



25 Years of Delivering Excellence & Value

The DIGITAL Download

REBUILDING OUR RAILROAD CORRIDOR: Increasing Ridership Drives Innovative Solutions



For 25 years AI Engineers, Inc. (AI) has been working to improve transportation and infrastructure in the Northeast region. In 1994, those efforts moved into regional commuter rail lines with the Track Upgrade and Interlocking project at the New Haven Rail Yard for Metro-North. Since then we have proudly been associated with a number of major railroad owners; completing engineering and track work projects that include civil/drainage, switches, signals, catenary upgrades, traction power, railroad bridges, and railroad facilities structures including platform replacement and rehabilitation. Whether as a part of design, construction administration or construction management, AI has developed significant expertise in the sensitive operational needs of railway projects that keep them fully operational and on schedule during construction. As ridership along these lines has increased to record numbers, especially on commuter lines, much needed renovations and technology upgrades are being completed to provide passengers with a more safe, comfortable and efficient commute.



Recent Awards & Acknowledgements

We are proud to announce that AI has, once again, been ranked as an ENR Top 500 Design Firm. ENR listed AI at #383 which is a significant rise from last year's ranking. We would like to thank all of our clients who have given us the opportunity to serve them over the years. ENR annually publishes this list that ranks the 500 largest design firms in the United States, based on their revenues. [Click here to view the complete list.](#)



Tariq Islam spoke to New York City's Red Tape Commission at this year's hearing in Queens, NY. Tariq told the Commission that Federal, State, and Local small business programs provided AI President/CEO, Abul Islam, the support needed to achieve his dream of establishing a consulting/engineering firm.

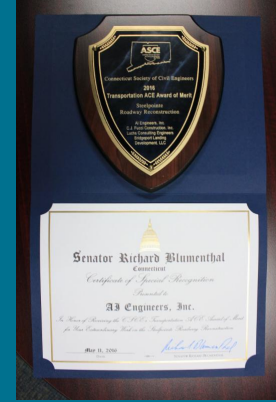
ConnDOT REPLACEMENT OF 6 NEW HAVEN LINE SUBSTATIONS Various Locations, CT



For over 150 years, the 75 mile corridor between New York City and New Haven has been one of the most active commuter lines in the country. Serving over 39 million passengers a year, continual service and aging technology and equipment make

completing renovations to this stretch of track very challenging and critically necessary. Acknowledging our capacity in both civil and electrical construction, Connecticut Department of Transportation (ConnDOT) retained AI to provide construction inspection and contract management services to replace six substations along a 30-mile stretch of the New Haven Line between the South Norwalk and Milford stations.

One of multiple projects along the New Haven - Grand Central line, the substation replacement project includes installing new substations, site improvements, ductbanks to transmit power lines underground, and 12 autotransformers. The substations and autotransformers to be installed are of an innovative design being used for the first time by Metro-North in an effort to improve comfort and reliability along the New Haven Line. The new layout provides upgrades to the capacity of the system and is more compact, which allows the construction to be completed within strict right-of-way limitations. Security has also been improved as the new construction fits within a secured, gated enclosure. When complete, Metro-North and ConnDOT will offer commuter passengers on the New Haven Line a safer and more dependable commute.



AI was honored to receive the 2016 Transportation ACE Award of Merit for the Steelpointe Roadway Reconstruction project in Bridgeport, CT. This award was presented by the Connecticut Society of Civil Engineers (CSCE) for AI's extraordinary work on the Steelpointe project.

Follow AI on
Facebook & LinkedIn



LONG ISLAND RAILROAD (LIRR) COLONIAL ROAD BRIDGE RECONSTRUCTION Manhasset, NY

The Long Island Rail Road has been active for over 180 years and carries a ridership of nearly 88 million passengers a year. With over 700 miles of rail line



track the need for significant improvements and reconstruction is sorely needed. Today, Colonial Road Bridge is a historic multi-span steel truss structure carrying 2-lane traffic over an active track of the LIRR. In continuous operation since its commissioning in 1887, this \$45 million project will see the 130 year old bridge replaced by a concrete arch structure that will act as a short tunnel over the tracks. The project is a right of way closely bordered by the backyards of residential neighborhood and a busy local street which presents challenges to maintaining 24/7 safety and finding adequate space for the location of equipment. Simultaneously, construction is coordinated while allowing two to four passenger trains an hour to continue to operate on schedule and without interruption.

The LIRR track and Colonial Road are being realigned to provide enhanced site distance, improved drainage and the inclusion of an extended pocket track which will be approximately 1,200 feet long. The project also includes significant excavation, slope stabilization, electrical ductbanks, relocated major utilities, concrete spread footings, installation of precast and cast-in-place arch sections, reconstructed pavement, signage and landscaping.

AI is operating as the on-site construction inspector and representative of LIRR; reporting to the LIRR Project Manager. AI is responsible for assuring conformance with contract drawings, specifications and other relevant contract documents. Specific functions include enforcing quality of work, inspection, testing requirements, and construction

requirements.



ConnDOT REPLACEMENT OF AMTRAK BRIDGE OVER ROUTE 1 Branford, CT



Al was the Prime Construction Administrator and Inspector on the largest American Recover and Reinvestment Act (ARRA) project in the State of

Connecticut. The scope included constructing a new extension of the train bridge and widening of route 1 in Branford that travels under the bridge. The new bridge consisted of two single lane bridges replacing an existing two lane bridge at the same location. The completed work covered site improvements, demolition, and temporary and new construction of track and catenary. Extensive structural support improvements were required to span the new ballasted deck system bridge which included common abutments and wingwalls.

The extent of this project created several challenges for construction. Track closures were only allowed during off-peak hours and road closures evenings and overnight. These

limitations required AI to manage a complex phasing schedule that allowed for continuing Amtrak passenger service and road traffic during construction. This phasing included the installation of temporary tracks, phased demolition of the existing bridge, and phased construction of the two sections of the new bridge. Additionally, the narrow right of way and extent of the project required AI to administer special construction methods to construct the roadway and bridge structure without infringing on adjacent properties.



ADDITIONAL RAILROAD PROJECTS

AI has been performing bridge inspection, evaluation, load rating, and facility improvement projects over the years for MBTA in Boston and is currently working under bridge inspection and general engineering consulting Contracts. The MBTA is the largest commuter railway agency in Massachusetts.



MBTA BRIDGE INSPECTION & LOAD RATING

System-wide, MA

2014 - Present

AI provided inspection and project engineering services for MTA in New York City for the upgrade of facilities and digital communication within many subway stations and other MTA facilities.

MTA ROCKEFELLER CENTER
STATION INSPECTION
New York, NY
2012 - 2014



www.aiengineers.com