Hello Members,

Actors have the Oscars and musicians have the Grammys, but it’s not often that Engineers take the time to pat each other on the back for a job well done. This month we have just such an opportunity. Thursday, June 29, 2017 The San Bernardino and Riverside Counties branch of ASCE will host our Annual Awards Banquet at the Riverside Convention Center. I hope you will all join us in celebrating those who raise the bar of the Engineering Profession and inspire us with a vision of Engineering Excellence. Awards will be presented to individuals who best exemplify the engineering profession and to public and private engineering projects demonstrating innovative design, project complexity, benefit to the community, impact on the physical environment, unique operation, and outstanding aesthetics. This is the not-to-be-missed event of the year for the San Bernardino and Riverside Counties branch. Leaders in the public and private sectors will all be gathered to honor our colleagues.

Also presented at this gala event will be 2017 scholarship recipients. These exceptional students have demonstrated a commitment to engineering and ASCE. These are...CONTINUED ON PAGE 2
leaders in their student associations. These are tomorrow’s industry leaders. Come and celebrate their early success.

At the risk of giving you an unfair business advantage, I am prepared to reveal that sponsorships are available for this event which will provide special acknowledgement at the dinner, your company logo in this newsletter, a listing on the event program and reserved seating for you and your guests! Registration for this event and the sponsorship form are detailed on pages 17 and 18. We look forward to seeing you all there!

Sincerely,

Kenneth E. Cox, P.E., G.E.
San Bernardino and Riverside Counties Branch President
While driving back from Las Vegas after attending the awesome ASCE – SB/Riverside Top Golf get together and Bellagio Fountains Technical Tour, you may have noticed some very large mirrors surrounding three tall towers in the middle of the desert along the Interstate 15 Freeway soon after crossing the border into California. If you were like me and your brain was mushy after sitting through all of that Sunday afternoon traffic, you asked your passenger to do a quick Google search. If your passenger did little more digging, you would know that it is actually the largest concentrating solar thermal power plant in the world!

That visually imposing solar power plant is known as the Ivanpah Solar Electric Generating System and is sitting on 3,500 acres of federal land managed by the Bureau of Land Management in Ivanpah Dry Lake, California. The project was developed by BrightSource Energy and constructed by Bechtel at a cost of $2.2 billion. Ivanpah is operated by NRG Energy and produces enough power annually for 140,000 homes in the Pacific Gas & Electric and Southern California Edison service territories. The complex will reduce carbon dioxide (CO$_2$) emissions by more than 400,000 tons per year. The facility is comprised of three separate plants built in phases between 2010 and 2013, and uses BrightSource Energy’s LPT solar thermal technology.

The plant deploys 173,500 heliostats, each with two mirrors, and focuses their energy on boilers located on three centralized solar power towers; which in turn has a net capacity of 377 megawatts (MW) and gross capacity of 392 MW. “Ivanpah produces electricity the same way that most of the world’s electricity is produced – by creating high-temperature steam to turn a conventional turbine. However, instead of burning fossil fuels to create the steam, the infinite Sun is used as fuel. Over 300,000 software-controlled mirrors track the Sun in two dimensions and reflect the sunlight to boilers that sit atop three 459 foot tall towers. When the concentrated sunlight strikes the boilers’ pipes, it heats the water to create superheated steam. This high-temperature steam is then piped from the boiler to a standard turbine where electricity is generated. From here, transmission lines carry the power to homes and businesses.” (Brightsourceenergy)

Thanks to BrightSource’s solar tower technology, the taller towers and optimized solar field design uses less land compared to other solar technologies such as photovoltaic and trough solar systems. This solar technology uses up to 95% less water than comparable wet cooled thermal plants by employing a dry-cooling process. This process uses air instead of water to condense steam. The steam production cycle is a closed looped system and all water is recycled back into it directly. The facility uses approximately 100 acre feet of water per year and the majority of water consumption is used for mirror cleaning to maintain strong reflection of sunlight.
Engineers Column  By: Christopher Quach, P.E. and Jing Yang,

Construction of this project commenced in October 2010 and it became completely operational by December 2013. During construction, this project reached a peak of 2,636 construction workers and support staff over a three-year period. Operation of this facility employs 65 permanent and seasonal operations & maintenance jobs.

