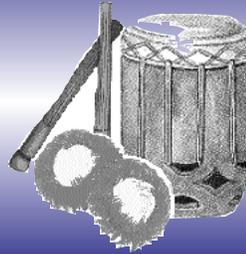
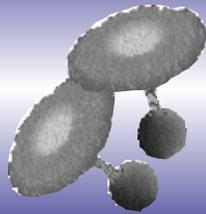


HAWAIIAN CONNECTIONS



NEWSLETTER OF THE HAWAII LOCAL TECHNICAL ASSISTANCE PROGRAM

VOLUME 4, No. 1

SPRING 2002

IN THIS ISSUE

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Please pass this on to other interested parties in your office.

VEHICLE DETECTOR NEWS

Clearinghouse Established

A new Vehicle Detector Clearinghouse (VDC) has been established at the Southwest Technology Development Institute, New Mexico State University.

The clearinghouse is a multi-state pooled-fund project undertaken in cooperation with the Federal Highway Administration. Its expressed purpose is "to provide information to transportation agencies on the capabilities of commercially available vehicle detectors by gathering, organizing, and sharing information concerning tests and test procedures in a timely, efficient, and cost-effective manner. Equipment types included in the VDC are devices which detect vehicle presence, speed, axles, classification (AVC), and weight (WIM). The clearinghouse will be a catalyst for developing standard test protocols." A VDC website is currently under development. (<http://www.nmsu.edu/~traffic/>)

Non-Intrusive Technologies: Phase II

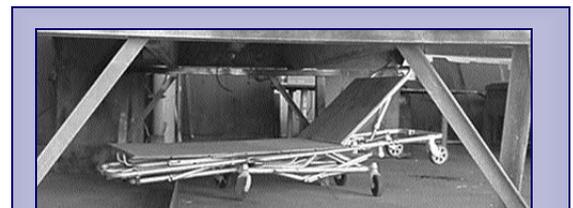
The Minnesota DOT, with funding assistance and technical guidance from the Federal Highway Administration (FHWA), is implementing a continuation of the Field Test of Monitoring of Urban Vehicle Operations Using Non-Intrusive Technologies (NIT) Project. The goals of this phase are to develop standardized

test methodologies, conduct extensive field tests of non-intrusive technologies for use in a variety of applications, and examine the deployment issues and costs associated with the technologies.

Phase I was a two-year test completed in May 1997 that evaluated seventeen sensors representing seven different technologies under varying environmental and traffic conditions on both urban freeway and intersection locations. The Final Report of Phase I is available at <http://www.dot.state.mn.us/guidestar/nitfinal/index.html>.

Phase II continues the test activities by examining new sensors as they become available and also examines the use of non-intrusive technologies for real time/ITS applications.

Baseline calibration and up-to-date results of Phase II are posted on the web at <http://projects.dot.state.mn.us/nit/results.html>



Got a Better Mousetrap? Page 7

Walter Lum's Rules of Thumb

Editor's Note: Walter Lum, consulting engineer, through many years of experience has developed quick and easy ways to solve complex problems. He has shared his rules of thumb with us.



CONSIDER SOIL NAILING IN LIEU OF RETAINING WALLS

Reinforced concrete retaining walls, 6 to 20 ft. high are often used to retain banks or cuts through residual soils. In many of these instances, consider the use of soil nailing in lieu of conventional concrete retaining walls.

