# UJIIKI ENGINEER O hawaii John Hawaii

VOL. 37 NO. 8

#### **SERVING 2000 ENGINEERS & LAND SURVEYORS**

JANUARY, 2002



#### HONOLULU POST SOCIETY OF AMERICAN MILITARY ENGINEERS

Established 1920 --Dedicated to the National Defense

P.O. Box 30907, Honolulu, HI 96819

### 2001/2002 Honolulu Post Officers and Directors

President — COL David Defoliart
(Air Force, PACAF) 449-5254

1st VP (Programs) — CAPT (Sel) Brian Scott
(Navy,PACDIV ROICC) 471-2646

2nd VP (Sust.Mbr) — Paul Luersen
(Corporate, CH2MHill) 943-1133

3rd VP (Membership) — Cynthia Wong
(Army, Honolulu Engineer District) 438-8855

Treasurer — Cpt Dave Norton
(Air Force, PACAF) 448-0283

Secretary — Cpt Michal Holliday
(Air Force, PACAF) 449-1971

#### Directors:

CAPT Karin Lynn
(Navy,CEC,COMNAVREG) 473-2168
LCDR Roger Wykle
(USCG,14th District) 541-2437
Jim Bersson
(Army,Honolulu Engineer District) 438-9293
COL Tom Hayden
(Air Force,PACAF) 448-0347
Paul Chinen
(Corporate, IT Corporation) 474-9142

#### Want to be a TEAMS Coach?

Aloha Post,

TEAMS is a program the Post has supported for the past couple of years. It's a competition among high school teams who work together to solve engineering problems. It is coordinated by the University of Hawaii College of Engineering. The next TEAMS competition is scheduled for March 9, 2002.

We plan to support the two high schools we helped in the past: Maryknoll and Kailua. Our work is to help the teacher/advisor in coaching high school students in preparation for the competition. It's fun, it's helpful, and it's a challenge.

Scott Hartung is our coordinator this year. If you have an inkling to be a coach or otherwise help. Scott, send him an email at Scott\_Hartung@URSCorp.com or leave him a voice message at 593-1116. He'll be back from vacation on 7 January 2002.

Happy Holidays!

Paul Luersen, AICP, Honolulu Post VP for Sustaining Members.

#### **KNOW YOUR ASCE HISTORY**

by C.S. Papacostas

On December 7, 1941, the "Honolulu Star-Bulletin" published three special editions of the newspaper, naturally dominated by the attack on Pearl Harbor. But, on page seven of the paper, appeared a drawing of three possible routes and tunnels connecting Honolulu with the windward side of O'ahu. The three alternative alignments, drawn in profile, showed tunnels across the Koolau Mountains via Kalihi, Nuuanu and Manoa Valleys.

The Kalihi profile started at 3.92 miles on the Honolulu side of the tunnel and approached at an average grade of +3.5%, followed by a 1.08-mile tunnel at a grade of -6.0%, and a 1.51-mile stretch on the windward side at an average grade of -4.7%. The Nuuanu route was shown to climb on the Honolulu approach at an average grade of +3.0% for 4.22 miles, to traverse a 0.68-mile tunnel at -7.0%, and to extend 0.9 miles at an average grade of -2.1% toward Kailua. The now forgotten Manoa alignment rose at an average grade of +2.1% for 3.3 miles to the portal of a 1.72-mile tunnel that had a +1.1% grade, and then descended for 3.1 miles at an average grade of 2.3% on the windward side

The caption reads:

"THREE TUNNEL ROUTES: Here is a drawing of three possible routes for a vehicular tunnel connecting Honolulu with windward Oahu. They were prepared by Cols. John D. Kilpatrick and George K. Larrison, requested by the citycounty to make a survey. Their recommendation was the Kalihi valley route, rather than via Nuuanu or Manoa valleys. Reasons were its proximity to military establishments in the light of national defense, and certain traffic factors. They suggest two 'tubes' of two traffic lanes each, although Joseph F. Kunesh, city-county chief engineer, feels that one 'tube,' costing about \$4,500,000 would suffice. The financing would be carried by the city-county, territory and federal government, according to Mr. Kunesh's recommendations, but the public works committee of the board of supervisors has disapproved this and holds that as the tunnel is now primarily a military need, the cost should be borne entirely by the federal govern-

Others had different route preferences: In 1946, the Hawaiian Electric Company, in an advertising series, looked ahead to When Honolulu Really Goes Windward:

"Now the Koolau tunnel begins to look like a reality, and a not too distant one. Before long, surveyors should be at work. And before the tunnel is completed, today's blueprints will be translated into the avenues and parks, the homesites and shopping centers of 'Suburban

Honolulu.'"

Johnny Wilson, the builder of the original carriage-road over the Pali, was re-elected mayor in 1948 after a hiatus. One of his first pursuits was to request of the territorial legislature an increase in the gasoline tax to pay for a tunnel in Kalihi valley. Back in 1931, having again teamed with his old partner and subsequent competitor Louis Whitehouse, he had planned to finance a road in China by paying off bonds with tolls and gasoline taxes, but the plan was rejected by the banks. His 1949 gas tax proposal for the Kalihi tunnel was turned down by the Territory which favored the Pali route instead. In the same year, Governor Ingram M. Stainback set aside a city-county master plan in favor of an alignment designed by territorial highway engineer Robert M. Belt that eliminated the hazardous Morgan's Corner.

Wilson argued that the latter would merely be a private access road for Kailua residents, whereas the Kalihi alternative would serve the entire windward side. Rumors had it that his opposition to the Pali alignment was driven by a desire to protect the Elizabeth and A. Lester Marks estate from condemnation by the Territory and that, a year later (1950), he hired

(continued on page 7)



PO Box 12204 Honolulu, HI 96828

#### **OFFICERS**

President: Kely E. Ota 527-6144
Vice President: Jamie T. Hikiji 521-3051
Secretary: Bryce T. Yonemura 473-8000 x2456
Treasurer: Warren H. Hayakawa 543-7060
Directors: Lloyd P.C.W. Lee
Michael Y. Magaoay

Michael Y. Magaoay Randolph H. Murayama Wayne H. Nakamura

#### RECEPTION FOR PRESIDENT DOBELLE

You are invited to join the College of Engineering and the Engineering Alumni Association in welcoming new University of Hawaii President Evan Dobelle at a reception on Thursday, February 28, 2002. This reception (rescheduled from November 29, 2001) will be held at the Honolulu Country Club from 5:30 to 7:30 p.m. Cost is \$10.00 per person and includes heavy pupus and no-host drinks. If you would like to attend, or for more information, please contact Carrie Matsuzaki at 956-2286 by February 14, 2002.



Published monthly by:

HAWAII COUNCIL OF ENGINEERING SOCIETIES

SERVICE PRINTERS, INC.

1829 Dillingham Boulevard • Honolulu, HI 96819 Telephone: (808) 841-7644 • Fax: (808) 847-1487 ADDRESS ARTICLES FOR PUBLICATION TO: WARREN YAMAMOTO

1526-C Pukele Avenue • Honolulu, HI 96816 Telephone: 527-6989

#### **WILIKI MAILING LIST**

Additions and/or corrections should indicate the proper society, institution or association.

