

AI SELECTED TO UPDATE CONSTRUCTION STANDARDS MANUAL FOR THE PA NY&NJ

The Port Authority of New York and New Jersey (PA NY&NJ) awarded AI the task of updating their construction standards manual. This assignment will involve a complete review of the current manual, comparing/correlating with existing construction engineering practices and incorporate missing elements of work now undertaken by the PA NY&NJ. In its second phase, AI will rewrite/update the construction standards manual, in consultation with the Port Authority's staff, to produce a new, revised comprehensive and compact manual. Additionally, we plan on creating an attractive and user-friendly compendium of the manual which inspectors can use as a convenient reference tool on all Port Authority construction project.

AI PERFORMING INSPECTIONS ON LONG SPAN BRIDGES IN CT, RI & NY



Gold Star Bridge in New London, CT is one of the major deck truss bridges in CT.

Subsequent to the Minneapolis deck truss type bridge collapse, AI Engineers, Inc was involved in performing special inspections for two of the four Connecticut State deck trusses with non-redundant members. These two bridges were the Commodore Hull Bridge in Shelton and the Route 7 over the Housatonic River, Fairfield. The inspection included special emphasis on the conditions of the gusset plates connecting the truss verticals/diagonals to the truss chords. AI also performed load rating analyses of two trusses for the Department's Office

of Rail. The Rhode Island DOT requested AI to perform a load rating analysis for one of their deck truss bridges as well. For NYSDOT, as a subconsultant to B&H Engineering, AI was involved in the special inspection of deck truss type portions of the Brooklyn Bridge across the East River. Also, working as a subconsultant to Weidlinger Associates, AI's team is performing special inspection of the Kosciuszko Bridge also in the Queens/Brooklyn Counties in NY.

VA WEST HAVEN FACILITY IMPROVEMENTS

AI is currently involved in performing a condition survey of over 1200 existing fan coil units at the VA Hospital buildings in West Haven, CT. The condition survey evaluates the condition of fan coil units, recommends repairs/replacement required and includes repairs to the chilled water line insulation that serve these units. Pursuant to the condition survey, we are preparing plans for Phase I of the project that require the replacement of about 100 units. Part of the project is to prepare as-builts and correct major discrepancies, if any, in the HVAC existing as-built plans. The design for Phase I is about 60% complete and is expected to go for construction in August 2008.

An Integrated Approach to Infrastructure Solutions.

Marketing: mktg@aiengineers.com

Employment: hr@aiengineers.com

AI Engineers, Inc.

919 Middle Street
Middletown, CT 06457
860-635-7740
860-635-7312 fax

99 Wall Street, 24th Floor
New York, NY 10005
212-760-2423
212-760-2451 fax

www.aiengineers.com

8 Faneuil Hall Marketplace, 3rd Floor
Boston, MA 02109
617-973-6424
617-973-6406 fax

Services

Transportation

Bridges / Structures

Highway / Civil / Site
Design

Sustainable Desing &
Construction (LEED)

Architectural Engineering /
Facility Design

Utilities / Power

Surveying / Land
Development

Design - Build

Construction
Management

Construction Engineering
& Inspection

AI News

A Newsletter About **AI** Engineers, Inc.

Volume 4, No. 1

2008

AI TECH CENTER: GATEWAY TO HARTFORD

On December 3rd, AI Engineers unveiled the plans for the construction of the AI Technology Center at 3 Constitution Plaza in downtown Hartford (former home of the WFSB Channel 3 Broadcast House). Expected to be completed in 2010, this proposed 13 story office complex will be the new home of AI Engineers from its current Middletown facility. This structure is proposed to be a LEED Platinum Building, representing the highest available level as outlined in the US Green Building Council building certification program.

"My goal is to move the AI Engineers corporate office into a one-of-a-kind structure in downtown Hartford," said Abul. "I envision a facility with strong social, economic and sustainable features that will both impact Hartford and the surrounding communities."

