

HAWAIIAN CONNECTIONS

THE HAWAII LOCAL TECHNICAL ASSISTANCE PROGRAM

VOLUME 8, No. 2

SUMMER 2006

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

PUBLIC COMES FIRST, SECOND AND LAST

By Brennon T. Morioka, Ph.D., P.E., HDOT Deputy Director

The Highways Division of the State of Hawaii Department of Transportation has always played an integral role in the lives of every one of Hawaii's citizens. We impact the way we live our lives. We influence the way we do business. Public service and, more importantly, customer service must always be our number one priority and always top of mind.

A critical component in servicing the public is evaluating and determining the needs of our customers. This involves adequate planning and coordination between both the service providers and those that rely on our services. Planning is not a glamorous activity nor is it as high profile as a ground breaking or ribbon cutting ceremony and yet it is the foundation and starting point from which all success can be achieved. As a geotechnical engineer, I may be a little biased, but the foundation of any worthwhile effort is always the most important.

The Highways Division is embarking on our long-overdue Long Range Land Transportation Plans for all three neighbor island counties. These plans will establish the ground work upon which we can develop an effective long-term land transportation program. However, developing our long-range goals must also be supplemented with mid-range and

short-range milestones for us to strive for and measure our performance against. Our Highways Division Planning Branch, under **Ronald Tsuzuki** and his team, have a monumental task ahead of them as they will map out the direction for the Highways Division over the next 6 to 10 to 25 years.

However, we cannot develop our plans in a vacuum. We must embrace the contributions that all of our stakeholders have to offer. There has been a concerted effort to significantly increase our interaction and collaboration with the general public, various community groups and leaders, industry representatives, and other stakeholders who may have something to add to our projects and our programs.

(Continued on Page 6)



Participants of the "Developing a Pedestrian Safety Action Plan" workshop experience the viewpoint of a pedestrian. See page 11.

HAWAII DOT RESEARCH PROGRAM

Soil-Structure Interaction Modeling of the Kealakaha Bridge

By: Ian N. Robertson, Ph.D., P.E. (Principal Investigator)
 Horst Brandes, Ph.D., P.E. (Co-Principal Investigator)
 Shentang Wang, Ph.D. (Research Assistant)

Introduction

This research program involves a detailed soils investigation and soil-structure interaction modeling of the Kealakaha Stream Bridge, planned for construction on Highway 19 in the Hamakua District of the Island of Hawaii. This investigation is being performed in concert with a parallel HDOT project to install seismic instrumentation on the bridge, so as to provide more accurate modeling of the soil-foundation-structure response to future earthquake ground-shaking.

Bridge modeling

The Kealakaha bridge structure was modeled first under dynamic loading, but without its foundation or surrounding soil. Computations were carried out using the finite element method employing 3-dimensional nonlinear concrete-steel hybrid elements. This analysis was performed using OpenSees, an open source non-linear analysis program under development by the Pacific Earthquake Engineering Research (PEER) center. This computer program allows consideration of geometric and material nonlinear effects.

As shown in Figure 1, for this structure-only model the base of the two piers are assumed to be fixed boundaries, while the ends of the girder are free to move in the longitudinal direction at the slide bearing abutment supports. The response of the bridge was investigated using input accelerations from a nearby

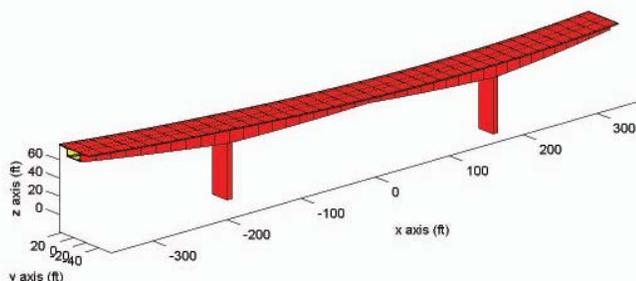


Fig. 1: Bridge discretization

accelerometer recorded during a magnitude 4.9 earthquake that took place on the Big Island on April 2, 2000. Figure 2 shows the predicted longitudinal displacements of the free ends as a function of time.

