona Annual Conference will be held at the Black Canyon Conference Center. The PTOE exam was held in Phoenix on October 23rd.

On November 2nd, the General Election will be held that includes Proposition 400 (Regional Transportation Funding); before the election, ITE will have had speakers at three different luncheon meetings giving different perspectives related to Proposition 400 to educate our members. I encourage all members to vote in the General Election.

In December, we will have our annual ITE Arizona Section holiday party. In January 2005, the ITE Arizona Section will serve as a sponsor again of the Future Cities Competition. The Future Cities Competition includes middle school students building models of future cities. ITE sponsors the “Best Multi-Modal Transportation System Award.” Please contact me if you would like to serve as a judge for the Future Cities Competition. In March, we will have our ITE Arizona Section/IMSA Spring Conference at the Black Canyon Conference Center.

In May, the ITS America 2005 Annual Meeting will be held at the Phoenix Civic Plaza; this will be the first time in 15 years that ITS America will have its annual meeting in Arizona. Approximately 3,000 people are expected to attend this event. I am serving as the Chairperson of the ITS America Annual Meeting; we will need many volunteers for this event; therefore, please contact me if you would like to volunteer.

In July, the ITE District 6 Annual Meeting will be held in Kalispell, Montana. In August, the ITE (International) Annual Meeting will be held in Melbourne, Australia.

I look forward to working with each and every one of you regarding transportation activities. I would like to meet with as many members as possible during the next 12 months. Therefore, please call me at 602-526-0816 and we can set up a time to meet. If you would like to meet for lunch, I’ll pay for lunch (no ITE funds will be used)!

SOUTHERN ARIZONA CHAPTER OUTGOING PRESIDENT’S MESSAGE

Founded in November 2000, the Southern Arizona Chapter of the Arizona Section is only several years old. Enthusiasm for the chapter, however, has been demonstrated by high attendance at our monthly programs. Typically we have 20 to 30 people in attendance, out of a membership that numbers about 75.

While monthly programs are the chapter’s main activities right now, last year we conducted an outreach to the students at the University of Arizona that was well-received, and we will be doing that again this year, in October.

We’ve always held interesting and well-attended programs. Of particular interest among the year’s programs were the lag-left presentation by Paul Basha and Paul Box and the lead-left presentation conducted in June by Jim Sparks of the City of Phoenix. These were both tremendously informative, and, I am pleased to say, did not come to blows. There were many other great programs, and I am proud to have been involved in making them happen.
We have some fine programs lining up for this fall, and we look forward to welcoming the Arizona Section Executive Board to our program in November.

During my presidency, the SAITE Executive Board has focused on revising the chapter’s Charter and Bylaws. There was some extraneous verbiage that needed to be eliminated; the District wanted language regarding non-profit status incorporated; and the Arizona Section wanted Pinal County to be included in its area of influence (rather than ours). We took this opportunity to organize the Charter and Bylaws in a more user-friendly way and to clarify voting requirements. I am pleased to report that the Charter/Bylaws revisions were approved by the Southern Arizona chapter in May and by the District in June.

ACTIVE MEMBERS GROUP MEETING
The next meeting of the Active Members Group will be on November 15 at Rosie McCaffrey’s at 5:30 PM. Rosie McCaffrey’s is located at 906 East Camelback Road, Phoenix. AMG is also planning the Future Cities Golf Tournament for Saturday, February 5th, 2005 at the Estrella Mountain Ranch Golf Course. For additional information, contact Chris Williams at CWilliams@taskeng.net.

All ITE members are welcome and encouraged to attend. Don’t forget to invite a friend or colleague too.

CALL FOR PRESENTATIONS
2005 ITE/IMSA/MAG Spring Conference
March 2005
Do you have an interesting topic or project that you would like to present at the 2005 ITE/IMSA Spring Conference in Phoenix? Please contact Jennifer Kroening, Program Committee Chairperson at kroening@cox.net for more information.

MEMBER NEWS...
Scott Nodes, PE, PTOE will be assuming the new post of City Traffic Engineer for the City of Goodyear. He successfully served as City Traffic Engineer for the City of Peoria and is moving on to this new post in November 2004. Please join ITE in congratulating him at his new post and wishing him the best.

