

AUGUST 2002

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2002 / 2003**

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**American Society
of Civil Engineers**

North Jersey Branch Newsletter

2002 CONVERSE WARD SEMINAR:

Inclusion of Construction Flaws in the Structural Design of Drilled Shafts

Drilled shaft foundations have become popular over the past decade, particularly when large lateral loads must be resisted, e.g. under seismic loadings or certain scour conditions. However, current construction techniques typically produce undetectable structural flaws in the finished product. While large flaws can be discovered using Non-Destructive Testing, small flaws cannot. As a result, the current solution is to account for the presence of small structural flaws in the design of drilled shafts.

This presentation discusses the effects of small concrete voids, misaligned reinforcing steel, corroded and buckled steel rebar, under-strength concrete and soil confinement on the structural capacity of drilled shaft sections. Probabilities of occurrence of flaws are also discussed, based on a survey of construction sites and published data. A simple probability process is described whereby resistance factors are determined and used in LRFD examples.

SPEAKER: Prof. Michael O'Neill, PhD, PE, is a well renowned speaker with 39 years of applied research and consulting experience in deep foundations, soil properties, and field testing of foundation systems. A recipient of many awards, he currently conducts research for TX DOT on the design & construction of ACIP piles for Houston District bridges and for drilled shafts in soft rock for the Austin Bridge Division (Austin).

DATE: Thursday, September 19, 2002

TIME: Reception at 5:30 PM, Dinner and Presentation to follow.

RSVP To:

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RESERVE BY
THURSDAY,
SEPTEMBER 12th !!

LOCATION:

The Newark Club
One Newark Center
Newark, NJ
(973) 242-0658

COST:

Members: \$55
Non-Members: \$75
Students: \$30

Checks should be
payable to "ASCE –
North Jersey Branch"



PRESIDENT'S ADDRESS

Welcome to a new year at the North Jersey Branch ! For those of you who don't know me, I am Gita Sheth, an Associate with Booz Allen Hamilton, a Transportation Consulting company in Newark, NJ. I have been an engineering consultant throughout North Jersey for the past 14 years and am pleased to serve as the Branch president this year.

We had a pretty busy year last year. The good news is that our **150th Anniversary** weekend last May was a huge success ! The **Turnpike Dedication** acknowledged the history & achievement behind the 51-year old "tomorrow's highway" and brought well-deserved public recognition for the New Jersey landmark (see full article on page 5). The **Gala Celebration** and Awards Ceremony, was attended by well over 200 guests, entertainers, and award recipients, with the party lasting late into the evening. The anniversary event was result of all three Branches in the New Jersey Section working together. However, I'd like to give a special thanks to the *North Jersey* members who worked hard putting it all together: Ali Vaezi, Eugenia Roman, Bill Rutherford, Mike Murno and Kevin Sylvester.

This year we plan on continuing the wide and note-worthy range of programs. We've won the Outstanding Large Branch Award from National ASCE for two out of the last three years. It's an ambitious standard we've set, and I'm positive that with this year's combination of experienced and new board members, we will be able to provided the same level of service to our members. I look forward to seeing you at our events – come out, meet your colleagues and get involved.



A LETTER TO OUR NEWSLETTER SPONSORS

The American Society of Civil Engineers (ASCE) is the preeminent professional organization serving civil engineers and those in related disciplines. On both a national and local level, our organization serves as the focal point for developing and providing research results, technical applications and policy news.

New Jersey companies can support their local branch in these endeavors by sponsoring the **2002-2003 North Jersey Branch Newsletter**. The newsletter publishes local and regional information including upcoming seminars and symposiums, field trips, academic news, outreach opportunities, Younger Member activities, and other networking events.

Approximately eight newsletters will be issued from now until June 2003. The target audience ranges from 800 to 1000 members in the northern New Jersey region. *These are your colleagues and clients.* The sponsorship cost of \$150 helps defray the associated production and distribution costs and provides your company with a business-card size advertisement in each issue. If you are interested in placing an ad, please send an electronic image of your company ad to sheth_gita@bah.com or please call me at 973-456-5056.

On behalf of the North Jersey Executive Board, I would like to thank our long-standing sponsors who have consistently supported us through the years. Some of them are shown on the back of this issue, and others include Dewberry-Goodkind, Inc. and HNTB. We look forward to their renewal, as well as support from new companies throughout North Jersey.

Thank you for your support,
Gita Sheth

NORTH JERSEY
TECHNICAL GROUPS

Join Us! The Technical Groups deserve all the credit for putting together the technical seminars that happen just about every month. Become a part of one of these groups and get involved with others in your field of interest. Whether you just want to help out, or if you have ideas & speaker contacts, we are always interested in new members and future leaders.

For more information, contact Ali Vaezi, Chair of the Technical Committees, at avaezi@dewberry-goodkind.com OR contact any of the individuals listed below:

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SCENES FROM THE
150TH ANNIVERSARY GALA



The Colonial Musketeers ushered in the evening with a patriotic march.