#### LAVERNE HIGA

c/o Dept. of Facilities & Maintenance City & County of Honolulu 650 South King Street, 11th Floor Honolulu, Hawaii 96813

Phone: 527-6246 Fax: 527-5857

# HAWAII COUNCIL of ENGINEERING SOCIETIES

P.O. Box 2873 HONOLULU, HAWAII 96802

HOME PAGE:

http://www.eng.hawaii.edu/~hces/HCESHome.html

#### 2001-2002 OFFICERS

 Chairman:
 Ather Dar
 486-2092

 Vice Chair:
 Layton Nakao
 543-7317

 Secretary:
 Joanna Seto
 586-4329

 Treasurer:
 Mike Balderston
 263-0437

SOC Representative Alternate AACE ASCE T. Lau H. Brandes ASME J. Grogan E. Chang L. Mansfield EAH K. Andrade **FALEA** J. LaPutt C. Dungca I Nakao M. Cummins HALS. **HSPE** M Lanuevo R Santo IEEE M. Balderston F.Kobashigawa W. Kawano LGSEA M. Kasamoto L. Nagata SAME J. Bersson SEAOH I. Robertson SFPF S. Dannaway R Miller UH(assoc) W.F. Chen T. Dobry

#### **MEETING HIGHLIGHTS**

December 4, 2001

Each HCES Member Society is to submit their updated mailing list and the e-mail address of the person responsible for distribution of the Wiliki PDF files by December 31, 2001. Please notify your society membership chairperson if you prefer to receive your Wiliki via U.S. Postal Service or e-mail.

#### **ENGINEERS' WEEK 2002**

Engineers' Week is from February 17, 2002 to February 23, 2002. Please see the February 22, 2002 Banquet reservation form.

The committees for Engineers' Week 2002 are as follows:

- 1. Kick off Luncheon SAME
- 2. Finance and Budget IEEE
- 3. Exhibits SEAOH/SFPE/ITE



http://www.geocities.com/hals\_us

#### **OFFICERS FOR 2001**

OI I IOLINO I	OIX 2001	
President	Byron Komatsu	692-7599
Vice-Pres	Kendall Hee	591-8116
Secretary	Dennis Chong	523-4482
Treasurer	Eric Hee	591-8116
Director	Kevin Kea	521-7491
	David McDonald	536-2705
NSPS Gov	Patrick Cummins	247-6602
Past Pres	Layton Nakao	543-7317

# 2002 ANNUAL HAWAII SURVEYING CONFERENCE

# "SUSTAINABLE BEACHES AND SHORELINES"

Presented by The Hawaii Association of Land Surveyors

February 7 & 8, 2002 Radisson Waikiki Prince Kuhio Hotel One Day Presentation Featuring

ORVILLE MAGOON
Topic: Do Manmade Structures Affect
Erosion of Beaches

Covering Sand Rights and How Are Beaches Created As well as 'Safe Harbor' Beaches and Erosion or Accretion of Beaches

And a variety of **CONCURRENT SES-SIONS** to include:

NSPS Model Standards, GPS on Kahoolawe, ALTA Standards, Hawaiian Land Matters, The Great Mahele overview, Hawaiian Fishponds, DPP Standards, BWS Underground Toning, and much more.

#### Plus VENDOR DISPLAYS AND PRE-SENTATIONS

For conference updates, please check our website: www.geocities.com/hals\_us



#### **HAWAII CHAPTER**

P.O. Box 508, Aiea, Hawaii 96701 Phone: (808) 485-1400 Fax: (808) 485-1500 Web Page:www.lgsea.com

#### 2001-2002 OFFICERS & DIRECTORS

Position	Name	Phone	Fax
President	Les Nagata	951-5916	941-6489
Vice Pres.	Brian Ide	536-2108	521-3000
Secretary	Mike Kasamoto	955-6834	955-2483
Treasurer	Colleen Miyasato	735-3211	735-3280
Director	Mike Goodnight	1-245-3975	1-245-3977
Director	Ron Iwamoto	533-2210	533-2686
Director	Gary Lum	536-4495	524-4466
Past Pres.	Dipankar Sengupta	955-4441	942-2027

#### 2001-2002 COMMITTEE CHAIRS

Program:	Brian Ide	536-2108	521-3000
Technical:	Gary Lum	536-4495	524-4466
Membership:	Ron Iwamoto	533-2210	533-2686
Corp. Spon.:	Mike Goodnight	1-245-3975	1-245-3977
HCES:	Ather Dar	486-2092	486-9261

#### STRATEGIC PLANNING CONFERENCE

A summary of the Strategic Planning Conference held on November 15, 2001 will be sent to LGSEA members when done.

#### **COMING EVENTS**

January 3, 2002, 12:00 p.m. HI Chapter LGSEA Board of Directors Meeting at Hawaii Pacific Steel Framing Alliance conference room.

The 2002 Installation Banquet has been tentatively scheduled for Monday, February 4, 2002. Larry Williams of the national LGSEA will be present. Call Les Nagata for details.

#### **MEMBERSHIP IN LGSEA**

LGSEA membership is open to engineers, architects, and trades people interested in light-gauge steel framing. \$50 per year. Call Ron Iwamoto at 533-2210 for membership forms.

- 4. Banquet ASCE
- 5. Program FALEA
- 6. Registration ASME
- 7. Entertainment AACE
- 8. Lifetime Achievement Award HCES
- Engineer & Young Engineer of the Year -HSPE
- 10. Student Engineer of the Year UH
- 11. Publicity EAH
- 12. Awards & Leis HALS
- 13. Proclamation & Photo LGSEA

# HSPE HAWAII ENGINEER AND YOUNG ENGINEER OF THE YEAR AWARDS

In conjunction with the activities for the Engineer Week 2002, the Hawaii Society of Professional Engineers (HSPE) will select the Hawaii Engineer of the Year and the Hawaii Young Engineer of the Year. HSPE will evaluate the nominees for both awards. The selected engineers will be announced at the Engineers Week Banquet on February 22, 2002.

Completed nomination forms must be either postmarked no later than January 23, 2002 or hand delivered to Manny Lanuevo, HSPE Representative, by the end of the business day on January 25, 2002. Details are available on the HCES website at http://www.angelfire.com/linux/hces/.

# ADVERTISING IN THE ENGINEERS WEEK BANQUET PROGRAM

Are you interested in advertising your company in the 2002 Engineers Week Banquet program? You will reach an audience of approximately 200 attendees - maybe even more. Please contact Juny P. La Putt, Program Chairman and FALEA Representative, via email to <code>junylaputt@yahoo.com</code> by Tuesday, January 15, 2002.

#### **HCES WEBSITE**

Check it out! Our Hawaiian Webmaster, Juny P. La Putt, has generated new life into our HCES website. Go to http://www.angelfire.com/linux/hces/ for back issues of the Wiliki O Hawaii, Engineer's Week information, Awards, Constitution, meeting information, and past officer information.

#### **NEXT MEETING**

Date: Tuesday, January 8, 2001 (subject to change)

Time: 12:15 p.m.

Place: Plaza Hotel Restaurant, 3253 N. Nimitz Hwy.

RSVP (regrets and reports) to Ather Dar via

hces@yahoogroups.com



P.O. BOX 3348, HONOLULU, HI 96801 Web Page URL http://www.seaoh.org

#### **2001 OFFICERS & DIRECTORS**

Position	Officer	Phone	Fax
President	Dennis Hanatani	737-9488	735-1432
Vice Pres	Tom Tanimura	536-7692	537-9022
Secretary	Darin Okuda	689-5400	689-5406
Treasurer	Craig Sakanashi	942-9100	942-1899
Director	Irving Hirata	839-0606	839-0396
Director	Wes Segawa	536-4495	524-4466
Past Pres	Glenn Miyasato	488-7579	488-7818

#### HIGHLIGHTS OF BOD MEETING

December 3, 2001

Reviewed and approved treasurer's report. Current general checking account balance: \$3,969.45. Current money market account balance: \$5,991.89. Current convention checking account balance: \$7,442.92. Craig Sakanashi reported that the 2000 tax returns have been filed.

