



Capital Branch



Central Valley Branch



Feather River Branch



Shasta Branch

February 2012

The Engineerogram

Volume 74, No. 2

President's Message

by Jon Balzer, P.E., President



CELEBRATING 90 YEARS

It is ironic how adversity often has a way of revealing what's important in life. My journey through ASCE began at a time when I was only a few years into my professional career, and was eager to get involved and make a difference. In

the beginning, the primary goals focused on student outreach, redefining scholarship programs, and looking for new ways to help students transition from college to industry. The successes of these programs were often subtle, and illustrated a valuable principle: change takes time. The value of the goals and programs were not seen as much in the immediate tasks, they were a growing snowball, and after years of efforts, the results became more apparent. The journey of a thousand miles begins with a single step, and with each step it became clearer: real satisfaction, the kind that originates deep down, begins with giving.

The formula is largely the same today, and while the efforts and programs have broadened to encompass new horizons, it is largely

the art of giving that not only drives ASCE but also the industry and profession at large. The Civil Engineering profession, by nature, is a service to the public that protects public safety and environmental resources, while searching for new ways to elevate many of the standards of society. The irony is that in a time of economic hardship with resources in short supply, giving would be expected to fall off. It is however, during these times that the smallest acts of kindness mean the most. Acts such as recognizing excellence, furthering the profession, and promoting the growth of young professionals and students carry great meaning in times of adversity. Perhaps it is also this act of giving, or testament to the creativity and excellence in our profession today, that led to the record number of this year's ASCE Sacramento Section Outstanding Project Award Applicants.

Giving it Back – Paying it Forward:

Last month applications were due for the ASCE Outstanding Project Awards, and not only were there a record number received, but the quality, creativity, and diversity of the projects were perhaps more than ever. It is exciting to be part of a profession that promotes such excellence and growth. The Awards Banquet is scheduled to occur February 22, 2012, and I would encourage all to attend. The event also marks the 90th Anniversary Celebration of the Sacramento Section—a Section rich in history and heritage, and rich in the people that have helped shape the area and profession today. Yet, perhaps more than anything, the Awards Banquet is as an opportunity to give it back, and pay it forward.

The Section Awards Banquet on February 22, 2012 is an opportunity to recognize achievement in our industry today, the people that have helped shape our profession, and pay it forward to the students that will carry our profession. Students and young professionals are encouraged to attend the event, and in addition to awarding Golze Scholarships, selected students are planned to also be in attendance and assisted by event sponsors. Furthermore, the event is also planned to have a raffle with proceeds funding scholarship and young professional programs. In an effort to promote the profession, and help successfully transition and encourage students and young professionals, the Banquet should provide a wonderful blend of giving in the profession of Civil Engineering. However, this is not the only opportunity to give.

Every day is an opportunity to make a difference. For some of us, that opportunity exists in the projects and pursuit of excellence that is helping shape the profession today. It is in the creative solutions that shed light on new horizons and change the nature of all before it. For others, that opportunity has led them to the universities, and helping support the students and young profes-

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Advertising Rates: Full Page \$250 - A page is 7 1/2" x 9 1/2"
Half Page \$130 - 1/2 page (either horizontal 7 1/2 x 4 3/4; or vertical 3 3/4 x 9 1/2)
Quarter Page \$75 - 3 3/4 x 4 1/4
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(To our contributing writers: The Engineerogram reserves the right to make revisions, correct spelling and grammatical errors, to prioritize information and to summarize content. Articles may be shortened as editorial requirements dictate. Questions regarding this policy may be directed to the President of the Sacramento Section. Thank you for your understanding. Editors.)

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University of California, Davis	Alex Wong and Joe Novielli	Co-Presidents	ucd.asce.president@gmail.com

For more ASCE activities if you wish to be active in a committee, career opportunities, complete text for the legislative activities, go to the Sacramento Section web site at www.asce-sacto.org, or contact a current officer. To MAKE CHANGES OR RENEW YOUR MEMBERSHIP, go to website: www.asce.org. For MEMBERSHIP APPLICATIONS, please e-mail to memapp@asce.org.