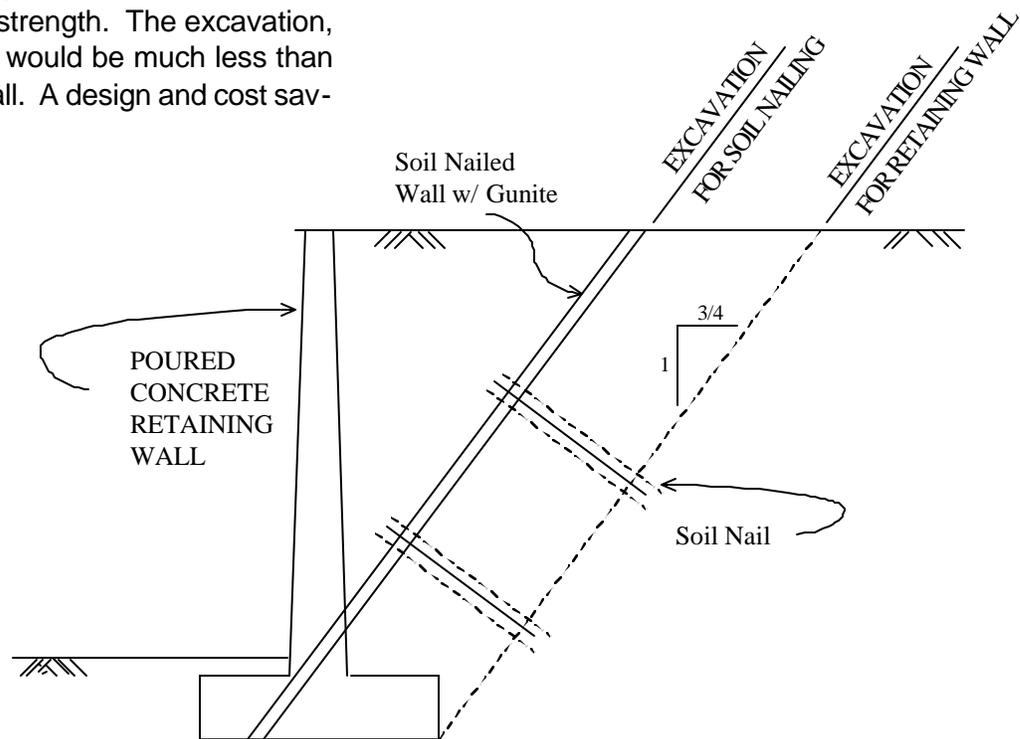
Residual soils with blow counts of over 15 blows per ft. by the standard penetration test will have shear strengths of 1500 psf. or better. Twenty foot high cuts at $\frac{3}{4}$ hor. To 1 ver. slope in these materials can stand with little or no support. A thin coat of gunite and a few soil nails would increase the safety of the bank sufficiently as a design for long-term conditions.

The figure shows a comparison of the excavation required for the soil nailed wall versus a retaining wall. By eyeball, the excavation required for a retaining wall will be almost twice that of a soil nailed wall.

No backfill is required for the soil nailed wall, whereas a considerable amount is needed for the retaining wall. The retaining wall's only function appears to be to retain the backfill that was first excavated to allow for the construction of the wall. It seems that the wall would be unnecessary if the backfill were not present.

A soil nailed wall would require less work in residual soils with adequate shear strength. The excavation, backfill and concrete work would be much less than a conventional retaining wall. A design and cost saving worth considering.

FIGURE



Click, Listen & Learn

By C.S. Papacostas, Hawaii LTAP

Our National Local Technical Assistance Program Association (NLTAPA) has collaborated with the American Public Works Association (APWA) to schedule a series of training sessions using APWA's video-conferencing program known as "Click, Listen & Learn."

APWA's audio-web conferences offer a new way of learning and sharing information through the use of a telephone and a PC with web access.

You listen to the speakers through your telephone, and view the visual presentation via the web. Programs average 2 hours in length, include printed speaker handouts and feature live Q&A.

You can participate from your desk, or in a group setting by connecting through a conference/speaker phone and projecting the web image on a screen.

Among the scheduled sessions for this year are the following:

* **Wednesday, April 24, 2002**, 10:00-12:00 Central: Using Gut-level Emotion to Make Safety Training Stick; An alternative Approach that YOU Can Use by Terry McNinch, Director of Michigan LTAP

* **Tuesday, May 21, 2002**, 10:00-12:00 Central: Conflict Solving for the New Supervisor by David Grouchy, Louisiana Technology Transfer Center

* **Wednesday, July 17, 2002**, 10:00-12:00 Central: Implementing GASB 34; What It Could Mean For You by William J. Mobbs, P. E.