Ogbonna Abarikwu, PE, Principal of CK Engineering, Inc. received the Spirit of Enterprise Award for Entrepreneur of the Year from the ASU W.P. Carey School of Business. The Spirit of Enterprise Award is intended to promote firms that demonstrate ethics and excellence in entrepreneurship. The award ceremony was attended by various transportation leaders in the valley including Debra Brisk of ADOT and transportation leaders from various municipalities.

FUTURE CITIES...
Volunteers are still needed for the Future Cities event. See below for additional information on the Future Cities Event.

2004-2005 Future City Competition
Phoenix Region
Competition Overview

The Future City Competition is a national program sponsored by the engineering community to promote technological literacy and engineering to middle school students. The program fosters an interest in math, science, and engineering through hands-on, real world applications. The competition is open to all public, private and parochial schools. The national finals of the Future City Competition are a featured event during National Engineers Week, with students from across the country competing in Washington, D.C.

Goals
The Future City Competition offers students a fun way to learn about engineering and cities of the future. Through the program, students will:
- Work as a team under the guidance of a teacher and a practicing engineer.
- Apply their knowledge to real world situations.
- See firsthand how engineers turn ideas into reality.
- Use the popular award-winning computer game, SimCity to design their future city.
- Build a scale model of a section of their city.
- Utilize their communication skills by preparing an essay and response to a special problem and a verbal presentation relating their experience in the design of their city and some specific engineering features.

Mission
Students participating in the Future City Competition program will gain and demonstrate:
- Problem solving skills
- The ability to work in teams
- Research and presentation skills
- The application of math and science to practical problems
- Computer skills
- An increased awareness of community related issues
Relationship between the Engineer, Teacher, and the Students
The competition employs a team-based approach. Each team consists of three students, a teacher-sponsor and an engineer-mentor. All members of the team have a role that is necessary for the successful completion of the project.

Phoenix Region Competition Schedule
Team Registration: The team registration period is from August 9 until October 15, 2004. A school may submit multiple teams. Students may participate on one team only.

Phoenix Competition Timeframe
Logical Model Judging: The computer model (SimCity) and the scoring sheets will be submitted for judging not later than November 24, 2004.

Research Essay and City Design Abstract: The essay and abstract with scoring sheets will be submitted for judging not later than December 10, 2004.

City Model Display and Judging: Student teams will deliver their completed designs, city models and written requirements to the Central Branch of the Phoenix Library on Friday, January 14 and no later than Sunday, January 16, 2005. The models will be on public display at the library January 16-21.

Regional Competition: The Phoenix Regional Competition will be at the Phoenix Preparatory Academy, 7th Street and Fillmore, Saturday, January 22, 2005 beginning at 8:15 am. The Regional Semi-Finals will be held in the morning with the Regional Final Competition and Award Program scheduled for the afternoon.

The National Finals of the Future City Competition will be held February 20-26, 2005 in Washington, D.C. as a highlighted event of National Engineers Week.

Volunteers Needed:
There are many opportunities to become involved with the student teams and the competition. Volunteers can be:

Engineer-Mentors: The engineer is involved in all phases of the competition as an advisor and provides input and technical assistance, integrating real life engineering experiences as the students work on the competition. The students must do all of the actual work, such as the computer design of the city, building the tabletop model, writing the essay and presenting the project during the competition with support from the engineer. Approximate commitment: 35 hours, August-January

JUDGES: The teams have 6 major deliverables: a project plan, a computer disk containing the logical design of their city, 2 essays, a physical model of a section of their city and a verbal presentation. Engineers will evaluate all student submissions. Approximate commitment: 35 hours, November-January

Relationship Manager: The relationship manager is responsible for regular communication with the teacher-sponsor at the schools. This involves a periodic telephone call providing good information flow between the teacher and various committees. The relationship manager is not required to be an engineer. Approximate commitment: 25 hours, July-January

Day-of-the-Event Support: The competition will involve students from the Phoenix area. Volunteers will assist all aspects of the competition including team check-in, awards, gift distribution and other logistical requirements of the event. Approximate commitment: 10 hours, January 24

Various committees: To ensure a successful event, a series of committees have been established including: Industry Relations, Professional Society contact, School contact, Administration and Finance, Communications, Competition, Data Management, Judges, Awards and Logistics. All individuals, both technical and non-technical, can participate on a committee.