MASTER CALENDAR

Date(s) (Times)	Event	Location	Information
2012 February Monday, 13th 6:00 - 7:30 pm	Sacramento Section Board Meeting	Blackburn Consulting 2491 Boatman Avenue West Sacramento, CA 95691	Kristy Chapman, 530-368-1286 kristyo@blackburnconsulting.com ; or Jon Balzer, 916-825-4958, jon.balzer@gcinc.com
Wednesday, 15th	Engineers Without Borders Meeting	TBA	Dustin Harrison, sacproppresident@gmail.com
Thursday, 16th	FREE EVENT San Francisco / Oakland Bay Bridge Project Technical Presentation, Page 5	Sacramento State Campus, Del Norte Hall Building (Old Bookstore) Room #1004	http://asce-sfobb-feb16.eventbrite.com
Wednesday, 22nd	ASCE Sacramento Section 90th Anniversary and 2012 ASCE Outstanding Project Awards Banquet, Page 6	Tsakopoulos Library Galleria 828 "I" Street, Sacramento, CA	Kimberly Brown Kimberly.Brown@hdrinc.com
Saturday, 25th	Engineers Day Page 10	Sunrise Mall near Customer Service and Macy's Women's South Fountain, 6009 Sunrise Ave., Citrus Heights, CA	Joyce Copelan, 530-908-8372, or jcopelan95694@yahoo.com .
Tuesday, 28th	ASCE Region 9 Sixth Annual California Infrastructure Symposium, Page 11	Hyatt Regency Sacramento at Capitol Park, 1209 "L" Street, Sacramento	www.asce.org/region9
Wednesday, 29th	ASCE Region 9 Legislative Day, Page 11	California State Capitol in Sacramento	Lori Campbell, Administrator 916-965-1536 lkc.consulting@sbcglobal.net
	Central Valley Branch Meeting, Page 3		Anthony Mazzei amazzei@condorearth.com
	Feather River Branch Meeting, Page 3		Amie McAllister, 530-228-6003 amie.steel@gmail.com

Conferences	Section Officer Meetings	Seminars	YMF Events
Section Meetings	Region 9 Events	Outreach Events	Student Events
Branch Meetings			

President's Message - Continued from Page 1

sionals that carry our profession forward. In a world of growing complexity, with tighter tolerances, and more considerations than ever before, these students and young engineers hold the key of our future. It was said by Arthur Ashe that, "from what we get, we make a living; what we give, however, makes a life." Perhaps therein lies the key: to professionally, and personally, find an opportunity to give.

Thank you, and if you would like to sponsor the raffle, Section Banquet Event, or just want to share some thoughts, please contact us at: asce@asce-sacto.org.

Sincerely,
Jon Balzer

Shasta Branch

For more information about the Shasta Branch meetings, please contact Dale Roper, P.E., at droper@shn-engr.com.

Feather River Branch

For more information about the Feather River Branch meetings, please contact Amie McAllister at amie.steel@gmail.com.

Capital Branch

The Capital Branch Luncheon will not be held in February. Instead, the Capital Branch will be holding a Technical Presentation on the SFO-BB Project. Please see Page 5 in this newsletter for further details. For more information about the Capital Branch, you may email or call Alfred R. Mangus at mangusalf@yahoo.com or 916-205-1962.

Central Valley Branch Meeting

For more information about the Central Valley Branch meetings, please contact Jason Tokheim at jtokheim@ksninc.com.

The Law and Civil Engineering

by Eugene L. Bass, Esq.

Consultant has no Liability to the Developer for Delays in Completion of the EIR

The developer of a large mixed land use development project submitted a development application to the County for processing. Pursuant to the California Environmental Quality Act (CEQA), the County was required to prepare an environmental impact report

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The Law and Civil Engineering - Continued from Page 3

(EIR) regarding the potential significant environmental impacts of the proposed project. The County was required by CEQA to establish by ordinance a time limit for completion and certification of an EIR, not to exceed one year from submission of a project applicant's complete application. Four months after the development application was submitted, the County, hired a consultant to prepare an (EIR) for the project. The consultant contract stated that the EIR was for the developer's proposed project and required the consultant to provide the developer with a copy of the EIR. The County required the developer to reimburse it for the consultant's work. The consultant was aware that the developer was paying the County for the consultant's work. The consultant contract required that the EIR be completed within 4 months. The EIR was not completed within the required contract time and 13 months after the date of the contract date the County terminated the contract with the consultant after a second notice of termination and after the consultant failed to submit an acceptable EIR. The County then proceeded to hire a second consultant to prepare the EIR.

As the result of the delay in completion of the EIR, the developer's sale of the project property to a third party fell through and the developer sued the consultant for breach of contract, negligence and on various other legal theories. The developer sought reimbursement of amounts paid to the County for the consultants' services and other alleged damages including \$50 million in damages due to loss of sale of the property. The trial court rejected the complaint of the developer and entered a judgment for the consultant. The developer appealed.

The appellate court agreed with the trial court and held that the developer could not sue the consultant on any of the claimed legal grounds. In confirming the decision, the court said that CEQA confers the duty upon the local lead agency to produce an adequate EIR for dissemination to the public, and the discretion to evaluate the project for the public. The County, as lead agency on the project, owes its duty to the public to release a proper EIR and owes no duty to satisfy the desires of the potential developer. The court also noted that there was nothing in the contract between the County and the consultant providing for the consultant's liability to the developer in the event of breach or otherwise demonstrating that developer was to be an intended beneficiary of the contract. Hence, the developer could not sue as a third party beneficiary of the contract.