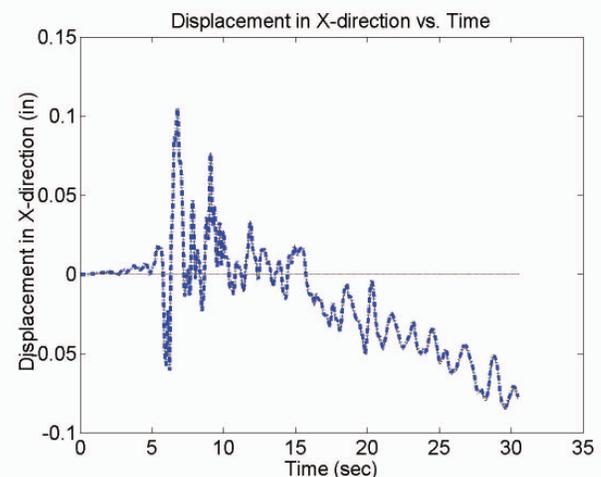


Fig. 2: Longitudinal displacement prediction

Foundation Modeling

The interaction between piles and surrounding soil has been modeled in OpenSees using more accurate soil and pile discretization and nonlinear material properties. The finite element mesh used to model the foundation and surrounding soil is shown in Figure 3. Utilizing symmetry, only half of the foundation is modeled to reduce the computational time required to analyze the model. The concrete pier, pile cap, and individual piles are modeled as elastic material with 20-node elements. The soil mass is modeled as an elasto-plastic material with 20-node elements. Assumed soil properties have been used until further soil investigations can be performed during bridge construction. The response of the model has been analyzed under static, push-over lateral loading applied at the top of the pier.

In order to model the soil more accurately, three new soil constitutive models were developed and implemented in the non-linear finite element analysis code, OpenSees. By implementing these models in the OpenSees code, they are now available for other

HAWAII DOT RESEARCH PROGRAM (Continued from Page 2)

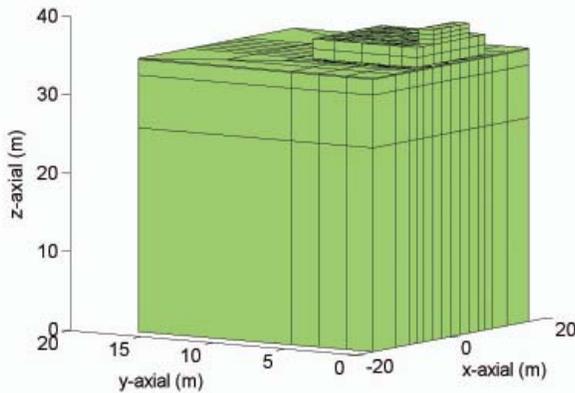


Fig. 3: Detailed pier and soil discretization

researchers utilizing this open source computational tool.

Figure 4 shows a schematic of an OpenSees model under development that will incorporate both pier foundations and bridge structure, enabling non-linear analysis of the entire structure. This model, which incorporates a hybrid finite-infinite element formulation,

will be available for comparison with the bridge response during future earthquakes.

Soil Investigation

In order to improve the soil properties included in the OpenSees model, it is necessary to perform a detailed soil investigation. This investigation will involve drilling boreholes to sample the foundation materials at various depths below the surface at both pier and abutment locations. Static and dynamic testing of the sampled material will be performed in the UH Geotechnical Laboratory along with field investigations during boring to determine both linear and non-linear properties of the foundation materials. Because of delays in bridge construction, the soil investigation is yet to be performed.

Acknowledgement

Funding for this project was provided by the Research Branch of Hawaii Department of Transportation. This support is gratefully acknowledged. The opinions presented here are those of the authors and do not necessarily represent the opinions of the funding agency.