* **Thursday, December 5, 2002**, 10:00-12:00 Central: Risk Management and Tort Liability on the Roadways-What You Need to Know to Protect Your Agency! by Mike Blankenship, P.E., Program Manager of the West Virginia Transportation Technology Transfer Center at West Virginia University

The Hawaii LTAP is willing to organize participation by small groups of interested individuals. Should there be sufficient demand, we could arrange multiple group sites that would be convenient for all counties. So, if you are interested in participating in any of the training sessions in a group setting, please contact Gail Ikeda or Juli Kobayashi at (808) 956-9006.

To enhance site availability and to allow for the necessary logistics, we should hear from you approximately one month in advance of the session that interests you.



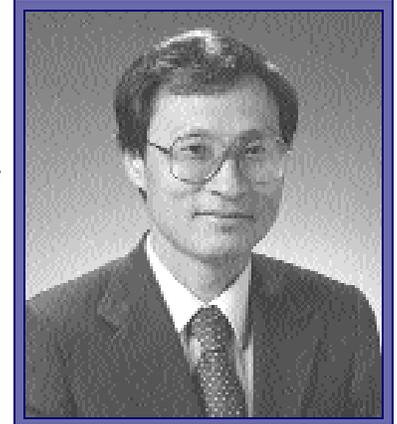
For upcoming workshops and past newsletters, visit our webpage at:
www.eng.hawaii.edu/~hltap

A TRIBUTE TO STEVE FONG



*That best portion of a good man's life,--
His little, nameless, unremembered acts
Of kindness and of love.*

~ William Wordsworth 1770-1850



It is difficult having a Federal Highway Administration office without Steve. Not a day has passed when his insight and experience were not needed. Steve was an engineer in the office, but most importantly he was a friend and a mentor. Steve's mission in life was to teach and share all of the knowledge he accumulated through the years. Someone called him an "in-office encyclopedia." He would make us study the cracks in the sidewalk, quiz us on smoother pavements, debate guardrail design, and research conflicting issues. Many times he would say, "you're so stupid." He didn't mean it as an insult. He really meant that we were being unreasonable, hard-headed, or just plain lazy.

His teachings didn't stop to those of us in the office. One Hawaii Department of Transportation Engineer recently reminded us of Steve's unique teaching method, which he named "the Fong Treatment." Those of you who worked on projects with Steve know what this treatment entails. For those unfamiliar with this term, "the Fong Treatment" was when Steve tested your knowledge and decision-making abilities with questions. Only after he thought you suffered enough, would he tell you everything he knew about the subject, generally an area he had a lot of experience in. He always kept you on your toes. As a result, many people were intimidated and made sure they did their homework before calling him. But everyone who received this treatment soon realized that he had a purpose. It was to make better engineers and, most importantly, better people.

His favorite time to discuss issues and give us the usual "Fong Treatment" was while we ran to pick up lunch-not walked- ran. His most passionate lessons had nothing to do with engineering; they were les-

sons in life. Lessons on professionalism, finances, friends, and family.

He made sure that we didn't break any rules, fought for what's right, and didn't make "stupid" decisions. He always told us to never give up in anything that we do. To him, it was no disgrace to fight and to be beaten. The only disgrace was to quit, which he never did.

For most of the people in the office, he assisted us in making sure that we all thought about our futures and how important it is to plan for the future, no matter what length of time you thought you might have left on earth. By thinking ahead, we would be able to have a better retirement or provide for our families if we needed to.

Steve never forgot the people who touched his heart. He would call people, he had not talked to for 20 years, just to talk and see what they were doing and to inform them of possible opportunities.

He was always looking for opportunities to improve. He always had a plan that no one else was aware of. He would plant a seed and watch it grow. He never pushed-okay-he did push, a lot, but it was for our own good. Steve inspired us to be the best we can be in life.

Steve made sure that we understood the meaning of family and the concept of respecting the other. He always asked us: What do you gain from fighting and having it your way? Is it worth it?

(Continued on page 6)

NEWS FROM OUR PARTNERS...

