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Civil**

# North Jersey Branch Newsletter

## JANUARY DINNER SEMINAR:

### Route 80: Emergency Bridge Repair and Replacement

NJDOT was put to the test last summer, when a truck fire destroyed a bridge on a critical segment of Route 80. The resulting damage shut down miles of the heavily-commuted Interstate for days, and restricted travel for months. This seminar will talk about the investigation, initial findings, and the options that NJDOT had to consider in getting the road back open. The speaker will discuss how they decided on which temporary and permanent repair methodologies to use. He will include information on the deck pouring issues and the subsequent jacking up of the entire bridge deck, removal of the temporary span, and the final opening of Route 80. Additionally the presentation will cover the Route 46 damage and how they fixed it in 6 days.

**SPEAKER:**

Mr. Rod Roberson is the Assistant Commissioner for Operations for the NJDOT. He has worked in the maintenance and operations department for the last 24 years and also serves as its Emergency Coordinator.

**DATE / TIME / LOCATION**

- Thursday, January 24, 2002
- **The Radisson**, Route 46 Eastbound, Fairfield, NJ
- Cash Bar opens at 5:30 PM, Dinner and Presentation to follow.
- **RSVP by Jan. 21** to Paul Emilius at 973-697-2122 or [pemiliusjr@geodcorp.com](mailto:pemiliusjr@geodcorp.com)
- Cost \$40 (\$15 for students)

ASCE National has given the North Jersey Branch the

### OUTSTANDING LARGE BRANCH AWARD For 2000 – 2001

The officers would like to thank all the committees and members who organized the many successful technical, outreach and networking programs.

**PRESIDENT'S ADDRESS**

Welcome 2002 !! I hope this newsletter finds all of you well rested and ready for another year of activities hosted/sponsored by the North Jersey Branch of ASCE.

Several exciting events are already planned for the first half of 2002. Engineer's Week activities at the Liberty Science Center in Jersey City will be taking place on February 18th and 25th. There are several very interesting seminars that the Transportation Committee and the Structures Committee are planning for February and March, respectively. And on May 11th, the New Jersey Section, in conjunction with the North, Central and South Branches, will celebrate ASCE's 150th Anniversary.

On a different note, it gives me great pleasure to inform you of 2 important communications that I recently received from ASCE National. The first is a note of congratulations to the North Jersey Branch on the **40th Anniversary of the Branch**. Many thanks to all of the past presidents and board members who worked year after year to sustain the success of the branch to this milestone anniversary. The second is a note congratulating the North Jersey Branch on winning this year's **2000 Outstanding Large Branch Award** (for Zone 1 – see map below). This award has been bestowed on the branch as a result of the many programs and events that have been organized during the past year to serve our membership. All who planned and coordinated these activities should be commended for their hard work and dedication.

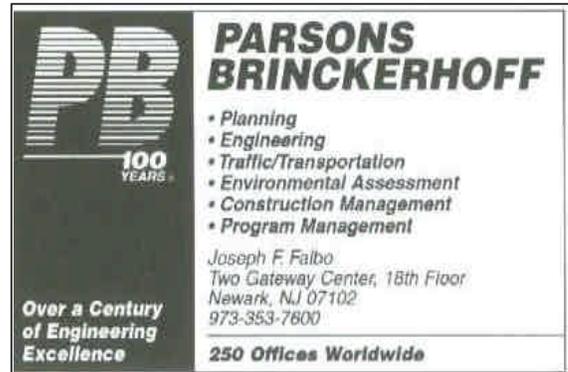
I look forward to seeing you at the various events that are planned for the New Year. Best Wishes for a Happy and Prosperous New Year!



*Attention North Jersey Readers:  
Do you have any interesting news, photos, upcoming events, or solicitations ?*

*If so, please contact the newsletter editor at  
Sheth\_Gita@bah.com*

*We would like to thank our newsletter sponsors,  
who are shown throughout this issue...*



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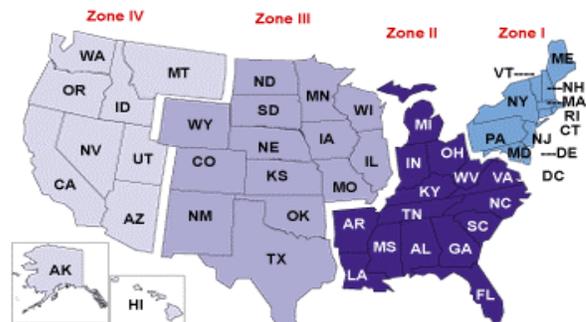
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**Did you know that....**  
ASCE is divided into four equal Zones based on number of members.



**TOP 10 NEW JERSEY CIVIL ENGINEERING PROJECTS:****EXTENSION OF DEADLINE TO FEBRUARY 15, 2002**

The submission deadline for nominations for the Top 10 New Jersey Civil Engineering Projects has been extended one month to February 15, 2002. With the events of the past few months, this time extension has been made to allow people ample time to prepare their nomination package.

