President's Greeting

elcome to the 35th ACEC-NJ Annual Engineering Excellence Awards dinner. Tonight we come together to recognize our award winners' outstanding and innovative work. But, even more, we celebrate the contributions and achievements of our group as a whole, engineering professionals who work diligently to make a difference in the day-to-day lives of individuals and families throughout the state.



Among the many that have made tonight's event possible, I thank Rutgers University, now in its 6th year as our host facility. We are grateful for the University's friendship and continued involvement with us.

I also thank the awards committee, ably led by John Cassetta. The committee approached the awards selection process with efficiency and professionalism, as well as the individual judges outside the association. This "third party" review adds credibility to the judging process and verifies the value of the projects submitted.

With 26 entries to consider, it is clear that our judges had to make difficult choices. Each of the award entries represented excellent work and all are deserving of recognition. We appreciate the effort each entrant invested. Take time tonight to view the entries. You'll be impressed by their innovative approaches to improving our transportation systems, our environment and our overall quality of life.

In addition to recognizing our award winners, we also will honor individuals who have made significant contributions to our profession this past year and throughout their careers. Congratulations to the winners of our Distinguished Service, Journalist of the Year, Educator of the Year and Member Recognition awards.

Each year, ACEC-NJ provides scholarships to help further the education of the area's brightest engineering students. Tonight is no exception. We announce scholarships this evening for four exceptional students attending New Jersey engineering schools. Recognizing that our profession ultimately lies in the hands of future engineers, if these students are an indication of success, we can have great confidence in the long-term outlook.

As we move forward into 2006 and beyond, we face issues that will challenge us to develop and employ strategic thinking and new, creative approaches. Our

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President's Greeting

Continued from page 1

state's transportation trust fund, suffering from a lack of funding, is broke. Restraints on new developments are forcing even higher density in developed areas, putting more strain on all forms of infrastructure. Roads are deteriorating and congestion is choking the system.

Engineers can make a difference in these situations, but it will require us to wrestle with and solve a broader range of issues than our predecessors did. The very kinds of innovative approaches demonstrated by tonight's award winners will be critical to success for all of us. The issues we must address are not pure engineering issues, but quality of life issues. Yet, the challenge offers an opportunity, because no other profession is better equipped to address – and solve – these issues than we are.

Thank you for your support this evening.

J. Finn, ACECNJ

2006 Engineering Excellence Awards

Rutgers University March 16, 2006

PROGRAM

Introduction Rod Pello

HNTB Corporation

Remarks Jack Finn

HNTB Corporation

President

Master of Ceremonies

Welcome Dr. Hani Nassif — Rutgers University

Recipients American Council of Engineering Companies of NJ

Scholarship Awards

Ronald A. Wiss Memorial Scholarship Recipient

Bernard Langan Scholarship for

Engineering Excellence

Dinner

Assemblyman John Wisniewski

2005 Distinguished Service Award

Debra Rubin, Engineering News Record

2005 Journalist-of-the-Year Award

Dr. Hani Nassif, Associate Dean for Academic Affairs, School of Engineering, Rutgers University

2005 Educator-of-the-Year Award

Lissette Miquel, Vollmer Associates LLP

2005 Member Recognition Award

Presentation of Awards John E. Cassetta, Boswell Engineering

Awards Chairman

Closing John Cassetta

Awards Chairman

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New Jersey Association of Consulting Engineers			
1958-59	Harry Terry	1963-64	David M. Greer
1959-61	John G. Reutter	1964-65	Lee T. Purcell, Sr.
1961-62	Donald R. Goodkind	1956-66	George H. Leland
1962-63	Frank W. Bohren		Ü
Consulting Engineers of New Jersey, Inc.			
1958-59	Joe Rosenthal	1965-66	Bernard Steinke
1959-60	William C. Baumann	1966-67	Joe Layer
1960-61	David Wiseman	1967-68	Herbert Fox
1961-62	Clyde Fiske	1968-68	Harold Hamilton
1962-64	Abe Walton	1968-70	Louis Goldberg
1964-65	Harvey Winter		· ·
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New Jersey Consulting Engineers Council			
1966-67	Peter Homack	1968-69	Joseph S. Ward
1967-68	Gerald E. Speitel	1969-70	J. David Welch
Consulting Engineers Council of New Jersey			
1970-71	William H. Bruce, Jr.	1987-88	Gordon L. Kirjassoff
1971-73	Norman C. Possiel	1988-89	William H. Fleming, Jr.
1971-75	Gerald L. Baker	1989-90	H. Clay McEldowney
1975-76	Robert C. Moore	1990-91	John P. Talerico
1975-70	Edwin Robins	1990-91	Leo A. Santowasso
1970-77		1991-92	
	Robert C. Bogart Alexander M. Churchill	1992-93	Richard E. Ragold L. Gerald Adelsohn
1978-79	James A. Strosnider		Ronald A. Wiss
1979-80		1994-95	
1980-81	John S. Urban	1995-96	Robert C. Kirkpatrick
1981-82	George Kirgis	1996-97	Stephen T. Boswell
1982-83	Ralph F. Visco	1997-98	Dominic B. Carrino
1983-84	Thomas W. Birdsall	1998-99	William S. Howard
1984-85	Clifford W. Johnson	1999-00	Donald Goldberg
1985-86	Minard H. Whitnall	2000-01	C. Douglas Cherry
1986-87	Paul B. Ostergaard	2001-02	Kevin Page
		2002-03	Glenn Gerken
American Council of Engineering Companies of New Jersey			
2003-04	Philip A. Falcone	2005-06	John G. Finn
2004-05	Rodney P. Pello	2000 00	voimi G. I iiiii
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WHO are ACECNJ and ACEC National?

ACECNJ was founded in 1958 as the New Jersey Association of Consulting Engineers.

More than 150 firms employing over 5,000 engineers, surveyors, architects, planners, scientists and support personnel make up the membership of the American Council of Engineering Companies of New Jersey.

The ACECNJ member firms range from sole proprietorships, professional associations and partnerships to employee-owned, as well as private and public corporations. Some are single-location firms in New Jersey while others have offices across the country as well.

The Council's objectives include the maintenance of ethical professional standards and promotion of the professional and economic welfare of its members.

The American Consulting Engineers Council was formed in 1956 and became the American Council of Engineering Companies in 2001. Its 5,500 member firms, representing some 200,000 employees, offer a wide variety of professional engineering and surveying services, including civil, electrical, mechanical, structural, environmental, geotechnical, metallurgical, chemical, acoustical, industrial, mining and agricultural.

The ACEC is the largest national organization of engineers engaged in the independent practice of consulting engineering and is governed by 52 national directors representing each of the state and regional organizations.

Welcome to Rutgers

utgers, The State University of New Jersey, with almost 50,000 students on campuses in Camden, Newark and New Brunswick, is one of the major state university systems in the nation. The university comprises 29 degree granting divisions: 12 undergraduate colleges, 11 graduate schools and six schools offering both undergraduate and graduate degrees.

Chartered in 1766 as Queen's College, the eighth institution of higher learning to be founded in the colonies, Rutgers has a unique history as a colonial college, a land-grant institution, and by acts of the legislature in 1945 and 1956, The State University of New Jersey. Instruction in engineering began at Rutgers in 1864, and the College of Engineering became a separate entity in 1914. In 1999 the name was changed to The School of Engineering to reflect the comprehensive nature of its programs.

Today the School of Engineering enrolls approximately 2,300 undergraduates in nine separate degree programs and 700 graduate students in ten different programs. It is committed to preparing its graduates to be productive citizens and leaders of the state, the nation and the world through engineering practice, research and public service.