Cement and Concrete Products Industry of Hawaii (CCPI)

The Cement and Concrete Products Industry of Hawaii (CCPI) proudly announces the first recipient of the John S. Farmer CCPI Scholarship Award to Grant Okunaga. Congratulations Grant! Well done! This is a small part of CCPI's continual effort to promote the development of our engineering community.

Of further note, in recognition of our engineers, February 17th to 23rd was "Engineers Week - Without Engineers, the World Would Stop!" Exhibits produced by several student chapters, Institute of Transportation Engineers and American Society of Civil Engineering were displayed at Kahala Mall.

Continuing our active partnership with the UH Civil Engineering Department and SEA/OH, we recently held a seminar on 'Self-Compacting High Performance Concrete'. Imagine, fluid concrete poured in the formwork requiring no vibrators? Development of this product in Hawaii will add new dimensions in concrete design and applications. Our guest speaker was Professor Denis Montgomery from the University of Wollongong, Australia.

Later this month, CCPI will be conducting the ACI Certification for Concrete Field Technicians Grade I. Two more sessions are scheduled for the year. These

sessions have proven very beneficial for agency inspectors as well as laboratory technicians. Previously, we have partnered with LTAP to hold sessions in Hilo. If you are interested, please contact Juli Kobayashi or me, and we can make a special group arrangement on the neighbor islands as well.

Lastly, we recently held a booth display and a seminar at the Building Industry Association Home Show. Our theme was "Concrete Homes - A Solid Investment". The message to homeowners was the benefits of using a concrete material, i.e. termite resistance, wind and hurricane resistance, low maintenance, energy efficiency, etc. Homeowners were given several options on how they can build (with a licensed contractor of course) their concrete home, i.e. masonry units, insulated concrete forming system, aluminum forming systems, hybrid concrete/light gauge steel panels, precast concrete panels, etc.

For any follow up information on the above topics, please contact me at 833-1882. I would be happy to provide informational assistance. Thank you very much.

Mahalo,
Wayne Kawano

HAPI Kickoff 2002

The Hawaii Asphalt Paving Industry (HAPI) and the Hawaii LTAP helped start out the year with the "HAPI Kickoff 2002" held at the Hilton Hawaiian Village on January 31. HAPI reviewed its goals for 2002 and introduced current and new members. Attendees became familiarized with the State of Arizona's tactics on Asset Managements Systems for Pavement Maintenance. Presenters included Mr. Jim Delton, Arizona DOT who discussed Rationale, Performance Measures, Goals, Resources, Funding, and Success of Arizona's Pavement Management System. Mr. Lorne Fleming from Roadtec, displayed his new RX 10 milling machine and discussed the

many ways Roadtec improved pavement construction techniques with their equipment. Mr. John Duval from the Asphalt Institute gave attendees an overview of what the Asphalt Institute does for the paving industry and how they can assist with concerns or questions relating to asphalt pavements. The seminar was designed for engineers, technicians, and contractor personnel responsible for management and maintenance of asphalt pavements.

For information about HAPI, please contact **Lisa Economy** at (808) 961-3196.

A TRIBUTE TO STEVE FONG *(continued from page 4)*

Most of all, he taught us that getting sick is a fact of life. He never gave up. He always hoped that a cure was around the corner. He also stated that doctors aren't aware of all the possible treatments; we must take it upon ourselves to seek out the latest technology.

No matter how bad he was feeling, he had things he wanted to see completed. He pushed himself and everyone around him. His commitment, professionalism, and courage will never be forgotten. Steve burned bright, steady, strong, warm and energetic from as far back as anyone can remember. His no-nonsense ways always kept him on the go and he lived his life to the fullest. It is truly an honor to have known one with many talents as Steve and to see him pass on his skills and knowledge as a remarkable engineer and incredible golfer. He will be missed.



Simply, he left footprints.....

