Highway Engineering for the Non-Engineer

Hawai‘i Department of Transportation
1720 Haleukana Street
Līhu‘e, Hawai‘i
Conference Room

April 5, 2010

8:15 a.m. – 3:30 p.m.

Registration Procedure
1. Please contact Gail Yamamoto at 808-956-8367, 808-956-8851 (FAX) or gikeda@hawaii.edu by Monday, March 22, 2010.
2. Attendance is limited and preference is given to local government employees.
3. Private company registration fee is $50.

Payment
Payment can be made via Check—payable to the Research Corporation of the University of Hawai‘i) RCUH, Purchase Order, Credit Card (Visa & MasterCard) or Purchasing Card. Please mail payments to:
Hawai‘i LTAP
University of Hawai‘i at Mānoa
Dept. of Civil & Environmental Engineering
2540 Dole Street, Holmes Hall 383
Honolulu, HI 96822

Cancellations
Please contact us if you must cancel your registration or if someone will be substituting for you. Refunds will be made if notice of cancellation is received at least 3 working days prior to the workshop date. Frequent no shows will result in your receiving lower priority in future enrollments.

Registration begins at 8:00 a.m.
Lunch is on your own.
Course Description:

Have you wondered: How are highways built? Why do they put steel in concrete? How are projects selected? Why can’t I see the pavement stripe at night in the rain? What are “they” talking about? Can anyone figure out how engineers think?

This course is aimed at answering these questions and more so as to help people working or supporting highway projects to be able to have improved understanding of why “engineers do what they do” and open up opportunities to make us all better.

In this course participants are walked through the entire highway development process: financing - planning - environment - right of way - highway and bridge design - construction - operations and maintenance. Engineering terms will be explained as each area is discussed: What is functional classification, the Uniform Act, NEPA, etc.? How do you design for safety? Design speed is explained. One learns why pavement is built with different layers of materials; is shown why steel is used to reinforce concrete. The class “builds” a bridge from the piles to the parapets; discuss the MUTCD and much much more.

"I've been with the DOT for 4 years and I learned more about how they work in this course than in the whole 4 years", (IDOT technician)

Target Audience:


Agenda:

8:00 a.m.—8:15 a.m.  Registration
8:15 a.m.—9:30 a.m.  How highways are built—the entire process
  -Introduction
  -Importance of Safety throughout the whole process
  -Planning items covered
  -Environment items
  -Right of Way items
9:30 a.m.—9:45 a.m.  Break
9:45 a.m.—11:30 a.m.  Highway and Bridge Design
  -Geometrics
  -Pavements
  -Bridges
  -Bridge Design
11:30 a.m.—12:30 p.m.  Lunch (on own)
12:30 p.m.—2:00 p.m.  Construction
  -Roadway & Paving
  -Construction—QA/QC
  -Bridges & Structures
2:00 p.m.—2:15 p.m.  Break
2:15 p.m.—3:15 p.m.  Operations
  -Traffic Engineering
  -Maintenance
3:15 p.m.—3:30 p.m.  Questions & Answers
  -Open Discussion
  -Adjourn

Speaker:

Mr. Charles J. Nemmers, P.E.
As a certified National Highway Institute (NHI) Instructor Mr. Nemmers teaches the course. He brings a wealth of knowledge and experience to the course, gained from their over 32 years with the Federal Highway Administration (FHWA). Mr. Nemmers was the FHWA Division Administrator in Delaware, Georgia and New Jersey, and then served as the FHWA’s Director of the Office of Engineering R&D in Washington, D.C. He is also currently a member the Civil and Environmental Engineering faculty at the University of Missouri-Columbia. Charlie’s dynamic teaching style actively involves the class participants; he brings real life examples to course.