2005 Distinguished Service Award Assemblyman John S. Wisniewski

ssemblyman Wisniewski was first elected to the New Jersey General Assembly in 1995. He has served as Deputy Minority Conference Leader, Assistant Majority Leader and Deputy Speaker. Since 2001 John has been Chairman of the Assembly Transportation Committee. A graduate of Rutgers University and Seton Hall Law School, Assemblyman Wisniewski is a partner in the Law Firm of Ronan, Tuzzio & Giannone, with offices in Tinton Falls.



This year Assemblyman Wisniewski was named the 2004 Legislator of the Year by the South Jersey Alliance for Action.

Assemblyman Wisniewski is an Adjunct Professor of Political Science at Monmouth University

Throughout his tenure, John has worked diligently to well represent the people of his district and of the state. His skill as a legislator is evident in the great number of bills he has introduced in the Assembly which have been signed into law.

This legislation includes the Work First New Jersey Act, which required individuals to work at jobs or in community services as a condition of their benefits, the Dormitory Safety Act which required the installation of sprinklers in all dormitories, the School Bus Enhanced Safety Inspection Act which created new standards for school bus inspections, and the Athletic Training Licensure Act which required that athletic trainers be licensed. Assemblyman Wisniewski wrote the law that increased the Veterans Property Tax Deduction, he wrote the law that enhanced the penalty's for Identity Theft, and the law which established a scholarship program for the families of the victims of the September 11th terrorist attack. He is working with his Democratic colleagues to clean up government with the group of bills known as Restoring the Public Trust.

The Assemblyman's commitment to community and good government was recognized by the citizens of the 19th Legislative District when they elected him in 1995, then overwhelmingly re-elected him five times.

2005 Member Recognition Award Lissette Miquel

issette Miquel has over twenty six years of experience in the administration and management of transportation and major civil engineering projects. Her professional experience includes positions as Project Engineer and Project Manager for transportation and water resource projects. Her responsibilities also include Business Development and Marketing where she uses her technical expertise to identify and pursue project opportunities.



Mrs. Miquel is now a Principal Professional with Vollmer Associates LLP, and has been a member of the ACEC-NJ since 1998. She has served as

a Director in the Executive Committee, and has chaired the Education Committee for the past 4 years. She is also a member of the Transportation Committee since 1998, has served on the NJDOT, NJ Transit, and NJ Turnpike subcommittees, and has supported the organization with legislative issues dealing with the Transportation Trust Fund and the reauthorization of TEA-21. In addition to her involvement with the ACEC-NJ, Mrs. Miquel is a member of the Greater New York March of Dimes Transportation & Construction Luncheon Committee.

Mrs. Miquel is a Licensed Professional Engineer in the New Jersey and New York. She received her BECE from the City College of New York, where she was a member of Chi Epsilon and Tau Beta Pi Honor Societies, and her MSCE from Polytechnic Institute of New York.

She is currently living in New Jersey with her husband and two daughters.

2005 Educator-of-the-Year Award Dr. Hani Hassif

r. Hani H. Nassif is currently an Associate Professor in the Department of Civil and Environmental Engineering at Rutgers University, New Jersey after having taught at Villanova University. He is currently involved with the New Jersey Department of Transportation on various projects related to the infrastructure including the validation of the new LRFD-AASHTO specifications using field-testing of the Doremus Avenue Bridge in Newark, NJ.



Prof. Nassif is heading the research area on Large Scale Transportation Infrastructure Systems (TIS) Evaluation in the Center for Advanced

Infrastructure and Transportation (CAIT) and has established Rutgers' Bridge Engineering Program.

Dr. Nassif is the Secretary of TRB Committee on the Dynamic and Field-testing of Bridges and Task Force on Seismic Analysis and Design. Currently, he is the Chairman of ASCE Committee on Safety of Bridges a Fellow of the ACI and a member of its technical activity committee. Prof. Nassif received ASCE Central New Jersey's Educator of The Year Award for excellence and is also a member of Tau Beta Pi and Chi Epsilon.

Nassif obtained his B.S. and M.E. in Civil Engineering from The University of Detroit. He received his Ph.D. in Structural Engineering from the University of Michigan-Ann Arbor in 1993.

2005 Journalist-of-the-Year Award Debra Rubin

ebra K. Rubin is editor-at-large for business, management and workforce coverage for Engineering News-Record magazine (ENR), McGraw-Hill Inc.'s weekly engineering and construction news magazine.

As such, she is responsible for managing ENR's national and international coverage of news and trends in these areas, and developing high-impact cover stories. Specific topics range from mergers and acquisitions and corporate changes to economic trend impacts and educational developments.



Ms. Rubin has been with ENR since 1983, previously serving as group senior editor in charge of environmental coverage and associate editor for management and labor issues.

Before joining ENR, Ms. Rubin was a reporter for the Bergen Record newspaper in Hackensack, N.J., and wrote business-related articles for such publications as Long Island Newsday and the Wall St. Journal's National Business Employment Weekly. She also worked as a public affairs officer for the U.S. Dept. of Labor

Ms. Rubin has a B.S. in Journalism from the University of Maryland, College Park, Md. She is the recipient of industry and business journalism awards for environmental writing and coverage of the 9/11 attack on the World Trade Center, among others. She has lived in South Orange, N.J., for 18 years.

Previous Recipients of the Journalist-of-the-Year Award:

1993 Gordon Bishop, The Star-Ledger 1995 Robert J. Braun, The Star-Ledger 1996 Howard B. Stussman, ENR 1997 Alfred R. Pagan, P.E. 1998 John McLaughlin, The Star-Ledger 1999 Paul L. Wyckoff, The Star-Ledger 2000 Jeffrey Page, The Record 2001 Joe Adelizzi, Asbury Park Press 2004 Charles Pinyan, Media Recognition Award

Previous Recipients of the Educator-of-the-Year Award

1995 Dr. Saul K. Fenster 1996 Harold J. Raveche 1997 David P. Billington 1998 Dr. William R. Spillers, P.E. 1999 Professor Harold Deutschman 2000 Dr. John Grieco 2001 Professor Robert Dresnack, P.E. 2002 Leslie Rose Brunell, Ph.D., P.E. 2003 Henery P. Dobbelaar, Jr., P.E., P.P.

Previous Recipients of the Distinguished Service Award:

1985 William Simon
1993 Hon. Nicholas R. Felice
1994 Hon. Garabed "Chuck" Haytaian
1995 Kenneth A. Afferton, P.E.
1996 Henry M. Rowan
1997 Hon. Donald T. DiFrancesco
1997 Hon. Paul Digaetano
1998 Hon. Alex DeCroce
1999 Hon. J. William Van Dyke
2000 Hon. John G. Kuna
2001 Hon. Frank J. Lombardi, P.E.
2002 Hon. John F. Lettiere, Jr.
2003 George R. Zoffinger
2004 Colonel John B. O'Dowd

Previous Recipients of the Member Recognition Award:

1985 Gerald E. Speitel, P.E. 1986 Russell D. Shallieu 1987 Joseph S. Ward, P.E. 1988 Robert C. Moore, P.E. 1989 Minard H. "Bud" Whitnall, P.E. 1990 Frederick K. Mosher 1991 Clifford W. Johnson, P.E. 1992 Frank H. Lehr, P.E. 1993 Donald Goldberg, P.E. 1994 Stephen T. Boswell, P.E. 1995 Paul B. Ostergaard, P.E. 1996 Ronald A. Wiss, P.E. 1997 John S. Urban, P.E. 1998 Michael S. Della Rocca, P.E. 1999 Robert C. Kirkpatrick, P.E. 2000 William S. Howard, P.E., P.P. 2001 Rodney P. Pello, P.E. 2002 C. Douglass Cherry, P.E., P.L.S., P.P. 2003 James D. Kelly, Esq., P.E. 2004 John E. Čassetta



American Council of Engineering Companies of New Jersey

2006 Scholarship Sponsors

Each year, the Consulting Engineers Council awards up to five scholarships to junior or senior students attending New Jersey engineering schools. This program is possible through the generosity of the following firms:

Boswell Engineering

Cherry, Weber & Associates, P.C.