It is estimated that over the first 30 years of the power plant’s operation, it will contribute to $650 million of employee earnings and approximately $350 million in local and state taxes.

One of three units at Invapah Solar Facility courtesy of BrightSource Energy
So the next time you are on the road and catch something big and interesting out the corner of your eye, keep it in mind and look it up later. It may very well be something very significant; it may even be the largest solar thermal plant in the world. This engineering accomplishment was definitely worth the quick Google search and made the drive home a little more interesting.

Units 1, 2, & 3 at Ivanpah Solar Facility courtesy of Business Wire

Sources:
http://www.brightsourceenergy.com/ivanpah-solar-project#.WSz-QLzyvdQ
On Friday, May 5 2017, members of the San Bernardino-Riverside County Branch made their way to Las Vegas for a technical tour of the Bellagio Fountains Filtration System. The weekend long event started with a meet-and-greet at Topgolf at the MGM Grand. The Topgolf facility is a four level driving range where you can practice your swing with an overlook of the buildings along the Las Vegas strip. Our group was seated within a reserved area where we could mingle and get to know each other while cheering on the great hits or having some laughs at our wild slices. To top it off, we were treated with a buffet meal. Some of the group gave lessons to those of us with little to no experience while others played some of interactive golf games.
On Saturday, we shook off the Cinco-De-Mayo headache from the night before and met at the Bellagio Hotel to tour their Fountains Filtration System. The local ASCE Chapter was able to join us for the tour. The tour was lead by members of the Bellagio staff who maintained the pumps day after day to keep the show going. The staff said that we were the biggest tour that they had ever given.

We got a fascinating behind the scenes look at the work it takes to keep the show running. The hotel employs a full staff to run the equipment, repair the components that wear out, and keep the fountain clean. This is in addition to the full time divers who retrieve and install the components and the engineers who design the shows. And all of this work for a free display! We were impressed to learn that the water from the fountain was obtained entirely from groundwater at the hotel site or recycled water from the City so that the fountains were not a drain on local resources. We were especially fascinated by the items that they pull out of the fountain each day. From cell phones, cameras, and sunglasses to a pile of loose change that they collect, clean, and donate to charity.
On Friday, May 12 2017, the California Polytechnic University Pomona ASCE chapter (CPP ASCE) organized their annual Order of the Engineer event. The goal of the event is to get potential graduates and younger professionals to obligate themselves to uphold devotion to the standards and dignity of the engineering profession. The participants typically receive a ring. The ring is an excellent symbol of continuity and community. It is worn for all to see and in effect, says “here is an engineer possessed of a publicly avowed dedication to the profession and those it serves.” Participants were mainly CPP students, Cal Baptistes University students, and San Bernardino/Riverside County ASCE professionals.
The event commenced at approximately 4:30 am with short speeches by Kenneth Cox (ASCE SBR President) and Jerry Burke (ASCE LA Section President elect). The introductory speeches focused on the history of the Order of the Engineer event, goals and insights of such an event, and recitation of the oath. Participants were then called to receive their rings by Professor Helen Jung from CBU and Professor Kenneth Lamb from Cal Poly. Ken and Jerry handed rings and certificates to the participants. The event was concluded with snacks and great conversations between the professionals and the students. The event was a great success. A special thanks to CPP ASCE for organizing such a great event.
Sacramento Fly-in Equals SUCCESS!
May 17, 2017

jewlsg12 California State Capitol

Liked by leilapalooza, maleek81 and 43 others

jewlsg12 When you and Mark Timmerman, Senator Mike Morell's Chief of Staff, hit it off you take silly pictures! #mystatesenator #infrastructureweek #ascer9flyin
May 19th 2017 Southern California Edison extended the San Bernardino/Riverside ASCE YMF an opportunity to visit their newest, and most efficient, power generation plant in California. The Mountain View Power Plant is located in Redlands, approximately 80 miles east of Los Angeles, and produces approximately 1,050 megawatt(MW) of energy to the Inland Southern California Area. The plant came online in 2005, just in time to increase the capacity for the fast growing and short powered inland area.