The court stated that exposing environmental consultants to liability in the manner

that the developer sought could compromise their independence and objectivity given their potential exposure and would create a conflict for the consultant between their duty to the public and their duty to the developer as project applicant. This conflict would undermine CEQA's goal of obtaining an accurate EIR for proposed projects. It would also alter the availability of consultants and the fees they charge and the potential liability exposure would create incentives for the consultant to complete the report at the expense of the analysis of environmental issues. The Court did not believe consultants could remain objective in their duty to the public if the fear of possible retaliatory action from developers existed.

Consultants should always be aware that their contracts for preparation of EIR's do not create liability to a developer or other entity not a party to the contract. Such contracts should be carefully reviewed by legal counsel.

The author's discussion of legal ramifications of the particular case(s) are provided only for educational purposes and should not be relied on as legal advice. If you have a specific legal problem, please consult with your attorney

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Staff Geotechnical Engineer

Entry level to 3+ years experience - responsibilities include field investigation, construction observation and monitoring, engineering calculations, technical analysis, and report preparation and writing. Excellent communication skills both written and verbal. Must possess a valid driver's license, and acceptable driving record.

Education: B.S. in Civil/Geotechnical Engineering, MS/EIT registration preferred.

Project Geotechnical Engineer

2 to 5+ years experience preferably with a geotechnical firm. Responsibilities include performing geotechnical engineering analysis, report writing, developing field investigations and laboratory testing programs, managing field investigations and/or construction monitoring, and preparing proposals. Excellent communication skills both written and verbal. Must possess a valid driver's license, and acceptable driving record.

Education: M.S. or Ph.D. in Geotechnical Engineering. RCE Preferred.

Locations:

San Diego, El Centro, Sacramento, Torrance

For confidential consideration, please apply on line at our website,
<http://www.groupdelta.com/careers.html>



Thursday,
February 16, 2012
6:30 - 8:00 pm
Cost: FREE

Location:

Sacramento State Campus
Del Norte Hall Building
(Old Bookstore) Rm #1004

FREE Pizza and soda will be served from 5:30 - 6:25 PM
RSVP required online at:

<http://asce-sfobb-feb16.eventbrite.com>

Seating limited to 224

For more information call:

Ajay Sehgal - 650-580-1221

Mario Carreon - 916-802-6470

ASCE Food Sponsors:

Sacramento YMF
Capital Branch
Sacramento Section

Free PECG Movie Raffle:

Bridge So Far,
A Suspense Story
A Span in Time,
with Max Tabloid

www.pecg.org

Presenters:

HNTB
Smith-Emery Company
Caltrans

Parking Fees:

Attendees can purchase a \$6 parking pass at various permit machines in the parking lots that are good for more than 2 hours.

Maps:

Sacramento State campus maps with parking lots and building locations can be found through the following link:

<http://www.csus.edu/campusmap/>

San Francisco-Oakland Bay Bridge Project TECHNICAL PRESENTATION

hosted by the
2013 Orthotropic Bridge Conference Committee

www.orthotropic-bridge.org



The Self-Anchored Suspension Bridge Segment of the San Francisco-Oakland Bay Bridge (SFOBB) East Spans of the Seismic Safety Project continues to advance their work of steel erection in Oakland as they have received all major fabricated steel components from China. **Dr. Brian Maroney** and **Karen Wang** will present the uniqueness of this bridge with the design elements and the complex nature of the construction and steel fabrication involved. They will discuss how quality is driven as a main element throughout the entire steel fabrication and erection process. This will be further demonstrated by Smith-Emery Company Lead Inspector, **Leonard Cross**, who will discuss and show the technology currently used on the bridge during weld inspections. They will also present the current status of the project as they strive towards a bridge opening of 2013. For more information related to the Bay Bridge, visit <http://baybridgeinfo.org/>.

Dr. Brian Maroney is a Civil PE with over 25 years experience in Bridge Design, Earthquake Engineering, Construction and Project Management. He is employed by Caltrans and currently the Principal Bridge Engineer & Deputy Toll Bridge PM overseeing all aspects of the design for the Toll Bridge Program.



Karen Wang is a Civil PE with over 10 years at HNTB, and a member of HNTB's Program Management Team on the East Span of the SFOBB Project. She is currently working on the Self-Anchored Suspension Bridge involving management of all issues related to the orthotropic box girders, and is bringing together an expert seismic safety peer review panel and expert welding panel and leading them through an oversight process of the steel fabrication completed in China.