One of the key components of this move is to connect the staff of AI with the Hartford school systems to bring awareness and motivate middle and high school students to embrace engineering/technical education through a specialized mentoring program. Abul envisions this mentoring program beginning from initial design of (cont. on page 3)



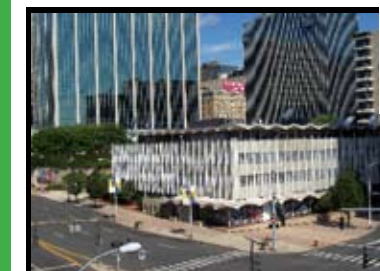
AASHTO Conference October, 2008, Hartford, CT

AI GOING GREEN

With the environmental challenges facing society and businesses, AI Engineers has pledged to invest in environmentally friendly technology and exercise leadership by example in the community. As part of our commitment to sustainable design, water efficiency, energy & atmosphere, materials & resources and indoor environmental quality, AI recently hired Michael Sherber, PE, LEED-AP as the Director of Facilities to oversee all M/E/P, HVAC building projects.



Mr. Sherber has over twenty years of experience in manufacturing, contracting and design of high performance HVAC equipment systems and is nationally (cont. on page 2)



Above: A rendering of the new AI Tech Center at 3 Constitution Plaza. Left: Former WFSB Building as veiwed from the Science Center, Hartford, CT.

AI DESIGN SERVICES PROFILE

The design concept is an integrated and inseparable process of physically constructing a project in a timely, cost-effective, functional and serviceable manner. AI's senior designers have significant experience in the construction industry and/or have been greatly influenced by close interaction of in-house construction professionals. AI's design activities are grounded on reality and premised on the AI end goal: successful construction. As we move forward, we con-

tinue to grow and our ability to provide inter-disciplinary services continues to satisfy existing clients and attract new clients. These include many federal, state and transportation agencies, utility companies, municipalities and private developers. Though our initial area of expertise centered on civil/structural engineering when first founded in 1993, our project assignment capabilities have increased. With the addition of new staff and the integrated use of skills, we

have been able to win more significant prime contracts in civil/site and structural design, as well as, mechanical/electrical/plumbing and architectural engineering. Our highly skilled and experienced teams of professionals have a qualitative edge on design primarily due to: (a) a global and general understanding of the design activities and the final goal, (b) extensive knowledge of issues during construction and (c) better con- (cont. on page 2)

AI SELECTED FOR THE MILLING AND RESURFACING OF BRADLEY RUNWAY

AI was selected to perform construction engineering and inspection services at the Bradley International Airport (BDL). The project involves the milling and resurfacing of the airport's main runway. It also includes the reconstruction of all intersecting runways and taxiways, the installation of a 24" waterline sleeve underneath the main runway as well as airport illumination. Successful completion of this project will require detailed planning and close coordination between the contractor, the BDL operations and security personnel. We are eager and excited to be part of this interesting and challenging assignment!

New Faces at AI



We are pleased to announce **William G. Murphy, PE** as Director of Engineering & Operations. Bill has 30 years of engineering experience in design and construction, a (cont. on page 3)



Please join us in welcoming **John Lloyd, PE** to the AI team! John was recently hired as the Principal Electrical Engineer and will be working with our facilities group managing many of (cont. on page 3)

Message From the President



In this issue we have profiled our record of achievements for design projects, both horizontal (roads/bridges) and vertical (building) construction. Our design professionals employ a very practical

approach, producing designs that are clear, promote construction within the owner's time schedule, specify high quality materials, and require the best construction practices. Our designs are functional, durable and, now, more importantly, environment friendly. AI has always been successful in driving the message that engineering designs need to be innovative, creative, and with a finished product that is cost effective, timely and of high quality. Furthermore, there is a strong emphasis on communication between various technical professionals at AI, with cross training and continuing professional development. We encourage state-of-the-art applications and best management practices in both design and construction, fostering a philosophy of professional excellence. I am proud to have facilitated such a team environment where our professional staff take pride in what they do and share this approach with other design and construction professionals, including a few specialty sub-consultants. With the addition of a LEED team in the mix to champion a sustainable design approach, we have added the very important aspect of environmental sensitivity and compliance to our projects too. Being environmentally friendly is no longer just a "cool" phrase. It's very important to all of us as individuals, businesses and the community and society at large.

