



GCA Turns Vision Into Reality

The General Contractors Association of New York (GCA)

was founded 105 years ago during one of the greatest expansions of public and private infrastructure in the nation's history. It was a time when visionaries in both the public and private sectors came together to create a 20th century New York that cemented its reputation as the "Empire State."

GCA members were at the very heart of this burst of creative activity, carving out hundreds of miles of railroad and subway tunnels, laying down thousands of miles of water, sewer and gas lines, paving roadways and erecting the foundations of the greatest skyscrapers that the world had ever seen.

A century later, the potential and promise to build an even bigger and better New York is undiminished despite fiscal challenges and hurdles that lie ahead. We are making significant down payments on the Empire State of the 21st century.

And, once again, GCA members are turning vision into reality for both the public and private sectors:

- Building a new, wider, safer and more efficient Kosciuszko bridge that will carry 170,000 cars a day.
- Erecting a new Tappan Zee bridge that will not only be more resilient than the 55-year-old structure it replaces, but

will allow for a potential cross-Hudson transit link in the future.

- Excavating the foundations of a new, privately developed neighborhood—a city in itself—on the West Side of Manhattan.
- Completing the first phase of a Second Avenue Subway that promises to move 200,000 people on day one.
- Tunneling through the toughest bedrock in the nation to provide access to Grand Central and the East Side of Manhattan for over 40% of the MTA Long Island Rail Road's daily customers.
- Constructing NYC's Third Water Tunnel that will provide over 1.3 billion gallons of water a day to a growing population, while relieving pressure on the two existing and aging tunnels.
- Providing new terminals, roadways and parking at the busiest set of airports in the United States.
- Dredging our natural deepwater port even further to prepare for the next generation of super ships and secure New York's historical preeminence in international trade and commerce.

All are critical projects that will be of fundamental importance to the economic health and quality of life of the 21st century New York region.

As New York continues to set its sights on growth, more and more people want to be here:

- The city's population has hit an all-time high of 8.4 million according to a March 2014 census report—and is on track to hit well over 9 million in the next 20 years.
- That anticipated growth will drive the need for another 50 million sq ft of office space.
- New communities continue to spring up, with miles of dormant waterfront transforming into residential and recreational developments.
- Some 80,000 new units of affordable housing are planned or underway.
- Record levels of tourists are visiting over 54.3 million in 2013—with new hotels needed to accommodate them.
- New industries are taking shape overnight, with the help of incubators like the Cornell Tech campus on Roosevelt Island.
- Each day, over 8.5 million people ride our subways and buses, up over 40% from just 20 years ago.

These successes increase demands on our existing, but aging, core infrastructure, and investments in



Tappan Zee Constructors installs the main span piles for the New NY Bridge.

maintaining a state of good repair lag far behind the need. Recent forecasts by the Center for an Urban Future estimate that the city will need as much as \$34.2 billion to maintain a state-of-good-repair over the next five years, separate and apart from any capital expansion projects.

We must find a way to meet the region's needs.

There is no escaping the fact that adequate financial resources must be found to meet this need.

"There is undoubtedly a huge cost of investing in NYC's infrastructure to expand, modernize and maintain our systems, but the cost of not investing is far greater," says Denise M. Richardson, GCA's Managing Director.

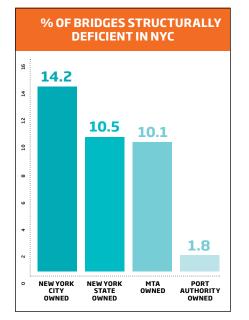
In that regard, the GCA has actively forged partnerships with industry organizations, policy leaders and elected officials to make the case for upgrading, maintaining and building new infrastructure to meet the challenges of the 21st century. But, says Richardson, "it will take more than just money."

 It will require new ways of planning and delivering projects so they can be built as efficiently and cost-effectively as possible.