The Hawaii Division of the
Federal Highway Administration and
Federal Motor Carrier Safety Administration

*Many people will walk in and out of your life,
But only true friends will leave footprints in your heart.*

~Author (unknown)

"MISSION POSSIBLE: Integrating Technologies for Spatial Solutions"

The Hawaii Geographical Information Coordinate Council (HIGICC) is a non-profit organization that bridges GIS activities among a wide range of GIS users. Their goal is to reduce duplication, promote data sharing and maintain data standards. In the State of Hawaii, GIS is recognized and effectively used by the government, business and the citizens for understanding and managing our land resources. HIGICC is a shared mechanism for the diverse community to identify, explore, and solve problems with geospatial information.

HIGICC is holding a conference on May 7-9, 2002 that will identify and discuss traditional and innovative applications of GIS and spatial information technologies. New technologies will be presented with open issues integral to all fields of application. Information exchange also will be a highlight of this conference.



May 7 - 9, 2002

For more information visit the HIGICC website:
www.mhpcc.edu/projects/HIGICC/gismap2002/gismap2002.htm

Or contact **Lee-Ann W. Choy** at (808) 831-1050.

Got a Better Mousetrap?

Editor's Note: In the Winter 2001 issue of this newsletter, the LTAP Director challenged our readers to submit descriptions of devices or machine modifications they invented so that everyone can gain from the fruits of local creativity. Three inventions, all from Maui, are featured below. We hope that other counties will follow and submit their devices to be featured in the next issue.



WELDING CRAWLER

The first featured device, invented by **Michael Santos** in Wailuku Maui, is the WELDING CRAWLER. What is that? Maui County purchased a used ambulance for use as an electrician's vehicle making use of the storage compartments in the vehicle. The medical gurney was not being used and was taking up space in the mechanic shop, until one day Michael had to do lots of welding. He placed a spark retardant cloth over the gurney and used it. It was strong, well built, easy to maneuver, and was easy on his neck. You can even adjust the height.



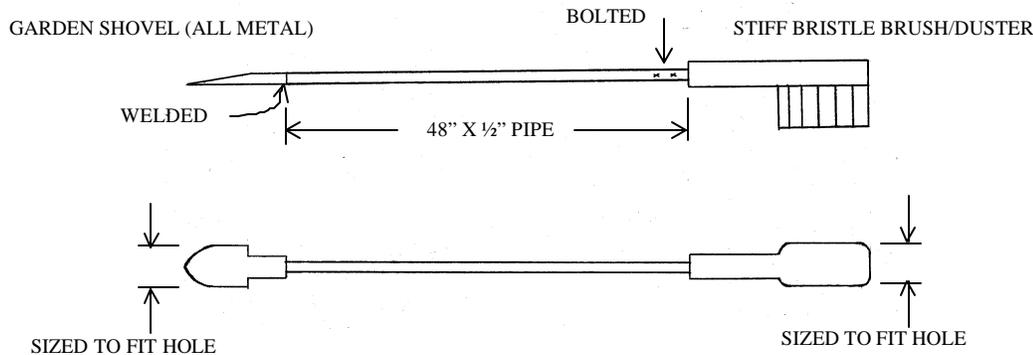
WEEPHOLE CLEANER

Edwin Bonnell from Lahaina Maui devised the WEEPHOLE CLEANER. This device has a shovel and brush at the ends of a 48-inch by 0.5-inch metal pipe. It is used to clean weep holes in the Federal Flood Control Projects. As Edwin explains, dirt and debris are first dug out of the hole by the garden shovel and then the hole is swept clean with a brush. This keeps grass and other vegetation from starting to grow out of the weep holes in the structural embankments. This is done twice annually. This device is simple and gets the job done.