To make power, the plant uses a two natural gas powered dry low nitrogen oxide (NOx) combustion turbines and two steam turbine generators. The process begins with natural gas being fed into the two combustion generators to produce 220 MW (each), then the exhaust gases are pumped into fire heat-recovery steam generators, and then the steam provides the energy to make a nominal 300 MW per steam turbine.

The plant has its own water recovery system through means of an on-site ion exchange plant that treats the water used in steam creation on a continuous basis. The plant uses ammonia injection in its catalytic converters to reduce the amount of NOx and carbon monoxide emissions.
The control room shows just how complex the plant really is, with each control room operator managing a minimum of 8 screens and keyboards at their desks. Operators are responsible for monitoring of various things throughout the plant, from emissions to water quality, and even security at the plant. Emergency shut off controls are hard wired directly to the control room in case of emergencies.

This month’s technical tour really highlighted how all forms of engineering come together to make something as amazing as the Mountain View Power Plant. We saw every form of engineering at the plant, electrical, structural, civil, environmental, water quality, and mechanical. Each element plays a critical role for safe and efficient power generation for millions of people throughout the inland empire.
ASCE YMF San Bernardino/Riverside branch would like to thank Lyle Laven and the Mountain View Power Plant staff for inviting us and donating their time to provide an exceptional technical tour. We’d also like to thank all ASCE YMF members who attended the trip, we really appreciate your participation and hope you took something away to help you in your careers. We look forward to seeing you at the next tour!
On May 20, 2017 the United Way of the Inland Valleys hosted a fundraising event “A Pathway to Success” in Riverside to expand the Girls Excelling in Mathematics with Success (GEMS) Program into the Riverside area school districts. This program currently serves middle school girls in the cities of Moreno Valley and Perris. The GEMS program, is a STEM based program designed to inspire middle school girls to pursue STEM careers and STEM education. The girls are treated to University tours, local STEM business tours, a week-long STEM camp, and women in STEM panel discussions. I was fortunate to provide a tour of the Flood Control District to 40 seventh grade girls last year and it was quite the success.

Like the GEMS program, the American Society of Civil Engineers has a similar goal, to encourage the youth to join our profession. The mission of the Society is to deliver value to our members, advance civil engineering, and protect the public health, safety, and welfare. Because of that, the Branch Board agreed to help with the fundraiser and donated two Fitbit’s for the raffle at the event. Nothing better than encouraging our younger generation to consider a STEM career. Right?

Photos of the tour, the panel discussions and the fundraising event are shown below.
Congratulations to Cal Poly Pomona for placing 3rd in the Pacific Southwest Conference (PSWC)!

Civil Engineering Top 3 at Pacific Southwest Conference

A civil engineering student team competed in the annual Pacific Southwest Conference (PSWC) 2017 in UC Irvine, and returned with a bounty of wins across several competitions and placed third overall. Competing against 17 other student teams, the team placed high in several competitions: first in transportation and seismic design, third in steel bridge, geotechnical wall and surveying, and fourth in Concrete Canoe.
Event Information:
Date: Saturday, June 24, 2017
Time: 10:30 AM – 2:00 PM
Meeting Location: Frank G. Bonelli Park
120 Via Verde,
San Dimas, CA 91773

The Event is free and BBQ will be provided after the Event.
Games may include: Tug-of-war, Giant Jenga, Ball Toss, Extreme Tic-Tac-Toe, Water Ballon Toss, Giant Pong Toss, and more.

For more information or registration please contact: Ibrahim Ibrahim,
ASCE SB/R YMF
at 208-596-5166 or ibra0717@hotmail.com
2016-2017
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ANNUAL AWARDS BANQUET

Please join you San Bernardino and Riverside Counties Branch of ASCE at the Annual Awards Banquet. Come celebrate the accomplishments of your fellow engineers, firms, and agencies that are making an impact in our area.

This year we will recognize several remarkable, recently constructed, projects and award scholarships to our local university students.

You won’t want to miss this year’s festivities. Hope to see you there!