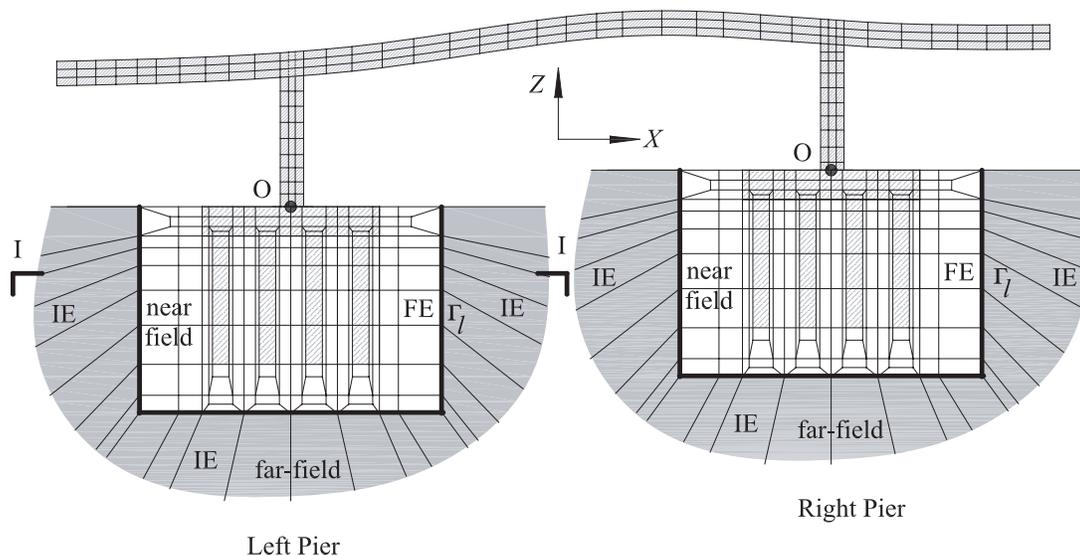


Figure 4: OpenSees computer model of soil-foundation-structure system for non-linear seismic analysis.

NEWS FROM OUR PARTNERS...

American Society of Civil Engineers



By Ron Iwamoto, ASCE Hawaii Secretary

HAWAII SECTION OUTSTANDING CIVIL ENGINEERING ACHIEVEMENT (OCEA) AWARD NOMINATIONS FOR ASCE HAWAII SECTION OCEA AWARD

The ASCE Hawaii Section annually recognizes an exemplary civil engineering project as the Outstanding Civil Engineering Achievement (OCEA). This prestigious award recognizes the project that best illustrates superior civil engineering skills and represents a significant contribution to civil engineering progress and society.

The 2006 Hawaii Section OCEA Award winner will be announced and the award presented to the project owner at the Hawaii Section Annual Banquet in October. OCEA Awards of Merit may also be awarded. The Hawaii Section OCEA Award winner will be nominated for the 2007 ASCE National OCEA Award to be presented next spring.

Nominations for the 2006 Hawaii Section OCEA Award may be submitted by the individual firms or agencies involved in the project. The project must be located either in the State of Hawaii or in a location that is not under the jurisdiction of another ASCE Section. The level of project completion required to be eligible for the OCEA Award depends on the type of project.

Please download additional information located at the following site: <http://www.ascehawaii.org/awards.html#oce> Deadline for nominations is Friday, September 15, 2006. Please submit six (6) copies of each nomination to Awards Committee Chair **Benjamin Rasa** of Belt Collins Hawaii, 2153 North King Street, Honolulu, Hawaii 96819. If you have any questions, please e-mail Ben at brasa@beltcollins.com or call 521-5361.

Better Mousetrap?

Have you or one of your co-workers built a better mousetrap 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 (808) 956-8851.

NEWS FROM OUR PARTNERS... (Continued from Page 4)

STEVEN FONG SCHOLARSHIP GOLF TOURNAMENT 2006

The Hawaii Asphalt Paving Industry (HAPI) and the Cement and Concrete Products Industry (CCPI) are again jointly working together to put on the 2006 Golf Tournament in memory of a very special individual, **Steve Fong**. The first event was held in August 2003 and has been so well received, the Industry and Agencies wanted to do it again in 2006.

Steve Fong was an Engineer with the Federal Highway Administration, as well as a past President of CCPI, who passed away in March of 2002 after a long illness. Those of you who knew Steve, and had been exposed to the "Fong Treatment," can relate to what this man was like and why he was so special. Steve would always test your knowledge and decision-making abilities, all in his hope of making better engineers, and most importantly, better people. Hawaii's transportation engineers, governmental agencies, HAPI & CCPI, continue to pay tribute to the memory of this Engineer, **Steve Fong**, by doing this special event.

Proceeds from this Scholarship Golf Tournament will be used to benefit an undergraduate student enrolled in the Civil and Environmental Engineering program at the University of Hawaii, Manoa Campus.