Dewberry

Garden State Engineering Surveying & Planning Inc.

HNTB Corporation

KS Engineers, P.C.

Langan Engineering and Environmental Services, Inc.

Maitra Associates, P.C.

Maser Consulting P.A.

Michael Baker, Jr., Inc.

Parsons Brinckerhoff

Paulus, Sokolowski and Sartor, LLC

Taylor Wiseman & Taylor

The Louis Berger Group, Inc.

Vollmer Associates LLP



American Council of Engineering Companies of New Jersey

2006 Scholarship Winners

Ross Kozarsky

Meadowbrook, PA Princeton University

Marc Galati

Bayonne, NJ New Jersey Institute of Technology

Hiral Patel

Jersey City, NJ Rutgers University

Colleen Sloss

Mt. Laurel, NJ Rowan University



Ronald A. Wiss Memorial Scholarship

Presentation: Isobel Wiss and Kevin J. McMahon, Edwards & Kelcey 2006 Recipient: Mark A. Galati

New Jersey Institute of Technology

on's engineering career began when he joined Edwards and Kelcey over 30 years ago, after graduating from the former Newark College of Engineering (now New Jersey Institute of Technology) in 1966. He joined the firm as a staff engineer and rose to become CEO and Chairman of this international engineering firm serving transportation and telecommunications clients around the world.

For three decades Ron was deeply dedicated to advancing New Jersey's most innovative transit and transportation projects. Among his many visible accomplishments are the N.J. Transit Newark-Elizabeth Rail Link, the Bergen County Transit Plan and NJ TRANSIT's new Frank R. Lautenberg Rail Station at Secaucus Juction.

Ron was an enthusiastic supporter of many organizations and professional associations. He served as president of the Consulting Engineers Council of N.J. from 1994 to 1995, receiving its prestigious Member Recognition Award in 1996. Ron had also been chairman of the Meadowlands Chamber of Commerce, a director of the N.J. State Chamber of Commerce and was a member of the Advisory Committee of the Department of Civil and Environmental Engineering, New Jersey Institute of Technology. He was recently voted "Civil Engineer of the Year" by the N.J. American Society of Civil Engineers.

Ron Wiss was a visionary with a pioneering spirit, a consummate professional and business leader. In his personal life he was a devoted husband to Isobel, his wife of 34 years, and a loving father to their two daughters, Audrey and Jeanine. His energy, enthusiasm and deep commitment to fostering future generations of engineers will continue through the scholarship fund established in his name.



Bernard Langan Scholarship for Engineering Excellence Presentation: George Kelley, Langan Engineering 2006 Recipient: Colleen Sloss Rowan University

ernie started his career in 1965 when he joined the firm of Woodward Clyde Associates as a Geotechnical Engineer. He previously had completed his academic education at the University of Detroit and Purdue University where he received BSCE and MSCE degrees specializing in Geotechnical Engineering.

While with Woodward Clyde, he worked on projects throughout the United States and became an Associate in the firm in the Clifton office. In 1969 he left Woodward Clyde to form Langan Engineering Associates, Inc. Under his leadership, the Langan firm grew from a small Geotechnical group of several people to the present day multi-discipline firm with over 450 people in 7 offices located in the eastern United States. In December 2004, he retired from the firm with plans to start a geotechnical specialty company.

Throughout his career, Bernie has mentored many young engineers and has consistently emphasized the value of a good technical education. His philosophy is that all engineering work produced by the firm must exhibit a high degree of technical excellence in combination with the type of practical experience that can only be gained by getting your hands and boots dirty and being involved in the construction process.

This scholarship has been created as a tribute to Bernie and to assist young people toward obtaining the foundation of their career – a strong technical education.



 $\label{eq:american council of Engineering Companies} of \textit{New Jersey}$

2006 Engineering Excellence Awards Committee

John Cassetta, ChairmanBoswell Engineering

Nickitas Alexiades Vollmer Associates LLP

C. Douglas Cherry Cherry, Weber & Associates, P.C.

> **Glenn Gerken** Schoor DePalma

Donald Goldberg Dewberry

George KelleyLangan Engineering & Environmental Services, Inc.

Patrice Malleus Schoor DePalma

Rod Pello HNTB Corporation

Russ Shallieu Hatch Mott MacDonald



American Council of Engineering Companies of New Jersey

2006 Engineering Excellence Awards Judges

John Clearwater

Construction Industry Advancement Program of N.J.

 ${\bf Professor\ Hank\ Dobbelaar, Jr.}$

Stevens Institute of Technology

Gene R. O'Brien, P.E.

New Jersey Society of Professional Engineers

Chuck Pinyan

Engineering News Record

Al Zaccone, AIA

Architect



Grand Honor Award

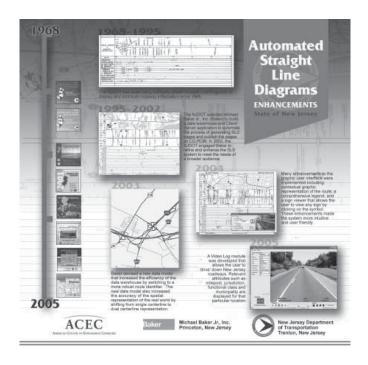
The Louis Berger Group, Inc. Secaucus Potter's Field Disinterment/Reinterment Client: New Jersey Turnpike Authority

he Secaucus Potter's Field disinterment/re-interment project is believed to be the largest disinterment ever undertaken under a single contract and likely the largest disinterment of a potter's field in the nation. It was precipitated by the New Jersey Turnpike Authority's plan to construct a new interchange on the New Jersey Turnpike, in Hudson County, New Jersey.

Potter's Field was one of three documented burial grounds near Laurel Hill, then Snake Hill, but the only one to be impacted by the interchange project. The three burial grounds were used by Hudson County's former institutional complex at Snake Hill and other nearby cities within the county. The burial grounds were established in 1880 and ceased operations in 1962 with a total burial population of over 9,000. By the 1980s, Potter's Field had been forgotten; there were no grave markers and the burial ground was covered by nearly six feet of landfill and debris.

In October 2002, the New Jersey Turnpike Authority contracted with The Louis Berger Group, Inc. (Berger) to perform all disinterment and re-interment activities at the Potter's Field burial ground. Berger's primary goal was to locate and disinter all human remains situated within the area where the new interchange would be constructed and relocate them to an existing, functioning cemetery. More than just locating thousands of unmarked graves and recounting events that had taken place at the burial ground, Berger was also tasked with the responsibility of reclaiming the identity of the thousands of individuals who had been buried at Potter's Field.

Using historical maps, original hand-written burial ledgers, osteological examination, background research and artifact analysis, the Berger team was able to identify 825 individuals.



Michael Baker, Jr.