2000 Treasurer's Audit: Craig Sakanashi will provide Beverly Ishii-Nakayama with the 2000 financial records for auditing.

Draft 2002 Budget: The Board discussed and review the draft budget for 2002.

CPB Visa/MasterCard Seminar Payments: Craig Sakanashi presented details for payment of seminars and meetings with Visa/MasterCard. Next year's Board will review the details.

2001 Convention Financial Summary: The Board received and reviewed a summary of income and expenses for the 2001 Convention from Glenn Miyasato. Craig Sakanashi will audit convention financial records.

Concrete Building Design Seminar (per 1997 UBC) – November 14, 2001 Summary: Tom Tanimura reported that about 70 people attended the seminar. SEAOH had no formal commitment. Dennis Hanatani suggested that future speakers distinguish between concrete building design and detailing requirements in Hawaii's different seismic zones.

#### **New Member Applications:**

The Board voted to accept **Adriano Bortolin** of the Sika Corporation and **Steve Duddles** of the Simpson Strong-Tie Co., Inc. as Affiliate Members and **Brian Board** of Englekirk Partners, Inc. as an Allied Member.

#### Old Business:

HHRF: Follow-up on position letter from Steve Baldridge. Tom Tanimura reported that Steve has not yet prepared a letter.

Light Gauge Steel Truss Booklet: Follow-up on contact with LGSEA. Darin Okuda reported that LGSEA is preparing guidelines for light gauge steel trusses. SEAOH will review the guidelines.

NCSEA: Update on mailing list for Structure Magazine subscription. Tom Tanimura reported that the mailing list has been updated.

#### Correspondence:

Received notice from George Nishimura that ASCE will be holding a Licensing Forum on February 15 and 16, 2002.

Received NCSEA request for high school career day structural engineer presentations.

Received report on results of 2001 Golf Tournament held on November 26, 2001 at Waikele Golf Course from Kathleen Higa. The results are as follows:

32 people participated in this year's tournament. Flight "A" is for handicap 20 and below. Flight "B" is for handicap 21 and above.

Flight "A" winners:

1st (\$50) – Leonard Oki (net 66) 2nd (\$35) – Paul Morimoto (net 68) 3rd (\$25) – Ken Hasegawa (net 69)

Greenies:

#5 hole — Craig Sakanashi #8 hole — Craig Sakanashi #11 hole — Dennis Sakamoto #17 hole — Les Nagata

Flight "B" winners:

1st (\$50) - Deane Kadokawa (net 59) 2nd (\$35) - Jerry Taniyama (net 64) 3rd (\$25) - George Nishimura (net 66)

Greenies:

#5 hole - Ken Nagai #8 hole - Kathleen Higa Thanks to Jerry Taniyama of Hawaii National Bank for the complimentary tees and ball markers for all participants and Date Books to the 1st and 2nd place winners.

#### **Committee Reports:**

Membership: Update on membership list. Dennis Hanatani reported that the membership list has been updated and is posted on the website.

HCES: Wiliki Dues: Irving Hirata reported that the dues will probably increase since SEAOH has new members.

Budget: Irving reported that HCES does not have a budget, but he will request one at the next HCES meeting.

Updating mailing list: Irving reported that the mailing list will be updated by the end of 2001.

(continued on page 6)

# ACI Concrete Field Technician Program — Grade 1 Certification

Sponsored by The Cement and Concrete Products Industry

The ACI Certification Program for Concrete Field Testing Technician—Grade 1. During Session I, the seminar portion, will include instruction and review of ASTM testing. Session II, the examination, each participant will be given a written and performance examination.

Session I Seminar: Saturday, January 26, 2002 from 8:30 a.m. to 3 p.m. at Hawaiian Cement (Halawa Valley Plant) Halawa Valley Road, Aiea, Hawaii.

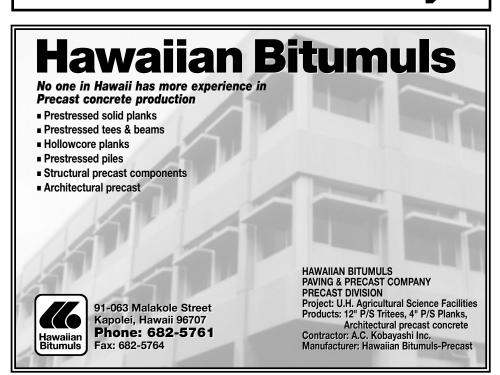
Session II Examination (Performance & Written): Saturday, February 23, 2002.

Time to be announced. Location will be Hawaiian Cement at Halawa Valley Plant.

Registration is \$200 per person and includes seminar, books and exam. One retesting session will be scheduled for examinees that do not pass written or practical test. Cost is \$100 per written or practical exam—\$175 to retake both. Class size is limited to 15 people. Registration deadline is January 25, 2002.

For additional information or to register, call CCPI at 833-1882







Website: www.ascehawaii.org

#### 2001-2002 OFFICERS

		Phone	Fax
President	Tony Lau	524-3771	538-0445
	tlau@hawaiipacifi	cengineers.	com
Pres-Elect	Horst Brandes	956-8969	956-5014
	brandes@wiliki.ei	ng.hawaii.ec	lu
Vice-Pres	Westley Chun	488-0477	488-3776
	engrsól@verizon.	net	
Secretary	Keith Niiya	533-3646	526-1267
•	kniiya@atahawaii	.com	
Treasurer	Walter Billingsley	539-1432	538-7819
	wbillingsley@belt	collins.com	
YMF Dir	Willie Gacutan	847-3763	843-0294
	wgacutan@hotma	ail.com	
Past-Pres	Joanna Seto	586-4329	586-4352
	iseto@eha.health.	.state.hi.us	

#### JANUARY DINNER MEETING

Program:

- Honoring new Life Members for their dedicated years of service to ASCE and the civil engineering profession. This year's honorees are Mr. Clifford Arakawa, Dr. Edmond Cheng, Ms. Clare Copleman, Mr. Richard Fujii, Mr. Herbert Hayama, Mr. David Higa, Mr. Calvin Kim, Mr. Michael Kimura, Mr. Robert Lau, Mr. Donald Lee, Mr. Arthur Marutani, Mr. Stephen Wong, and Mr. Reginald Young.
- Presentation by ASCE National President Gerry Schwartz, "Ground Zero - ASCE's Role".
- 3. Presentation by LCDR Steven L. Stancy, CINCPACFLT Diving and Salvage Officer, on the relocation and recovery of the Ehime Maru due to its collision with the USS Greeneville on February 9, 2001.

Date: Thursday, January 24, 2002, Note: Special Date.

Location: Treetops at Paradise Park,

Manoa Valley

Time: 5:30 p.m. - Social Time

6:30 p.m. - Dinner 7:30 p.m. - Program 9:00 p.m. - Adjourn Multi-entree buffet

Cost: \$22.00 for Hawaii Section members

\$25.00 for non-section members

and guests

Menu:

\$11.00 for University of Hawaii at Manoa Student Chapter members

Make check payable to "ASCE-Hawaii Section." Mail to Walter Billingsley, ASCE Treasurer, Belt Collins Hawaii, Ltd., 680 Ala Moana Blvd., 1st Floor, Honolulu, HI 96813-5406 postmarked by Monday, January 21, 2002. Reservations to Walter Billingsley by Monday, January 21, 2002 by phone at 539-1432, fax at 538-7819 or email at wbillingsley@beltcollins.com.