Leonard Cross is the Lead Inspector for Smith-Emery Company, a sub to American Bridge/Fluor JV on the Bay Bridge Project. Smith-Emery Company performs the inspection and testing for structural steel of the SFOBB SAS project. He will present a demonstration on two types of non-destructive testing performed on welds similar to those placed on the SAS steel structure. These include Magnetic Particle Testing and Ultrasonic Testing.



ASCE Sacramento Section 90th Anniversary & 2012 ASCE Outstanding Project Awards Banquet

Sponsored by the ASCE Sacramento Section

save the date

**Wednesday,
February 22, 2012**

Tsakopoulos Library Galleria
828 "I" Street
Sacramento, CA

[5:30 PM] No Host Reception
[6 PM] Dinner & Awards



awards

Awards Including:

Outstanding Project of the Year | Small Project
Environmental | Transportation and Development
Structural | Flood Control | Water/Wastewater

Student Awards Including:

Golze Scholarship Awards



tickets

Individuals: \$85

Full Table Sponsorship:
(9 seats and 1 Student Award Winner) **\$900**

Half Table Sponsorship: (5 seats) \$450

(Note: Table sponsorship includes preferred seating and recognition during program)



For Sponsorship Opportunities, to Donate Door Prizes, or for more information please contact:

Kimberly Brown, Kimberly.Brown@hdrinc.com

[Proceeds support the Golze Scholarship Fund]

Capital Branch News

by Alfred R. Mangus, P.E.
President, Capital Branch

Engineer's Week, and Sharing with the General Public What We Do:

Introduction: For those of you who do not know me, my name is Alfred R Mangus PE, and this is my second time as President of the ASCE Capital Branch (last 2003-2004). My area of interest is orthotropic steel bridges.

Who's on First: Thor is Past President, Mario was elected President Elect, Dick Weitzenberg is Treasurer, and Vice President of Education is Ajay Sehgal.

Hats-off: The installation of suspension cables for the new portion of the San Francisco - Oakland Bay Bridge has started, and more information is available on the web. Dr. Brian Maroney, M.ASCE, will speak this month about this important project that we will all use soon to drive to San Francisco.

Future Speakers: The March 2012 topic will be *The Seismic Retrofit of the Antioch Bridge* presented by Mr. Yong-Pil Kim, P.E. Senior.

We Want you to provide us with a speech on a diversified ASCE topic. We need speakers for each and every ASCE Institute. Please email us any topic(s) or commitment to aksehgal@comcast.net. We are open to out-of-town visitors who can provide high quality talks.

What's up: Please provide us with news about your project in our area. We are also seeking tours, including "hardhat" tours of local projects. A portion of your section dues goes to funding this newsletter; let's all utilize this communication resource. Please email us any topic(s) or commitment to our President-Elect at Mario.carreon@att.net. Mario has been mentoring younger engineers. Please also contact Mario if you want to stay with Radisson, or switch to a brown bag meeting location in a government building.

Our international Bridge Event: The third www.orthotropic-bridge.org official email address is orthotropic_bridge_org_asce@yahoo.com. Additional volunteers are needed for this committee. It's planned for 2013. Precise dates and the hotel / meeting rooms are not selected yet.

Presidential Pulpit with Craig Copelan PE:

Every year Engineers Week falls upon us, but do we explain complex ideas to the general public? How do we explain what we do to our children? (See Figure 1)

ASCE National created a series of documentary tapes in partnership with PBS (Public Broadcasting System) entitled



Fig. 1. How do we transfer knowledge father to son? (Alfred to his 6-week old son)

The Building Big Series, with a companion book written by David Macauley Architect.

Locally, there are award-winning documentaries which were developed by Professional Engineers in California Government. These films are entertaining case histories of four major California Department of Transportation, or Caltrans, projects with the key theme of ABC (Accelerated Bridge Construction process). These films show how entertaining and informative communication can be to the general public about major construction projects in their community. They also demonstrate the effectiveness of this means of communication in winning community support. The organization, PECG (Professional Engineers in California Government), is a *bargaining unit* which represents 12,000+ engineers and other related classes of workers employed by the State of California. The organization was formed in 1962 as a professional association in response to members' wishes to promote a positive image for public employees engaged in all areas of transportation engineering. PECG has been well served by the capable leadership of well-known Caltrans Bridge Engineers.