Automated Straight Line Diagram Enhancement Program Client: New Jersey Department of Transportation

n the late 1990's, The New Jersey Department of Transportation (NJDOT) selected Michael Baker Jr. Inc. (Baker) to build a Client/Service application to automate the process of publishing Straight Line Diagrams (SLDs) on CD-ROM. The diagrams represent sections of roads in a stick diagram and show the location of relevant events such as intersecting streets, streams, railroad crossings, etc. Responding to the increasing needs of the growing user base, the NJDOT launched a program to enhance the automated SLD system and once again chose Baker to build the next generation SLD system.

The NJDOT's goals for the project were to: include additional and more accurate spatial and attribute data in the warehouse; make the Client/Server application more user friendly; give users easier access to the myriad of video and photo data available; and give outside users access to the most current data. Baker also incorporated over 25,000 miles worth of roadway data more than originally existed and implemented a new data model that made the system more efficient and produced more accurate information.

The result is a suite of new and enhanced tools and products that provide easier access, quicker turnaround, and more accurate information. The tools are being made available on the New Jersey Transportation Information Portal (NJTIP), a user-friendly web application that gives outside users such as planning and engineering organizations direct access to the data. This project was completed as scheduled and within the original budget of \$2.9 million.



Honor Award

Gannett Fleming, Inc. Rt. 18 Extension, Section 2A-The Missing Link Client: New Jersey Department of Transportation

he New Jersey Department of Transportation (NJDOT) has completed construction of the 2.1-mile-long, \$90 million Route 18 Extension, Section 2A, located in Piscataway Township, Middlesex County, N.J. This much-needed transportation solution eliminates a severe congestion bottleneck and completes the "missing link" in the New Jersey State Highway System. Carrying more than 40,000 vehicles per day, this extension serves as the transportation backbone of Rutgers, the State University (RU) of New Jersey.

The project team faced numerous challenges while planning to make the "missing link" a reality, including completion of the \$5.8 million data recovery to preserve the Raritan Landing Archaeological District. The largest such effort sponsored by NJDOT, it utilized state-of-the-art technology to manage the recovery of one million artifacts.

An extensive communication network was essential in the selection of the project alternative and resulted in the use of various context-sensitive solutions, including architectural and aesthetic enhancements, and numerous innovative mitigation techniques. Of ongoing significance to the engineering community, several of these techniques have become standard applications for future projects.



Honor Award

Malcolm Pirnie Inc.

Preliminary Assessments on MMRP Ranges and Sites
Client: US Navy-Engineering Field Activity, North East

alcolm Pirnie worked with the U.S. Navy under a \$12 million contract to implement the first stage of a groundbreaking environmental undertaking that is potentially one of the country's greatest environmental initiatives yet - investigation and cleanup of unexploded ordnance (UXO) and related chemical constituents on military installations nationwide. Working on over 150 former military ranges, Pirnie established a systematic process to conduct initial investigations, called Preliminary Assessments, or PAs, as a first stage of prioritizing human health and environmental risks and liabilities in advance of site remediation. Malcolm Pirnie developed original, graphic-intensive conceptual site models to vividly portray to all stakeholders the interactions between sources and receptors of concern to facilitate reviews and finalize cleanup recommendations. An innovative approach was integrating GPS data into each installation's GIS, and for the first time the program addressed Navy ranges in open water as well as land-based sites. With cleanup costs estimated up to hundreds of billions of dollars and encompassing millions of acres of land nationally, the procedures established in this program take the critical first step for future remediation, enabling the Navy to assess and prioritize its liabilities. The program will also help make contaminated sites that could possibly represent danger to the public welfare safe for reuse imperative, as military installations nationwide are slated for closure.



Hatch Mott MacDonald Clyde Potts Membrane Filtration Plant Client: Southeast Morris County Municipal Utilities Authority

he Southeast Morris County Utilities Authority's (SMCMUA) Clyde Potts Reservoir has been providing potable water to Morristown and neighboring communities for over 70 years. The reservoir is one of Morris County's few surface water supplies and its continued use is critical in satisfying the long-term water needs of the area in light of the region's dwindling water resources. In the mid 1990s, SMCMUA recognized that the existing treatment systems could not satisfy upcoming regulations related to microbial contamination.

The reservoir had also experienced significant periodic episodes of taste and odor events that resulted in complaints and a loss of consumer confidence. The Authority needed to replace the treatment plant with a facility that (1) removed the microbial contaminants in accordance with existing and future regulations; (2) minimized process wastes (conventional treatment processes generate 5-10% of the feed water as waste); (3) re-used existing facilities to greatest extent possible to minimize construction costs; and (4) integrated complex site restrictions including a dam, spillway, stilling pond and steep slopes.

The solution was a treatment process based on immersed membranes in conjunction with granular activated carbon (GAC). The immersed membranes exceeded the microbial removal requirements of current and anticipated future regulations. Unlike conventional technologies, chemical pretreatment is not needed and the lack of chemicals allows 99% of the process wastes to be re-used in the production of potable water. The GAC removes all objectionable taste and odor.



FIGG/Vollmer Joint Venture Victory Bridge Replacement Project Client: New Jersey Department of Transportation

n 1927 the Victory Bridge over the Raritan River opened to acclaim. Soaring costs to maintain the aging steel swing span bridge led the New Jersey Department of Transportation to undertake the state's first precast concrete segmental bridge as a replacement and a new landmark for the area. The new bridge features fully match cast 440' precast concrete main spans, a record for this type of construction. This span length was used to increase the horizontal shipping clearance to a generous 355', providing for uninterrupted commercial river traffic. Vehicular safety was improved with wider travel lanes and shoulders, a pedestrian walkway and improved intersections on the northern approaches to the bridge. Construction was staged to keep all four lanes of traffic flowing. The first of the bridges opened just 15 months after notice to proceed was issued to the contractor. With all traffic moved safely onto the first new structure, demolition of the old bridge was swift and the superstructure of the second bridge was erected in just eight months, opening to traffic two months ahead of schedule. High performance concrete was utilized to achieve a minimum of 100-year service life for the new structures. In honor of the original Victory Bridge, aesthetics rededicating the bridge to honor WWI veterans were created, including four concrete obelisk-shaped monuments at the abutments, each showcasing a cast bronze plaque from either the original bridge or a new one rededicating the bridge to the Veterans' honor; concrete pilasters along the 6' wide sidewalk on the southbound structure that feature smaller cast bronze plaques dedicated to the various branches of service active in WWI.



Hardesty & Hanover, LLP Rt. 9 Section 17B over Bass River Client: New Jersey Department of Transportation

he Route 9, Section 17B Bridge over Bass River project site consists of a new bridge and approach roadways which cross over freshwater and tidal wetlands. The roadway is traversed by a Garden State Parkway overpass, located just west of the Bass River.

The new bridge replaces an existing historically significant bascule bridge that was considered structurally deficient. The existing Route 9 Bridge over the Bass River is a two-lane structure 351-feet long and 30-feet wide. H&H designed the new bridge as a five-span, prestressed concrete fixed bridge supported on drilled shaft pier bents. The new structure is approximately 470-feet long and 52-feet wide consisting of two twelve-foot lanes, two 10-foot shoulders, one 6-foot sidewalk with parapet and one concrete barrier.

An investigation of geomorphic factors and other qualitative analyses revealed that the bridge is susceptible to significant local and degradation scour. The presence of scour along with seismic criteria necessitated the use of relatively large piles.

Wetland impacts were mitigated through wetlands creation and enhancement. The major concern of the community was maintaining navigation through the project area. The aesthetics, boating access and wetlands enhancements creates an environment for the community that is compatible with the values of the people living in the New Jersey Pinelands area.

Future maintenance issues were significantly decreased through the use of new materials and techniques.