# EXECUTIVE COMMITTEE MEETING HIGHLIGHTS

December 6, 2001

#### 2002 CALENDAR OF EVENTS

(subject to change)

February 17 to 23, 2002 – Engineer's Week. February 22, 2002 – Engineer's Week Banquet at the Sheraton Waikiki.

March 2002 - Blaine Leonard, District 11

Director, Presentation on the 2002 Winter Olympics

April 2002 - Hosted by the Environmental Committee

May 2002 - Hosted by the Legislative Affairs Committee

June 2002 - Hosted by the Construction Committee

July 2002 - Hosted by the Geotechnical Committee

August 2002 - Hosted by the Structural Committee

#### PASSING OF AN ASCE MEMBER

The ASCE Hawaii Section was saddened to hear about the sudden passing of Felix Limtiaco. Felix was born and raised in Guam and earned his Civil Engineering degree from Stanford University. He was the Deputy Directory of the City and County of Honolulu, Department of Wastewater Management, 1993-1994 and the Director from 1994-1996. While at the City, he introduced microtunneling to the department; a procedure used on this year's OCEA award winner, the Nimitz Highway Reconstructed Sewer project. After leaving the City, he started his own firm, The Limtiaco Consulting Group. He was also an active supporter of the Consulting Engineers Council of Hawaii. He is survived by his wife, Ruth and two children, Mathew and Kimberly. prayers go out to Felix's family and friends.

#### ASCE HAWAII SECTION WINS 2001 OUT-STANDING LARGE SECTION AWARD FOR ZONE IV

The ASCE Hawaii Section was awarded the 2001 Outstanding Large Section Award for Zone IV. This award is made annually to the most outstanding ASCE Sections and Branches each fiscal year. Zone IV consists of the states of Washington, Idaho, Montana, Oregon, California, Utah, Arizona, Nevada and Hawaii. The award will be presented to the Hawaii Section at the 2002 Zone IV Leadership Conferences to be held from March 1-3 in Reno, NV. Thanks to all the Hawaii Section volunteers for their hard work this past year to make this achievement possible.

# ASCE NATIONAL PRESIDENT SCHWARTZ TO VISIT HAWAII

ASCE National President H. Gerard "Gerry" Schwartz, Jr. will be visiting the Hawaii Section in January. While in Hawaii, he will be doing a presentation on ASCE's role at Ground Zero at the Hawaii Section dinner meeting and will be promoting civil engineering and ASCE to local

businesses and government agencies. Please welcome President Schwartz to Hawaii at the January dinner meeting. Details of the meeting are listed above.

#### HAVE AN ENGINEERING POSITION TO FILL?

The ASCE Hawaii Section has developed a new web page that allows the posting of job openings for the civil engineering community. For a minimum monthly fee of \$40/month, you can advertise your job opening to over 1,000 ASCE Hawaii Section members. The ASCE Hawaii Section website is linked with other ASCE section and ASCE student chapter websites, expanding the number of civil engineers with access to your job listing to over 123,000 worldwide. Over the last two years, there have been over 6,000 visitors to the ASCE Hawaii Section website.

Your job listing can be designed to include your company or department logo and any information you require. Please visit our ASCE Hawaii Section website to view our current posted job openings at www.ascehawaii.org.

For further information, please contact ASCE Hawaii Section's webmaster, Joanna Seto at (808) 586-4329 or at <code>jseto@eha.health.state.hi.us</code>.

#### **MEMBERSHIP COMMITTEE**

Can you use \$5,000? Members who recruit 150 new, paid members between April 1, 2001 and September 30, 2002 will receive \$5,000 from ASCE. Please contact our Membership Chair, Stacie Saito, at 449-9195 or Stacie.Saito@hickam.af.mil for more information.

#### West Point Bicentennial Engineering Design Contest

College tuitions are increasing every year!! Could your child use a \$15,000 scholarship? Enter the West Point Bicentennial Engineering Design Contest and your child, in grades K-12, could win a \$15,000 scholarship. For further information please visit ASCE's 150th Anniversary web site <a href="https://www.asce.org/150/programs.html">www.asce.org/150/programs.html</a>.

#### 150th ANNIVERSARY OF ASCE

ASCE is the nation's oldest national engineering society. ASCE has begun its yearlong 150th Anniversary celebration. The Hawaii Section is looking for volunteers to help out with ASCE's 150th Anniversary. Please contact Delwin Ching (dching@hgea.org) to find out more information and how you may assist in this effort.

(continued on page 5)



Phone



2540 Dole Street, Holmes Hall Honolulu, Hawaii 96822

#### **COLLEGE DEANS AND CHAIRS**

Dean	W.F. Chen	956-7727
Chair, CE	Edmond Cheng	956-7550
Chair, EE	Anthony Kuh	956-8403
Chair, ME	Bruce Liebert	956-7167

#### **CIVIL ENGINEERING SEMINARS (CE 691)**

Spring Semester 2002

#### ALL ARE WELCOME!

**LOCATION:** Holmes Hall 243, Department of Civil Engineering, University of Hawaii at Manoa

TIME: 3:30 p.m.

**JAN 18:** Greg Thorp, HIOSH. Will the worker go home today?

**JAN 25:** James Kobashigawa et al, State Board of Professional Engineers, Architects, Land Surveyors and Landscape Architects. Everything you wanted to know about the F.E. and P.E. exams!

Note: Only this seminar will be held at Marine Science Building 114.

FEB 1: Ardalan Nikou, EarthTech. Rockfall mitigation.

**FEB 8:** Glen Miyasato, Miyasato Kuniyoshi. Forensic engineering.

**FEB 15:** Paul Luersen, CH2M Hill. Project deliverv.

**FEB 22:** Troy Ogasawara, Geotech Solutions, Inc. The use of geotextiles in road stabilization.

**MAR 1:** Sam Frydman, Technion, Israel Institute of Technology. Geotechnical problems in the Holyland, then and now.

**MAR 8:** Edmond Cheng, University of Hawaii Civil Engineering Dept. My research topic in wind engineering.

**MAR 15:** Edison Gica, University of Hawaii. Numerical simulation of storm surge generated by hurricanes in Hawaii.

**MAR 22:** Ian Robertson, University of Hawaii Civil Engineering Dept. The use of fiber reinforced polymers (FRP) in civil infrastructure.

MAR 29: No class, Good Friday and spring break.

**APR 5:** W.F. Chen, University of Hawaii College of Engineering. A new approach to structural steel design: An overview of the 2005 AISC Specification.

**APR 12:** Albert Kim, University of Hawaii. The cheap parallel computation in PC clusters.

**APR 19:** Si-Hwan Park, University of Hawaii. Absorbing boundary conditions: Methods for modeling infinite domains.

**APR 26:** Panos Prevedouros, University of Hawaii Civil Engineering Dept. Results from a politically motivated ramp closure.

**MAY 3:** Michelle Teng, University of Hawaii Civil Engineering Dept. Numerical and experimental study of the effect of beach roughness on ocean wave run-up.