Date: Thursday, June 29, 2017
Time: 5:30 PM – 8:30 PM

5:30 PM – 6:30 PM    Reception & Hors D’oeuvres (cash bar)
6:30 PM – 8:30 PM    Dinner and Program

Location: Riverside Convention Center
3637 5th Street, Riverside CA

Cost: $50 ASCE Members w/ RSVP
$35 Government Employees w/ RSVP
$35 ASCE Life Members & Students w/ RSVP
$60 Non-Members / Walk-Ins / No RSVP

*Parking is FREE in the Main Convention Center Lot (enter at 3rd Street and Main Street)

Register: Click here to register online.
Deadline: Please register by June 21, 2017
Questions: Kenneth E. Cox
(951) 500-3500
kcox@leightongroup.com

● www.asce-sbriv.org ● @ASCESBRIV on Twitter ● ASCE SB Riv on Facebook
SPONSORSHIP FORM

This year’s banquet promises to attract the firms, agencies, and people who have helped shape the Inland Empire. By sponsoring the event, your company will be featured in the Awards Program and in the ASCE Newsletter. Your sponsorship will help to fund next year’s ASCE Annual Student Scholarships. The breakdown of benefits is as follows:

**Platinum Sponsor - $1000**
- Reserved Table for 10
- Mention at Dinner
- Mention and Logo in the ASCE Newsletter
- Listing on the Event Program

**Gold Sponsor - $500**
- Reserved Seating for 5
- Mention at Dinner
- Mention and Logo in the ASCE Newsletter
- Listing on the Event Program

**Silver Sponsor - $250**
- Reserved Seating for 2
- Mention at Dinner
- Mention and Logo in the ASCE Newsletter
- Listing on the Event Program

**Sign Me Up!**

I want to be a part of the ASCE San Bernardino and Riverside Counties Branch Annual Awards Banquet, take advantage of the promotional opportunities afforded to me as a selected sponsor, and help support the Branch’s student scholarship program.

- [ ] Platinum
- [ ] Gold
- [ ] Silver

Company: __________________________________________________________
Contact Name: ______________________________________________________
Address: ___________________________________________________________

Phone: __________________________ Fax: __________________________ Email: __________________________

Please email this form and a high-resolution copy of your company logo to: Jeff Meiter, Branch Treasurer

**Phone:** (909) 982-4601  **Email:** jeff@valued-eng.com

*Sponsorships will be invoiced for payment by ASCE Sb/Riv Branch*

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- [www.asce-sbriv.org](http://www.asce-sbriv.org)
- [@ASCESBRIV on Twitter](https://twitter.com/ASCESBRIV)
- [ASCE SBIV on Facebook](https://www.facebook.com/ASCESBIV)
July Lunch Meeting

The Development of Aviation in the United States

Dr. Hany J. Farran, ASCE Life Member

Dr. Farran will trace the development of commercial aviation in the United States and provide an overview of the history of aerospace engineering and flight sciences around the world. Professor Emeritus at Cal Poly Pomona, Dr. Farran has been a public speaker for the past 41 years all over the United States and various parts of the world. He has been a research and development engineer for Caltrans and Northrop-Grumman, a consultant for the United States Air Force, and an adjunct professor for the Cal Poly Master’s Degree program in Aerospace Engineering. Dr. Farran is an advocate for the importance of Civil Engineering, Infrastructure, and the environment.

Date: Wednesday, July 19, 2017
Time: 11:30 am to 1:00 pm
Location: Riverside Convention Center
3637 Fifth Street, Riverside CA
Cost: $35 ASCE Members w/ RSVP
$30 Government Employees w/ RSVP
$25 ASCE Life Members & Students w/ RSVP
$40 Non-Members / Walk-Ins / No RSVP
*Parking is FREE in the Main Convention Center Lot (enter at 3rd Street and Main Street)
Deadline: Please reserve by July 12, 2017
Additional Info: Kenneth E. Cox
(951) 500-3500
kcox@leightongroup.com
The committees for the Inland Empire Report Card update are making great progress! The Water, Wastewater, and Parks and Recreation Committees have sent surveys to local agencies and have received many responses. The Aviation, Transportation and Solid Waste Committees have prepared surveys and will be distributing soon. The Flood Control and Urban Runoff Committee is working with the County flood control agencies on gathering data. The committees plan to have draft grades to the Executive Committee for review in August 2017 in hopes to have the report card completed by the end of the year. If you have any questions about the report card please contact Edwin Quinonez, PE at eequinon@rivco.org or Julianna Adams, MPA, PE at jadams@rivco.org.