The total construction cost is \$13.6 million and was jointly funded by NJDOT and FHWA. Hardesty & Hanover was the design for NJDOT and J. Fletcher Creamer & Son, Inc. was the Contractor.



Edwards and Kelcey Rt. 21 Reconstruction-Contract 1 Client: New Jersey Department of Transportation

dwards and Kelcey (EK) is responsible for various studies, preliminary design efforts, final design efforts, and construction efforts for Route 21, which was such a large undertaking, with approximately \$100-million in construction costs that NJDOT and EK divided the project into four construction contracts, including an ITS project. This section of Route 21 brings motorists through the Central Business District (CBD) of Newark from Newark Liberty International Airport through one of the most congested portions of Newark. This specific project entailed construction and widening of the roadway to six lanes, as well as moving the roadway 100 feet closer to the Passaic River to accommodate the NJ TRANSIT Newark City Subway Extension (NCSE), and included the relocation of most existing utilities from the area to be occupied by the NCSE.

Also crucial was the necessary accommodations of the new roadway alignment, and replacement of two parallel NJ TRANSIT Railroad Bridge structures using "roll-in" procedures.

The design schedule, as initially developed in 1999, required an 18-month reduction. This difficult task was accomplished by implementing several innovative methodologies that were either completely new or new to a project of such a large scope that constructed 0.8 -miles of highway through the CBD of the busiest and largest city in the State of New Jersey.



Arora and Associates, P.C.

Rt. US 1 Pedestrian Bridge at Delaware and Raritan Canal State Park Client: New Jersey Department of Transportation

he Delaware & Raritan Canal was constructed in 1834 as a joint venture between canal and railroad interests and quickly became one of America's busiest navigation canals. The park's trail system was designated as a National Recreation Trail in 1992.

Route US 1 crosses the Canal State Park in Lawrenceville, New Jersey and blocks the passage along the linear park between Trenton and Princeton. The break in the continuity of the Canal Park discouraged park patrons, who wish to walk or bike along the canal towpath. The Route US 1 crossing also was a significant barrier in the East Coast Greenway and effectively isolated miles of excellent trail and park space.

Recognizing the intrinsic value of New Jersey's largest park, the D&R Canal Commission advocated the creation of a continuous path for the entire length of the D&R Canal as the primary goal of their 1979 Master Plan. In response to the obstacles posed by the Route US 1 crossing, the Commission's 1996 Development, Acquisition and Management Plan recommended the construction of a pedestrian bridge across Route US 1.

The pedestrian bridge consists of a ten-foot wide, reinforced concrete walkway/bikeway supported by a 130-foot span steel truss structure over Route US 1. The pedestrian bridge is connected to the canal towpath with three 66-foot ramp trusses and concrete walkway ramps supported by retaining walls on each approach. The bridge was designed and constructed to meet the requirements of the Americans with Disabilities Act (ADA), AASHTO Specifications for Bridges and Structures and the NJDOT Design Manual for Bridges and Structures.



Dewberry in association with HNTB Corporation NJ Turnpike Authority-Contract R-1393A, Chaplain Washington Memorial Passaic River Bridge Client: New Jersey Turnpike Authority

he Turnpike Authority (NJTA), in its efforts to properly maintain and safely operate one of the nation's busiest highways, undertook the seismic retrofit, partial lowering/widening, lighting and miscellaneous improvements for the 1.7-mile Passaic River Viaduct Bridge located on the Easterly Alignment of the NJ Turnpike. Along with the seismic retrofic, the project aimed to eliminate the existing shoulder width restrictions under the Pulaski Skyway by lowering the roadway. The lowering/widening under the Pulaski Skyway, in addition to improving safety, will benefit a current project to reconstruct the aging bridge decks built during the original turnpike construction in 1952. Unique features of this project include:

- 1. Lowering of 12 spans, from south abutment to pier 12S without shutting down traffic. The lowering increased overhead clearance under the Pulaski Skyway in order to widen the existing narrow shoulders to a full width, matching the adjacent sections.
- 2. Use of special telescopic systems and friction collar systems around single taper piers. These systems served as temporary jacking supports for the removal and replacement of old steel rocker bearings with new shallow seismic isolation bearings.
- 3. Coordination and performance of the work over the waterway, utilities and heavy railroad traffic. True partnering among the NJTA and the design/construction teams resulted in the successful completion of this complex project, without any inconvenience to the traveling public.



Edwards and Kelcey MOTBY Transportation and Land Use Client: Bayonne Local Redevelopment Authority

he Bayonne Local Redevelopment Authority (BLRA) proposed redeveloping the former Military Ocean Terminal at Bayonne (MOTBY) site as a mixed-use waterfront and maritime development of major significance to both the City of Bayonne and the region. Edwards and Kelcey (EK) was selected as part of a multidisciplinary team to perform a transportation and land use study of the MOTBY peninsula. This study produced a redevelopment plan that established parameters and the vision for transforming the former military base into vibrant mixed-use development consisting of new neighborhoods drawn to the waterfront through a series of well-furnished public streets, opens space and the Hudson River Waterfront Walkway.

EK's transportation component of the study included formulation and testing of transportation alternatives for regional access to and circulation within the peninsula. Final recommendations included a series of roadway and transit improvements:

- Widening of Route 440
- A new interchange at Route 440 and Pulaski Street
- New signalized intersection connecting the Peninsula to Route 440
- A streetcar line that runs the entire length of the peninsula
- Pedestrian bridge over Route 440 linking the peninsula and the Hudson Bergen Light Rail
- A grid street network on the peninsula for internal circulation and access
- Pedestrian walkway along the south and east sides of the peninsula
- A new NJ Turnpike interchange

With an estimated transportation construction cost of \$350M, the Peninsula at Bayonne Harbor will transform MOTBY into a mixed-use community extending two miles in the New York Harbor and reclaim the waterfront for the residents the enjoyment of local residents.



Greenman-Pedersen, Inc. New Jersey Turnpike Eastbound Viaduct Widening Client: New Jersey Turnpike Authority

he redevelopment of Jersey City has created the need for transportation improvements allowing greater access to the City. To meet their transportation challenges, Jersey City approached the New Jersey Turnpike Authority to request the widening of the viaduct that carries the Turnpike over streets, freight rail lines, New Jersey Transit light rail, wetland areas, and numerous utilities in order to provide additional lanes to the Grand Street eastbound exit ramp. GPI was selected by the Authority to provide engineering services on the project.

The challenges facing the GPI design team were enormous including project scope development, scheduling, and project coordination. The project required extensive coordination with no less than 10 agencies and community groups, the maintenance of two through travel lanes on the Turnpike during peak traffic periods, and the integration of modern design and construction techniques with an existing viaduct structure constructed in the 1950's.

Modern investigative methods were employed by GPI. 3D laser scanning of the viaduct was conducted to determine the location of structural elements that were not available in the original viaduct plans or that could not be cost effectively obtained by conventional methods. GPI was able to identify details such as the exact number of rivets in the existing structural connections and determine the vertical and horizontal position of the existing beams and connections.

GPI was successful in the development of maintenance and protection of traffic plans that allowed for the construction of the widened viaduct while maintaining two lanes of traffic along this vital New Jersey Turnpike link to the Holland Tunnel during peak periods.



HAKS Engineers, P.C.

REI Services for the Construction of Storm Sewers & Best Management Practice (BMP) Work in Lenevar Avenue Client: New York Department of Design & Construction

his \$18.7 million project for NYCDDC was among the first projects to utilize Best Management Practices (BMPs) to convey storm water collected in local storm systems to adjacent wetland areas. This approach is a significant improvement over the larger, more centralized approach to storm water management which is traditionally used in New York City and as such represents a unique application of technology to the area.

