

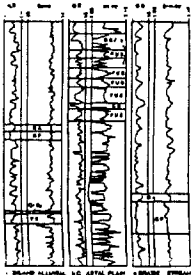
ASSOCIATION OF ENGINEERING GEOLOGISTS

Southern California Section

"Serving Professionals in Engineering, Environmental, and Groundwater
Geology Since 1957"

NEWSLETTER - SEPTEMBER 1999

MONTHLY DINNER MEETING



Date: Tuesday, September 14, 1999
Location: El Adobe Restaurant, 31891 Camino Capistrano, San Juan Capistrano, CA
Time: Social Hour (sponsored by Teratest Labs) - 6:00 p.m. Dinner - 7:00
Announcements and Presentation - 8:00 p.m.
Reservations: Call (949) 253-5924 ext. 564
Cost: \$25.00 for reservations made by 12:00 noon Monday Sept. 13, \$30.00 at the door, and
\$10.00 for students w/ valid i.d.). "No-shows" will be billed \$10.00.

Speaker: Don Terres, Leighton and Associates

Subject: Geotechnical Issues -- Eastern Transportation Corridor (ETC) Project

The 27-mile long Eastern Transportation Corridor (ETC) was constructed primarily across undeveloped terrain in the Northern Peninsular Ranges Geomorphic Province of Southern California. The alignment cuts across the northern portion of the Santa Ana Mountains and Loma Rill making its way towards the eastern portion of the Tustin Plain. The alignment crosses environmentally sensitive and geologically diverse terrain. Silverado Constructors was awarded this design-build project in 1995 for \$765 million contingent on a strict completion deadline of December 1999. The design portion of the project was led by CH2MHILL with Leighton and Associates, Inc. added to provide geotechnical support during both the design and construction phases of the more rugged hillside terrain and high earthwork volume areas.

OFFICERS

CHAIR

Wendy Schell
(949) 250-1421
schellbw@aol.com

VICE CHAIR

David Seymour
(714) 560-9016
ds Seymour@ch2m.com

TREASURER

Doug Santo
(562) 908-6205
dsanto@willdan.com

SECRETARY

Martin Lieurance
(805) 499-5035

The northern portion of the Peninsular Ranges and the corridor alignment is underlain by a thick sequence of Tertiary and Cretaceous sedimentary rocks. The primary bedrock formations encountered included the Puente, Topanga, Vaqueros, Sespe, Santiago, Silverado, Williams, and Ladd Formations. Bedrock was anticipated and mapped as folded with many ancient faults at formational contacts and crossing geologic structure. One ancient fault which paralleled and zigzagged through the corridor was traced and mapped for a distance of more than 3 miles.

The primary geotechnical challenges encountered during construction of the ETC involved slope stability and settlement. However, liquefaction, bedrock expansion, foundation design, rippability, and other geotechnical issues had to be addressed throughout the alignment. The talk will primarily focus on the design-build strategy developed by Silverado for resolving geotechnical issues that arose during the project. Three specific geotechnical challenges that were encountered will be presented. Geotechnical conditions prior to and during the design phase will be reviewed and compared to geologic conditions encountered during grading. The first area is located in the Santa Ana Mountains near the northern end of the corridor. This ridge line area, known as "Windy Ridge," separates Gypsum Canyon on the north from Blind Canyon to the south. This northwest-southeast trending ridge was the highest point of the alignment and was cut down over 300 vertical feet. This cut area was over a mile in length and included over 14 million cubic yards of earthwork. A second challenging area was Loma Ridge, which creates an abrupt northwest-southeast trending ridgeline that divides the Santa Ana Mountains from the Tustin Plain. This ridge line cut included over 7 million cubic yards of earthwork and created cut slopes over 300 feet high. Prior to construction, both of these deep cut areas were determined to be stable as cut slopes. However, during construction both had numerous large (up to 0.5 million cubic yards) slope failures along complexly folded and faulted geologic structure. These slopes were stabilized using variable cut angles instead of the standard "build a huge buttress" method.