The 2006 Golf Tournament will be held:

- Date: Thursday, August 17, 2006
- Place: Pearl Country Club
- Time: 12:30pm (Shot gun start)
- Format: 3-person modified scramble
- Cost: Individual Entry - \$120
Corporate & Tee Sponsor Entry - \$525
Awards Dinner Only - \$20



Early Entry Deadline: June 9, 2006, to qualify for bonus Prize drawing

Deadline: July 21, 2006, or first 144 players

Shirts: Based on numerous requests, this year we will be selling "Steve Fong Golf Tournament" Golf Shirts. The cost is \$20. Please see the entry form. We have a limited supply. We will fill orders on a first-come-first serve basis.



For more information call:

Raymond Nii, HAPI (842-3211)

Wayne Kawano, CCPI (848-7100)

Randy Matsumoto, HAPI (842-3227)

PUBLIC COMES FIRST, SECOND AND LAST

(Continued from Page 1)

As a part of the FHWA initiative towards Context Sensitive Solutions (CSS), the Highways Division's Design Branch has spearheaded our efforts, under the guidance of **Gary Choy** and **Ross Hironaka**, to develop our formal CSS policies and processes for and public participation. Public participation and involvement has always been an important component of our Highways Program, however, we are determined to continually improve the way in which our outreach is constructed and received by all. We believe the public demands it; we believe that industry expects it; and we believe that this will help us in providing products and services that will more closely serve the needs of our citizens.

The next few years will be a very exciting and important period for our Division. We are embarking on a number of new initiatives. In upcoming editions, we will feature some of these new programs and projects to provide some insight as to the direction the Division will be taking and the kind of commitment we are putting behind them.

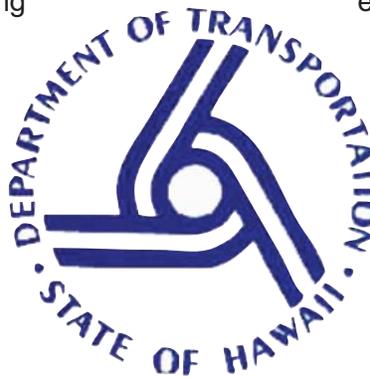
Two of the major programs we have initiated are the Strategic Highway Safety Plan and the Safer Routes to School program.

The Strategic Highway Safety Plan is intended to bring experts from both public, private, and community sectors to help develop our Division's strategy to attack and address such issues as aggressive driving, drinking and driving, pedestrian safety, and much, much more. **Alvin Takeshita** and **Sean Hiraoka** of our Traffic Branch are leading this effort.

The Safer Routes to School (SR2S) Program will also become a cornerstone of our safety initiatives. This program will target elementary and middle schools by providing much needed infrastructure improvements to make walking and bicycling to school safer. Educational programs will also be a vital component of SR2S. This program is currently under the management of **Alex Kaonohi** and **Marjorie Kazama** but will ultimately reside as a part of our Traffic Branch in order to work collaboratively with our Bike-Pedestrian Advocate,

Neal Honma.

Hawaii has become a national leader in storm water management practices and ADA compliance within our State Highway facilities. **Bob Shin** of our Oahu District Office has led us through our consent decree and MS4 application process, and has led his team towards developing a new philosophy for our Division and Department in terms of asset management and maintenance of our facilities. **Kam Kin Sin** and his ADA compliance team must also be commended for their efforts to bring the DOT into 100% compliance. Hawaii is now a model for other states and municipalities for completing and complying with such an enormous task.



And finally, our commitment to the riding public could not be more evident than the creation of the Pavement Management Task Force. **JoAnne Nakamura** has headed the Task Force, comprised of members from DOT, FHWA, and HAPI. This group has developed a sound program in evaluating our current road conditions as well as a plan to address these conditions and recommending new methods that the DOT and industry must explore to extend the life of our existing surfaces. We are committed to implementing pavement preservation and proper pavement management to maintain what we already have and providing the appropriate amount of investment in sustaining our inventory.

A healthy transportation system is vital to our State. We, as a Division and as a Department, must do our part in sustaining our vibrant economy as we are the vehicle of commerce, and to provide our residents with the kind of quality of life they deserve, expect, and should receive.

As a side note, we are also very pleased to announce to those of you who are not aware that our new standard specifications for the DOT are now available. Please refer to the announcement in this newsletter (see page 8).