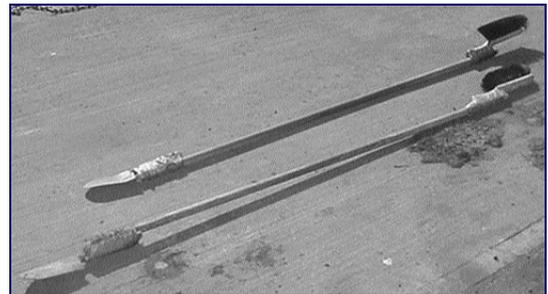


Mousetrap *(continued from page 7)*

WEEPHOLE CLEANER

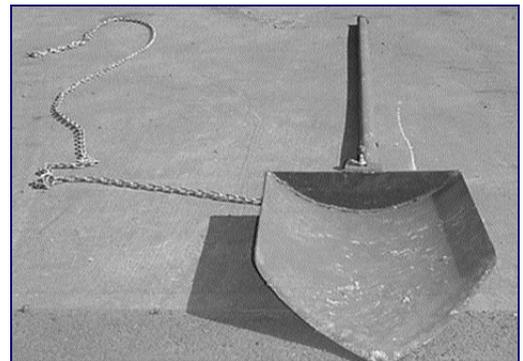


WEEPHOLE CLEANER



OCEAN OUTLET CLEANER / SHOVEL

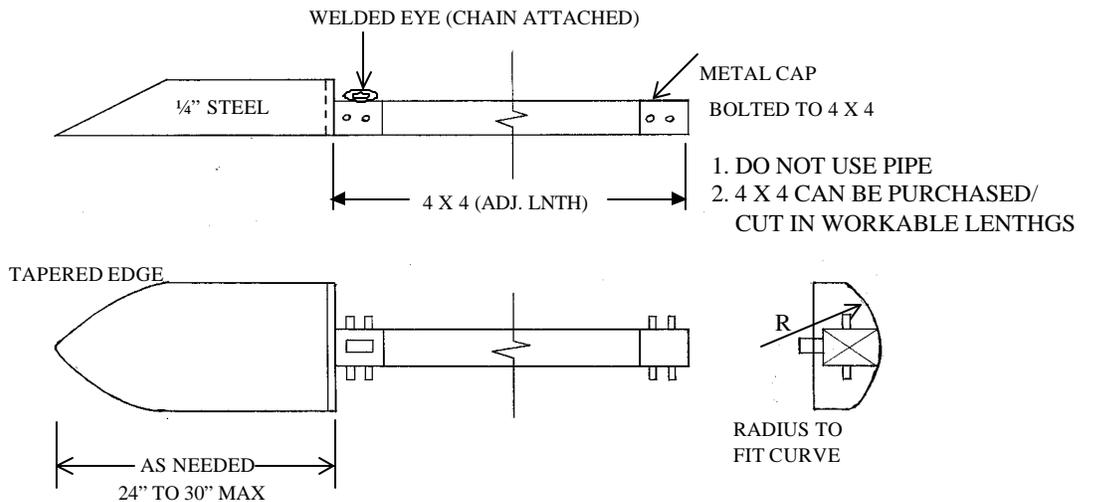
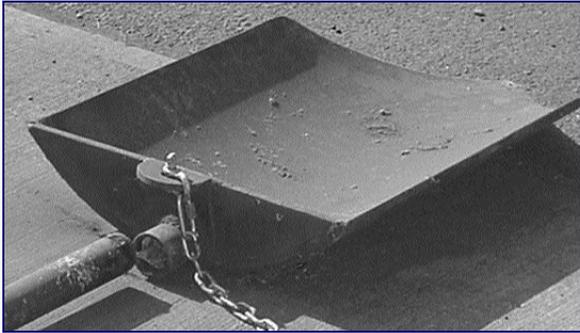
Leonard Costa from Wailuku Maui devised the OCEAN OUTLET CLEANER / SHOVEL to unclog ocean culvert openings rather than by hoe and a regular shovel. Using the hoe and shovel was too slow, tedious and not safe since workers had to physically crawl into 18 and 20-inch culverts to clean. Working in a cramped culvert was simply not reasonable or safe.



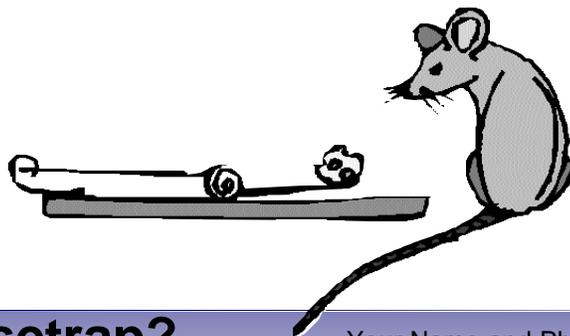
In order to adjust our shovel length, a 2-inch black pipe with threaded couplings was used as the handle. This did not work since the couplings were the weak points and broke. Instead, various lengths of 4x4 (wood) are used and work better.

