

ASCE HAWAII SECTION

2014 Outstanding Civil Engineering Achievement Award Winners

The American Society of Civil Engineers (ASCE) Hawaii Section is pleased to announce the 2014 Outstanding Civil Engineering Achievement (OCEA) Award winners. The purpose of this award program is to recognize projects that demonstrate important outstanding civil engineering accomplishments by Hawaii's design and construction professionals. To be eligible, projects were required to have been designed for constructed in Hawaii and completed within the last two years. Some of the key judging criteria included: Resourcefulness in identifying and solving design challenges; Contributions to the well-being of people and communities; Pioneering use of materials and construction methods; Inventive or new application of civil engineering technologies; Protection of and reducing impacts to natural resources; Beneficial effects of the project, including aesthetic value.

The following projects and project teams were honored and presented with awards at the ASCE Hawaii Section OCEA Awards Banquet, held at HASR Bistro on Saturday, September 27th, 2014. Congratulations to our winners!

2014 Hawaii Section Outstanding Civil Engineering Achievement Award and Best Transportation Project (Project to be nominated by the ASCE Hawaii Section for the 2014 Region 8 OCEA award).

Project Name: Hana Highway Route 360 Emergency Repairs

Project Owner: State of Hawaii, Department of Transportation

Submitted By: AECOM

Heavy rains in March 2012 set record rainfall levels and caused extensive flooding across most of Hawaii. The heavy storm water runoff caused extensive damage. It severely washed away roadway embankments and sections of pavement at two locations, Mileposts (MP) 10.4 and 14.0, along Hana Highway (Route 360) in Maui. The runoff also triggered landslide debris that swept over the entire highway at a third location, MP 16.0. These runoffs buried parts of the highway and forced vehicles to drive on a single lane, further increasing the potential for progressive ground instability.

The roadway closures immediately disrupted the lives of Maui residents because Hana Highway is the sole thoroughfare that connects the town of Hana, in East Maui, to the rest of the island. The town and highway offer visitors popular scenic routes and tourist attractions.



Therefore, road closures negatively impacted the business and livelihood of the town community by making it difficult for both residents and visitors to access and leave Hana. More importantly, however, dangers from driving along the eroded highway threatened people's health and safety.

RESOURCEFULNESS IN IDENTIFYING AND SOLVING DESIGN CHALLENGES

The project team faced several challenges: working in a remote part of the island with limited infrastructure for accessing each affected site; working along steep mountain slopes; managing heavy daytime vehicular traffic; working along narrow road lanes with limited passing and sight distances; and facing unpredictable and frequent heavy rains. Additionally, construction required heavy equipment that could potentially compromise the aging transportation bridges—which have restrictive load capacities—along Hana Highway.

The challenge at MP 10.4 was to repair damage along a sharp curve in the road. On the mauka side, adjacent to the road, there was a 20-foot high vertical slope and on the makai side, flooding damage had washed over the roadway shoulder and undermined the road pavement, leaving hanging guardrails and a 45-foot deep drop-off. The team undertook corrective actions on the makai side by shifting the roadway alignment approximately nine feet in the mauka direction and cutting back the slope to a more stable 1.5H – 1.0V gradient. The team further stabilized the new cut slope by applying an erosion mat, which was secured to the slopes with a mechanical earth anchor system and vegetated. The team stabilized the makai embankment by installing a system of deep soil anchors and a high strength wire meshing and an erosion mat to assist with the

natural growth of vegetation on the slope. Shifting the road alignment and cutting back the mauka slope allowed for a design that improved vehicle site distance and motorist safety, while allowing the existing steep makai embankment to be stabilized in place and avoid extensive backfilling and grading.

Conversely, since site constraints at MP 14.0 made road realignment impractical there, the design approach taken at this site was to restore the undermined makai roadway section by incorporating a relatively shallow reinforced concrete wall that utilized tieback anchors and micropiles spanning and retaining the damaged section of roadway. By limiting construction to only the makai side of the road, the mauka travel lane could remain open to contraflow traffic. Once the roadway was restored, improvements to the mauka slope could commence by shifting contraflow traffic to the new makai section of roadway.

PIONEERING USE OF MATERIALS AND CONSTRUCTION METHODS

Each of the three highly damaged locations presented challenges that required the project team to improvise and adapt its methods to overcome difficult site conditions.

MP 10.4- Installation of Platipus mechanical anchors combined with a high tensile strength erosion mat along the mauka embankment to stabilize soil slopes against shallow failures. This system allowed for the design of a steeper embankment, thus reducing land acquisitions and increasing savings for the State.

Installation of the soil anchors near the bottom of the deep slope on the Makai embankment required fabrication of a special support cage equipped with a down-the-hole hammer.

MP 14.0 - The highway width along the flood damaged stretch was too narrow to accommodate both the mandatory contraflow traffic and

continued on page 9





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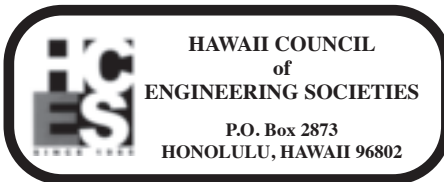
1829 Dillingham Boulevard • Honolulu, HI 96819
Telephone: (808) 841-7644 • Fax: (808) 847-1487

ADDRESS ARTICLES FOR PUBLICATION TO:

WARREN YAMAMOTO

1526-C Pukey Avenue • Honolulu, HI 96816
Telephone: 732-5216**WILIKI MAILING LIST**

Additions and/or corrections to the Wiliki mailing list should indicate the proper society, institution or association. Corrections to email addresses should be submitted to your society coordinator.

HOME PAGE: <http://hces.us>**2014-2015 OFFICERS**

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Chair-elect: Les Kempers
Secretary: Joanne Hiramatsu
Treasurer: Stephanie Doan

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AlternateWebsite: hawaii.apwa.net**Hawaii Chapter 2014 Officers**

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	kck@akinaka.com	
Vice-Pres	Tyler Sugihara	768-3600
	tsugihara@honolulu.gov	
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	vvaldez@ssfm.com	
Secretary	Mark Yonamine	768-8481
	myonamine@honolulu.gov	
Past Pres	Jeffrey Cudiamat	488-5000
	engineer@structuralhawaii.com	

<http://www.hawaiihspe.org/>**HSPE Officers, 2014 to 2015**

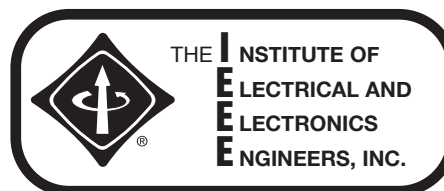
Darren Okimoto President
dokimoto@wsue.com
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curt137inverse@yahoo.com
Kurt Kunimine Secretary
kkunimine@bowersandkubota.com
Joelle Dubois Past President/Treasurer
jdubois@bowersandkubota.com
Majella Stevenson NSPE HOD Rep
Majella.Stevenson@navy.mil
Barry Nakamoto Educational Foundation
barry.nakamoto@heco.com
Marc Botticelli Kona-Kohala President
marc@wrsolutions.com
Mandy Saito Maui Chapter Director
mandy@femaui.com

Nominations are being sought for **Engineer of the Year** and **Young Engineer of the Year** candidates. Nomination forms will be available on the HCES and HSPE websites. The awardees will be presented at the 2015 Engineer's Week Banquet in February, 2015. Please contact Majella Stevenson of HSPE at MujTravel@aol.com or Joelle Dubois at jdubois@bowersandkubota.com if there are any questions, or for nomination forms. Nominations will be due in December of 2014. Mahalo!