For additional information, visit the Future City web site at:

Or contact:
Michael Andrews, Coordinator
(480) 991-1619, (480) 948-4486 (fax) e-mail: m.andrews@ieee.org

Pom Jintasawang, Co-Coordinator
(602) 484-5453, (602) 484-5353 (fax) e-mail: pom.jintasawang@swgas.com

Interesting Article (next page) ...

The article following is an interesting look back to the beginning of Walk/Don't Work Signal for Pedestrians. As engineers who are continuously challenged with how to improve upon existing technology in an effort to make our world a safer place, it is always humbling to look back to how most of our current systems attribute their origin to, and the thought process of our predecessors.
Where was the First Walk/Don't Walk Sign Installed?

You Will Not Find the Answer Here

The Highway History page recently received an inquiry about where the first Walk/Don't Walk sign was installed. This question has come up before, but we've never been able to find the answer. Our research helped pin down the time frame (late 1930's), but not the location. The Highway History page does not like to fail, but here's a summary of the research—for what it's worth. - Richard F. Weingroff, FHWA

During the 1930's, city officials were trying to figure out how to reduce the death and injury toll among pedestrians. For example, cities began passing laws establishing that pedestrians have the right-of-way under certain circumstances. When that didn't work, they tried physical means, including barriers to prevent pedestrians from crossing where they weren't supposed to cross.

One method was to add a light to the traffic lights to indicate the walk cycle. When it was on, all traffic approaching the intersection stopped so pedestrians could cross the streets in all directions, including diagonally. (This crossing method was known as the "scramble" in later years.) I came across an article in the February 1934 issue of Public Safety magazine (published by the National Safety Council) describing an experimental traffic light developed by Dr. John Harriss, a former Special Deputy Police Commissioner in charge of traffic (1918-1926). His system was installed on Fifth Avenue between 40th and 45th Streets. A diagram of the signal shows a light at the top and bottom of the signal, and a hand with palm out in the center where the amber light would normally be. The signal operated in four periods:

The above drawing indicates the character and the use of the traffic light which Dr. John Harriss has obtained permission to test. In the first period, vehicular traffic moves north and south. In the second, pedestrian traffic moves in all directions. In the third all traffic waits while pedestrians in the street clear the intersection. In the
The new system eliminates all turns on the red light. It provides every 100 seconds a 20 second period in which, with the lens shining yellow and the hand red, all motor traffic is stopped while pedestrians cross at the four corners. This is followed by a five second interval, lens dark and hand shining red in each direction, in which pedestrians clear the intersection. Then vehicles move east and west for 30 seconds. Again, traffic moves for five seconds, when north and south vehicular traffic is given the green light for 58 seconds. A two second hiatus in which neither pedestrians nor vehicles may proceed, completes the 120 second cycle.

Dr. Harriss believes that the illuminated hand which forms a distinctive part of his signal device will be an improvement over the round red lens, which is used at present. To many motorists, he holds, a red light often indicates danger or detour, and not definitely stop. Many are in the habit of starting out while the signal is still red.

Dr. Harriss hopes the new signal will eliminate a source of irritation and danger when drivers fail to see, or claim they have failed to see, the traffic officer's uplifted hand. The lighted hand should also, he thinks, curb the practice of passing a red light, which he believes to be one of the most dangerous and serious violations of the traffic rules and the cause of thousands of deaths and injuries . . . .

The great majority of cities in the United States, according to Dr. Harriss, use the light signal system prevalent in New York City at the present time. There has been considerable experimentation with the extra yellow light, some cities using the amber signal as a cautionary sign; others, such as Boston, Los Angeles and San Francisco, as a crossing light for pedestrians. Among cities abroad, Paris has used the combination of one red light followed by a dark lamp, while London and Berlin use modifications of the red, green and yellow system.