#### ASCE, from page 4

#### **GET CONNECTED AND KEEP UPDATED**

Do you currently receive ASCE dinner meeting notices by e-mail? If not, you are not on the ASCE e-mail list. Sign up now to receive quick updates on ASCE activities, such as legislative affairs, Section meetings, field trips, and future Wiliki O Hawaii.

Visit our website at www.ascehawaii.org and register to be on the ASCE e-mail list. There is no charge. However, you must be a current member of the Hawaii Section and have your ASCE membership number available when registering.

If you prefer to receive your future *Wiliki O Hawaii* newsletters by U.S. Postal Service, please contact our Membership Chair, Stacey Saito, at 449-9195 or *Stacie.Saito@hickam.af.mil.* 

#### ASCE ENDOWED SCHOLARSHIP FUND

The Hawaii Section gives out an annual scholarship to a well deserving UH Student Chapter member. Show your support for our Civil Engineering students by sending your donations for the ASCE Endowed Scholarship Fund. Please send your contribution to Joanna Seto at the ASCE Hawaii Section address.



#### 2000-2001 OFFICERS

Director: Willie Gacutan 847-3763, x212 wgacutan@hotmail.com Admin: Jamie Hikiji 521-3051 jamie\_hikiji@metcalfeddy.com Social/ Jeff Kalani 593-1116 Comm.Act jeff kalani@urscorp.com Web page: Lori Ikeda 455-3569 lori@ikedanet.com PE Refresher Tony Lau 524-3771 Course tlau@hawaiipacificengineers.com Past-Dir: 527-5202 Lorna Heller Iheller@hbws.org St/Liais Lori Nishida 956-5808 lornish@hotmail.com

#### 2002 ASCE YMF PE REFRESHER COURSE

Dates: Saturdays, January 19, 2001 to March 30, 2002

Class size is limited and registration is done on a first-come first-served basis. To sign up for the 2002 ASCE YMF PE Refresher Course, contact Tony Lau at 522-7426 or tlau@hawaiipacificengineers.com.

# WITHOUT ENGINEERS THE WORLD STORS

#### 2002 Engineers Week Banquet

Friday, February 22, 2002 Sheraton Waikiki Hotel 2255 Kalakaua Avenue

Cocktails: 6:00 p.m. Dinner: 6:30 p.m. Program: Speaker - tba

Presentation of Awards - HCES Lifetime Achievement, Engineer of the Year,

Young Engineer of the Year, and Student Engineer of the Year

Installment of New Officers

	e(s) of 10 persons or individual \$34.00 per person or \$39.00 per persor ••	
Please print names.		
1	6	
2	7	
3	8	
	9	
	10	
Company:		
Society Affiliation(s):		
Total Enclosed: \$		

Make checks payable to "HCES" and mail with this reservation form to: 2002 Engineers Week Banquet

c/o Mike Balderston, HCES Treasurer

P.O. Box 2873

Honolulu, Hawaii 96802



If you have any questions, please contact Mike Balderston at 263-0437 or by e-mail at mikeulu@aol.com.



#### 2001-2002 OFFICERS

James Grogan	254-2947
To be determined	
Chester Kaitoku	527-6063
Sam Gillie	543-4739
Ed Chang	543-4227
Ron Flegal	455-0254
	To be determined Chester Kaitoku Sam Gillie Ed Chang

#### **MEETING NOTICE**

Executive Committee Meeting Date: TBA via e-mail

# DONATION TO THE UH COLLEGE OF ENGINEERING

The HI Section thanks Fred Kohloss, ASME Fellow, 1999 HCES Lifetime Achievement Award Recipient, and past HI-ASME Section Chairman (1968,69), for his donation to the UH College of Engineering Fund in memory of Drs. Hi Chang Chai and Deane H. Kihara. His donation along with our Section donation was sent to the UH last month.

#### 2002 MATHCOUNTS COMPETITION

It is almost that time of the year and again volunteers are needed to help score and proctor the competitions. The MathCounts Oahu Chapter Competition will be held on Saturday, February 9, 2002, while the State Competition will be held on Saturday, March 16, 2002. Both competitions will be held at the Kamehameha Schools Kalama Dining Hall. Proctors are asked to arrive by 7:30 a.m. and scorers by 8:30 a.m. Volunteering is fun and interesting. You cannot call this work since it is more entertaining than anything else. Please volunteer by calling Ed Chang at 543-4227 or by e-mailing him at echang@hei.com.

MathCounts is a nationwide math competition for 6th, 7th and 8th graders. It is sponsored by NSPE and sponsored locally by Aloha Airlines and Hawaiian Electric Company, Inc.

#### **HECO MICROTURBINE TOUR**

On November 17, eleven members and guests inspected and witnessed the operation of HECO's microturbine at the Ward Avenue facilities. HECO Engineer, Dan Suehiro, reported that the Capstone microturbine cost about \$80,000 to procure and install. The microturbine is a small sized combustion turbine considered for distributed generation along with fuel cells, photovoltaic panels, and diesel engines. It runs at about 96,000 rpm at full load supplying about 30 kW running on diesel fuel. As an emergency generator, the microturbine takes about a minute to start up compared to seconds for a diesel generator. It was mentioned that it would be better to buy two diesels for the price of one microturbine. This microturbine demonstration project is a joint venture of the Electric Power Research Institute (EPRI) and 30 utilities. HECO uses this project to better inform its customers on available alternate energy systems. We thank Dan Suehiro for a very informative tour.

# UH DEPARTMENT OF MECHANICAL ENGINEERING INDUSTRY ADVISORY BOARD

On December 1 eight members of Industry Advisory Board (IAB) met with the professors of the Department of Mechanical Engineering (DME) to review the curriculum and programs, inspect the lab facilities, and for a question/answer session. The IAB is a requirement of ABET for having constituent involvement to assess how well the DME Mission is accomplished. The constituents are com-

posed of students, alumni, employers, and the IAB. The IAB was organized to provide input to improve program objectives and program implementation, to participate in program outcome assessments, to provide feedback on the performance of the graduates in their respective organizations, and to provide input for program improvement to better meet the needs of the industry. The IAB are composed of 13 graduate mechanical engineers from the local industry. The IAB will meet with the DME each semester or annually to provide input/feedback through assessment forms. The IAB includes ASME-HI members Ed Chang, Sam Gillie, Fred Kohloss, Tom Kurashima, and Guy Pasco.

#### JANUARY 2002 KAHE POWER PLANT TOUR PLANNED

As part of our Power Technical Chapter activities, a tour of HECO's Kahe Power Plant is being planned for Saturday, January 19, 2002, starting at 10:00 a.m. The interesting aspect of the tour will be looking inside one of the boilers opened up for the overhaul to see how huge it is inside. Most people pass by the power plants and only see the plain outsides. They will be surprised to see what makes up a boiler and power plant. Those interested should contact Ed Chang at 543-4227 or e-mail him at echang@hei.com before January 15, 2002.



#### 2002 Hawaii Section Officers

President: Oscar Libed Vice-Chair: Grant Torigoe Treasurer/Secretary: Mark Rognstad (ph:956-8712)

#### **JANUARY MEETING NOTICE**

Date: January 15, 2001 (Tuesday) Time: 11:00 am check-in, 11:30 am lunch Place: Ala Moana Hotel

Cost: \$10

Speaker: L. Thomas Vest, Jr.; Senior Network Operations Manager, Asia Pacific; America Online, Inc.