IMPORTANT INFORMATION ABOUT NOMINATIONS FOR THE ENGINEER OF THE YEAR, YOUNG ENGINEER OF THE YEAR, AND HCES LIFETIME ACHIEVEMENT AWARDS.

HCES is currently seeking nominations for the prestigious **2015 HCES Lifetime Achievement Award**. This is a highly prestigious award which aims to recognize those seasoned individuals who have achieved significant accomplishments and contributed greatly to the engineering profession and local engineering industry.

Nominee eligibility requirements, as well as nomination and submission instructions are available on the HCES website, <http://www/hces.us>. Nomination packages are due Friday, December 19, 2014. The awardee will be featured in the February 2015 edition of the Wiliki O Hawaii and be presented a plaque at the 2015 HCES Engineers Week Banquet, on Saturday, February 28, 2015.

**IEEE Hawaii Section****2010-11 Hawaii Section Officers**

Section Chair: John Camery
john.camery@gmail.com
Vice-Chair: Chris Russell
Treasurer: Marjorie Pearson
marjorie.pearson@twtelecom.com
Secretary: Grant Torigoe
Grant.Torigoe@hawaiiantel.com

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Website: www.eaauh.org**2014-2015 Officers**

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Past Pres	Glenn M. Nohara

It's that time again! In a short 6 years, Holmescoming has grown into Hawaii's premier "friendraiser" event, bringing together our engineering community in a very casual format for great food, great drinks, and great entertainment. It's a terrific opportunity to catch up with old friends and create new ones.

PLEASE SAVE THE DATE!**7th Annual Holmescoming****Friday, November 21, 2014****5pm to 8:30pm****Holmes Hall, UH Manoa Campus**

Sponsorships: \$1,300 (10 Tickets, recognition and signage at event)

Individual Tickets: \$75 each

Make checks payable to UHF/COE and mail to:

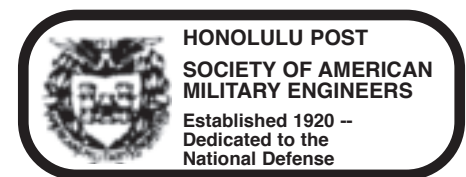
2540 Dole Street, Holmes Hall 240

Honolulu, HI 96822

Attn: Jean Imada

For information, 956-5112

Wiliki Advertisers Wanted

P.O. Box 31218, Honolulu, HI 96817
Web page: www.samehonolulu.org**Officers/Directors/Advisors for 2014-15**

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Advisor at Lge,	
Navy	TBD
Advisor at Lge,	
Air Force	TBD
Advisor at Lge,	
Coast Guard	LCDR Clay McKinney, PE, USCG
Advisor at Lge,	
Civilian	John Lohr, Col, USAF (Ret)



2014-2015 ASCE HAWAII SECTION OFFICERS

Office	Name	Phone
President:	Glenn Miyasato, P.E. email: gmiyasato@ascehawaii.org	488-7579
President-Elect:	Benjamin Rasa, P.E. email: brasa@ascehawaii.org	531-1308
Vice President:	Timothy Goshi, P.E. email: tgoshi@kaihawaii.com	791-3966
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YMF President:	Puna Kaneakua, P.E. email: pkaneakua@ascehawaii.org	593-1116

NOVEMBER DINNER MEETING

Program: Honolulu Sea-Level Rise Risk and Vulnerability Study

Speaker: Dolan Eversole, NOAA Coastal Storms Program Coordinator, Pacific Islands Region

Synopsis: Among the impacts associated with climate change is the threat of rising sea levels. Recent projections of global sea level rise (SLR) estimate an increase of up to 1 meter or higher above current sea levels. This is of particular concern to low-lying coastal communities and ecosystems which are exposed to a variety of coastal hazards, such as tsunamis and hurricanes. These hazards and the resulting risk to coastal areas can be exacerbated by SLR. A thorough risk and vulnerability assessment includes the mapping of inundation and an analysis of social and economic impacts as a result of SLR and associated coastal hazards.

This project aims to fulfill the need for Hawaii-specific information regarding the impacts of SLR on coastal areas within the state. Because of its high density, large population, major infrastructure, and high economic activity, the project focuses on the urban corridor of Honolulu, as it represents the majority of the state's commercial and industrial sectors. This area of focus extends from Diamond Head to Pearl Harbor in Honolulu, Hawaii. The objective of the research is to identify the change in exposure and risk to coastal inundation hazards such as hurricanes, tsunamis, and storm inundation as a result of SLR.

Date: Thursday, November 20, 2014

Location: Dave and Busters, Paina Room

Time: 5:30 p.m. - Social Time
6:30 p.m. - Dinner
7:00 p.m. - Program
8:45 p.m. - Adjourn

Menu: Multi-entree buffet
Cost: \$30.00 for ASCE Hawaii Section members
\$35.00 for Non-ASCE Hawaii Section members and Guests
\$20.00 for UH Manoa Student Chapter members

Please make checks payable to ASCE Hawaii Section and mail to Eric Arakawa, ASCE Hawaii Section Treasurer, The Limtiaco Consulting Group, 1622 Kanakanui Street, Honolulu, HI 96817. Please send reservations

for the dinner meeting to Eric Arakawa by Wednesday, November 12th, 2014, by phone at 808-596-7790 or email at earakawa@asce-hawaii.org. No shows will be billed.

EXECUTIVE COMMITTEE MEETING

Last held: October 9, 2014

Next meeting: November 4, 2014

CONTINUING EDUCATION

ASCE National holds more than 275 seminars and computer workshops each year on a wide variety of technical, management, and regulatory topics. These seminars are held in more than 45 cities across the U.S. In addition, ASCE offers customized on-site training and many distance learning programs, including live interactive web/teleconference seminars, online courses and courses on CD, videotape, and audiotape. Please visit <http://ascehawaii.org> for complete details.