1ST ACTT WORKSHOP IN HAWAII!

By Christine Yamasaki, HDOT Project Manager

The Hawaii Department of Transportation (HDOT) held its very first Accelerated Construction Technology Transfer (ACTT) workshop in Honolulu on April 18 to 20, 2006 at the Hilton Hawaiian Village. Our conference was the last in a series of 28 workshops fully funded by FHWA. Future projects may incorporate this ACTT process as appropriate. Sixty-eight participants attended the workshop that focused on deck repairs for the Pearl City, Waimalu, and Airport Viaducts.

These ACTT workshops have been sponsored by FHWA and AASHTO's Technology Implementation Group and held all over the country. National transportation experts teamed up with our HDOT colleagues, consultants and construction industry to highlight ways to shorten construction time, curb work zone congestion, and better serve motorists through improved quality. The workshop brought innovative ideas to the table, as well as reinforced our current practices, in a concentrated two and a half-day session.

As a group, the ACTT participants rode a Royal Star tour bus to all three viaducts and engaged in two days of lively "brainstorming" exchanges on cutting-edge ways to get in, stay in, and get out as soon as

possible, minimizing impacts to the traveling public. **Pete Rahn**, Missouri DOT Director, was an excellent guest speaker. His presentation on improving quality in the workplace was very inspirational and motivating. **Paul Santo**, HDOT Bridge Design Section Head, did an outstanding job as the tour guide and wrapping up the workshop, which provided valuable feedback to the ACTT facilitators. At the conclusion of the workshop, the HDOT was given a set of recommendations for consideration and implementation, while moving forward with the project.

The workshop was a huge success with the help of **Domingo Galicinao** of FHWA and **Juli Kobayashi**, **Gail Ikeda**, **Dr. C.S. Papacostas** and **Keoni Wasano** of LTAP. Planning, coordinating and conducting the workshop was a major undertaking for the ACTT committee, whose HDOT members also included **Craig Watanabe**, **Karen Chun** and **Paul Santo**. Special thanks also goes out to the HDOT note takers. This workshop would not have been this successful without the support of many generous individuals.



Construction Skill Set



Innovative Contracting Skill Set



Traffic Engineering / Safety / ITS Skill Set



Public Relations Skill Set



Structures / Geotechnical / Materials Skill Set



Environmental Skill Set

WHAT'S NEW?

HiDOT Plays Host to WASHTO Conference Delegates from 18 Western states to meet in Honolulu

By Noreen Kam, HDOT

The number fifty will be key at this year's annual conference for WASHTO, the Western Association of State Highway and Transportation Officials. This year marks the 50th anniversary of the national interstate highway system. So, it seemed perfect for the 50th state to play host for the 2006 WASHTO Conference.

More than 400 transportation officials, delegates and exhibitors are expected to attend the 85th annual conference in Honolulu. The conference runs from August 27 to 30 at the Hilton Hawaiian Village Beach & Resort Spa and includes a variety of sessions and a transportation expo. The delegates will include **J. Richard Capka**, Federal Highway Administration administrator, and members from the 18 WASHTO states.

On Monday, August 28, HiDOT Director **Rodney Haraga** will welcome the delegates at the opening session. Renowned navigator **Nainoa Thompson** is scheduled to be the keynote speaker. The first session will be held that afternoon on the 50th anniversary of the national interstate highway system.

On Tuesday, August 29, sessions will be held to discuss design/build, project management, and highway safety.

In the afternoon, delegates will be taken on a technical tour to visit the historic U.S.S. Arizona Memorial, the Battleship Missouri and Pearl Harbor.

The final day, Wednesday, August 30, will wrap up with sessions on public private partnerships, programmatic systems management and federal technical assistance to the Western states and the Pacific territories.

Registration forms and information for the 2006 WASHTO conference can be found at www.washto2006.org.

WASHTO consists of Departments of Transportation for 18 Western states, including Hawaii. WASHTO helps to promote a closer relationship between its members and works with the United States Department of Transportation and other governmental agencies.



Hawaii DOT 2005 Standard Specifications Now Available!

The HDOT 2005 Standard Specifications for Road and Bridge Construction are now available for purchase.