James E Roberts, PE was active in PECG during his early career, and was later elected as the 1972 state President. IBC awarded Mr. Roberts its prestigious Roebling Award for his lifetime achievements in Bridge Engineering. The California legislature honored Mr. Roberts after his passing by renaming the Toulumne River Bridge as the "James E. Roberts Memorial Bridge" in October 2007. This bridge is an excellent example of the ABC process. PECG created a poster listing the creative ABC features of this bridge. PECG produced, or provided technical support for, each of the documentaries discussed in this paper as a part of that same mission. IBC awarded two other State of California employees, i.e. Mr. Charles "Chuck" Seim, and the late Art Elliot, its prestigious Roebling Award for lifetime achievements in Bridge Engineering.

THE BRIDGE SO FAR: A SUSPENSE STORY

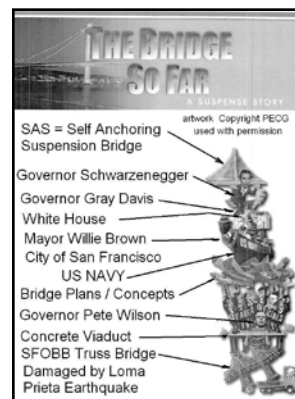


Fig. 2. Movie Poster Copyright PECG

The first documentary created was "The Bridge So Far – A Suspense Story." This film was the first of a series of documentaries developed by the union, PECG. The documentary, in addition to discussing the technical issues that surround a major bridge project, examines the interplay involved in the development of a transportation mega-project within the heart of the busy metropolitan San Francisco Bay Area. With a historical perspective that sweeps from the inception of the San Francisco / Oakland Bay Bridge in the 1930s, to the Loma

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Capital Branch News - Continued from Page 7

Prieta earthquake in 1989 when a portion of the bridge collapsed, up to early 2006 and the beginning of bridge construction, the documentary provides a rare insight into the workings behind the scenes of a major transportation structural engineering project.

Through the use of a humorous and interesting story line a powerful and compelling look at how a major engineering project involves input from many sources is provided. With a scope that includes the collision of politics, community activism, and conflicts between local, state and the Federal governments the film provides entertainment value and a thought provoking message about the staccato steps in the journey a community follows in the development of a new, safe bridge that provides greater mobility for all modes of travel across the Bay. Award winning filmmaker David Brown filmed and produced this entertaining story with all the drama, comedy, optimism, dashed hopes, and plot reversals that can only happen in real life. The 3-D animation was by Rick Pepper and cartoon animation by Charlie Canfield. Figure 2 shows the political cartoon of Caltrans carrying the political load on the back of an orange truck. Animation of these cartoons is part of the movie. Movie stills can be viewed for free at www.thebridgesofar.com/. The bridge designers at Caltrans received a Seismic Retrofit Project of the Decade Award from the ASCE= American Society of Civil Engineers in 2009 for the West Spans or Suspension portion. The East Spans or truss spans of the bridge featured in this film.

AMAZING: THE REBUILDING OF THE MAC ARTHUR MAZE



Fig. 3. Movie Poster
Copyright PECG

This second documentary produced by PECG is destined to be a classic example of ABC's success story. The opening sequence of "Amazing: The Rebuilding Of The MacArthur Maze" features the fiery collapse of a major freeway connector in downtown Oakland, and then recreates the moments that led up to this con-

flagration with an animated sequence of the truck overturning. The Interstate 80/580 connector at "The MacArthur Maze" links Oakland and San Francisco. On April 29, 2007 a tanker truck carrying fuel overturned, causing a fire to erupt. The heat from the flames caused a 160-foot-long, 45-foot-wide span of the ramp to collapse. With the sudden loss of a structure that serves as a key component in the regional transportation network, the documentary begins to tally up the impacts that the loss of a busy thoroughfare, which serves in excess of 100,000 vehicles per day, and is a primary access point to the San Francisco / Oakland Bay Bridge, can have upon a city or a region. The cumulative costs in loss of mobility alone can be enormous, and in turn justify the use of accelerated construction and emergency contracts with hefty contractor incentives for early completion of a state-designed replacement structure to restore what is, in essence, a

lifeline for the movement of goods, services and commute traffic across the San Francisco Bay.