In December 1934, the magazine carried an article about a new "progressive control" signal system installed on Michigan Avenue from 12th Street to Oak Street in Chicago. The system contained several "revolutionary" features, including "Walk" indications for pedestrians. Synchronization of traffic signals allowed motorists, if they adjusted their speed, to keep moving through intersections without having to stop at each one; traffic in opposite directions was controlled separately. Here is how the article described the pedestrian feature:

Under the old control, we had to wait, first on one foot and then on the other, for the long period of the red light to expire. Then we were allowed a long period of green. We were subject to the interference of turning vehicles, and sometimes, if we did not complete our crossing
on the green, we were caught in the middle of traffic, some of which might have been “jumping” the amber.

Perhaps we became too impatient and tried to cross against the light. Then we had a merry chase through traffic which was “hitting it up” in order to get the greatest possible distance on the allotted time.

Under the new system, a “Walk” light shows during a part of the time that the green light is burning for traffic moving in the same direction as ourselves. According to W. C. Brandes, City Traffic Engineer, this signal is so timed that if, in crossing Michigan, we step from the curb before the “Walk” light goes off, we should have time to reach the safety island before the traffic in front of which we have been crossing, gets the “Go” light. We are, however, still subject to interference from turning vehicles.

Whereas, under the old system, traffic on both sides of Michigan stopped and started together, under the new, at half of all the intersections, traffic may be stopped on one side and moving on the other, so, it means the pedestrian may cross only one-half of the street at a time, spending a few seconds on a safety island.

Pedestrians complained that they were forced to wait on the island, although Mr. Brandes indicated their overall time was better under the new system. Some pedestrians did not understand that the “Walk” signal applied only to their side of the avenue, so the city placed lighted signs on top of the signals informing pedestrians how far to walk on each signal.

On October 13, 1937, the National Safety Council’s Committee on Pedestrian Control presented a report on “Pedestrian Control and Protection” during the 26th National Safety Congress. The report included the following:

For several years cities in different parts of the country have had varying successes with the regulation of pedestrian traffic by Stop and Go signals. Some cities have had not only legal requirements but a large measure of voluntary obedience, and in such sections the actual control of pedestrian traffic by signals is usually successful. In other cities general opinion is that such control is not practical and cannot be imposed upon pedestrians. One generally acceptable principle is that unreasonable delays due to unnecessarily long cycles of operation of Stop and Go signals are conducive to disobedience by pedestrians. This has been one of the large factors in reducing the length of cycles to the minimum which will handle traffic successfully.

Another development in the use of Stop and Go signals for pedestrian aid and protection is the pedestrian walk light. Formerly, this was incorporated into the cycle as a separate phase for pedestrians to walk in all directions during which no vehicular traffic might move. However, this tended to increase greatly the total length of the cycle because it added to the time required for vehicles to move [and] the
time required for pedestrians to move in all directions and did not enable pedestrians to take advantage of the opportunity to cross with the green light. This type of special pedestrian signal has generally been discarded in favor of the type which operates in conjunction with the green light at the ordinary four-way intersection. It allows pedestrians to cross in the same direction and at the same time as the vehicles with the exception that the special pedestrian light (usually white or purple) goes off a few seconds before the green changes to yellow because it requires a longer time for pedestrians than for vehicles to clear the intersection. At special types of intersections where there is almost a continual flow of vehicles across the crosswalks, it is necessary to install special pedestrian walk signals if there is appreciable pedestrian traffic and protection is necessary. In such a case it is usually necessary to operate the walk signals as a separate phase of the cycle.

To be most successful for pedestrian obedience a Stop and Go signal should have a face toward each direction of pedestrian movement. If signals do not face all movements, the pedestrians going in certain directions will have to depend upon the indications of signals at right angles to their direction and, thus, be in danger of becoming confused and disobeying the signals inadvertently.

In these examples, the references to walk lights do not appear to mean the lights had a "walk" or "don't walk" on them. It appears the cities were attempting to accomplish with lights what would later be accomplished by the Walk/Don't Walk signs.

An article in *The New York Times* for December 4, 1938, described an initiative to stop jaywalkers: "Pedestrian control signals reading alternately "Wait" and "Walk" will be installed in Times Square, at the intersection of Broadway and Forty-fifth Street, about Jan. 1." In my limited research, this is the earliest reference I found to a form of Walk/Don't Walk sign, but that does not mean it was the first in the country.