**ASCE CONTINUING EDUCATION**

*Check out all of the content available from ASCE. When ordering be sure to use the Promo Code below so that the branch will receive 20 percent of the gross revenue from the registration. This helps the branch to reduce member costs, provide better activities and give out more scholarships for the benefit of the local engineering community.*

**WEBSANBRIBRA**

The San Bernardino/Riverside Branch Nominating Committee has made the following recommendations to the Board of Directors for the slate of officers for the term beginning October 2017:

**President-Elect** (for a three-year term; President-Elect, President, and Past President): Melissa Barbosa, P.E., Water System Engineer, Azusa Light & Water

**Vice President** (for a one-year term):
Jeff Meiter, L.S, R.C.E., President, Valued Engineering, Inc.

**Treasurer** (for a one-year term):
Chet Robinson, G.E., Senior Project Engineer, Geocon, Inc.

**Newsletter Editor** (for a one-year term):
Entcho Anguelov, P.E., Senior Engineer, Albert A. Webb Associates.

**Secretary** (for a one-year term):
Vacant.

Current Branch officers, not up for election, serving out their remaining terms are:

**President** (two-year term remaining; President and Past President):
Julianna Adams, M.P.A., P.E., Senior Civil Engineer, Riverside County Flood Control and Water Conservation District

**Past President** (one-year term remaining):
Kenneth Cox, G.E., Senior Project Engineer, Leighton Consulting

In accordance with Article V, Sections 4 thru 6, of the current ASCE San Bernardino / Riverside Branch Bylaws, this serves as the announcement of the Official Slate of Officers and additional nominations from our Subscribing Members will be considered up to the Annual Meeting (June 29, 2017). If no other nominees exist, the Presiding Officer shall conduct the Branch election at the Annual Meeting (June 29, 2017). Submit any additional nominations, before June 28, 2017, to: ASCE San Bernardino/Riverside Branch President Kenneth Cox, G.E. at (951) 500-3500 or kcox@leightongroup.com.

In addition to the above Board positions, the Assistant Newsletter Editor committee member position is VACANT. This position is a great way to get involved in a moderate role with ASCE and see how service on the Board works both for and with you and your career.
2016-2017
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Want to advertise an employment opportunity?
Contact the Newsletter Editor
Chet Robinson, GE
robinson@geoconinc.com
Contact ASCE Board member
Jeff Meiter, PE, LS
Branch Treasurer
jeff@valued-eng.com
Employment Opportunities

RK Engineering Group, Inc. has a position available for an Associate Principal Traffic Engineer. For more information follow the link below:

http://rkengineer.com/Positions/AssociatePrincipalTrafficEngineerPosition.pdf

Be sure to check out more career opportunities at ASCE’s Career page at

http://www.asce-sbriv.org/careers-1.html

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Calendar of Upcoming ASCE Events

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<tr>
<td>June 9, 2017</td>
<td>SBR Branch Board Meeting</td>
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<td>June 24, 2017</td>
<td>YMF Olympics and BBQ</td>
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<td>June 29, 2017</td>
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<td>ASCE Lunch Meeting</td>
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Membership Information

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<tr>
<td>Students</td>
<td>FREE</td>
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<tr>
<td>Associate Member</td>
<td>$50 per year of Baccalaureate degree and first year after, then incremental increases to $225 over five years.</td>
</tr>
<tr>
<td>Member</td>
<td>$225</td>
</tr>
<tr>
<td>Affiliate</td>
<td>$225</td>
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Section (Branch) Dues: $55

National ASCE student membership is now FREE! Those who have chapters or clubs still must be a member of them before joining National. Log onto [http://www.asce.org/join/](http://www.asce.org/join/) fill out the short application or call 1-800-548-ASCE (2723) and instantly become a member of ASCE.

Online membership renewal is available! Go to [http://www.asce.org/membership-communities/](http://www.asce.org/membership-communities/) You will need your membership number. All payments must be made with a major credit card. An e-receipt is transmitted to the

Newsletter Information

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