Awardees included Prof Ed Dauenheimer (seated) for Educator of the Year, Bryan Juncosa (far right) for Civil Engineer of the Year, and Eugenia Roman (standing 3^d from right) for Young Engineer of the Year.



The Newark City Subway was recognized as one of NJ's Top Ten Projects in the past 150 years. New Jersey Transit officials (center) accept the award from ASCE officers.

ADJUNCT PROFESSORS WANTED !

The **Engineering Technologies Department of Essex County College** seeks adjunct faculty members to teach the following courses this Fall:

Surveying I - 3 credits
Soil Mechanics - 3 credits

The courses run in the evening from September 3, 2002 to December 16, 2002. The Surveying class includes Saturday fieldwork.

Positions are also available for Spring 2003:

Surveying II - 3 credits
Structures - 4 credits
Hydraulics & Drainage - 4 credits

Adjunct faculty should possess a master's degree and have expertise in the subject taught. For information and to get a registration form, please contact **Prof. John Gribbin at 973-877-3454** or send an email to gribbin@essex.edu.

The **School of Engineering and Engineering Technology at Fairleigh Dickinson University** is looking for an adjunct lecturer for the following evening course this Fall:

Construction Practices I - The availability, use, production & cost of various construction equipment. Earthmoving, hoisting and rigging. Layout, use, & production of on-site plants. Preassemble, prefab and unitizing. (Text: Construction Methods & Mgt., Nunnally, S.)

A minimum of three years of relevant industrial experience, a P.E. license and a Master's degree in Civil or Construction Engineering (or closely related field) is required. All candidates must demonstrate evidence of potential for effective teaching and scholarly productivity. For application information, please contact **Prof. Melvin Lewis at 201-692-2348** or mlewis@fdu.edu.

NJIT'S "SUMMER INSTITUTE" STILL A SUCCESS

Every July, New Jersey Institute of Technology holds a summer program for high schools students, introducing them to the field of Civil Engineering. This year, over 25 students attended the 5 week program structured to mimic college life and academic responsibilities. Educational activities also included math enrichment, communications skills, and computer science.

Two weeks of the program are sponsored by ASCE National and ASCE North Jersey Branch. One of the highlights of the program are the presentations given by our own North Jersey members. As a visiting speaker, engineers from different disciplines describe their real-life experiences, day-to-day and career accomplishments. The students benefit from the interactive session and the speakers enjoy sharing their personal case studies.

This past July, the following members volunteered their efforts on the following topics:

Ralph Dinkle, PE - Environmental Engineering
 Gita Sheth, PE - Structural Engineering
 Michael Murno, PE - Transportation Engineering
 Gareth Middleton, PE - Construction Management

We are looking for new speakers for next year! If you are interested in participating, on any area of Civil Engineering, please contact Mike Murno at mmurno@ekmail.com.

PRESS RELEASE

NEW JERSEY TURNPIKE NAMED ENGINEERING LANDMARK

EAST BRUNSWICK, N.J. ~ The New Jersey Turnpike Authority has been selected a **New Jersey Historic Civil Engineering Landmark** by the New Jersey Section of the American Society of Civil Engineers (ASCE).

A bronze plaque was presented on May 10, 2002 to Turnpike Authority Executive Director Michael Lapolla by ASCE President, H. Gerald Schwartz, Ph.D., P.E. The plaque commemorates the historic achievements of the engineers that designed a major highway through the State of New Jersey that not only provided for uninterrupted travel, but also allowed high-speed travel with extensive consideration given to safety. Many of the design and safety standards used for the original construction became a model for the Interstate Highway System some years later. The New Jersey Turnpike's continued innovation and sustained development continue to serve the citizens of New Jersey.

In its construction, the Turnpike's creators were faced with the incredible challenge of constructing a safe world-class expressway in less than two years. For the majority of the Turnpike's interchanges, ramps pass over the Turnpike. This design allows exit ramps to be on an upgrade where exiting motorists decelerate, and entrance ramps on a downgrade where entering traffic must accelerate to merge with high-speed through traffic.

The dual-dual roadway arrangement was created to increase capacity and separate passenger car traffic from general traffic mixed with trucks and buses during normal conditions. The Turnpike's dual-dual roadway arrangement provides access to exits and service areas with separate ramps from each roadway. Ramp gates and changeable message signs at every entrance to the dual-dual section allow one roadway or the other to be closed for construction or maintenance, or to balance traffic when one of the roadways may be congested.

In its fiftieth year, the New Jersey Turnpike has endured all of the traffic, the widenings, and reconfigurations. The Turnpike has not only survived, but it has prospered and is here to stay and continue to serve its patrons well. The New Jersey Turnpike's innovation and sustained development continue to make it "tomorrow's highway built today."



ASCE National President Gerry Schwartz (right of plaque) presents the plaque to Turnpike Authority Executive Director Michael Lapolla. Other NJTA and ASCE officials were also part of the presentation.

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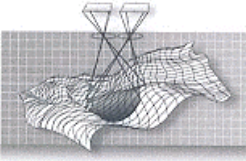
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