ASCE HAWAII SECTION STUDENT SCHOLARSHIPS

Please help us increase our scholarship endowment so that we can recognize deserving students. We continue to accept tax-deductible donations with the goal of increasing the annual scholarships. Make your check payable to 'ASCE Hawaii Section' and mail to: ASCE Scholarship Committee, P.O. Box 917, Honolulu, HI 96808-0917. If you have any questions, please contact Brian Enomoto at 388-5559, or benomoto@ascehawaii.org.

2014 WATER REUSE CONFERENCE

10th Biennial Water Reuse Conference on Oahu covering program highlights, regulatory, user, and technical presentations regarding reuse. The conference also provides a great networking opportunity for all.

Sponsored by:

Hawaii Water Environmental Association (HWEA)

American Water Work Association, Hawaii Section (AWWAH)

American Society of Civil Engineers, Hawaii Section (ASCE)

Dates: Thurs., November 13, 2014 to Fri., November 14, 2014

Time: (Thurs) 8:00a-7:00p and (Fri) 8:30a-12:00p (Hwn Time)

(Please visit website for more details on conference program)

Location: Pagoda Hotel, 1525 Rycroft St. Honolulu HI, 96814

Deadline to Register: November 3, 2014

Please visit <http://www.awwa-hi.org>, section events tab OR <http://www.hwea.org>, 2014 Water Reuse Conference tab for complete details.

ASCE JOB LISTINGS

The following job listings are currently posted on the ASCE Hawaii Section website:

- Civil Engineer VI – City and County of Honolulu
- Civil Engineer IV – City and County of Honolulu
- Civil Engineer V – City and County of Honolulu
- Mechanical Engineer IV – City and County of Honolulu
- Civil Engineer V – SSFM International
- Construction Manager – (Company withheld)

For further information on these job listings or to find out how you can post job openings in your company on this website, please visit <http://www.ascehawaii.org/job-listings.html>.

VOTERS TO DECIDE ON STATE CONSTITUTIONAL AMENDMENT PROVIDING FINANCING FOR DAM SAFETY IMPROVEMENTS

Voters will be asked to approve an amendment to the state Constitution in the November General Election to authorize the issuance of special purpose revenue bonds to finance dam and reservoir improvements. The amendment will provide financial assistance for public and private dam owners to make improvements to meet safety standards. A similar measure failed to pass during the 2012 election.

Following the 2006 breach of the Ka Loko dam on Kauai, the Department of Land and Natural Resources conducted an investigation of other reservoirs and dams throughout the state. This led to the passage of Hawaii Administrative Rules, Chapter 13-190.1 setting safety standards to be met by the facility owner.

ASCE supports the enactment of policies to provide sustainable and dedicated funding sources for repair, rehabilitation, or removal of publicly and privately owned dams in the state. Hawaii voters will be asked to vote "For" or "Against" Constitutional Amendment 5 which reads as follows:

"Shall the State be authorized to issue special purpose revenue bonds and use the proceeds from the bonds to offer loans to qualifying dam and reservoir owners to improve their facilities to protect public safety and provide significant benefits to the general public as important water resources?"

An affirmative vote **"For"** will ensure funds are available to improve dams and reservoirs protecting public safety and preserving important water sources. When going to the polls on November 4, remember this:

- Special Purpose Revenue Bonds will not create an additional burden for the state or taxpayers
- Both public and private entities will have an opportunity to seek out special purpose bonds.
- The measure will have no effect on current or future tax rates or debt limits.
- Ensuring funds are available for dam and reservoir improvement is in the public interest

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2014-2015 YMF Officers

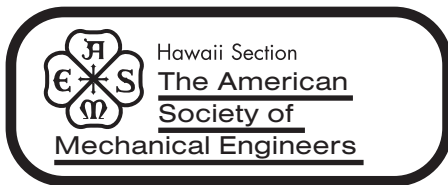
Puna Kaneakua, President
pkaneakua@ascehawaiiymf.org
Amanda Tanaka, Vice President
atanaka@ascehawaiiymf.org
Norman Leong, Secretary
nleong@ascehawaiiymf.org
Jordan Urabe, Treasurer
jurabe@ascehawaiiymf.org
Jason Sugibayashi, Past President
jsugibayashi@ascehawaiiymf.org

2014-2015 YMF Officers

Congratulations to the new officers listed above.

YMF General Meeting

The next YMF general meeting is scheduled for Wednesday, November 5, 6:00 p.m. at Hoku Brewing Company. If you are interested in attending to find out what the YMF is all about, contact YMF at ymf.hawaii@gmail.com.



www.asme-hi.com

ASME-HI 2014-2015 Officers

Chairperson	Derek Sato	543-4108
	Derek.sato@hawaiianelectric.com	
Vice-Chair	Derick Kam	848-6966
	kam@thermaleng.com	
Secretary	Kory Ikeda	628-1231
	kory.isamu@gmail.com	
Treasurer	Kevin Dang	737-1708
	dangk001@hawaii.rr.com	
Past-Chair	Kory Ikeda	628-1231
HCES Rep:	Derick Kam	
Alternate:	Derek Sato	

NEXT ASME-HAWAII SECTION GENERAL MEMBERSHIP MEETING

Date: To be determined
 Time: 5:30 pm to 7:00 pm
 Place: HECO Ward Ave Cafeteria
 Conference Room
 Agenda: To be determined

All members are invited and encouraged to attend our meetings. There are always lots of free pizza and soft drinks. Please contact Chairman Derek Sato or Secretary Kory Ikeda for directions and for more information, such as parking within Hawaiian Electric's Ward Avenue facilities.

HILITES OF SEPTEMBER 23, 2014 GENERAL MEMBERSHIP MEETING

Speaker, Edward Russell, was not able to attend meeting to make his presentation. He will be re-scheduled for another meeting. Chairman Derek Sato conducted the meeting and the following was discussed or presented:

Student Section reported a busy October with a resume workshop, Pearl Harbor Career Speaker, Boeing Career Speaker, Wind farm tour, and Beach cleanup event. In January 2015, they are planning a Pearl Harbor tour.