(Continued on page 2)

SPEAKER (continued from page 1)

The third example to be presented is a relatively small cut slope area. From all the preliminary geotechnical information there was no way to predict the actual geologic conditions that were exposed. It illustrates the hidden geology that was often encountered along the corridor and waits to surprise all geologists who will work in this portion of Orange County.

Don Terres grew up in the Santa Barbara Area and attended Principia College in Illinois, near St Louis. He graduated with a B.S. in geology in 1981, then received an M.A. Degree in geology from UCSB in 1984. His thesis involved the study of geologic features that control the locations of hot springs in Santa Barbara and Ventura Counties (Western Transverse Ranges). Don has been employed at Leighton and Associates since 1984 and is an RG/CEG in California. At present, he is an Associate of Leighton and assists in running the OC operations. Noteworthy project experience includes the Eastern Transportation Corridor, San Joaquin Hills Corridor (preliminary design phase only), Newport Coast Drive, repair of the La Ventana Landslide, and various large residential tracts in the cities of Orange, and San Juan Capistrano, and Laguna Niguel.

CHAIR'S COLUMN

Thanks to everyone who attended last months meeting at Steven Steak House. We all enjoyed Dr. Roy Shlemon's informative and interesting presentation on the faulting and politics in downtown Salt Lake City. I'm sure we'll be thinking of the issues he raised while we're at the AEG Annual Meeting in Salt Lake City later this month. The Annual Meeting is an excellent opportunity to learn about engineering geology practices in other parts of the country and to catch up on the latest advances in our science. The pre- and post-meeting field trips planned this year promise to be fun and educational. I encourage everyone to attend, learn something, meet old colleagues and have a good time. Registration information is in the Program with Abstracts which you should have received about a month ago; the National AEG web site also contains information on the meeting. The results of the election for section officers for the 1999/2000 year are in. Your new officers are:

Dave Seymour	Vice Chairman
Doug Santo	Secretary
Lorraine Muto	Treasurer

I was elected to a two-year term and will remain Section Chair until August 2000. The new officers take over their positions effective at this month's meeting. Please note the venue for the September meeting is the El Adobe Restaurant in San Juan Capistrano. Our corporate sponsor for the social hour is Teratest Labs in Irvine. Please make sure you stop by their display at the meeting and show your support for their contribution. I still haven't heard from any members with ideas for other corporate sponsors - does this mean you aren't interested in free drinks before the meeting? See you in San Juan Capistrano and Salt Lake City!

Wendy

OBITUARY

Don McCann passed away this spring, just before his 74th birthday. After working as a radar technician for the Army Air Force in the South Pacific, he graduated from USC in 1951. He was soon working for the California Department of Water Resources, where he learned hydrogeology in the field. Many of his life-long friends were co-workers in those years. When he joined the Foreign Operations Division of the Ralph M. Parsons Company, he spent most of his time in the Middle East and Africa. He then became a partner in Glenn A. Brown & Associates, which merged with Leroy Crandall & Associates and eventually became part of Law Engineering. Although he continued to do a little consulting, he basically retired in 1990, but never devoted as much time to his beloved sailplane as he intended.

[Ed. Note: Thanks to Nancy Anderson for this thoughtful submittal.]

MARTIN L. STOUT SCHOLARSHIP

The Southern California Section of the Association of Engineering Geologists is now accepting applications for the 1999 Martin L. Stout Scholarship. The scholarship is valued at \$500 and is open to all student members of AEG. The deadline for applications is October 1, 1999. Application forms may be obtained by submitting your name and address to Wendy Schell, Chairman of the Southern California Section of the AEG, 3775 Carmel Avenue, Irvine, CA 92606, or via e-mail at schellbw@aol.com. For more information about the Association of Engineering Geologists, please visit their web site at <http://www.aegweb.org>.

USE OF GEOLOGIST SEAL AND SIGNATURE ON NATURAL HAZARD DISCLOSURE STATEMENTS ("NHDS")

In a recent memorandum to the Board of Registration for Geologists and Geophysicists, the Legal Office of Department of Consumer Affairs (DCA) presented a formal opinion concerning the use of a geologist's seal and signature on Natural Hazard Disclosure Statements ("NHDS"). The DCA framed their opinion as a response to three questions: 1. Are registered geologists authorized to prepare natural hazard disclosure statements (NHDS) on behalf of real estate sellers or agents? 2. May a registered geologist use his or her own seal or signature on a NHDS made on behalf of real estate sellers or agents? 3. Is a registered geologist subject to license discipline for affixing his or her seal or signature to a NHDS or to other official documents which include conclusions or determinations which are not derived from, or the result of, work related to geologic practice?