The Top 10 New Jersey Civil Engineering Projects will recognize the accomplishments of the Civil Engineer in New Jersey as part of ASCE's New Jersey Section Gala on May 11, 2002 (see article below).

The year 2002 marks the 150th Anniversary of the founding of The American Society of Civil Engineers. The New Jersey Section's Celebration of this historic event includes the selection of the Top Ten Civil Engineering projects in the State New Jersey. The Top Ten Projects will be chosen from projects submitted to the Committee through the official entry form, which have been constructed within the last 150 years. Projects for which construction is completed by the entry due date are also eligible. The Top Ten Projects will be judged and chosen based on the criteria described in the application. For application and complete information on the statewide award, please visit ASCE's NJ Section website at

<http://sections.asce.org/newjersey/sec-150-top10.html>



**CALENDAR**  
**OF**  
**EVENTS**

February 21<sup>st</sup> - Dinner Seminar at the Newark Club:  
"Restoration of Train Service to Lower Manhattan." Speakers from PATH and NYC Transit.

(Sponsored by the Transportation Group.)

March 14<sup>th</sup> - Half-day seminar at the Radisson:  
"Geotechnical Engineering for Structural Engineers." (Sponsored by the Structures Group.)

March 2002 - "OSHA 10-hour Construction Standards Competency Training" to be held at NJIT. Contact Gareth Middleton at 973-273-0076 for further info. (Sponsored by the Construction Group.)

April 2002 - Full Day Symposium on Tunnels.  
(Sponsored by the Transportation Group.)



For more information on the Technical Groups, contact the chairperson(s) listed on Page 4 of this newsletter.

**ALL SYSTEMS GO FOR NEW JERSEY'S**  
**150<sup>TH</sup> ANNIVERSARY CELEBRATION**

New Jersey's 150<sup>th</sup> Anniversary Committee has been working diligently in planning a two-day anniversary event. At this time, the following schedule of activities has been established.

- On May 10, Friday morning, there will be a CEO Breakfast with ASCE National President Gerry Schwartz and key NJ state legislatures. The breakfast is a closed event, with invitees consisting exclusively of officers of companies who are sponsors of the Gala.
- On Friday afternoon, a New Jersey project (to be determined) will be declared a national, historic civil engineering monument.
- On Saturday May 11, the black-tie Gala dinner will be held at the New Brunswick Hilton. Entertainment will include the Colonial Musketeers. Awards for Engineer of the Year (Section and Branches) will be presented, as will the winners of the Top Ten Projects of the last 150 years. Tickets are \$100 and will be available to the public shortly.

Check future newsletters for updates and info on ticket sales.

## **YMG MAKES A DIFFERENCE IN PATERSON**

On Saturday, November 24<sup>th</sup>, the North Jersey Branch's Younger Member Group (YMG) and the Student Chapter at NJIT spent a day volunteering for Habitat for Humanity (HH) in Paterson, NJ. Habitat for Humanity builds and repairs low-income housing all over the world, and much of the labor is volunteered.

There were about 15-20 participants that were split up between two different sites. Tasks performed during the day included, but were not limited to: window installation, site clearing, and basement work. The type of work performed is dependent on the stage of construction of the house.

The YMG provided bagels and donuts for breakfast, while the NJIT Student Chapter brought bag lunches for the participants. Volunteers were also shown a few other sites where HH was striving to make a difference. YMG will be keeping in contact with HH and plans to volunteer in future projects.

## **PATENT AWARD GIVEN TO NJIT**

The Research & Development Council of New Jersey has awarded NJIT's Civil Engineering department a patent award for inventing pneumatic fracturing, a process that is used to clean contaminated soil. The Council has also named Saul Fenster, president of NJIT, educator of the year. Fenster and John Schuring, chairman of NJIT's civil engineering department, accepted the awards on November 8 at a dinner at the Liberty Science Center in Jersey City.

The Research and Development Council of New Jersey is a non-profit organization that supports the advancement of R&D throughout New Jersey. They supports initiatives in educational, scientific and industrial research.

John Schuring, who accepted the Thomas Alva Edison Patent Award for pneumatic fracturing, said NJIT engineers began working on the process in 1988. Back then most civil engineers were focused on digging and removing contaminated soil. NJIT had found a way to treat the contaminants in the ground without removing the soil. Pneumatic Fracturing uses deep drills to create a network of fractures in contaminated soil. Once the network is formed engineers inject one of a variety of gases, solids or powders into the fractures. The injected ingredient mixes with the contaminants and forms a biological reaction that causes "a degrading of the contaminants," Schuring says.

Pneumatic fracturing has been successful in cleaning contaminated army bases and commercial sites in the U.S. and abroad. NJIT received the first patent for pneumatic fracturing in 1991. "The patent submitted by NJIT demonstrates and meets all of the criteria we look for when evaluating patents," Schaffhauser says. "It addresses a current problem in a very novel way. The result of this patent is a product that clearly benefits society."