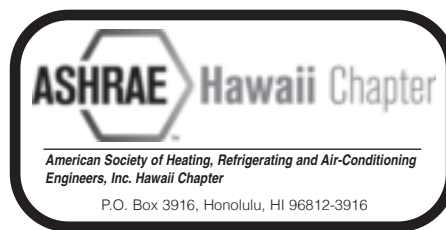
The UHM Department of Mechanical Engineering (DME) report made by Dr. A. Zachary Trimble, ASME Student Section Advisor, included the following: COE expects up to 25% budget cuts this year. DME has the largest enrollment, and thus has taken over several Teaching Assistant (TA) positions from EE. The Senior Design class, ME481/482, has 84 students enrolled. Due to the large enrollment DME has acquired an additional study room. ME 213 Introduction to Design class will be taught by Dr. Nejhad. DME plans to integrate project classes from ME213 and ME343 to ME481/482. The CE271 Statics class will be led and taught by DME. ABET meetings will be held this fall for 2015. Senior design projects include Formula car, electric vehicle, exercise bike to electric power, aero teams, medical product, HPV, and an underwater thruster. Dr. Ghorbani will share leading/instructing the ME481/482 classes with Dr. Trimble.

Outstanding Hawaii Section Member Recognition: How does the section recognize, show appreciation, and honor a member who has been active in the section for a long time, who has served in officer and committee positions, and provided outstanding guidance, advice, and service? The discussion outcome was presentation of a plaque and possibly din-

ner with officers and directors. If there are other suggestions, please contact Derek Sato.

Hawaii Section Shirts: Derek Sato presented his findings on possible suppliers. Kenjo is top on the list with many qualities above others, such as no minimum quantity need to be ordered, and variety of styles and colors available. Sato advised to offer two styles and colors for each gender. Setup fee for ASME logo will be \$65. Less expensive shirt prices range from \$20 to \$30, while higher quality shirts range from \$35 to \$55. Sato will assemble document for committee review.

Speaker Appreciation Gifts: Derek Sato presented his findings on possible gifts. They include Padfolios and Messenger Bags. Padfolio quantity and costs: 25 minimum to 49 at about \$23 each. Messenger Bags quantity and costs: 12 minimum to 24 at about \$53 each. Shipping and setup fees total over \$290. Bags from Kenjo cost \$50 for 7 bags minimum. Sato will assemble document for committee review.



William (Bill) Lee, PE	President
Donna Kishi	President-Elect
Dean Borges, PE	Vice President
Kevin Luoma, PE	Secretary
Mofazzal Mir, PE	Treasurer
Barry Jim On, PE	Past President

We are looking for nominations for the ASHRAE Technology Awards. For more information on the ASHRAE Technology Awards Program, go to <https://www.ashrae.org/membership—conferences/honors—awards/technology-awards-program>. Deadline for nominations is March 31, 2015. Please forward any nominations to Lori Arakawa, Technology Chair, at lori.a.arakawa@usace.army.mil.

October was National Energy Awareness Month. Congratulations to Les Taniyama, Blake Araki, Eric Nakagawa, Herman Siu and the rest of the Moore Hall Team for outstanding efforts in leading the way in energy conservation! Living in the State of Hawaii, we all have a part in making smart energy choices, protecting our environment and increasing our energy inde-

pendence. The future is in our hands. Let's be good stewards of energy usage and our environment!

There is a lot of good work that the HVAC community is doing to promote energy conservation and make buildings more energy efficient. What better way to recognize these efforts than to apply for an ASHRAE Technology Award? If you or someone you know worked on a project that achieved significant energy savings, indoor air quality and thermal comfort, cost effectiveness, reduced environmental impact, and displayed innovative design - tell us about it.



HAWAII CHAPTER OFFICERS

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rbigtas@ssdafire.com
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 Thermal Engineering Corporation
 Secretary: Ferdi Guinto
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Engineers Without Borders - Honolulu
<http://www.ewbaloha.org>

2012-2013 Officers

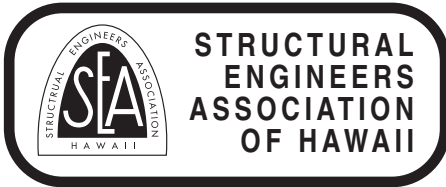
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 Secretary: Erin Allmann
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 Fundraising Chair: Brett Updyke
 Membership Chair: Sumon Kanpirom



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www.aacehawaii.org

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Secretary	Maelyn Uyehara
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Director of Communications	Joseph Uno, LEED AP BD+C
Director of Membership/Webmaster	David Ladines



PO BOX 3348, HONOLULU, HI 96801
Web Page URL <http://www.seaoh.org>

2014 BOD OFFICERS AND DIRECTORS

Position	Officer	Phone
President	Ethan Okuna	945-0198 x103
Vice Pres.	Fernando Frontera	781-2802
Secretary	Evan Mizue	387-2346
Treasurer	Jimmy Lam	223-3638
Dir. (Yr 2)	Paul Kane III	537-2811
Dir. (Yr 2)	Tim Waite	479-1216
Dir. (Yr 1)	Rodney Haraga	782-8661
Dir. (Yr 1)	Michael Kasamoto	589-1170
Past Pres.	Brian Kung	488-7579

HIGHLIGHTS OF BOD MEETING

October 1, 2014

Committee Reports

General Membership Meetings/Technical Seminars/Events

- November 28: SEAHO Golf Tournament @ Pearl Country Club. RSVP to Ethan Okuna or Rod Haraga.
- December 11: Seismic Steel Braced Frame Seminar on design concepts and connections, developed by AISC with speaker Rafael Sabelli.

General Membership Meeting

The fourth and last general membership meeting of 2014 was held at the Honblue Brue Bar. It was a great social gathering mixed with a focus on the Board of Directors' third discussion and presentation of proposed revisions to SEAHO Bylaws and Articles of Incorporation. Additionally, the Board made a last call for nominations for 2015 Officers and Directors. If you were unable to attend, contact Ethan Okuna (945-0198 x103, eokuna@cshengineers.com) if you have any concerns or questions.

Ballots for 2015 SEAHO Board of Directors:

Look out for your ballot to vote for the 2015 SEAHO Board of Directors.

Structural Special Inspections:

SEAHO Special Inspections Subcommittee is continuing discussions with the Honolulu Department of Planning and Permitting to explore instituting IBC special inspection requirements and an update of the special inspection form. Regularly scheduled lunch meetings are being held on Fridays, every two weeks, at Baldrige & Assoc. If you have opinions on the future implementation and enforcement of special inspections, please contact Ms. Kulia Boerstler (808) 534-1300, or any member of the Board.

New Website:

We are working on developing a new website for SEAHO. Please let us know if you have any ideas on information/functions that should be included in the new website. Also, we are looking for corporate sponsors who are interested in displaying their logo in the website. If you have ideas for the website or are interested in being a sponsor please contact Fernando Frontera (frrontera@baseengr.com).

New Member

The following membership applications have been accepted:

- Bryce Iwami, U of Hawaii, Student Member
- Lani Johnson, U of Hawaii, Student Member

New Member Applications

Application for Nathan Powelson, Wiss Janney Elstner Associates, Inc., for Allied Membership, has been received and is open for comments from the membership

Missing Members

Please contact Membership Chairperson, Jiabao Chen (Ph: 791-3945 or email jchen@kaihawaii.com), or any of the SEAHO Officers if you have a new mailing and/or email address.