The DCA concluded the following: 1. Registered geologists are not specifically authorized by virtue of their registration to prepare a NHDS on behalf of real estate sellers or agents. However, registered geologists are not proscribed from such practice. 2. Registered geologists are not specifically authorized nor are they prohibited from using their official seal or signature on a NHDS made on behalf of real estate sellers or agents. Since anyone can prepare the report, a geologist may also prepare the report. Nevertheless, by affixing an official seal and/or signature on any document, a registered geologist takes responsibility for the geologic content of the document. The appearance of the seal or signature on a NHDS indicates that a registered geologist either reviewed or supervised the review of the disclosure document. 3. A registered geologist may subject his or her license to discipline for affixing, in a misleading manner, the geologist's seal or signature to a NHDS, or to other official document which include conclusions or determinations not derived from, or the result of, work related to geologic practice. The specific facts of each complaint or case concerning allegations of deceit, fraud or misrepresentation related to a NHDS would have to be evaluated on a case-by-case basis in order to determine whether grounds exist for license disciplinary action.

A more detailed analysis of the DCA's opinion can be found on the BRGG web site at <http://www.dca.ca.gov/geology>.

22ND BIENNIAL GROUNDWATER CONFERENCE "INTERCONNECTED WATER SUPPLY IN CALIFORNIA"

The 22nd Biennial Groundwater Conference "Interconnected Water Supply in California" will be held September 20 and 21, 1999 at the Hyatt Islandia Hotel in San Diego, California. Sponsors include the Groundwater Resources Association of California (GRA), UC Water Resources Center, Department of Water Resources, Water Education Foundation, and the State Water Resources Control Board.

The theme for the 22nd Biennial Groundwater Conference emphasizes the interconnections of water supplies in California. In particular, surface and groundwater supplies should be managed as a single resource rather than as separate resources. The conference will offer a concurrent session format to allow water resources managers and professionals an opportunity to exchange technical information related to the water quantity and quality issues confronting California and to discuss possible solutions.

For more information, contact GRA executive director Harrison Phipps at (530) 758-3656 or by e-mail at execdir@grac.org. Registration information and a conference flyer can be found on the web site for the UC Center for Water & Wildlands (<http://www-wwwr.ucdavis.edu/>).

CCGO AGENDA FOR THE PROPOSED CHANGES TO THE 2000 INTERNATIONAL BUILDING CODE

[Editor's Note: The following update outlining CCGO's proposed agenda for the 2000 IBC was written and forwarded to us by Betsy Mathieson, CCGO Vice President, and Past Chairman, San Francisco Section, AEG. Much to her credit, Betsy has been at the forefront of the fight for appropriate inclusion and recognition of geologists in the IBC.]

The Final Action Agenda for the Proposed Changes to the 2000 International Building Code has been published, so we now know which proposed changes of interest to geologists will be voted on at the International Conference of Building Officials annual meeting in St Louis next month. All testimony and votes on Structural code provisions are scheduled to be held on Wednesday, September 15. The schedule, unfortunately, is flexible ("The projected times are approximate and the hearings for a given block of public comments may extend beyond the projected time or may begin earlier than indicated"), but the Structural hearings will not begin earlier than 8:00 a.m. on Wednesday and are projected to end at 11:30 a.m.

I plan to represent the California Council of Geoscience Organizations. AEG past president Greg Hempen and Paul Santi, chairman of AEG's St. Louis Section, have expressed interest in attending. I hope AEG's engineering geology standards committee and/or executive council can authorize them to testify on behalf of AEG. Individual geologists are encouraged to attend and testify also.