Topic: An overview of AOL's Internet plans for

the Asia Pacific region

RSVP: Call Oscar Libed at 441-8567 and leave a voice mail message BEFORE 1/10/01. Since the hotel will charged us by the headcount reservations, you are obligated for the lunch rate if you fail to show up. Reservations after 1/10/02 will NOT be accepted. This is a joint meeting with HTCA and AITP.

#### SEAOH, from page 3

2002 Installation Banquet: Wes Segawa reported that planning for next year's installation banquet is proceeding. He has received a menu and secured a speaker.

2002 Annual Convention in Japan: Glenn Miyasato reported that the committee has completed initial planning for the Convention. The Convention Committee is planning to send a flyer to the membership in early 2002.

#### 2002 CALENDAR OF EVENTS

Next BOD meeting: Monday, January 7, 2002, 11:45 am.

2002 SEAOH Installation Banquet: Friday, January 25, 2002, Hale Koa Hotel.

2002 SEAOH Convention in Japan: November 9 – 14, 2002.



po box 4353,honolulu,hawaii 96813 An association for Hawaii's Engineers and Architects New WEB Address http:community.hei.com/eah

#### 2001-2002 OFFICERS

President	Victor Russell	949-4155
1st V.P.	Maria Tome	587-3809
2nd VP	Martin McMorrow	247-1794
Treasurer	Ralph Dobson	543-4754
Secretary	Sam Gillie	543-4739
Director	Alan Mueting	523-1519
Director	Bob Morrissey	521-4711
Director	Tit Mun Chun	524-2270
Director	Neil Guptill	
Past Pres	Kai Andrade	521-4711

#### JANUARY MEETINGS

Jan 4th- "The Community College in the UH System" by Ramsey Pedersen, Provost, Honolulu Community College. Recently appointed to the position of Provost for Honolulu Community College, Ramsey Pedersen will discuss his vision for HCC, one of the best kept secrets of the University of Hawaii. He will describe the Pacific Center for Advanced Technology Training which is housed at HCC and utilizes resources at all community colleges. Initiatives for a Pacific Aerospace Center in partnership with UH Manoa, airlines and aircraft manufacturers will also be discussed.

Jan 11th- "Highway Initiatives of the DOT" by Jadine Urasaki, Deputy Director, Dept. of Transportation. Limited funds have caused the State Department of Transportation to seek ways to create more carrying capacity through the congested central portion of the H-1 Freeway. Using simulation studies, a selective combination of spot improvements can substantially decrease travel times on the freeway. Other current issues facing the Department will be addressed by Jadine Urasaki.

Jan 18th- "Aerospace Initiatives in Hawaii" by Vassillis Syrmos, PhD, UH Department of Electrical Engineering. Dr. Syrmos will describe the aerospace initiatives in the College of Engineering at the University of Hawaii. Following meetings with Boeing, he is developing three projects for the Integrated Vehicle Management Systems concept. In addition to Boeing and FAA, the work will include utilizing data available from the "black boxes" on interisland aircraft. The results of the effort should be of substantial benefit to Hawaiian and Aloha Airlines as well as others in the commercial aviation industry.

Jan 25th- "US Marine Corps Year Out Program" by James S. Teeples, Major, US Marine Corps. Major Teeples was selected for the USMC Year Out Program which places officers with corporate sponsors for one year. He will describe his work at the Pacific Basin Development Council to gain insights of organizational structures and business process applications outside the defense establishment. PBDC is a non-profit, public organization with members from American Samoa, the Northern Marianas and Guam and articulates and addresses economic and social development concerns of the Pacific Islands.

Program Chair: Owen Miyamoto

Meetings held every Friday at YWCA room 205 on Richards Street downtown. Parking at Alii Place off Alakea Street for \$1.00 per hour.

Meetings start at NOON and end promptly at 1:00 pm.

Members-\$7.50 Guests-\$8.50

Program schedule may be adjusted. Call Secretary to confirm speaker.

Anyone wanting a weekly email meeting notice please send your email address to Sam Gillie at sgillie@hei.com.

#### **Program Notes for November 16th**

SPEAKER: Alan Hee - Director HECO Forecasts Division, "HECO After 9-11, Its Impact on Electricity Sales"

Alan's job is to forecast electrical sales at Hawaiian Electric. To do that his group at HECO needs to track Hawaii's economy. They track all the economic data, but they listen of course to experts like Paul Brewbaker, Carl Bonham at the University of Hawaii, who's whole attention is focused on how the economy is doing. To predict what HECO's sales will be, they put together the forecasts on the economy and information they gather from HECO's customer base. Alan showed a graph of the growth of HECO sales for the last 30 years. Sales increased well in the 80's, but were slower or flat in the 90's, but started to pick up in year 2000. So HECO was also looking for an increase in 2001.

Alan's next slide showed an index of Hawaii's non-agricultural jobs compared with HECO's sales. In 1991 there was negative growth. Non-agricultural jobs tracked very well with HECO's growth until 1994. In 1994, non-agricultural jobs stopped tracking HECO's growth. In 1994 in Hawaii there was a structural change in the economy. This was the year of Costco and K-Mart, big box retailers and changes in the Hotels. What happened was that non-agricultural job productivity increased. There were not as many employees for retail and not as many employees for Hotels, but the same or more electricity was used. So the two lines diverged. But by 1997 the lines started to run parallel again, so the relationship has been reestablished. So this indicates that there is a relationship between HECO sales and the economy

There is also a relationship, between how the tourist arrivals are doing and HECO's sales. The next slide had shown three years of negative growth starting in 1993 and these three years coincide when both domestic and foreign arrivals were decreasing. This also happened in 1997 and 1998.

Prior to September 11, the economic outlook was already dropping a bit. A business confidence survey from 1998 to the second quarter of 2000, showed that people were feeling that things were going to be getting worst. People were thinking at the beginning of 2001 that the economy was getting slower.

After September 11, everyone knows what has happened to visitor arrivals. Alan's graph of tourist arrivals for 2001 show that arrives were steady. But in September there was a big hit of -34% on the visitor's arrivals. The percentage of domestic arrives as compared to the year before has recovered to about 90% of what it was. But the percentage of international visitors, mostly Japanese, have only recovered to 43% or less than half the previous year. The combination of domestic and international arrivals is only at 74% of last years passenger volumes and it looks like it has stabilized at this point. Prior to September the arrivals were at about 100% of the last year. Most of the effect of the attack will be felt by Oahu, because 50% of Oahu's arrivals are international. The neighbor islands have only about 20% from Japan

and places West.

Hotel occupancy also dropped. It dropped to about 55% in September compared to about 75% last year. So there was about a 20% drop in occupancy. This is where HECO will see an impact on sales, because when occupancy goes down fewer lights are used, less air conditioning is needed. Also hotel restaurants and retail stores are also affected. But hotel occupancy rates don't tell the full story. A visitor coming to Hawaii and staying at a hotel will show up in the occupancy indicator but it doesn't tell how the visitor spends money outside the hotel. A lot of visitors are staying at hotels and doing things in a hotel, but are not spending outside around the hotel, i.e. some of the jewelry kiosks, small restaurants have a greater decrease in business than the hotels. Job growth was dropping before September 11. Alan expects the non-ag job growth to really take a hit in the last quarter of 2001.

What are the initial economic impacts? Clearly, a drop in visitor arrivals, reductions in flights by Japan Airlines, NA, and United Airlines, three Outrigger hotels closed temporarily, though a couple were in the plan to be closed; American Classic Voyages went bankrupt. There was a \$500 million project at Kapolei called the Seaside Kapolei that was postponed; the increase in unemployment claims; the initial unemployment claims went up by 3 to 4 times the rate of the year before.