Next Meeting

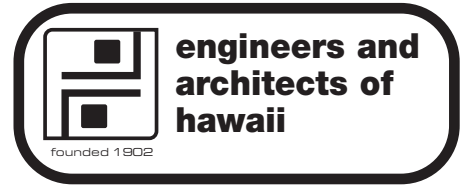
The next SEAHO Board of Directors and Officers meeting will be held on Wednesday, November 5, 2014. Contact SEAHO President Ethan Okuna (945-0198 x103, eokuna@cshengineers.com) for more information.

ASCE Dams, from page 3

est. Breaches not only create a public safety risk but, can cause significant damage to infrastructure in the surrounding area.

A blank vote is counted as a vote "Against" the measure.

Amendment 5 is supported by the ASCE Hawaii Section in addition to the Chamber of Commerce of Hawaii and a number of agricultural and land use groups throughout the state. It is also one of 15 legislative proposals endorsed by the Department of Land and Natural Resources. Help preserve the dams and reservoirs throughout the state by supporting and urging others to vote for this critical ballot measure.



po box 4353, Honolulu, Hawaii 96813

An association for Hawaii's Engineers and Architects
WEB address: www.eahawaii.org

EAH 2013- 2014 Officers

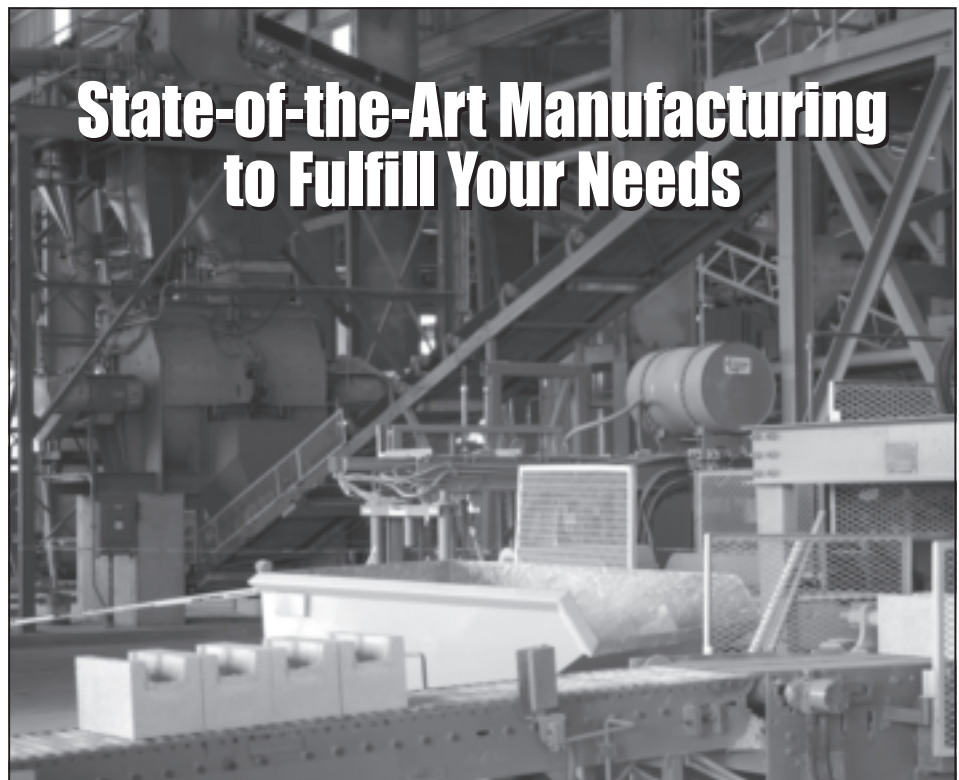
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EAH's new meeting location is above the Mango Grill in the Topa Tower (Ewa tower on Fort Street) of the Topa Financial Center (Old AMFAC Bldg). Take the elevator to the 3rd floor conference room. Parking is available (enter from Nimitz). The WEB site has been updated to provide directions and a Map. If you have questions please call Sam Gillie (543-4739).

Meetings are held every Friday (except Holidays). Meetings start at NOON and have ended PROMPTLY at 1:00 pm for 70 Years.

Program schedule may be adjusted, call Sam Gillie to confirm speaker 543-4739 Fax 203-1335.

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KNOW YOUR ASCE HISTORY

by C.S. Papacostas

Mauna Kilika and Market House Armories

In May of last year (2013) I promised to get back to the story behind the Armory of the National Guard of Hawaii that stood where today's State Capitol is located. At its location, on the Waikiki side of Miller Street (makai of Beretania, now gone) that divided the block from Richards to Punchbowl Streets in two halves, was a Drill Shed and Armory that was erected in 1886 [Daily Honolulu Press 4/7/1886]. To make room for the Capitol building opened on March 16, 1969, the fortress-like Iolani Barracks (Halekoa) that had been built before the Shed in 1870-71 next door was moved, block by block, to the adjacent Palace grounds.

As a legislator put it in 1890, Hawai'i's military was composed of companies existing "under a law different from any elsewhere [Hawaiian Gazette, HG, 7/8/1890]." At any given time, there were the regular troops, several uniformed voluntary militia companies, paramilitary but government-supported forces, and armed groups and clubs of varying persuasions and political affiliations. The detailed evolution of these groups would be of interest in many quarters. However, I will be selective in my reporting that follows, keeping in mind that my present objective is to talk about the story behind the Armory and not the military history of Hawai'i.

An armory in the modern sense was clearly part of the Honolulu Fort (1816-1857) that gave Fort Street its name and served many other functions also, including as residence for the Governor of O'ahu and as a prison. It was located below the intersection of Fort and Queen Streets very near the shoreline prior to the reclamation of the adjacent area. Interestingly, a building outside the southeast boundary of the fort, designated as the "Armory" in a well-known 1854 sketch by Paul Emmert of a View of Honolulu from the Harbor (No. 1), was better known as "Mauna Kilika" or "Silk Mountain." This 1840 building served a variety of purposes as well, including as a legislative assembly hall, a hospital for foreign sailors, and the meeting place for political and social organizations.