Available at Fiscal Office (Room 201)...\$75.00/set
Postage - Local.....\$5.00/set
Postage - Mainland.....\$9.00/set

Make checks payable to "Department of Transportation"

Address:
Department of Transportation
869 Punchbowl Street, Room 201
Honolulu, Hawaii 96813

If you have any questions, please contact **Virgilio Gonzales**, Specifications Engineer at (808) 692-7554

FREE PUBLICATIONS

1. **SHRP-A-404 (1994)** - Fatigue Response of Asphalt-Aggregate Mixes
2. **SHRP-A-408 (1994)** - Level One Mix Design: Materials Selection, Compaction, and Conditioning
3. **SHRP-A-417 (1994)** - Accelerated Performance-Related Tests for Asphalt-Aggregate Mixes and Their Use in Mix Design and Analysis Systems
4. **FHWA-HI-94-027 A** - Part 4 - Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility, and Incident Management Operations - Revision 3
5. **TCRP-Report-35 (1998)** - Economic Impact Analysis of Transit Investments: Guidebook for Practitioners
6. **TCRP-Report-32 (1998)** - Multipurpose Transit Payment Media
7. **TCRP-Report-36 (1998)** - A Handbook: Using Market Segmentation to Increase Transit Ridership
8. **TCRP-Report-39 (1998)** - The Costs of Sprawl - Revisited
9. **TCRP-Report-47 (1999)** - A Handbook for Measuring Customer Satisfaction and Service Quality
10. **TCRP-Report-48 (1999)** - Integrated Urban Models for Simulation of Transit and Land Use Policies: Guidelines for Implementation and Use
11. **TCRP-Report-50 (1999)** - A Handbook of Proven Marketing Strategies for Public Transit
12. **TCRP-Report-51 (1999)** - A Guidebook for Marketing Transit Services to Business
13. **TCRP-Report-53 (1999)** - New Paradigms for Local Public Transportation Organizations. Task 1 Report: Forces and Factors That Require Consideration of New Paradigms
14. **NCHRP-Report-403 (1998)** - Guidance for Estimating the Indirect Effects of Proposed Transportation Projects
15. **SHRP-A-667 (1993)** - Analysis of Sulfur Compound Types in Asphalt
16. **NCHRP-Synthesis-272 (1999)** - Best Management Practices for Environmental Issues Related to Highway and Street Maintenance
17. **NCHRP-Synthesis-274 (1999)** - Methods to Achieve Rut-Resistant Durable Pavements
18. **NCHRP-Synthesis-277 (1999)** - Consultants for DOT Preconstruction Engineering Work
19. **NCHRP-Synthesis-279 (1999)** - Roadway Incident Diversion Practices
20. **NCHRP-Synthesis-281 (1999)** - Operational Impacts of Median Width on Larger Vehicles

**We are cleaning and reorganizing the Transportation Library!
Please take the time to review this list. Any remaining copies will
be discarded by SEPTEMBER 2006.**

Hawaii LTAP Transportation Library

The Hawaii Local Technical Assistance Program Library is located in Holmes Hall 143A 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 -
<http://hltap.eng.hawaii.edu/video.html>

Publications -
www.eng.hawaii.edu/~tlib

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

For more information, please contact us at 956-8719.



Director's Note

by C.S. Papacostas



At the joint regional meeting held at Olympia, WA in early June, LTAP Regions 9 (Arizona, California, Hawaii and Nevada) and Region 10 (Alaska, Idaho, Oregon, Utah and Washington) voted to merge, in what I jokingly called Region "nine and a half." Hopefully, the national association will approve the change later this summer.

Delaware, Pennsylvania and West Virginia (of Region 3) and the Northwest and Alaska Tribal Center sent delegates to our regional meeting. Their presence, along with FHWA Headquarters' **Clark Martin** (Affiliated Programs Team Leader) and **Gib Peaslee** (National LTAP Program Manager) made for a diverse group and intense discussion and sharing of ideas.

A technical tour included a visit to the new Tacoma Narrows Suspension Bridge. It is being built parallel to one constructed in 1950 to replace the infamous "Gallop Gertie," the slender structure that collapsed from aerodynamically induced vibrations on Nov. 7, 1940, only four months after its opening.