(Continued on page 4)

2000 IBC Agenda (continued from page 3)

Information on the hearings is available at <http://www.icbo.org> ("What's New", then "Code Change Agenda Set" and "The 1999 Expo is Coming"). The meeting will be held at the America's Center Convention Center. Four hotels have blocks of rooms for the meeting, but the reservation deadline was last week, about the time the agenda was published. (But at the Costa Mesa hearings, by waiting until a week before the hearings to reserve a room I saved about \$40 per night and avoided an early-departure penalty!) The code hearings are just one part of a large conference. I can't tell from the registration material whether hearing attendees will be required to pay the \$350.00 registration for the full program (all business, education, and social functions).

Several proposed code changes of interest to geologists were settled at the hearings in Costa Mesa, California, in March. (The California Council of Geoscience Organizations (CCGO) testified at those hearings.) Those changes are on the consent agenda for approval without testimony in St. Louis.

Here are the primary remaining issues of interest I have dug out of the Individual Consideration Agenda:

1) S9-99 (structural)

This proposed change is a power grab by the architects' lobby, wherein they are attempting to reassign to "the architect or professional engineer" numerous tasks currently assigned to "a registered design professional." (At least in California, the term "registered design professional" includes Registered Geologists). CCGO succeeded in getting three of the architects' numerous proposed changes modified so that Registered Geologists, and not only architects and professional engineers, will be allowed to classify and investigate soil; determine the scope of soil investigations including the number and types of borings and the equipment used to drill and sample; and have a fully qualified representative on site during all boring and sampling operations.

In St. Louis, the only allowable motions for S9-99 will be Approval as Modified (as noted in the previous paragraph) and Disapproval. Even with CCGO's modifications, S9-99 contains code changes that should raise the eyebrows of geotechnical engineers, but they were not represented in Costa Mesa. For example, Section 1622.4.2 as proposed to be changed by the architects' lobby (and as modified) states, "Earth-Retaining Structures. The seismic forces and design methodology shall be determined in accordance with a geotechnical analysis prepared by the architect or professional engineer."

Unfortunately, S9-99 still reassigns one task often performed by engineering geologists to "the architect or professional engineer." This is Section 1615.1.1, Site Class Definitions, dealing with soil profile classification based on shear wave velocities. The architects' change states, "Where site specific data are not available to a depth of 100 feet, appropriate soil properties are permitted to be estimated by the architect or professional engineer preparing the soils report based on known geologic conditions." On that basis alone, because no other modifications are permitted, I recommend CCGO and AEG argue for disapproval of S9-99.

2) S381-99 (structural) Appendix Chapter 33-1, Grading

This proposed change would reincarnate an updated version of the former Excavation and Grading chapter. There is no such chapter in the current Uniform Building Code and none in the 2000 International Building Code as written. The proposed addition of this appendix was disapproved in Costa Mesa but is on the Individual Consideration Agenda for St. Louis because a public comment was received from the proponent after the hearing. On the web site, the proposed appendix is at the end of the file titled "ibc-str5.pdf." It's easy to download with Adobe Acrobat, which is easy (and free) to download if you don't have it. I haven't read the entire proposed appendix, but a building code without a grading section seems to be missing a crucial element. I'll develop a recommended position before St. Louis.

I learned in Costa Mesa that building codes are not written by experts in a public agency. They're negotiated in bars and restaurants at a series of hearings. This is our last chance for the 2000 International Building Code. Let's make a showing in St. Louis so other professions and trades learn that the work of geologists is important to public health and safety, and we care about the future of our profession!

Betsy Mathieson

Vice President, CCGO
Former Chair, San Francisco Section, AEG

ZIP-A-DIP

Combination protractor, scales and most efficient apparent dip calculator!

Only \$4.00 each, 2-10; \$3.50; 11+; \$3.00; 50+; \$2.50

Brochure describes ZIP-A-DIP and stratigraph.

PLEASE NOTE NEW ADDRESS BELOW!