Walk/Don't Walk signs debuted in Washington, D.C. in 1939. An article in *The Evening Star* on October 5, 1939 is headlined:

'Walk' and 'Don't Walk' Signs, Success, May Be Extended

The article began:

*Gratified at the success of the elaborate pedestrian walk-light system recently installed at the busy intersection of Thirteenth street and Pennsylvania avenue N.W., Traffic Director William A. Van Duzer said today he is pushing plans for installation of similar "walk" and "don't walk" neon signs at other congested corners.*
A pedestrian walk-light system recently installed at the busy intersection of Thirteenth street and Pennsylvania avenue N.W.

The city had tried bright neon walk lights for the pedestrian signals at Twelfth and 13th Street, but Mr. Van Duzer said they "have never been very successful, largely because they aren't prominent enough to hold the pedestrian's attention." He added, "The larger and brighter neon signs are working out much better."

An article by Van Duzer on regulation of pedestrian traffic appeared in the February 1940 issue of Public Safety. Although he did not discuss signs, the article included two photos of the traffic pole at 13th Street. They show a traffic light with four lights (including a right turn signal). Below it is a separate sign illuminated for "walk" in one photo, and for "don't walk" in the other.

Neither the article about New York City nor the District of Columbia claimed that its installation was a "first" nationally. However, they help to pin down the time frame of 1938-1940 for the origins of the sign.

**Addendum:**

**The Barnes Dance**

After reading this article, several people commented on the reference to the "scramble," during which all traffic at an intersection is halted so pedestrians can cross in any direction, including diagonally. The readers suggested that Henry A. Barnes, who had been traffic commissioner in Denver, Baltimore, and New York City, invented the concept, which became known as the "Barnes Dance."

In Barnes' autobiography, *The Man With the Red and Green Eyes* (E. P. Dutton and Company, 1965), he doesn't claim to have invented the Barnes Dance. He traces his involvement in the concept to a presentation he made in *Los Angeles to the Institute of Traffic Engineers* while working in Denver. (Throughout the book, Barnes is
vague on years, but the presentation, "Denver Installs a Modern Signal System," was delivered in September 1951.) He decided to talk about pedestrians, inspired by dropping his daughter off at school and watching her and her friends dash across the street between parked cars. Then he had watched adults trying to cross streets, and found they were taking their lives into their hands:

As things stood now, a downtown shopper needed a four-leaf clover, a voodoo charm, and a St. Christopher's medal to make it in one piece from one curbstone to the other. As far as I was concerned--a traffic engineer with Methodist leanings--I didn't think that the Almighty should be bothered with problems which we, ourselves, were capable of solving. Therefore, I was going to aid and abet prayers and benedictions with a practical scheme: Henceforth, the pedestrian--as far as Denver was concerned--was going to be blessed with a complete interval in the traffic signal cycle all his own. First of all, there would be the usual red and green signals for vehicular traffic. Let the cars have their way, moving straight through or making right turns. Then a red light for all vehicles while the pedestrians were given their own signal. In this interim, the street crossers could move directly or diagonally to their objectives, having free access to all four corners while all cars waited for a change of lights. [See pages 108-110]

Barnes pointed out that he did not invent the concept. He said, "There were a few such installations in Kansas City, Vancouver, and a couple of other cities. But we would put them throughout the entire business area." [Page 110]

After predicting doom before the concept was put into effect, the local newspapers had to admit the concept worked well--and it didn't take long for people to get used to it. Barnes added:

There were other stories, too, including a feature article by the City Hall reporter, John Buchanan. For me, it was very pleasant reading, and John ended it by saying, "Barnes has made the people so happy they're dancing in the streets." And that's how the name, "The Barnes Dance," came into being." [Page 116]
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MEETING ANNOUNCEMENTS

OCTOBER MEETING ANNOUNCEMENT

The Next Monthly Meeting of the Arizona Section of ITE will be held on
October 28, 2004 at 11:55 A.M.

Location: Aunt Chilada’s Restaurant
Cost: $20.00
Menu: TBD

Speaker: YESon400 Committee Member
Topic: Current Standing Polls on Prop 400

RSVP by noon, Monday, October 25 to Micah Henry
Phone: (602) 943-2525
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MEETING ANNOUNCEMENTS

This newsletter is a bi-monthly publication of the Arizona Section of ITE. Send, e-mail or fax
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