On the tour we also viewed roundabout treatments on Burnham Drive in Gig Harbor and on Grandview Drive West at University Place, drove through Northwest Landing (a planned community in Dupond, WA), sojourned at Steilacoom (the oldest town in the State, and crossed the Sound on a ferry (touring bus and all) from Bremerton to Seattle.

The city of Seattle, WSDOT and FHWA are in the process of deciding the fate of the Alaskan Way Viaduct and Seawall along the waterfront. According to project reports, the existing double-deck viaduct is at risk of failure from earthquakes. A preferred tunnel and an alternate elevated structure have been carried through environmental and engineering reviews.

We thank **Brian Walsh** (Washington State LTAP Manager), **Kathleen Davis** (Highways & Local Programs Director) and their staff for a technically sound program and for their hospitality.

Program Manager's Note

by Juli Kobayashi



This year, we have been involved in the planning and coordination of several conferences with the Hawaii Department of Transportation (HDOT). We started out the year with the 2006 Highways Design Meeting in February, the Accelerated Construction Technology Transfer Workshop in April, and the Making Work Zones Work Better Workshop in July. Currently, we are assisting with the WASHTO 2006 Annual Meeting (see page 8) in August and look forward to another successful training event.

For the Making Work Zones Work Better Workshop, **Gail Ikeda** worked arduously with the HDOT to put together a Work Zone Safety handbook which presents guidelines from the 2003 Manual on Uniform Traffic Control Devices (MUTCD) for temporary traffic control. The recommendations apply to short-term work sites on planned activities in the public right-of-way.

We will be going through the handbook entitled, *Guidelines for Temporary Traffic Control* at the workshop as well as providing a copy to each of the participants. If you would like a copy or copies of the handbook, please contact us.



We would like to thank **Gail Ikeda** (HLTAP), **Steve Yoshida** (HDOT HWY-T) and **Karl Kunishige** (HDOT HWY-T) for all the time and effort they spent putting together this very important handbook!

*Hawaiian Connections features scenic pictures from various locations in Hawaii.

In this issue, we are featuring the Island of Lanai, nicknamed the "Pineapple Island". This island is the smallest of Hawaii's inhabited islands covering 140 square miles. On the cover is **Shark's Bay** a beautiful area to hike and view the east and west coastlines, and on the back is **Shipwreck Beach**, located on the northeast coast of Lanai.

HAWAII LTAP ACTIVITIES

Compiled by Gail Ikeda, Hawaii LTAP

Summer is officially in full swing! A recap of our second quarter included the following workshops: Accelerated Construction Technology Transfer (ACTT), Bridge Seismic Design & Retrofitting, Developing a Pedestrian Safety Action Plan, Designing Streets for Pedestrian Safety and Introduction to Highway Hydraulics.

The ACTT workshop was requested in 2004 by FHWA and the HDOT. A committee was formed and a project was carefully selected. The workshop consisted of two and a half days of interactive group activities which included brainstorming sessions where participants were encouraged to come up with alternate solutions. For more details on the ACTT workshop see page 7.

We were fortunate to have FHWA and the National Highway Institute (NHI) bring a "trial" course entitled "Bridge Seismic Design & Retrofitting" to Honolulu. This course provided detailed guidance in seismic evaluation, design, analysis and strategies for retrofitting highway bridges. Participants also learned screening and evaluation methods, hands-on retrofit design examples, geotechnical modeling, computer modeling techniques and various retrofitting measures.

In June we worked with **Jan Higaki** and **Neal Honma** from the HDOT Highways Traffic Branch to bring two pedestrian safety workshops to Honolulu: "Developing a Pedestrian Safety Action Plan" and "Designing Streets for Pedestrian Safety". The main purpose of the first workshop was to help the HDOT develop its own future Pedestrian Safety Action Plan. At the workshop invitees from various pedestrian safety organizations and the state had the opportunity to hear

suggestions from experts and work collaboratively towards making changes in our current policies and procedures. The second workshop focused more on pedestrian facilities design with emphasis on improving pedestrian safety through street and sidewalk redesign and the use of engineering countermeasures.

In the end of June, we assisted the HDOT with the "Introduction to Highway Hydraulics" workshop. This course provided a broad overview of the basics and fundamentals of highway drainage concepts. Participants also had the opportunity to observe a portable hydraulic flume set up in the University of Hawaii's Department of Civil & Environmental Engineering's Hydraulics lab.