What is on the brighter side? There are a few things that cause Alan's group to look on the positive side. Thirty year home loan rates are at 40 year lows. So now is the time to refinance or to do long term borrowing. Since mortgage rates and interest rates are going down, it may cause some of our companies to reinvest in capital, which will help the economy. Oahu building permits have increased over the past year. Other than the Kapolei project, Alan's not aware of any other postponements of other projects. The Lewers Street Outrigger Master Plan is still moving forward, so they are paying for the engineers and architects and the per-Alan hasn't heard if the K-mart on Ke'eaumoku has been postponed. There is a big project in Ko Olina call the Ko Olina Beach Club, which is still being constructed. So as one developer has postponed another developer has decided it looks profitable.

Another sign is that fuel-oil prices are dropping. So the price of electricity has been drop-Since September fuel oil price have been dropping. Why would they drop even if there is Military activity going on in the Middle east. The reason is that the global economic demand for oil is lower than before and that is the reason why gas prices are dropping. OPEC has tried to re-establish its economic power in oil, but it is not able to because some of its members are cheating, by over producing. They have tried to get non-Opec producers to join, but were unable to get all of them to join. So prices are still dropping. One of the reasons Alan is optimistic is that the US economy is expected to recover very quickly. Paul Bluebaker said that the outlook for the economy is that there will be a faster recover from a deeper than expected slow down. So if the US mainland is doing well, some of that will come over to Hawaii. The reason for the fast rebound is there is a lot of stimulus, on both the fiscal and monetary sides of the economy. The Federal Reserve has decreased interests for the 10th time and are expected to decrease one more time before the end of the year. Congress has put a lot of money into the economy, \$40 billion for re-building New York City, \$15 billion for airline bailout, and thinking of nearly another \$100 billion of stimulus if the Senate passes their version of the Bill. So there is some light at the end of the tunnel for the US economy.

The Japanese economy is something else entirely. Their problem is that they have deflation going on. So prices are dropping, so people are waiting until prices get lower. So people are not spending money, they are saving money waiting for the prices to get lower. So the economy is not being stimulated by consumer spending. And there are the other structural problems with the Banks and their bad loans. So they will remain in recession for the next year, 2002, which is not good for Hawaii. One of the reasons international arrivals have not returned is because the US now has a Branding Problem. For the first time they are looking at the US as a dangerous place to go to. So the US is a place the Japanese want to avoid. Japanese are still traveling, but not to the US and mostly close to their region. So we will have to wait for the Japanese to change their minds about the safety of the US. So Hawaii's economy depends on how well and how long the Anti-terrorist campaign lasts.

#### ASCE History, from page 1

lawyer Walter Trask to represent the people of Honolulu in preventing the condemnation. Eventually, the territory prevailed and the Honolulu-bound tunnels on Pali Highway were opened on May 11, 1957 with what the "Honolulu Advertiser" described as a "festive event"

According to an ad taken out in a special section of the May 10, 1957 issue of the Star-Bulletin.

"We Are Proud... The J. M. Tanaka organization held the construction contract for the biggest and most costly projects ever undertaken by the Territorial Highway Department - the \$2,000,000 Nuuanu Pali Highway tunnels for Honolulu-bound traffic. We finished a week ahead of our construction deadline.

This firm was also the contractor for the \$700,000, half-mile link of bridge and road construction joining the tunnel route to Hairpin Turn.

The new tunnel route ... will benefit the economy of all Oahu..."

HC&D Ready-Mix Concrete declared: "Concrete progress on the Pali. HC&D is proud to have furnished all the Ready-Mix Concrete for the Pali projects..." The special section of the newspaper carried dozens of other ads commemorating the impending opening. These ranged from restaurants ("After you drive through the tunnel Stop at DORIS' FOUNTAIN..."), to real estate sales ("...MINUTES FROM HONOLULU..."), to automobile sales ("Newer Highways Call for New or NEWER Cars..."), and many more.

In a related story, Yoshio Kunimoto, city engineer, was quoted to say that the City-County was proceeding with the construction of the Wilson Tunnel through Kalihi Valley; the Territory would handle the approach roads as a federal-aid project.

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.

# **Professional Directory**

D.L. ADAMS ASSOCIATES, LTD.

DARBY & ASSOCIATES

ACOUSTICAL CONSULTANTS
PALI PALMS PLAZA, SUITE A311
970 N. KALAHEO AVENUE
KAILUA, HAWAII 96734-1870
• 254 • 3318 FAX 808 • 254 • 5295



Consultants in Planning, Engineering, Architecture, Construction Management, and Related Services 1001 Bishop Street, Suite 850 Pauahi Tower Honolulu, Hawaii 96813 (808) 523-9696 Fax (808) 523-9699 www.c-b.com

#### Y. Ebisu & Associates

Acoustical and Electronic Engineers

1126 12th Avenue, Room 305 Honolulu, Hawaii 96816 (808) 735-1634

#### FUKUNAGA & ASSOCIATES, INC.



1388 Kapiolani Blvd Honolulu, HI 96814 Phone: 944-1821 Email: fainc@aloha.com Website: www.fainc.org

CIVIL ENGINEERING AND PLANNING CONSTRUCTION MANAGEMENT SERVICES Hawaii Pacific Engineers, Inc.

1132 Bishop Street • Suite 1003 Honolulu, Hawaii 96813-2830 Phone: (808) 524-3771 • Fax: (808) 538-0445 E-mail: hpeinc@hawaiipacificengineers.com

INABA ENGINEERING, INC HII O. HAWAII 96720

Phone: (808) 961-3727 / Fax: (808) 935-8033 Civil Engineering • Structural Engineering Land Surveying

#### NAGAMINE OKAWA ENGINEERS INC.

CONSULTING STRUCTURAL ENGINEERS

1001 Bishop Street • Pauahi Tower, Suite 725 Honolulu, Hawaii 96813 Phone: (808) 536-2626 • FAX: (808) 536-3926



Earth & Environmental, Inc. Tel: 808.545.2462 Fax 808,528,5379

rvice emirocosevtal, archaeo GIS consulting support **Portietly Opder Environmental** 



PACIFIC
MACHINERY
94-025 Farrington Hwy.
Waipahu, Hawaii 96797
808/676-0205 FAX 808/676-0264

CATERPILLAR & OLYMPIAN Generator Sets, Engines, Switchgear and Ancillary Equipment. (Prime Power & Standby Power, 8-2000 kW) CATERPILLAR 3600 Utility Plant Generator Sets (1.5-5 MW)

#### SHIMABUKURO, ENDO & YOSHIZAKI, INC. CIVIL & STRUCTURAL ENGINEERS



| 1126 12th Avenue, #309 | Honolulu, Hawaii 96816 | Phone: (808) 737-1875 | Fax: (808) 734-5516 | Email: seyeng@aloha.net

WALTER P THOMPSON, INC.