A backhoe pushes the shovel into the pipe culvert, sliding on the bottom. The shovel is then pulled out by way of a chain attached to the backhoe. Sand, rocks, and debris slide out. Leonard found that it is important to push the shovel into the culvert perpendicularly to the bottom of the culvert or the weak point will be at the back of the shovelhead, at the 4X4 sleeve. If this happens then the sleeve will have to be deeper. The metal cap on the end of the 4X4 is only to keep the end from splintering. Also, the radius of the shovelhead is important. He recognized that the more exact (best fit) the radius, the less chance of the shovel riding up (floating) while being pushed into the culvert pipe.

OCEAN OUTLET CLEANER / SHOVEL



OCEAN OUTLET – CLEANER / SHOVEL



Better Mousetrap?

Have you or one of your co-workers built a better mouse trap recently? A modified gadget? An improved way to do a job?

Please let us know about it. The best entries will be featured in a future issue of Hawaiian Connections.

Your Name and Phone Number:

Inventor's name and phone:

Invention:

Please fax this form to 956-8851

Director's Note

by C.S. Papacostas

Maui has met the "better mousetrap" challenge!

Not one, not two, but THREE innovative devices, all from Maui Public Works, were submitted in response to my request in the Winter issue:

The "welding crawler" by Michael Santos, the "weepole cleaner" by Edwin Bonnell, and the "Ocean-Outlet Cleaner/Shovel" by Leonard Costa are featured in this issue (pages 7-9).

What remains to be seen is whether the other three counties will rise to the occasion and come forth with descriptions of their own inventions.

As promised, a panel of judges will be assembled to select the best among them for recognition at the superintendent/overseer conference later this year.

With the support of our new Executive and Advisory Committees (see pg. 12), our hard-working staff is busy putting together what we hope will be a timely and worthwhile program of training and technology transfer activities.

This year we want to take advantage of a new opportunity, the National LTAP Association's "Click, Listen & Learn" program. Please take a look at the details on page 3 and let us know if you wish to participate.

As you may already know, we have been chosen to host next year's National LTAP annual meeting in July, 2003. This will be a golden opportunity for all to interact with colleagues from throughout the nation.

Program Manager's Note

by Juli Kobayashi

The Hawaii LTAP was recently featured in the Na Leo Makamaka, which is an interactive newsletter of the University of Hawaii. It is great to share with the community what our program does and how we are here to act as a clearinghouse of technology transfer to the transportation community.

We are looking forward to a very busy schedule this Spring. We have scheduled Advanced Relocation, and the Designing Streets for Pedestrians & Bicyclists courses for the month of April. We have also been involved in working with the Department of Transportation on several significant workshops. They are the National Pollutant Discharge Elimination System (NPDES) and the Hazardous Material workshop. We look forward to assisting the State with some of the problems that it faces regarding these two issues. There is also a Media Training course that will be coming to all the islands in June, which will feature Carin Michel, the National Media Trainer for the Federal Highway Administration. Please keep an eye out for these upcoming workshops, as they fill up rather quickly.

Finally, the Hawaii LTAP would like to extend our deepest sympathy to the Fong family for their great loss. Steve was truly a wonderful man who touched a lot of people's lives. I will always remember how he took time out of his busy schedule to help me with my golf game and I am so grateful for all the things he taught me. His display of friendship and dedication and loyalty to his job will never be forgotten. We will all miss him and his "Fong Treatment" dearly. God bless you Steve...

STAFF

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University of Hawaii
at Manoa

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Kyle Dasher
Ian McAuslin

Website:
<http://www.eng.hawaii.edu/~hltap/>

Happy Easter

From the Hawaii LTAP Staff



Hawaii LTAP Transportation Library

The Hawaii Local Technical Assistance Program Library is located in Holmes 207A at the University of Hawaii. The library houses over 10,000 transportation-related technical reference materials.