- It will demand more than just talk about streamlining the processes used to plan, design and build major new projects as well as rebuild existing infrastructure.
- It will necessitate a better and freer dialogue and exchange of ideas between the public and private sectors as projects advance, which could lead to not only cost efficiencies, but better physical outcomes.
- It will call for inter-agency project coordination and sequential planning in order to take advantage of a highly skilled and specialized construction labor force that could transition from one project to another, increasing efficiency and minimizing start-up costs.
- It will entail having long-term, stable and comprehensive plans and funding streams in place that will, over the long term, save money through simple predictability.
- It will better leverage private investment so we can help bridge the funding gap by identifying where non-governmental dollars can be best put to use.

AVERAGE AGE OF NYC'S UTILITIES INFRASTRUCTURE				
	MILES	AGE	MILES OVER 100 YEARS	
WATER MAINS	6785	69	1000	
SEWER MAINS	6437	84	1560	
GAS MAINS	6362	56	-	
STEAM PIPES	105	60	-	

AVERAGE AGE OF NYC'S TRANSPORTATION INFRASTRUCTURE				
		AGE	% OVER 100 YEARS	
BRIDGES	1445 Bridges	63	11	
TRANSIT SIGNAL SYSTEM	728 Miles	37% exceed their useful life	-	
SUBWAY SHOPS AND YARDS	13 facilities	90	15	



Source for graphs: Center for an Urban Future Report, "Caution Ahead," March 2014



Construction of the tunnel box under Hudson Yards for Amtrak's Gateway passenger rail tunnels

Infrastructure Investments for a Better New York, a Mix of New-and Old

With NYC's growing and everchanging social and economic demographics, we must pursue new projects that enhance the region's ability to thrive and compete nationally and internationally over the next hundred years.

The reality is that Phase I of the Second Avenue Subway, East Side Access and the Third Water Tunnel, while needed today, were planned well over 50 years ago to address the needs of a late 20th century population. Reference to the Second Avenue Subway first appeared 95 years ago in New York State Public Service Commission Chief Engineer Daniel Turner's 1919 Proposed Comprehensive Rapid Transit System. We are well beyond that and need to thoughtfully focus on what the region will need to serve future populations.

Transit access to LaGuardia Airport; new subway stations like one at 41st and 10th Avenue in Manhattan to service the burgeoning Clinton neighborhood; rehabilitating the city's two existing water tunnels once the Third is complete are surely among the initiatives that need to be planned for and funded.

As critically important as those projects are, two jump to the head of the line in terms of their value to the 21st century New York—Amtrak's Gateway Tunnel and the construction of a full-length Second Avenue Subway, with options to continue the line northward into the Bronx.

GATEWAY

Benefits Well Beyond New York and New Jersey

Currently, the two 100-year old "North River" tunnels beneath the Hudson carry the majority of passengers that use Amtrak's Northeast Corridor (NEC), as well as over 120,000 daily New Jersey Transit rail passengers.

While these aging structures, built to 19th century safety standards between 1904 and 1908, have been over-capacity for most of their lives, the stress placed on them is greater than ever before, with rail now surpassing flights as the primary mode of travel for commuters between New York and Washington D.C. From 2001-2011, Amtrak's share of the travel market between the two cities increased from 37% to 75% and



Sen. Charles Schumer at the ground breaking ceremony for Gateway with Rep. Jerrold Nadler, Assemblyman Richard Gottfried, former USDOT Undersecretary Polly Trottenberg, Assemblyman Kenneth Zebrowski, Port Authority of NY and NJ Executive Director Patrick Foye, and Amtrak's Chairman of the Board Anthony Coscia

from 20% to 54% between New York and Boston. As if all that strain were not enough, both tunnels were damaged by salt water flooding during Hurricane Sandy which will require that they be taken out of service for serious repair at some point in the very near future.

The importance of ensuring that this NEC chokepoint does not become a stranglehold cannot be underestimated. It is fundamental to the health of more than just metropolitan New York. It

The complete airline system shutdown on 9/11 underscored the critical role the Hudson River rail tunnels play in the nation's mobility, safety and security.

is the center point of the NEC and is critical to a 50 million person region—a region that generates one out of every five dollars in GDP, one of every three Fortune 100 headquarters, and one of every five U.S. jobs. Its health has a ripple effect on most of the nearly 2,100 Amtrak and commuter trains that operate on the corridor between Boston and Washington.