Within hours of the conflagration and bridge collapse, state staff met to set priorities, and within nine days of the incident, Caltrans opened the project for bids, advertising the project with a \$200,000 incentive for each day of completion ahead of schedule. The project had another clause stating that the contractor would be fined \$200,000 a day for every 10-minute delay in opening each lane closure. These clauses had a cap of \$5 million. The contractor, C.C. Myers, completed the project on May 24, 2009—within an amazing 25 days, earning Myers the full \$5 million incentive. The film references previous successful accelerated construction efforts, orchestrated by Caltrans after the Northridge earthquake in Los Angeles, to quickly replace a major collapsed freeway connector where, due to a state of emergency, environmental requirements were temporarily put on hold, and a contractor was provided with incentives to build a replacement structure designed by the state as quickly as possible with strict oversight provided by state engineering staff to ensure that the final product was built as designed, and would provide the taxpayers with a serviceable and safe replacement structure. This film communicates well the sense of urgency felt by all involved to restore this damaged link in the transportation network quickly, and details how incentives are used to provide a contractor with encouragement to complete the job of bridge repair and replacement on an expedited schedule. The contractor, Mr. C. C. Myers, is featured to good effect throughout the video as he takes an active role in procuring materials, arranging for shipment from locations across the US, and works with Caltrans to overcome barriers encountered. The film also does a good job of relaying the sincerity and dedication of the public servants at work in a tense situation. Award winning filmmaker, David Brown, filmed and produced the entertaining story with all the drama, comedy, optimism, dashed hopes, and plot reversals that can only happen in real life. The 3-D animation was by [Rick Pepper](#), and cartoon animation by [Charlie Canfield](#).

The bridge designers at Caltrans received a National Merit Award from the NSBA (National Steel Bridge Alliance) in 2009. An enduring testimonial to the value of accelerated construction, which features incentives for contractors, speeds the contracting process, and provides strong engineering oversight by capable state engineering staff, was provided in Governor Arnold Schwarzenegger's State-of-the-State Address on Tuesday, January 8, 2008.

"In April, a fiery truck crash melted the Bay Area's 580 freeway exchange. Hundreds of thousands of Californians who depended on that interchange foresaw months of delays and stress. Yet, it didn't take the normal 150 days to repair. Caltrans, working with contractors, cleared the span in 10 days, and then built a new bridge and opened it up in a record 16 days later. Government can work. It can be efficient. It can lead."

Movie clips may be viewed at <http://www.amazingmaze.org/> for free.

Continued on Page 9

Capital Branch News - Continued from Page 8

A SPAN IN TIME

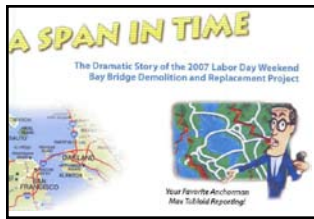


Fig. 4. Movie Poster
Copyright PECCG

The replacement of the San Francisco / Oakland Bay Bridge once again provides a third PECCG produced documentary which features ABC's solutions, and illustrates how state departments

of transportation can utilize accelerated construction and full freeway closures as tools to reduce the traffic impacts of major construction.

This documentary, "A Span in Time," (Figure 4) illustrates how prefabrication on a grand scale can shorten the time necessary for structure replacement, and reduce delays for commute traffic within the busy urban environment of the San Francisco Bay Area.

The project replaces a structure by demolishing an existing double-deck approach span the size of a football field that, on a normal working weekday, would carry 300,000 vehicles, and rolling into place a prefabricated replacement span. The planning and timing of this work was critical, with all construction scheduled to start and complete within Labor Day weekend 2007, with the structure scheduled to reopen for morning commute traffic. The story is told from the perspectives of the contractor, the legendary, C. C. Myers, dedicated Caltrans engineers and designers, as well as by reporters who covered the story. The technical details are instructive in this documentary, and there is a time lapse sequence that should be a part of any college course that discusses the use of accelerated construction. The project moves smoothly and completes 11 hours ahead of schedule. The documentary makes this a captivating experience that illustrates how all involved must work together to make ABC. Award-winning filmmaker, David Brown, filmed and produced the entertaining story with all the drama, comedy, optimism, dashed hopes, and plot reversals that can only happen in real life. The 3-D animation was by [Rick Pepper](#), and cartoon animation by [Charlie Canfield](#). Movie clips may be viewed for free at <http://www.aspanintime.com/>.

REBUILDING THE BOAT: FIXING I-5

This PBS documentary, "Rebuilding The Boat: Fixing I-5 in Sacramento," follows a construction rehabilitation project located on a busy urban section of I-5 Freeway in downtown Sacramento, CA. The film is copyrighted by Channel 6 KVIE, the Sacramento PBS affiliate for their show "Viewfinder" (Figure 6). This high traffic section is a depressed alignment through downtown, just blocks from the California State Capitol. The nickname, "The Boat," is slang for a watertight, depressed, retaining-walled freeway that will float like a boat due to a very high natural ground water table. A large number of tension piles resist the buoy-



Fig. 5. Movie Poster
Copyright PBS, KVIE Sacramento
(used with permission)

any action with a field of tension piles. The retrofit of the clogged drainage system and better pumping system, plus restored concrete paving system, were key structural items. The structural retaining system was sound, and only painting of existing concrete decorative wall embossments was in this contract. Originally conceived as a conventional construction project with lane closures planned for extended periods, accelerated construction is considered and utilized to reduce construction times and delays for traffic on this key artery, which carries 190,000 vehicles per day. Repair plans were placed out to competitive bidding. General Contractor, C. C. Myers was the low bidder, and proposed an ABC solution as a cost savings under the contract provisions. Myers' revised ABC plan was to reduce construction time from the maximum allowed of 305 days, to 34 days total. Caltrans agreed to Myers' ABC Plan, and put in place efforts to alert the public about freeway closures, and the rerouting of traffic necessary to successfully complete the project.