Informational and workshop videos may also be found in the library. Reference materials and videos are available to the public and may be borrowed or copied.

Database of all materials may be found on the web at:

Videos –

www.eng.hawaii.edu/~hltap/video.html

Publications –

www.eng.hawaii.edu/~tlib

Website:
<http://www.eng.hawaii.edu/~hltap/>

For more information, please contact Juli Kobayashi at 956-9006.

Staff News



The Hawaii LTAP would like to welcome our newest staff member **Kyle Dasher** as a computer technician. Kyle is a junior majoring in Information Technology Management. In his freetime he enjoys playing basketball, tennis and going to the beach. He hopes to find a job in the computer networking field in Hawaii.

UPCOMING WORKSHOPS

Advanced Relocation

East-West Center, Jefferson Hall, Asia Room, April 2 - 4, 2002

Designing Streets for Pedestrians & Bicyclists

East-West Center, Jefferson Hall, Pacific Room, April 11 - 12, 15 - 16, 2002

NPDES Storm Water Training Course for Maintenance Personnel

Oahu: June 3, 4, 17 & 18, 2002

Maui: June 10, 2002

Hilo: June 12, 2002

Kauai: June 14, 2002

NPDES Storm Water Training Course for Engineers and Inspectors

Oahu: June 5 & 6, 2002

NPDES Storm Water Training Course for Designers, Project Manager and Plan Reviewers

Oahu: June 7, 2002

Media Training

Oahu: June 17 & 18, 2002

Maui: June 20, 2002

Hilo: June 24, 2002

Kauai: June 26, 2002

For more information, contact Gail Ikeda at (808) 956-9006.

Free Publications

1. **FHWA-OP-01-019:** Case Study: NAVIGATOR Systems Integrator Contract Use of a Systems Integrator to Manage ITS Implementation
2. **FHWA-OP-01-020:** Case Study: Michigan Intelligent Transportation System Center Use of a Design/Build/Warranty Contract
3. **FHWA-OP-01-021:** Case Study: The Las Vegas Freeway and Arterial Management System Use of a Systems Manager Contractor to Procure ITS
4. **FHWA-OP-01-022:** Case Study: Chart II Software Upgrade Using a Design Competition to Procure ITS Software

For free copies (while supplies last) please call (808) 956-9006.



HAWAII LOCAL TECHNICAL ASSISTANCE PROGRAM

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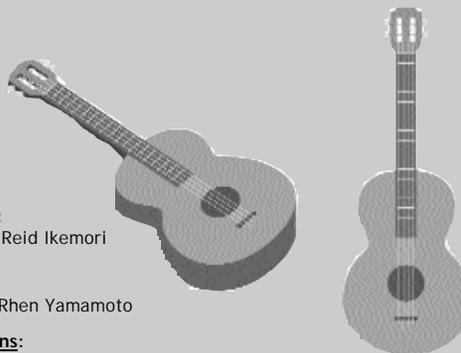
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Program Assistant: Gail Ikeda
Senior Volunteer: Peter Ho

Student Assistants:
Holly Suyama Rhen Yamamoto

Computer Technicians:
Kyle Dasher Ian McAuslin



The Hawaii Local Technical Assistance Program (LTAP) is a cooperative program of the University of Hawaii Department of Civil Engineering, the Hawaii Department of Transportation, Highway Division, State of Hawaii and the U.S. Department of Transportation Federal Highway Administration, Hawaii. The LTAP program provides technical assistance and training programs to local transportation related agencies and companies in order to assist these organizations in providing cost-effective improvements for the nation's highways, roads and bridges. Our office is located at:

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Website:
<http://www.eng.hawaii.edu/~hltap/>

The contents of this newsletter do not necessarily reflect the official views or policies of the HDOT, FHWA or the University of Hawaii. The newsletter is intended to convey useful information to the local highway and transportation personnel. Any references to commercial products or organizations are included only for informational purposes and are not intended as endorsements by the Hawaii LTAP.

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