Abul Islam

IN OTHER NEWS

- AI is proud to have participated in the AASHTO conference in Hartford, on October 17.
- AI has been performing more and more in-house training to accommodate for rapid growth and technological advances within the company. The training includes vigorous safety courses, monthly Project Managers seminars, weekly construction meetings and specialized computer software training.
- In September, AI participated in the CMSDC Annual Tradeshow at Foxwoods, where Abul Islam, President/CEO, was able to showcase the firm and the AI Tech Center in a presentation.

AI commits to exercise leadership by example in the community – AI GOING GREEN Cont.

recognized for his expertise on indoor air quality, high performance HVAC system design, and evaporative cooling. Mr. Sherber was the co-author of the 2000 Connecticut Academy of Sciences and Engineering (CASE) report to the Connecticut General Assembly that formed the basis for Connecticut's 2003 school indoor air quality law. Also, he was the first engineer in the State of Connecticut to become a LEED-Accredited Professional and designed the advanced HVAC systems for the first three LEED certifiable public schools in New Jersey. We are glad to welcome him to our team and are excited to grow our M/E/P division under his leadership!

AI DESIGN SERVICES PROFILE Cont.

control of projects by performing in-house work, including planning, ground survey, civil/site, M/E/P and construction support services. Due to the emphasis the company places on cross-training among disciplines, our senior design professionals are quick to relate to a client's needs and determine and/or adjust technical depth/expertise required accordingly. This trend results in innovative design and a better end product from both a cost-effective and functionality point of view. Keeping up-to-date with codes, client policies/procedures, design

practices, environmental compliance and construction practices is a must for all involved in the design process. The spectrum of design projects include: interstate highway and railroad bridges, major/arterial roadways, civil/site/drainage, utility, structural, mechanical, electrical, fire protection and architectural/building projects. Our engineering design experience is as diverse as it is extensive. We utilize the latest design and drafting software as well as proprietary design programs to meet or exceed the design requirements.



AI provided design and construction inspection services for this Rose Hill Avenue Bridge in Danbury, CT

Our designers are not only dedicated to their specialized technical disciplines but also bring an understanding of project goals that allows for us to provide a comprehensive array of successful design projects.

METRO-NORTH RAIL YARD EMU SHOP DESIGN COMPLETE



Interior view of the EMU Shop in the New Haven Metro-North Rail Yard.

As part of the \$800 million Metro-North Rail Yard Improvement project lead by PB Americas, Inc., AI completed the final design of the Electric Multiple Unit (EMU) shop. This two-story building is used to perform light repairs on Metro North Rail train cars. We were responsible for providing M/E/P and structural engineering services on this project which included

the addition of a new dock leveler as well as reinforcing the roof of the office space. The design also included the addition of an Uninterruptible Power Supply (UPS) unit for emergency lighting. We provided code compliance and safety repairs and Greg, Weiss and Gardner Architects, Inc. (GWG) was responsible for interior architectural work.

AI TECH CENTER Cont.

the project through construction to final building operations. The demolition plans are already underway, with construction anticipated to start in the summer of 2009. The demolition of the existing WFSB building will be pursuant to LEED guidelines for construction recycling. The completed preliminary design of the proposed AI Technology Center blends the current best of breed in terms of sustainable design into an architectural package that will both complement the surrounding structures and encourage foot traffic from both the street and plaza levels. The floor plates have been laid out and aligned to maximize both light infiltration but also to produce open, airy spaces. Energy demands from peak times will be shaved off through the installation of an on-site fuel cell, roof mounted photovoltaic panels and the generous use of energy efficient lighting fixtures. Drinkable water demands will be cut by more than half through the use of rainwater recycling and water efficient fixtures. We are proud to introduce the installation and use of the hybrid double duct HVAC system – an innovative system designed in-house that saves up to 70% of energy costs compared to comparable traditional installations. The sum total of this innovation creates a leasable space that represents a first for Hartford and Connecticut, and that we are confident will be a magnet for new business interests in the heart of the city.