Entertaining documentary clips may be viewed for free at http://www.kvie.org/programs/kvie/viewfinder/rebuilding_the_boat/

(The remainder of this article will be published in next month's issue of The Engineerogram.)

ASCE Region 9 Governor

The “Civil Engineering Revival”

by Fareed S. Pittalwala, P.E.
Governor, ASCE Region 9



What is the greatest challenge facing civil engineers as we embark on 2012? Some say it's reviving the economy, addressing our ever degrading infrastructure, ensuring adequate and pertinent education of new engineers, or continuing to engage our legislators to ensure financial commitments to infrastructure. All of these are valid and interrelated,

and I can't imagine ranking them in order of priority.

The focus of this year's Engineer's Week (February 19th – 25th) is based on the projected world population of 7,000,000,000. It's fairly obvious that this increase brings many challenges facing our world that require immediate and sustainable engineering solutions. Civil engineers are needed in the United States today as much or more so than they were during the nation's most prosperous years of growth, but the world in which we will operate is vastly different. As Engineer's Week 2012 starts this year, it's important to remember, but more importantly to embrace all of these challenges with a renewed focus on education. Education of the public, and education of the new generation of younger engineers joining us as colleagues and taking our profession into the future.

We know the education we gave our past graduates, even those of the recent past, will not fit our times. Today's civil engineers increasingly need other skills as they negotiate with the public, incorporate social skills in their work, and address questions of cost and sustainability. So what should constitute the education of a civil engineer in the years to come? ASCE has produced a document, the “Vision for Civil Engineering in 2025” that includes some guidance on the topic.

Engineers must still be grounded in math, science, and discipline knowledge, but they need to have to have a broader understanding of the humanities, social sciences, and economics, as well as the ability to lead, the last of which may be the most important. Additionally, today's civil engineers must take advantage of outside opportunities: volunteerism, international study, and any other relative education beyond the civil engineering core curriculum, whether in undergraduate education, post-graduate education, or continuing education once licensed.

As we look at the challenges we face and the continuing growth of our population coupled with the continuing degradation of our backbone infrastructure, our society is turning once again to civil engineers. We are the only ones who can solve our transportation problems and upgrade our roads, bridges, and tunnels, and manage our precious water resources. This is truly the time for the “civil engineering revival.” I encourage you to work with ASCE Region 9 on their efforts to usher in this revival through its many programs and strategic efforts, including education of the future generations of civil engineers.

New Members of the Sacramento Section for December

Capital Branch

Walter William Bourez	P.E., M.ASCE
Maurice D. Hall	Ph.D., P.E., M.ASCE
Jacob Coby Heinrich	S.M.ASCE
William Malcolm Kenney	P.E., M.ASCE
Robert Paul L'Heureux	P.E., M.ASCE
Timothy Robert Melin	EIT, A.M.ASCE
Shariq Pervaiz	P.E., M.ASCE
Mark Robert Philipps	P.E., M.ASCE
M. Shayan Rehman	A.M.ASCE
B. J. Wall	P.E., M.ASCE
Robert Westall	A.M.ASCE

Central Valley Branch

Osvaldo Escalona	S.M.ASCE
Clint Gregory	S.M.ASCE
David Thomas Kramer	S.M.ASCE
Jared R. Malone	S.M.ASCE

Feather River Branch

Kate Allison Keller	S.M.ASCE
Alexandra Oran	S.M.ASCE

Shasta Branch

Quintin Anthony Flores	S.M.ASCE
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Engineers Day

**You are invited to Engineers Day to
Celebrate Engineers Week!
Saturday, Feb. 25, 2012, 10 AM to 7 PM**

FREE hands-on activities. FUN for all ages!!!

**Connect with other professionals, students and teachers.
In Sunrise Mall** near Customer Service and Macy's Women's South Fountain, 6009 Sunrise Ave., Citrus Heights, CA

Please help us spread invitations to students, teachers, families and friends. All are welcome to come. For more information, go to www.asce.org/kids. To volunteer, please contact Joyce Copelan at 530-908-8372, or jcopelan95694@yahoo.com.