A notable or, for many, notorious paramilitary force was the Honolulu Rifles. Indications are that it had its genesis in an 1852 foreign sailor disturbance: During a quarrel in the fort between an American and a French sailor who had been incarcerated for being intoxicated, a prison guard, Constable Sherman, clubbed the American, Henry Burns, to death. This incident precipitated a riot involving foreign seamen and resulted in the destruction and burning of a building housing "the Harbor Master, Pilot's office, police station, and water reservoir" and "two small buildings adjoining, used as butcher shops [Polynesian, (Pol.) 11/14/1852]." As the Governor of O'ahu hesitated to deploy regular soldiers and "shed blood," a group of mostly foreign residents sought his permission to form a volunteer company to protect their properties and to quell the disturbance. He agreed and provided arms to two groups named "Hawaiian Guards" and "Hawaiian Cavalry" that were later described as "independent companies of foreigners with a few exceptions in the latter company [Pol. 3/19/1853]." More specifically, the

two groups were reported to be made up of "foreign residents, naturalized foreigners, and sons of foreigners [Pol. 4/30/1853]." Following the incident, the King thanked the volunteers by saying "I take this occasion to thank you all, as well as the other foreigners, who on a late occasion, mustered in arms in support of my authority of law and order [Pol. 12/4/1852]."

Renamed the "First" Hawaiian Guard, the new organization held training and drill sessions at its armory, said to be near the New Court House, and participated in ceremonies such as a Fourth of July parade [e.g., Pol. 6/24/1854]. The new Court House, by the way, was completed in 1852 and was located on Queen Street outside the fort on its Waikiki side.

A newspaper announcement introducing the Honolulu Rifles appeared in Feb. of 1857: "A meeting of the 1st Hawaiian Guard will be held at their armory... for the purpose of organizing a Rifle Company. Subscribers of the Honolulu Rifles, and all others interested in the formation of a Military Company, are respectfully invited to be present." Subsequently, the Polynesian of Saturday, Feb. 28, 1857 informed its readers that "at a meeting of the Hawaiian Guard at its Armory on last Thursday evening, it was resolved to organize a new volunteer company" named "Honolulu Rifles." Moreover, "some thirty persons, members of the old 'Guard' and others, subscribed their names on the spot." Interestingly, "Minnie Rifles and uniforms to match [were] expected in the 'Raduya,' 110 days out from Boston." The reference here to the "old" Guard (as opposed to a "new" one) is explained below:

These events took place at a time when, by proclamation, the King re-organized the "Royal Guard and Volunteer Forces" of the Kingdom. Among the changes contained in a related Order No. 1 issued by Secretary of War W. L. Green was the disbandment of the Hawaiian Cavalry and its replacement by a new "Leleiohoku Guard," the renaming of "The Prince of Hawaii's Own" volunteer artillery company to "The Prince's Own," and the formation of a new "Hawaiian Guard" volunteer infantry company to replace the "old" one mentioned in the previous paragraph. The entire proclamation and order, dated February 27, 1857, were published in the Pacific Commercial Advertiser [PCA 2/28/1857]. A sibling of the future King Kalakaua and the future Queen Lili'uokalani, Prince Leleiohoku was the heir apparent to the throne at that time.

Thus, a meeting at the armory of the "new" Hawaiian Guard took place in order to organize the Honolulu Rifles volunteer militia that consisted of members of the "old" Hawaiian Guard and others. Encouraging the public to contribute to the support of the Rifles, the Polynesian [3/21/1857] inferred that "His Majesty [had] in a substantial manner evinced a lively interest in this corps." The PCA [3/4/1858] identified the Rifles' Armory as being on Fort Square, that is, the space opened up by the demolition of the fort. Judging by proximity, it may have been the same building where the old Guard had its Armory, but I have not been able to prove this hypothesis.

Shortly thereafter, on June 21, 1858, the trustees of the Rifles' company submitted a petition to the Legislature "setting forth that the

building at present occupied by them as an armory is entirely unsuited for that purpose [PCA 7/1/1858]" and a bill was submitted by Rep. Manini of the Military Committee "authorizing the Minister of the Interior to grant Honolulu Rifles the free use of the upper part of the Market House for an armory." By October of the next year, the PCA [10/27/1859] noticed "that the second floor of the market is being converted into a large room to be occupied as an Armory by the Rifles."

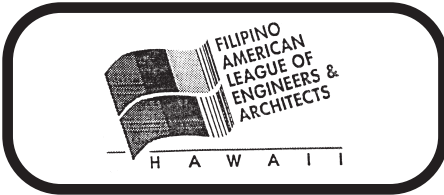
Constructed in 1851 by the Government on the wharf-side of Queen Street between Ka'ahumanu and Nu'uanu Streets, the two-story coral building was featured in the same painting by Emmert that included Mauna Kilika: Both are shown below. At the time, the first story was occupied under a long-term lease by a re-organized C. Brewer & Co. The building was often referred to as the "C. Brewer Building" and the adjacent wharf, Pier 12 since 1914, was at that time known as Brewer's Wharf. It was here, by the way, that troops from the USS Boston landed on January 16, 1893 during the overthrow of the Kingdom of Hawai'i.

The Honolulu Rifles occupied their Market House armory until 1886 when they moved to new quarters previously used by a skating rink and roller coaster enterprise at Manamanama on the makai side of Beretania beyond its intersection with Punchbowl Street [Daily Press 8/12/1886].

Stay tuned!

Do you know of a civil engineering accomplishment or event that your fellow ASCE members might find interesting? Please send a brief description to C.S. Papacostas (fax 956-5014, email csp@wiliki.eng.hawaii.edu). Previous articles in the series may be found at the Section's web site. Just point your browser to <http://www.ascehawaii.org>.





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OCTOBER HIGHLIGHTS:

AWARDS BANQUET AND INDUCTION OF OFFICERS & DIRECTORS – The start of the FALEA 2014-2016 administrative year took place this past October 11 at the Pacific Beach Hotel Grand Ballroom where the Awards Banquet and Induction of New Officers & Directors of the 21-year-old organization took place. Scholarships were also awarded to each of five deserving students. Additionally, three outstanding professional members were presented and recognized for their accomplishments.

The inducting officer, and guest speaker of the evening, was Consul General Gina A. Jamoralin, the new Consul General at the Philippine Consulate General in Honolulu. Inducted into their respective offices were: Francisco T. Cruzata, President; Gene C. Albano, Jr., VP/President-Elect; Maritez A. Marquez, Secretary; Riza Marie R. Gatdula, Treasurer; Belinda P. Tegui, Assistant Treasurer; Ramon B. Bonoan, Auditor; Ferdinand B. Guinto, Business Manager; John C. Ramos, Press Relations Officer; Jeoffrey S. Cudiamat, Immediate Past President; Elvira M. Sutherland, Director; Majella D. Stevenson, Director; Angelie L. Armas, Director; Nicolo A. Orense, Director; Joey G. Resurreccion, Director; Eugene N. Calara, Director; and Florante A. Lopez, Director.