ENGINEERS - SURVEYORS 333 Luc... SUITE 210 P.O. BOX 3351 HONOLULU, HI 96801-3351 \*\*\*\*91536-2705

MAUI 291 HOOKAHI ST. SUITE 208 WAILUKU, HI 96793-1 451 PH: (808) 242-5722

#### AUSTIN, TSUTSUMI & ASSOCIATES, INC.

| STIR, 15U SUINI & ASSUCIALES, II Civil Engineers - Surveyors 501 Sumner Street, Suite 521 Honolulu, Hi 98817 H Honolulu, Hi 98817 Tel: 533-3646, Fax: 526-1267, Email: stahni@atahawaii.com Branch Office: Walliuku, Maui Civil + Traffric - Sanitary + Structural

Ph; (808) 590-1116 Fit: (809) 590-1199

CONSULTING ENGINEERS

IT Corporation

ParEn,Inc.

Honolulu, Hawaii 96817

Your Ad

could appear here

for \$200/year.

HIDA, OKAMOTO & ASSOCIATES, INC.

The Commerce Tower, Suite 1120

1440 Kapiolani Boulevard Honolulu, Hawaii 96814

KFC AIRPORT, INC

NAKAMURA, OYAMA AND ASSOCIATES, INC.

CONSULTING ENGINEERS ELECTRICAL/TELECOMMUNICATIONS

1314 South King St., Suite 401 Honolulu, Hawaii 96814-2004 Telephone (808) 591-8887 Fax (808) 596-2383

the **Figroup** 

Nation's leader in on-site remediaiton services

Bldg. 223, South Avenue
P.O. Box 30526 Honolulu, HI 96820-0526
Tel: (808) 474-8172 FAX: (808) 474-0811

501 Sumner Street, Suite 502 INTERNATIONAL

紪

R. M. TOWILL CORPORATION

SINCE 1930
PLANING - ENGINEERING - ENVIRONMENTAL SERVICES
PHOTOGRAMMETRY - SURVEYING - CONSTRUCTION MANAGEMENT
420 WAIAKAMILO ROAD HONOLULU HAWAII 96817-4941 808 842 1133

Ph (808) 531-1308 | Fax (808) 521-7348

Project Managers, Planners, & Engineers

SUITE 300, KAWAIAHAO PLAZA 567 SOUTH KING STREET

□dba park engineering

Engineers, Surveyors, Planners

www.ssfm.com

HONOLULU, HAWAII 96813 TELEPHONE: (808) 531-1676

PROJECT MANAGEMENT CONSULTANTS
PLANNING • ARCHITECTURAL/ENGINEERING
DESIGN • CONSTRUCTION MANAGEMENT

3372 Koapaka Street, Suite F220-48 Honolulu, HI 96819 Phone: (808) 836-7787 Fax: (808) 834-4833

Engineers Spieré sts

Program and Construction Managers Environmental Planners

900 HALEKALIWILA STREET

HONOLULU HAWAII 96814

hon@urscog.com www.urscog.com

# **BeltCollins**

www.beltcollins.com

#### S.S. DANNAWAY ASSOCIATES, INC.

Fire Protection Engineers Building Code Consultants

720 Iwilei Road, Suite 412, Honolulu, HI 96817 Tel: (808) 526-9019/Fax: (808) 537-5385



#### FEWELL GEOTECHNICAL ENGINEERING, LTD.

OAHU: 96-1416 Waihona Place • Pearl City, Hawaii 96782-1973 (808) 455-6569 • FAX (808) 456-7062 MAUI: (808) 873-0110 FAX (808) 873-0906

#### **GEOTECHNICAL GROUTING** CONSULTANT

Edward D. Graf 182 Lumahai St. Tel: 808-396-9451

Honolulu, HI 96825 Fax: 808-396-2075

# ERNEST K. HIRATA & ASSOCIATES, INC.

Soils and Foundation Engineering 99-1433 Koaha Place • Aiea, Hawaii 96701 Fax (808) 486-0870 • Phone (808) 486-0787



841 Bishop Street, Suite 2006 Honolulu, Hawaii 96813 Tel: (808) 536-6621 Fax: (808) 523-1738 Email: adminhi@lyonassociates.com

**NEWCOMER - LEE** LAND SURVEYORS, INC.

1498 Lower Main Street, Suite "D" Wailuku, HI 96793-1937 Tel: (808) 244-8889 Fax: (808) 244-8422

#### Okahara & Associates, Inc. Engineering Consultants

200 Kohola St., Hio, Hi 96720 / Ph. (808) 961-5527 Fax (808) 961-5529 677 Ala Moara Blvd., Suita 703, Honolulu, Hi 96813 Ph. (808) 524-1224 Fax (808) 521-3151 73-5574 Mialau St., Bay 68, Rallua-Kona, Hi 96740 Ph. (808) 329-1221 Fax (808) 329-1006

#### PROSTAFFING

Contract-Permanent We put engineers to work 524-1733 Fax 523-3435 www.prostaffing.com

#### STRUCTURAL SOLUTIONS

Finite Element Analysis 98-030 Hekaha St., Suite 20 • Aiea, HI 9670 Tel: (808) 488-0655 • Fax: (808) 488-1655

#### WALKER INDUSTRIES, LTD.

Precast Concrete Products

CONISPAN
BENDOLE SYSTEMS

AARON UNO
10668 877-3430
Moul, Hawaii 96732 Fax (808) 871-7282

P.O. Box 1568 Kahului, Maui, Hawaii 96732

#### BROWN AND CALDWELL

nental Engineering And Consulting • Analytical Services

119 Merchant Street, Suite 200 Honolulu, HI 96813 (808) 523-8499 Fax (808) 533-0226

Esaki Surveying and Mapping, Inc. Lihue, Kauai, Hawaii Ph. (808) 246-0625 • Fax (808) 246-0229

esmap@hawaiian.net ENGINEERS • SURVEYORS Established 1979

# MASA FUJIOKA & ASSOC. A PROFESSIONAL PARTNERSHIP

ENVIRONMENTAL • GEOTECHNICAL • HYDROGEOLOGICAL CONSULTANTS



Engineering and Environmental Services (formerly known as Harding Lawson Associates)



98-1247 Kashumanu Street, Suite 305 - Aiea, Hawaii 96701
Phone: 808-486-6009 / Fax: 808-486-7184
• Civil Engineering and Design
• Geotechnical Engineering
• Construction Monitoring



864 S. Beretania Street Honolulu, Hawaii 96813 Telephone: **537-9971** 



1001 Bishop Street, Suite 500, Pauahi Tower Honolulu, HI 96813, telephone 808-521-3051



Environmental Eng Coastal Engineeri Civil Engineering

Pacific Tower #2970, 1001 Bishop Street Honolulu, HI 96813-3654 (808) 531-3017 / Fax: (808) 531-3177 oceanit@oceanit.com / www.oceanit.com

PACIFIC GEOTECHNICAL Γ٦ ENGINEERS, INC.

s and Foundations & Engineering Geo 429B Waiakamilo Rd. Honolulu, Hawaii 96817 (808) 841-8024 FAX (808) 848-5102

#### Sato & Associates, Inc.

HONOLULU 2046 South King Street Honolulu, HI 96826

MAUI 2115 Wells Street Wailuku, HI 96793 Tel: (808) 244-9265 Fax: (808) 244-5303

CONSULTING ENGINEERS • CIVIL & STRUCTURAL

#### WES THOMAS ASSOCIATES

75-5749 Kalawa St., Kailua-Kona, Hawaii 96740-1817 Tel: 808 329-2353 Fax: 808-329-5334 Surveying Hawaii Since 1975



HAWAII COUNCIL OF **ENGINEERING SOCIETIES** P.O. Box 2873 Honolulu, Hawaii 96802

Presorted Standard U.S. Postage Paid Honolulu, Hawaii Permit No. 1400