Fenster, president of NJIT for nearly a quarter century, helped transformed a small engineering school into a nationally known public research university. It has grown into a comprehensive university comprised of six colleges. Fenster's watch has been so effective that in 1996 the state legislature named NJIT as one of three public research universities, describing it as "essential and necessary for the welfare of the state and the people of New Jersey."

## **NORTH JERSEY TECHNICAL GROUPS**

Get Active! Become a part of one of these groups and network with others having similar interests. For more information, contact Ali Vaezi, Chair of the Technical Committees, at [avaezi@goodkindinc.com](mailto:avaezi@goodkindinc.com) OR contact the individual committee chairs listed below:

### **STRUCTURAL GROUP**

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### **GEOTECHNICAL GROUP**

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## GARETH'S PICKS

Better set your VCR this time – there are some good late night and daytime programs in this month's listing. Programs are listed by channel.

### The History Channel

#### **Hands on History: STEEL**

America was built with steel, and as the new nation forged its way across the continent, the process of making steel continuously evolved. Host Ron Hazelton traces that evolution from the pig iron of colonial forges to today's state-of-the-art equipment. At the nation's oldest steel mill, Lukens in Coatesville, Pennsylvania, Ron faces temperatures of more than 3,000 degrees as he helps turn over 100 tons of scrap metal into construction-ready steel plate and braves the giant smelting furnace.

**Thursday, January 10 - 12:00 to 12:30AM**

#### **Chesapeake Bay Bridge and Tunnel**

Named one of the seven engineering wonders of the modern age, the Chesapeake Bay Bridge and Tunnel connects Virginia proper with its easternmost land mass. Stretching 17 miles across the Bay, the structure represents a man-made boundary between the Bay and the Atlantic. The structure includes two two-lane highways supported mostly by trestles, four man-made and one natural island, two truss bridges, and two revolutionary sunken tube tunnels.

**Friday, January 11 - 2:00AM to 3:00AM**

#### **Paving America**

Tells the story of our national highway system, from its beginnings in 1912 (it was conceived by auto and headlight tycoons) to its completion in 1984 (when the last stoplight was removed--and buried).

**Wednesday, January 16 - 7:00am to 8:00am**

#### **Great Blunders in History - Bridge Disasters**

With emphasis on the Tacoma Narrows Bridge disaster, probably the most graphic bridge failure ever recorded on film, we'll see how not all the world's bridge structures are safe.

**Wednesday, January 11 - 10:00am to 10:30am**

#### **Transatlantic Cable: 2500 Miles of Copper**

Looks at how one man's vision and the cooperation between the U.S. and England resulted in an instant, reliable transcontinental mode of communication in the mid-1800s. See how wealthy 33-year-old Cyrus West Field endured many failures and lost millions in

his attempt to close the communication gap between the Old and New Worlds.

**Wednesday, January 16 - 1:00 PM to 2:00 PM**

#### **Traffic**

In less than a century, the world went from dirt tracks to highways, from propeller planes to space travel, from sailboats to supertankers. In the process, we have created a glut of traffic on roadways, railways, airways, and seaways--traffic that must be controlled, managed, and regulated. We'll see how it's done.

**Friday, January 18 - 1:00 PM to 2:00 PM**

#### **Aqueducts: Man Made Rivers of Life**

While this ancient technology has existed for over 2,000 years, today these engineering marvels cost billions of dollars to build. We'll focus on the systems of Los Angeles and San Francisco.

**Tuesday, January 22 - 7:00 PM to 8:00 PM**

#### **Hands on History - Subways**

In 1897, a 1.5-mile subway line opened in Boston, Massachusetts, making it the first such form of mass transit in North America. Host Ron Hazelton follows the history of subways throughout the country. He directs subways from a futuristic control room, drives a train through its downtown run, and even gets up close to the treacherous third rail.

**Wednesday, January 30 08:00 PM - 08:30 PM**

#### **The NYC Subway**

Informative look at that amazing "hole in the ground", the New York City subway system. Meet the riders, a towerman who helps run the system, a revenue agent collecting the day's cash from token booths, amateur musicians that perform at the stations, and others who make the subway one of the city's most fascinating public spaces.

**Thursday, January 31 - 1:00 PM - 2:00 PM**

### The Learning Channel

#### **Big Builders**

Meet the experts who build and operate the massive equipment used in the most ambitious civil engineering projects of modern history. Tunnel machine pros, crane supervisors, designers and project managers describe life on the job site.

**January 30 - 8:00 PM and again at 11:00pm**

#### **Superhighway: Boston's Big Dig**

Dig beneath Boston's quaint and historic streets to witness the construction of a state-of-the-art superhighway. Without disturbing the city's residents, engineers are undertaking the most ambitious and expensive road project ever attempted.

**January 31 at 6:00PM**

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