The BMPs were also designed to blend in well in their suburban setting, promoting the concept of designing and building in a nature-friendly environment. New and indigenous plant life was planted in the BMPs, thereby advancing the public image of engineering excellence.

The Lenevar Avenue project addressed the complex issues of street and home flooding by creating aesthetic BMPs comprised of structural and non-structural elements which blend harmoniously with their surroundings as opposed to the construction of a large, centralized facility.

The project exceeded the client's expectations. The BMP portion of the project was completed within budget. The budget was overrun primarily because the DEP requested significant quantities of additional water mains be installed within the project limits as this had been overlook during the design stage.



Hatch Mott MacDonald Rt. 35 Sec-5H Hollow Brook Culvert Replacement Client: New Jersey Department of Transportation

nundations of Route 35 at the Hollow Brook culvert crossing in Neptune Township, Monmouth County, NJ, as well as flooding of the nearby low-lying houses and businesses, prompted the NJ Department of Transportation (NJDOT) to replace the culvert, deemed inadequate to handle the occasional sever storm.

The goals of the project were (1) to provide safe passage for the traveling public by eliminating the overtopping of Route 35 for the 100-year storm and (2) to minimize nearby upstream flooding for the 25-year storm, while (3) minimizing the upstream and downstream channel work.

The Hollow Brook channel was realigned 280 feet downstream and 250 feet upstream, restoring the channel invert to its original elevation. To mitigate the adverse impacts of the channel realignment, all the wetlands that were disturbed by the project were restored with a 1:1 streambank restoration. The increased size of the culvert, coupled with the channel modifications, mitigated flooding due to storm events.

Overall, the project was very successful on three levels. (1) The highway will no longer be overtopped by the 100-year storm, and (2) in the 25-year storm, homes and businesses in the flood-prone area upstream of the culvert will realize flood levels reduced to well below first floor evaluations. Additionally, success was reached from an environmental standpoint, as the project (3) mitigated potentially adverse environmental consequences on the surrounding wetlands though streambank restoration and wetland enhancements.



Hatch Mott MacDonald Springfield Water Treatment Plant Client: New Jersey American Water

ackground - The Springfield Well Field dates back to the early 1900s. It was operated

for years until discontinued as a source of supply in 1989 due to non-compliance with water quality regulations.

Study/Evaluations - Several studies were completed by Hatch Mott MacDonald (HMM) to determine the best alternative for treatment of the well supplies to meet NJDEP standards. Due to the relatively high cost of providing treatment, the Client elected will maintain the wells in an inactive status. The NJDEP Commissioner issued Executive Order No. 2002-25, which required the Client to re-evaluate the feasibility of restoring the Springfield Well Field to active service.

Restored Treatment System - The facility provides state-of-the-art treatment meeting all federal and state water quality standards. Treatment includes a split train of manganese greensand filtration for the removal of iron and manganese and weak acid cation exchange for hardness reduction, followed by packed tower aeration for the removal of VOCs to below detection levels. The water is chlorinated and discharged to a 1 million gallon below grade concrete storage tank and pumped to the water distribution system. The new pump station uses energy efficient variable frequency drives to save on pumping costs and allow for varying system supply needs. The reactivation of the Springfield Well Field and construction of the new treatment facilities provide New Jersey American Water with 4 million gallons per day of additional groundwater supply from 11 wells. The supply provides greater system reliability that is less susceptible to drought, and conjunctive use of groundwater and other surface water supplies.



KS Engineers, P.C.
Preserving Plainfield's Railroad Heritage —One Bridge At A Time
Client: New Jersey Transit

he Central Railroad of New Jersey, built in 1838, directly contributed to the development of the region, and the City of Plainfield, New Jersey. Plainfield's thirteen railroad bridges (constructed between 1906 and 1908) are riveted steel, through-girder structures with rolled floor beams, without stringers, supporting a steel plate decks and ballasted track.

KS Engineers' structural engineering team associated with Edwards & Kelcey and a portion of the structural detailing) and Lynn Drobbin & Associates.

NJ DOT's vertical clearance guidelines required the floor of the bridge be raised to the minimum height of 14' 6". Our investigation revealed an existing track ballast of 24" AREMA code requires only 12". This gave the design team the space they needed to increase the bridges vertical clearance and reduced stress on the superstructure.

Track and historic profile were maintained throughout the project, down to replacement of gusset plates, replacement pivots, columns, bearings and girders.

The original estimate to rehabilitate the bridge was \$2,287,000 without the cost of maintaining the historic significance of the bridge. The final cost of \$2,491,000 represented an increase of 9% dedicated by NJ Transit to save an historic structure while renovating a heavily traveled section of track.



KS Engineers, P.C.
Development of Bridge Information System (BIS)
Client: New Jersey Transit Corporation

ince its inception on January 1, 1983, NJ Transit is responsible for inspection and-maintenance of all bridges inherited by the agency. Today, NJ Transit owns over 750 railroad and vehicular bridges and over 1000 signal bridges statewide. Up until 2003 the inspection and maintenance records for these bridges were maintained by multiple individuals in the organization. The information was maintained using various methods such as MS Excel, Lotus 123, Dbase, and many other means. The information was inconsistent, unreliable, and not easily accessible. As it's infrastructure was growing older NJ Transit needed a system for maintaining and tracking reliable, up-to-date information on all bridges under its jurisdiction. The system needed to be user friendly and built on a platform that would allow for future upgrades.

KS Engineers, P.C. (KSE) was retained by NJ Transit in 2002 to develope and implement a comprehensive Bridge Information System (BIS). All railroad, vehicular and signal bridges under NJ Transit jurisdiction were incorporated into the database. The front end user interface is extremely user friendly and requires minimum or no knowledge of MS Access. The BIS System actively tracks and reports bridge history, bridge inventory information, repair history and cost, emergency inspection and repairs history, most recent bridge inspection information and load limitations, and other relevant information. The BIS System also has a Report module, which has over 30 pre-formatted reports for instant use by users. Built-in security features also provide for secure administration of the database. BIS system is fully network compatible and multi-user compatible.



KS Engineers, P.C.
Rt. 18 Extension, Section 2A
Client: New Jersey Department of Transportation

his construction project, initiated in June 2003, by the New Jersey Department of Transportation, included a new four lane, 3,333 meters long divided highway, 6 bridge structures, 6 culverts and architectural surface treatments of all bridge abutments, piers and retaining walls. Also included were over 3,600 meters of multi-use paths for pedestrians and cyclists and the planting of over 100 species of trees, shrubs and flowers to restore 29 hec acres back to its natural habitat for the Rutgers campus. The designer of this \$75 Million Piscataway, New Jersey project was Gannett Fleming and the general contractor was Slatery Skanska Inc.

KS Engineers, P.C. (*KSE*) was the lead firm for construction engineering, administration, documentation and inspection of the Route 18 projects.

The project connected the John Lynch Bridge, carrying Route 18 over the Raritan River, to Hoes Lane and proceeded to the I-287 Interchange. Culverts with natural stream bottoms were constructed to be more aquatic life friendly, roadway sections were elevated to allow wildlife to cross under the new highway and out of danger from vehicles, and retaining walls, bridge piers and abutment walls with architectural stone cast-in finishes, stained to match the area rock were unique and innovative construction elements.

This major highway construction project minimized impacts to the environment, minimized congestion to the traveling public and maintained a safe construction record. The innovative concepts utilized on this project, advanced the practice of engineering and construction methodology to a new level, providing future projects and engineers with valuable solutions.