ASCE Region 9
Announces the Sixth Annual
California Infrastructure Symposium
Awards Dinner
Legislative Day

SAVE THE DATE
February 28 and 29, 2012

The American Society of Civil Engineers (ASCE) realizes that critical infrastructure systems are facilities and assets so vital that their destruction or incapacitation would disrupt the security, economy, safety, health, or welfare of the public. One of ASCE's top priorities is to raise the grades on California's infrastructure.

ASCE Region 9 is taking the lead by presenting the **Sixth Annual California Infrastructure Symposium** to be held on **Tuesday, February 28, 2012**, in Sacramento. The Infrastructure Symposium will address such topics as roads and highways, bridges, high speed rail, water supply, and flood control. The speakers are invited to give you the most current information on Federal and State priorities, alternate modes of funding, the stimulus plan, gas tax restructuring, and more. There will also be discussion of National and Statewide Report Cards which will identify and bring attention for infrastructure support and renewal in California.

Following the Infrastructure Symposium, you may also register for an evening to help celebrate excellence in California Civil Engineering projects and honor the outstanding accomplishments of individuals at the **ASCE Region 9 Awards Dinner**.

Please mark your calendar to join us on **Tuesday, February 28, 2012**, at the Hyatt Regency Sacramento at Capitol Park, 1209 L Street, Sacramento, California for continuing education, networking, and social events you will not want to miss. Look for more information as it becomes available at www.asce.org/region9.

Also, please note that **ASCE Region 9 Legislative Day** will take place on **Wednesday, February 29, 2012** at the California State Capitol in Sacramento.

For additional information, please contact Lori Campbell, Administrator,
lkc.consulting@sbcglobal.net, or by telephone at 916.965.1536.



ASCE Region 9 represents more than 18,000 ASCE members in the State of California.

P.O. Box 2575 | Fair Oaks, CA 95628 | 916.965.1536 | FAX 916.965.6234 | www.asce.org/region9



February 2012



JANUARY EVENTS

January was a busy month for YMF! The January business meeting was held at the office of Mark Thomas and Company. YMF members discussed events for the year 2012. Topics ranged from the monthly YMF gatherings to WRYMC and ski trips.

Many thanks to the YMF members who represented the Sacramento section at 2012 WRYMC gathering in Portland, OR; Marie Silveira, Rachel Radell, Shauna England, Mike Konieczki, and Elias Karam.

Finally, TMF Student Affairs Chair Steve Soldati and Sacramento Section Practitioner Advisor Greg Young, with help from YMF members, conducted a resume workshop and mock interview session on the campus of UC Davis. The workshop helped to advise students on how to obtain entry-level and internship positions. Feedback from students was definitively positive. Similar workshops will likely be held on the campuses of Chico State, Sacramento State, and University of the Pacific throughout the year.

MARCH SOCIAL

YMF's March Mixer will be held at Capitol Bowl on Thursday March 1st from 5:45-8:00 PM. Capitol Bowl is located at 900 West Capitol Avenue in West Sacramento. Free pizza will be provided by YMF. Bowling is free for YMF members (Shoes are \$1.50). YMF members are encouraged to bring guests at a cost of \$10 per guest. The March social also serves as an opportunity to fundraise for local students to compete in concrete canoe and steel bridge competitions. The suggested donation is \$5. Please RSVP for this event with Elias Karam at Elias.Karam@Jacobs.com

LEGISLATIVE EVENTS

Two important legislative events are coming up. First the state "drive in" day with California legislators will be on February 29,

2012. In addition, a federal fly-in day will be held March 20-22, 2012. YMF members are highly encouraged to get involved in order to add younger voices to the legislative process. Look for further details in the future.

FEBRUARY MIXER

The February Mixer will be held on the campus of Sacramento State University in Del Norte Hall Building Room 1004 on Thursday February 16th. The presentation will be on the San Francisco-Oakland Bay Bridge Project. The presenters will be Dr. Brian Moroney of Caltrans, Karen Wang of HNTB, and Leonard Cross of Smith-Emery Company. Free pizza will be served from 5:30-6:30 with the presentation to follow from 6:30-8:30. Space is limited! **RSVP is required.** Interested participants can RSVP at <http://asce-sfobb-feb16.eventbrite.com> or by following the link on the YMF website. Please note the parking will cost \$6 for a daily campus parking permit.

COMING SOON

Be sure to check out future YMF newsletters for upcoming events, such as YMF events, our annual golf tournament, and PE review classes.

UPCOMING EVENTS

- * February 16th: YMF meeting at Del Norte Hall Room #1004 on the campus of CSUS
- * February 29th: California Legislative "drive in" at the capitol
- * March 1st: Bowling at Capitol Bowl in West Sacramento
- * March 20-22: Federal "fly in" at Washington DC

For more information, visit www.sacymf.org



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