MASS HIGHWAY DEPT.

Footprint Bridge Program – AI is designing the replacement and/or rehabilitation of five structurally deficient and or obsolete bridges in the commonwealth.

Bridge Load Rating Task-Based Contract – AI is performing load rating statewide, several bridges have been completed thus far.

Bridge Preservation Task-Based Contract – AI has recently been awarded this assignment for the design, rehabilitation and emergency design support services for bridges statewide.

RT. 1 DESIGN BEGINS AGAIN

AI has recently proceeded with the preliminary design for the ConnDOT Route 1 Reconstruction design project. AI is addressing any changes in standards and design concepts since the original design. The re-design of Route 1 consists of widening the road to install a center, bi-directional left-turn lane with wider outside shoulders. It also includes new and modified traffic signalization, hydraulic analysis and evaluation of a box culvert/bridge. One of the major challenges of this one-mile roadway reconstruction

is the heavily urbanized tight corridor where construction will be taking place. AI is working hard to minimize impact to local businesses and homes. This is also the first major design project to be completed using the software, In-Roads. Our engineers and CADD professionals have taken in-house training for In-Roads and are striving to accommodate to ConnDOT's new digital design environment (CADD standards).

RT. 63 OVER NAUGATUCK RIVER TRAFFIC PLAN

Another design project recently completed by AI is the highway and traffic portion of the replacement project, Route 63 over the Naugatuck River. The project required three-stage construction due to high traffic volumes on the state highway. Of particular interest to the state



Traffic Design Plan of Rt. 63 over Naugatuck river.

was the busy super-elevated western approach that featured a signalized intersection only a few hundred feet from the

bridge construction. AI had to devise M&PT schemes that allowed controlled flow through the approach intersection and

the bridge construction zones while allowing truck traffic in each direction for all phases of bridge construction. In addition, the existing structure contains a single sidewalk on the northern side of the bridge which was closed during two different phases of construction, and temporary pedestrian crossings, including new signals phases and ramps.

New Faces Cont.

William Murphy Cont.

BCE and MS in Civil Engineering and an MBA. He has extensive experience working for clients in both the public and private sectors, including a strong focus on municipal and state services. He is a very active member of the New England Chapter of APWA and a CT Director of the chapter's Executive Committee. Bill is also a longstanding member of the ASCE. At AI Bill will work closely with our staff to promote the highest quality in service delivery and superior client satisfaction.

John Lloyd Cont.

our electrical projects. John has over 20 years of experience in electrical engineering design and construction management and has managed a wide range of projects for municipal, state and private clients. He earned his BS in Electrical Engineering from the University of Hartford and is a member in a number of professional associations.

More New Faces at AI...

Michael Sherber, PE, LEED-AP -Director of Facilities

Edmund Parker, Jr., PE -Principal Engineer

Paul Tarbay, PE -Resident Engineer

Seung-Chul Ok -Civil Engineer

Frank Liu, EIT -Civil Engineer

Eric Biegen -Construction Supervisor

Samer Hasson -Structural Engineer

Aaron Moore, NICET IV -Construction Inspector

William Fuentes -Engineering Technician

Eric Wagner -Senior Surveyor

Julia Morrow -Marketing/Office Manager NYO

Jean Apollon, NICET IV -Senior Construction Inspector

Mohammed Amer Irfani -Civil Engineer

Desmond Deville -Construction Secretary

Tara Gieger -Accounting

Sita Ram Pandey -Structural Engineer