Langan Engineering & Environmental Services
Former American Standard Pottery-Environmental
Cleanup for Site Redevelopment
Client: American Standard

n September 2004, the American Metro Center opened it's doors in this newly renovated office building which was the former nearly century old former American Standard Trenton Pottery. This redevelopment project by Preferred Real Estate Investments, Inc. is a cornerstone in the 1000 Acre Hamilton Township Redevelopment Zone which incorporates the site of the former American Standard Trenton Pottery as well as the adjacent Hamilton Township NJ TRANSIT Station.

Langan applied it's specialized expertise in environmental and geotechnical engineering to prepare the former Trenton Pottery for redevelopment by designing innovative remedial measures to transform areas impacted by former operations into features that could be integrated into a future site redevelopment plan. These environmental activities began with the closure of several areas containing barium clay spoils and also included former wastewater lagoons.

Additional innovative engineering solutions included stabilizing soft sediments in the former lagoons by incorporating geotextile grids and chemical stabilization of barium carbonate was performed using gypsum to create barium sulfate to satisfy regulatory requirements. The area of these former lagoons was incorporated into the redevelopment as newly constructed parking lots. During the final phase of site environmental remediation activities over 50,000 cubic yards of discarded pottery was crushed and consolidated beneath paved and landscaped areas.



Distinguished Award

Langan Engineering & Environmental Services Nolen Greenhouses for Living Collections Client: New York Botanical Garden

he Nolen Greenhouses for Living Collections at The New York Botanical Garden are among the most sophisticated behind-the-scenes greenhouses at any botanical garden in the country. They form a network of eight growing zones totaling 36,000 square feet under glass plus 7,000 square feet of support space. The Nolen Greenhouses will enable the Botanical Garden to develop its living collections, propagate plants for exhibition, and grow plants under specialized conditions for study, research, and conservation.

Langan provided civil and geotechnical engineering services from the feasibility and planning stages through construction documents and inspection. Innovative site/civil engineering solutions enable this state-of-the-art facility to blend into the pristine historic landscape. The greatest challenge was to retain and enhance the unique natural site conditions of this area of the Botanical Garden—rock out-croppings, beautiful specimen trees, and lawns—while satisfying the strict solar orientation requirement of the Nolen Greenhouses and providing convenient and logical visitor and service access.

Predominant among the unique building features of the project is the operable roof. State-of-the-art operating systems create unique growing conditions in each zone. The innovative site and building solutions for the Nolen Greenhouses provide a model for future projects.



Distinguished Award

The Louis Berger Group, Inc.

NJ Turnpike Authority, Secaucus Interchange, Contract No.SIP-301

Client: New Jersey Turnpike Authority

he New Jersey Turnpike Authority (NJTA) initiated the Secaucus Interchange Program in concert with planning for Allied Junction to help establish a new gateway to New Jersey's Gold Coast by tying together Frank R. Lautenberg Rail Station and the New Jersey Turnpike. The Louis Berger Group, Inc. was hired by the NJTA for the final design of Viaduct Contract No. SIP-301 that constructed a 3,100 foot long, high level curved ramp structure spanning over wetlands and the NJ Transit (NJT) Main Line. The design challenges included construction in the eco-sensitive Meadowlands adjacent to rail traffic, utilities and other facilities.

Berger led the design team that developed innovative concepts required to solve constructability issues and address temporary and permanent impacts to the wetlands. A complex horizontal and vertical alignment was developed to clear NJT tracks and PSE&G transmission lines as well as provides for future connections to Tonnelle Avenue and Bergen Arches. Due to the Viaduct's shape and underlying soils strata, site specific seismic response spectra were developed for the design analysis. Also, because of the underlying compressible and contaminated soils, it was necessary to pre-consolidate the approach embankment using permanent sheeting and wire-faced MSE walls to minimize impacts to the wetlands.

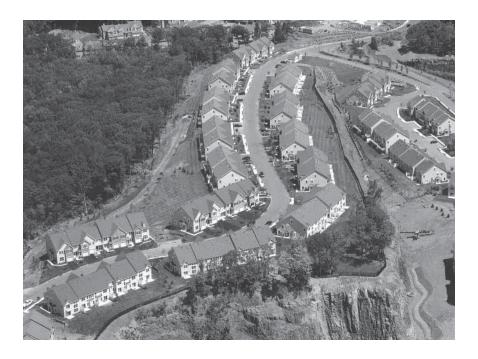


Parsons Brinckerhoff Quade & Douglas, Inc. Rt. 47 Operational and Safety Improvements Client: New Jersey Department of Transportation

he project area, Route 47 within the Cities of Millville and Vineland in Cumberland County, New Jersey, is a two-mile stretch of roadway which includes the Route 55 interchange. The corridor is heavily traveled because of the presence of shopping malls, eateries, businesses and residential access points and had the unwanted distinction of being one of the top 10 roadways in the State for traffic incidents. The most significant deficiency along Route 47 was the absence of designated left turn lanes. The corridor was subject to massive congestion and back-ups during peak periods caused by a combination of mall and commuter traffic combined with the lack of auxiliary lanes, and the inefficient function of the Route 55 interchange ramp system. In addition, the lack of safe accommodations for bicyclists and pedestrians became a foremost priority in reconfiguring the roadway.

The intent of the project was to improve traffic conditions along the Route 47 corridor to provide efficient and safer access to businesses and residences. The operational improvements untaken to accomplish this task included widening the roadway to include a center turn lane, adding two new signalized intersections and upgrading seven others, providing auxiliary lanes for the Route 55 interchange, and relocating two access roads in order to comply with the State's access code and to improve functionality of the corridor.

Not only have the changes made to this corridor eliminated the traffic congestion and provided for more pleasant and safer travel, but they also lend themselves to the continued economic growth and posterity of this community



Paulus, Sokolowski & Sartor, LLC Lakeside at North Haledon Residential Development Client: K. Hovnanian

. Hovnanian researched an abandoned 100-acre quarry for a potential residential development in North Haledon, NJ. They conceptualized a townhouse community centered around a lake offering spectacular views of the Manhattan skyline from the upper ridge of the property. Paulus, Sokolowski and Sartor (PS&S) was contracted to provide civil and geotechnical engineering, landscape design, and environmental services to bring this concept to fruition.

The abandoned quarry, largely bordered by single family and townhouse communities, presented a safety concern to the residents. In addition, redeveloping the quarry environment presented PS&S with a number of engineering challenges including distribution of utilities (sanitary and water) to the project, rock face rising 60-100 feet from the quarry floor, rock face protection and rock catchments, innovative approaches to infrastructure design to minimize blasting, vertical roadway geometry, site and emergency access.

The design transformed abandoned quarry quality residential community, providing homes to 301 families, including Mount Laurel housing. A total of 53 affordable housing units were integrated into the development; Infrastructure Improvements - Substantial offsite water system improvements benefiting existing North Haledon residents and the overall Hawthorne water system within the upper pressure gradient; Creative Site Design Features Protective plantings and low visibility safety fence protection for high ledges and retaining walls, integrated water quality swales & rock fall protection along old quarry walls, and the use of different groupings of major deciduous trees to define individual neighborhoods.



RBA Group Berkshire Valley Golf Course Client: Morris County Park Commission

he Berkshire Valley Golf Course, located in the northwest corner of Morris County, is a publicly owned jewel. Formerly a sand and gravel mining operation, the site was abandoned in an extreme scarified state, riddled with environmental hazards and dangerous attractive nuisances. The Morris County Park Commission tackled what was, in essence, a reclamationproject, converting environmental challenges into golf course benefits, culminating in a financially sound public championship golf course with breathtaking vistas.