Scholarship Awards were given this year to the following students: Juanito Moises, Jr. – currently enrolled as a Freshman at the University of Hawaii in Civil Engineering; Megan Stevenson – currently enrolled in Biomedical Engineering at Washington University in St. Louis, Missouri; Geoffrey Tran – pursuing his Ph.D. in Electrical Engineering at the University of Southern California after completion of his bachelor's degree in Electrical Engineering at the University of Hawaii, and a 4th term FALEA scholarship recipient; Fernan Suela – a senior in Electrical Engineering at the University of Hawaii, and also a 4th term FALEA scholarship recipient; and Angelica Tran – pursuing a bachelor's degree in Computer Engineering & Computer Science at the University of Southern California, and a 3rd term FALEA scholarship recipient.

The final event of the evening was announcing and presenting the three FALEA Outstanding Professionals for 2014. The first one was Gene C. Albano, Jr., PE, LEED AP, Managing Principal & President of WSP Hawaii, Inc. He is an electrical engineering graduate of

California State University at Long Beach and presently a member of various professional organizations related to his profession.

The second awardee was Ferdinand B. Guinto, PE, fire protection engineer at the Naval Facilities Engineering Command at Pearl Harbor. He has been involved in the fire protection industry for over 18 years. He is a professional member of the Society of Fire Protection Engineers, serving as Secretary for the Hawaii Chapter. He is an electronics & communications engineering graduate of Lyceum of the Philippines University.

The third awardee was Kristin Namoca, PE, Pacific Air Forces (PACAF) Asset Management Planning Manager at Joint Base Pearl Harbor Hickam, Hawaii. She is a civil engineering graduate of the University of Hawaii.

Entertainment was provided by The Teknikling Dancers, Krista Chang, FALEA Dancers, and special line dance with selected participants and audience participation.

Emcees were Renie Aagsalda, a Past President of FALEA, and his wife Marlyne. DeeJay was Noni Panen.

Congratulations to the new officers and directors, scholarship recipients and our outstanding professionals!



CMAA Hawaii Chapter

<http://hawchapter.cmaanet.org>

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Past President	Mike Young	836-7787
	hawaii.cmaa@gmail.com	

News:

The 2014-2015 CMAA Hawaii Chapter Officer elections were completed in September and the new officers installed at the Chapter's end of year Paina. A very big Mahalo to President Tim Bramsen and the 2013-2014 board for all their hard work this year serving the Hawaii CM Community.

Please welcome our new CMAA Hawaii Chapter Board:

Derek Mukai, PE- President

Jeff Clark- Vice President

Bill Thornton, CCM- Secretary

Chandra Namumnart, CCM- Treasurer

Tim Bramsen, CCM- Immediate Past President

Mike Young, PE, CCM- Director

Dustin Timm, PE, CCM- Director

Our 3rd Annual Scholarship Golf Tournament was held on October 3rd at Coral Creek Golf Course and was a huge success. Everyone who attended had a great time. Our 2014 Scholarship Awardees (Lana Moe, Rachel Goings and Jacklyn Plan) were introduced to the participants.

The CMAA National Conference was held on October 19th – 21st in San Francisco this year.

Just a reminder that our chapter is here for all Construction Engineering and Management professionals.

Upcoming chapter events for the fall include:

Our Final Bi monthly Luncheon for 2014 will be on November 19, 2014. The Speaker, Tom Sean from Archilele will present information on Aerial Drone site Photography.

We will have one more Chapter Happy Hour in December. Please look for the email invitation.

If you have any questions regarding any of our upcoming events, would like to get involved with the CMAA Hawaii Chapter or would simply like to be added to our email list, please contact one of our board members or email us at hawaii.cmaa@gmail.com.

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		<div>2⁵/₁₆" x 1¹/₄" \$20.00</div>	

The price for the ads will be based on a 1¹/₄" x 2⁵/₁₆" module size which is 1/24th of the page, and be \$20.00 per month with a 15% DISCOUNT for a 6-MONTH RUN.



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LETTER FROM THE ACECH PRESIDENT

Written by William H.Q. Bow, P.E.

Continuing on my soap box to answer the question: What am I getting from my membership in the American Council of Engineering Companies of Hawaii (ACECH)?

For the last year, ACEC Hawaii and ACEC National have been working on legislation to pass a Patent Trolling bill through Congress. Patent Trolling occurs when law firms and/or shell companies send letters to firms demanding payments by asserting infringement of certain business process patents, such as scanning and sending documents to email. Patent trolling sounds like someone is scamming your business, although it does have some legal merit. Letters have been received by some of our local companies, in some cases demanding approximately \$1,000 for each company employee to settle this claim without court action. You can do the math on how that could affect your company. Being a member adds your voice for passing this legislation. ACECH is working hard to protect our Hawaii engineering companies!

For those companies that are not members of ACECH, please consider joining and being part of the engineering ohana of companies. Stay tuned for my next letter.

50TH ANNIVERSARY TRIVIA QUESTION OF THE MONTH

To help celebrate our 50th anniversary in 2014, an ACEC Hawaii trivia question will appear in each of this year's issues of the Wiliki. The answers to the questions and background information will appear in the subsequent issues.

This month's question: Who was ACECH President during the organization's 5th year anniversary?

Answer to the previous question: ACEC selected a Hawaii project as one of three to represent the national organization in the 2013 FIDIC Centenary Awards. FIDIC will be recognizing and applauding the best consulting engineering achievements of the 20th Century. Which ACECH member firm received this prestigious recognition?

Answer - Sato & Associates



Hawaii Section 2014-2015 Officers

www.ite-hawaii.org

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ppascua@wilsonokamoto.com
Vice Pres.: Natasha Soriano
natasha.a.soriano@hawaii.gov
Secretary: Sara Okuda
sara.t.okuda@hawaii.gov
Treasurer: Robert Nehmad
rnehmad@mmm.com

ITE Section Meeting

The next Section meeting is scheduled for Wednesday, November 5, 11:45 a.m. at The Fasi Municipal Building. Mark Garrity, Deputy Director with the City and County of Honolulu's Department of Transportation Services will be speaking about the King Street Cycle Track. Please visit our website at ite-hawaii.org for more information, and RSVP to ite.hawaii.section@gmail.com by Monday, November 3, and please indicate if you would like to purchase a lunch.

September Section Meeting Summary

On Wednesday, September 24, 2014, ITE Hawaii held their Section Meeting at the Kapolei State Building. Western District Secretary-Treasurer Cathy Leong announced that there is currently an RFP out to overhaul the Western District website for \$10,000, if anyone is interested go to westernite.org. President Pete Pascua informed everyone that we are looking for ideas for speakers and events such as field trips and happy hour. If anyone has any suggestions please let any of the officers know.