Brochure only ___ ZIP-A-DIP quantity ___ total cost _____

Name _____

Address _____

To: ZIP-A-DIP, 3891 Ashford Dr. Eugene, OR 97405

DISTRIBUTOR FOR CHANCE® HELICAL PIER® UNDERPINNING SYSTEM AND THE STANLEY® COMPULEVEL™

THE ONLY ENGINEERED FOUNDATION SYSTEM LISTED WITH THE FOLLOWING:

Building Codes:

BOCA

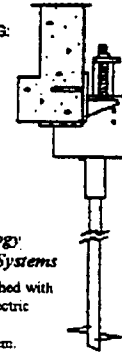
Report No. 94-27

ICBO

Report No. ER-5110

SBBCCI

Report No. 9504



This Proven System Provides These Benefits:

- Significantly lower cost compared to other stabilizing methods.
- Measurable capacity during installation.
- Predictable results: known capacity in specific soils.
- No stress on structure during installation.
- Fast installation: minimal site preparation.
- Installs in limited access areas.
- Provides support for failing retaining walls.
- Can be utilized in emergency shoring situations.

Proven Helical Pier® Technology Now Used For Underpinning Systems

Foundation Stabilization is accomplished with an engineering technology used by electric utilities for decades: Helical screw anchor foundation system.

For more information on product, or how you can become a certified Chance® installing contractor in your area contact:

ADVANCED SUPPORT TECHNOLOGY, INC.

(805) 250-1688

Serving Southern California

EMPLOYMENT OPPORTUNITIES

Geologists -

Ninyo & Moore's Geotechnical Division seeks Project Geologists (a minimum of 5 years experience and RG/CEG is preferred) and Senior Staff Geologists (a minimum of 2 years experience). Please mail your resume to: Ninyo & Moore, 9272 Jeronimo Road, Suite 123A, Irvine, CA 92618 or via fax: (949) 472-5445. EOE.

Geological Career Opportunity - Law/

Crandall's Geotechnical Division currently has a career opportunity for a CEG/RG. A minimum of 10 years experience in Southern California is required, with experience in fault rupture hazard evaluations, landslide stabilization, hillside grading, and geologic-seismic hazard evaluations is required. Experience with directing geology staff, project management, and managing geologic inspection projects is desired. Please send your resume to Martin B. Hudson, Ph.D., Law/Crandall Geotechnical Division, 200 Citadel Drive, Los Angeles, CA 90040.

Engineering Geologist -

The California Department of Water Resources will be giving an exam for the position of Engineering Geologist (entry-level position). Those wishing to take this exam must apply before September 16, 1999. For more information, job specifications, and application forms visit: <http://www.dms.water.ca.gov/person/job/>. Open positions are available at offices statewide. Engineering Geologists may work in engineering geology or hydrogeology.

Solutions
Land
Water

Consulting Geohydrologist
Engineering Geologist
Water Quality Specialist

Sanford L. Werner

Registered Geologist
Certified Engineering Geologist

21031 Blythe Street, Canoga Park, CA 91304
(818) 998-8178

COMMITTEE CHAIRS

MEMBERSHIP

John Whitney
(714) 647-0277

LEGISLATIVE AND REGULATORY AFFAIRS

Dave Ebersold
(626) 568-6943
david.b.ebersold@mw.com
Mark Schluter
(626) 930-1223
conversegp@aol.com

PUBLICATIONS

Dawn James
(805) 499-5035

FIELD TRIPS

Kim Bishop
(213) 343-2409
kbishop@calstatela.edu

SHORT COURSES

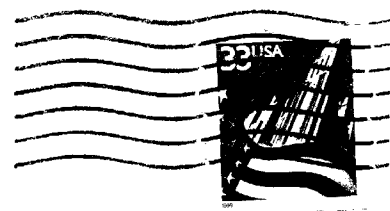
Sue Tanges
(619) 442-8022

EDUCATION

Ali Tabidian
(818) 677-2536

EDITOR

Stuart Michener
(310) 670-9221
nsam@pacbell.net



Association of Engineering Geologists
Southern California Section

Stuart R. Michener
AEG Newsletter Editor
1669 Wilson Ave.
Arcadia, CA 91006



FIRST CLASS POSTAGE

D & Construction Specialties, Inc.

LC. # 681416



"Specializing In Hillside Drilling & Tough Hand Excavations"

* Test Pits/Test Borings

* Foundation Underpinning & Repair

* Caissions/Grade Beams

* Slope Repairs/Recompaction

* Demolition & Hauling

Friendly & Professional Service

(818) 767-8864