In order to develop the land, the County overcame serious erosion issues associated with lengthy one-mile excavated slope, with heights exceeding 70 feet. Other environmental challenges included addressing surface and groundwater contamination, eliminating hazards associated with man-made siltation and settling ponds, endangered species issues, preserving the site's historic resources as a result of its prior use by Ringling Brothers as a holding area for its circus animals, and a variety of permitting obstacles.

The RBA Group was retained by The Park Commission to work with its golf course architect to make this vision a reality. The result culminated in a positive public image of engineering excellence; the elimination of thorny public health and safety issues and an overall significant enhancement to the environment.



Schoor DePalma Inc. Steven's Park Little League Field Client: City of Hoboken

he Steven's Park Field is located along Frank Sinatra Boulevard and the Hudson River. Due to the density of the City, it is the only Little League Field in Hoboken. It is likened to a diamond in the rough since it offers residents a place to rest and to play in the midst of a busy urban climate. The lack of adequate drainage facilities created frequent flooding problems during the recreation season. The field was closed often, therefore under-utilized. Plans were implemented to perform a complete reconstruction to solve these problems and to install an artificial turf surface so that residents could use the field throughout the year.

The most notable characteristics defining this project were the unique time schedule in which the park was reconstructed (6-weeks from the start to completion); its scenic location along the Hudson River and Manhattan skyline view; and the utilization of state-of-the-art artificial turf that enabled the park to be utilized throughout the year. Additionally, all consultants and contractors worked together seamlessly and at record speed, including during weekends, to complete this project on time.

The time frame for this project was catalyzed by the timing of a Green Acres grant that was awarded for this project in March 2005. The revitalization of the park was underway by mid-March 2005 and the site was completely renovated and ready for play six weeks later in May 2005. The largest contributing factor to this record-time completion was the overall project management combined with the exceptional cooperation of all agencies involved. Due to these collective efforts, the baseball season was only delayed by one month and the field now accommodates baseball and soccer games throughout the year.



Vollmer Associates LLP Race Street Bridge & Spillway Rehabilitation Project Client: New Jersey Department of Transportation

he Race Street Bridge and Spillway Rehabilitation Project is located in Southampton Township in Burlington County, NJ. The project entailed the replacement of two bridge structures and two Township owned spillways.

As the engineer for the project, Vollmer was responsible for the design of the bridge and spillway structures, roadway, drainage, landscaping and park improvements. Sub consultants provided support in the areas of geotechnical and right-of-way engineering, hydrologic and hydraulic analyses in support of the dam safety permit, and environmental

The project included the replacement of one single span prestressed concrete voided slab bridge over the main channel, a precast concrete box culvert over the Mill Race and two spillways. Both spillways were designed as reinforced concrete ogee-shaped structures. A fish ladder was also designed for the main spillway to allow for the migration of River Herring. Realignment of the roadway was necessary as well as relocation of various utilities.

permitting.

Vollmer utilized Context Sensitive Design elements to ensure that the structures fit into the historic character of the area. Stone architectural treatments including decorative capstones, bridge railings, and stone veneers designed to blend with the character of the area were incorporated into the design. Vollmer also designed an upgrade for the Township park located on the island created between the main channel at the Mill Race.

Vollmer successfully coordinated the work with the New Jersey Department of Environmental Protection (including the Dam Safety Section), the United States Fish and Wildlife Service, the State Historic Preservation Office, the Burlington County Engineer's office and the Southampton Township Engineer and Clerk.

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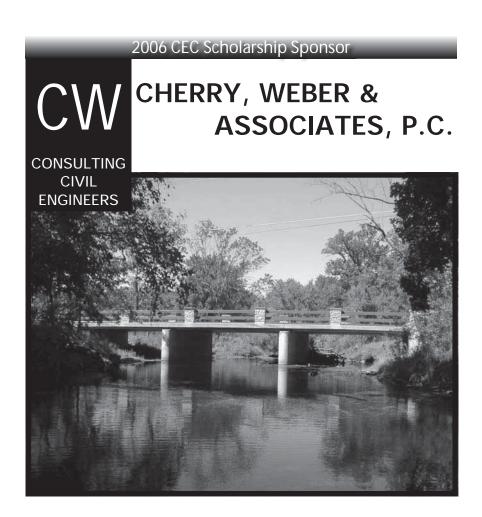
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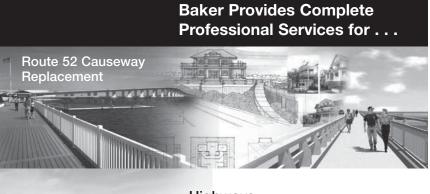
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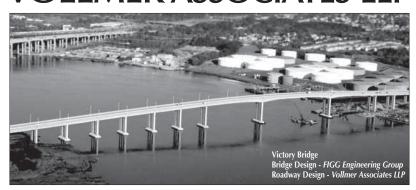
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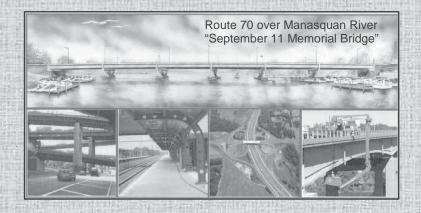


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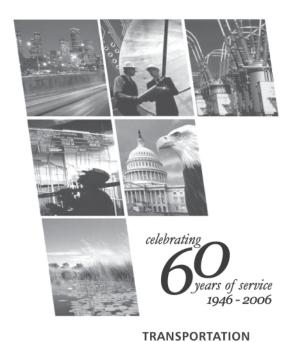
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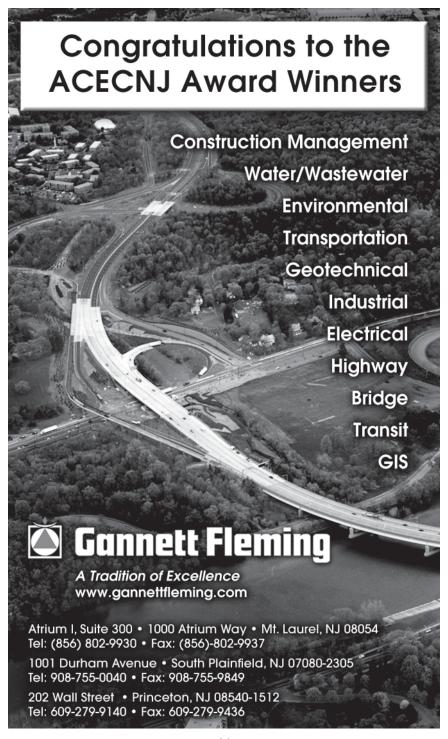
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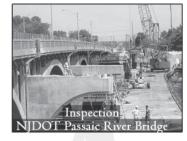
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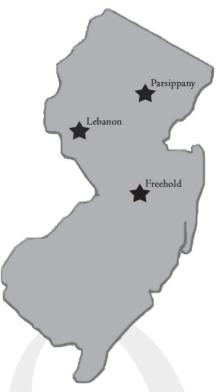


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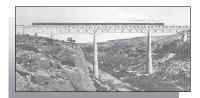
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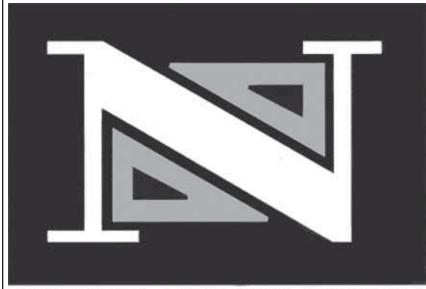








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