For more information on any of these workshops please contact us at (808) 956-9006.



*Instructor **Jim Schall** shows participants the portable hydraulic flume.*

What did YOU think?

*Editor's Note: This is a new feature, quoting our associates and stakeholders about our activities. The first one, talks about a training activity delivered by **Dee Hadfield** from our sister LTAP in Utah earlier this year.*

"...This heavy equipment training has been in my opinion the most successful heavy equipment training session that I can remember, even though we had Dee for just 2-weeks, he sure did a terrific job with our men at our new facility at Kapolei Corp. yard. He had our guys grading, grubbing and leveling about 3+ acres, during the first week from Tuesday until Friday, what a transformation of turning that yard into a very acceptable condition.

Again, Juli, thank you so much, and I hope we can have Dee back every so often..."

Submitted by : **Kalani Joseph**, City & County of Honolulu, Department of Facility Maintenance.





HAWAII LOCAL TECHNICAL ASSISTANCE PROGRAM

Executive Board

Steven Ege
Engineer
Hawaii Department of Transportation
Materials Testing & Research Branch
2530 Likelike Highway
Honolulu, HI 96819
Tel: (808) 832-3556
Fax: (808) 832-3407

Wayne Kaneshiro
Safety Engineer
FHWA Hawaii Division
P.O. Box 50206
Honolulu, HI 96850
Tel: (808) 541-2700
Fax: (808) 541-2704

C.S. Papacostas
Director, Hawaii LTAP
Department of Civil and Environmental
Engineering
University of Hawaii at Manoa
2540 Dole Street - Holmes Hall 383
Honolulu, HI 96822
Tel: (808) 956-6538
Fax: (808) 956-5014

Advisory Board

A. Ricardo Archilla
Assistant Professor
Department of Civil and Environmental
Engineering
University of Hawaii at Manoa
2540 Dole Street
Honolulu, HI 96822

Steven Ege
Engineer
Hawaii Department of Transportation
Materials Testing & Research Branch
2530 Likelike Highway
Honolulu, HI 96819

Wayne Kaneshiro
Safety Engineer
FHWA Hawaii Division
P.O. Box 50206
Honolulu, HI 96850

Galen Kuba
Engineering Division Chief
County of Hawaii
Department of Public Works
101 Pauahi Street, Suite 7
Hilo, HI 96720

Wallace Kudo
Chief, Engineering Division
County of Kauai
Department of Public Works
4444 Rice Street
Lihue, HI 96766

Larry Leopardi
Chief, Division of Road Maintenance
Department of Facility Maintenance
City & County of Honolulu
99-999 Iwaena Street
Aiea, HI 96701

Gordon Lum
Executive Director
Oahu Metropolitan Planning
Organization (OMPO)
Ocean View Center
707 Richards Street, Suite 200
Honolulu, HI 96813

R. Paul Won
Chief, Traffic Engineering Division
City & County of Honolulu
Department of Transportation Services
650 South King Street
Honolulu, HI 96813

Cary Yamashita
Engineering Division Chief
County of Maui
Department of Public Works
200 South High Street
Wailuku, HI 96793

Hawaii LTAP Staff

Director: C.S. Papacostas
Program Manager: Juli Kobayashi

Program Assistant: Gail Ikeda
IT Specialist: Thong Lien

Field Engineer: Les Imada
Student Assistants: Keoni Wasano, Kevin Kuba

The Hawaii Local Technical Assistance (LTAP) is a cooperative program of the University of Hawaii Department of Civil and Environmental 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:

*Hawaii LTAP
Department of Civil and
Environmental Engineering
University of Hawaii at Manoa
2540 Dole Street - Holmes Hall 383
Honolulu, Hawaii 96822*

*Please contact:
C.S. Papacostas, Director
Tel: (808) 956-6538
Fax: (808) 956-5014
E-mail: csp@eng.hawaii.edu
or
Juli Kobayashi, Program Manager
Tel: (808) 956-9006
Fax: (808) 956-8851
E-mail: juli@eng.hawaii.edu*

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

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Hawaii Local Technical Assistance Program
Department of Civil and Environmental Engineering
University of Hawaii at Manoa
2540 Dole Street - Holmes Hall 383
Honolulu, Hawaii 96822

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