Vice President Natasha Soriano introduced speaker Ross Hironaka from the State of Hawaii Department of Transportation to talk about the H-1 Rehabilitation Project. Ross spoke about his background, and how he's been with the DOT for almost 27 years, 22 of which he has been a Project Manager. He explained that because this project was so large and unique, a design consultant was hired, but he was part of the overall decision making process. Parsons was the Consultant, Hawaiian Dredging was the Contractor, and Bow Construction Management Services was also part of the team. The purpose and need of this project was to alleviate congestion and improve safety. For the State, this project proceeded very quickly, starting only in August of 2012 and beginning construction in April of 2013. The biggest concern during the construction phase was to avoid the back to school and holiday rush, therefore, to minimize the impact to the public a compressed schedule was followed and night work had to be done. It was decided that full closures were needed so that the entire width of the freeway could be repaved in one lift. Because there was no engineering solution for mitigation, the focus was to make the public aware. Although very few people showed up to the public meetings, the media did, and that proved to be one of the best sources to getting the message out. HPD, fire, and ambulance, and also the Visitors

Bureau were informed of when the full closures were going to take place and could adjust their routes accordingly. The public affairs office send out weekly notices to the DOT and the media, keeping the momentum going to continually keep the public aware of the construction activities. Having the information in the media and keeping the public aware proved to be a win/win/win, as the public heeded the message, and complaints were minimal. The H-1 Rehab public outreach campaign was recognized with an award from the Hawaii Chapter of the Public Relations Society of America for best integrated communications in the Government, Associations and Non-Profits category.

Ross opened the floor to questions. Several questions were asked and discussed among attendees, including the design exception for the substandard 10' lanes. Test sections were first tried, and although the initial idea of 10' lanes sounded a little scary for motorists, when in place the public responded favorably, and the 10' lanes were continued as far as possible.

Pete thanked Ross for his presentation, and reiterated that we are looking for suggestions for speakers and events. It was also announced that we are looking to fill committee chair positions, and Cathy revealed that Brysen [Calkins] volunteered to serve as the student liaison chair.



Ross Hironaka speaks about the H-1 rehabilitation project.



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Achievement Award Winners, from page 1

the large equipment necessary for drilling the deep tieback anchors. The project team came up with an incremental system of construction which allowed use of large equipment to rebuild the roadway beginning from each end and progressing towards the center of the work area. By doing so, the contractor was able to reach and install the entire wall and the tieback system while maintaining contraflow traffic in the mauka lane.

MP 16.0- Utilization of geotechnical and sub-surface investigation in combination with geophysical testing by way of electrical resistivity tomography and seismic refraction techniques to determine the soil and rock properties as well as the extent of various ground layering conditions. This innovative and uniquely combined methodology provided the project team subsurface information necessary in designing an erosion mat system with approximately 400, 45 foot deep rock anchors and developing the means of construction.

INNOVATIVE OR NEW APPLICATION OF CIVIL ENGINEERING TECHNOLOGIES

The project team used a system of grouted hollow core soil anchors to stabilize the makai embankment at MP 10.4 location. This system involved embedding anchors nearly 40 feet deep into the mountain and connecting them together on the surface with a high tensile strength wire meshing that unified the system—a pioneering and innovating use of this type of system in Hawaii for slope stabilization with further specifications to carry traffic loading.

The project team installed a permeable layer of aggregates and perforated pipes below the entire new roadway pavement at MP 10.4 site. This was intended to allow subsurface passage of ground water, which would improve the life expectancy of the pavement structure.

The makai embankment at MP 14.0 was washed away to near vertical slopes. Such steep mountain slopes were unable to carry the vertical loads of the concrete retaining wall that was to be constructed there. To remedy

the situation, the project team designed and installed a series of micro-piles, drilled down into the steep slope that served as the base for the wall foundation. Once the concrete wall was installed, the team drilled heavy-duty tieback anchors into the wall below the roadway, sixty feet into the slope. The anchored wall system now supports both the lateral ground loads as well as the anticipated traffic loading.

PROTECTION OF AND REDUCING IMPACTS TO NATURAL RESOURCES

Protecting the surrounding environment and natural resources was critical to the design process, particularly in light of this historic and legendary road, and Hana community's deep roots in Hawaiian tradition.

Best management practices and good housekeeping principles were employed throughout construction to safeguard the Honomanu Stream and the pristine east Maui coastline on the makai side of Hana Highway. Archaeological monitoring was required to address proper protocols in case historical artifacts were uncovered.

Except to improve road conditions and motorist safety at MP 10.4, no additional impervious surfaces were created. The retaining wall design at MP 14.0 provided for the restoration of the road pavement while preserving the existing open "green" area. The slope stabilization design involved an erosion mat system secured with mechanical earth anchors and/or a system of anchored wire mesh and permanent erosion mat, both of which allow native vegetation to be restored while providing the required slope stability.

BENEFICIAL EFFECTS OF THE PROJECT, INCLUDING AESTHETIC VALUE

Hana Highway is also a popular scenic route and tourist attraction. Consequently, protecting the natural beauty of the area, with its lush rainforests, waterfalls, pools, seascapes, and black sand beach was an essential design consideration.

Restoring the three sections of highway was the primary objective; however, the project team's goal was to design improvements conducive to the aesthetics of the area. The road

improvements at MP 10.4 not only enhanced motorist safety but also provided for a more scenic drive through this area of Hana Highway, which has 620 curves and 59 bridges. Furthermore, the project team found it imperative to develop slopes at all three sites in a way that ensured slope stability and allowed natural vegetation to return to and thrive in the area.

The project was the result of a joint effort between the project team and the impacted communities to address the communities' concerns and to communicate the project's purpose.

2014 Best Small Project

Project Name: Emergency Repairs of 'Ihi'ihi Lauakea Bridge

Project Owner: State of Hawaii, Department of Transportation

Submitted By: Bowers and Kubota

2014 Best Study and Research Project

Project Name: Hawaii Historic Bridge Inventory & Evaluation

Project Owner: State of Hawaii, Department of Transportation

Submitted By: MKE Associates LLC

2014 Best Humanitarian Project

Project Name: Te'ekiu Disaster Shelter Project

Project Owner: NAVFAC Pacific

Submitted By: Lyon Associates Inc.

2014 Best Special Project

Project Name: Manele Small Boat Harbor Tsunami Damage Response

Project Owner: State of Hawaii, Department of Land and Natural Resources

Submitted By: Bow Engineering & Development Inc.

2014 Best Green Project

Project Name: University of Hawaii Warrior Recreation Center

Project Owner: University of Hawaii

Submitted By: Wilson Okamoto Corporation

2014 Best Large Project

Project Name: Pacifica Honolulu

Project Owner: Oliver McMillan

Submitted By: Baldrige & Associates Structural Engineering Inc.

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