Looming large on the near term horizon is the West Side's blossoming Hudson Yards commercial and residential development only steps from Penn Station. With a projected 200,000 inhabitants, 5 office towers, more than 100 shops, 14 acres of public open space and 24 million visitors annually, demand for additional transit service and NEC rail access is expected to explode.

....salt [from Sandy related flooding] is speeding up the damage to cables and concrete and rails and ballast and all the things that it takes to maintain a reliable crossing under the Hudson River.... it is unclear how long the existing tunnels will last....it could be 20 years or seven..... it would take eight to nine years to build replacements.

> **Joseph Boardman** President of Amtrak, May 2014

To help solve the capacity problem and add redundancy for the future, Gateway's two new tunnels under the Hudson will allow for the doubling of the number of trains into and out of Penn Station, increase track capacity and provide an additional 25 train slots at peak times. Its role in providing redundancy and, more urgently, allowing for closure and needed rehabilitation of the existing tunnels, makes the most compelling case for why Gateway must be built.

While the overall project cost is estimated at over \$13 billion, an initial investment has already been made to construct the first physical element of the new tunnels, a \$165 million, 800-ft encasement under Hudson yards between 10th and 11th Avenues. This critical segment, which was fully funded by "Sandy redundancy relief aid" secured by Senator Charles Schumer, will protect Gateway's future Right-of-Way.

The next steps are already being taken by Amtrak itself, which is using \$45 million of its own capital dollars over the next three years for planning and preconstruction work. A long-term funding solution has yet to be identified to carry out the full project, but a combination of Amtrak, federal, state, local and private dollars is needed to build this project.

SECOND AVENUE SUBWAY Phase II, III and IV—the Next Pieces of the Puzzle

The Second Avenue Subway was on the drawing board for the better part of the 20th century. Its actual construction suffered from a series of fits and starts, mostly caused by the inability to find adequate financing and fiscal crises that spanned from the Great Depression to the City's fiscal crisis in 1975. By the time the money ran out in the '70s, only three non-contiguous portions of the project had been built: a six-block segment between 99th and 105th streets,

a ten-block segment between 110th and 120th streets, and a two- to three-block segment between Pell Street in Chatham Square and Canal Street in Lower Manhattan. When Phase I, from 63rd Street to 96th Street is completed in 2016 using the first of those already constructed elements, it will serve over 200,000 riders and will be the first significant expansion of the subway system in over 50 years.

Until Phases II, III and IV stretch the line a full 8.5 miles along the length of Manhattan's East Side from 125th St. in Harlem to Hanover Square, the need for additional subway capacity on Manhattan's East Side will only be partly fulfilled. The complete Second Avenue Subway's 16 new stations are key to tying together communities from Harlem to the financial district, linking over 400,000 people a day with jobs, health



Second Avenue Subway, 86th Street Station: street-level crane lowering concrete bucket for concrete pour

care, schools, and recreational activities. It will also for the first time provide the East Side, which has only one set of subway lines, the kind of redundancy the West Side of Manhattan has enjoyed for many decades.

"Phase 1 is a great start, but to bring new vitality to the city's East side, the entire project needs to be realized," says GCA treasurer Art Corwin, President & CEO of Moretrench American Corp. "New York needs to provide mobility to neighborhoods all along its eastern border, affording people in those neighborhoods a reasonable and convenient means to get to work, job opportunities, and access to the healthcare corridor along the city's East Side."



Development followed the initial eastward expansion of the #7 line into the farmlands of Queens. Rawson Street and Queens Boulevard. January 12, 1917.

Beyond Just Physical Assets

"Investing in infrastructure gives

back as soon as you start investing in the form of job creation, increased tax revenues, large-scale development opportunities and the growth of small businesses," says Michael Viggiano, first Vice President of the GCA and Skanska USA Civil Northeast Executive Vice President.

Nowhere has this been more evident than in the case of the extension of the MTA New York City Transit #7 subway line westward from Times Square to the Javits Convention Center. Even before its completion, new housing, office buildings, restaurants and other commercial establishments have begun to spring up in what Hudson Yard's developers have dubbed "New York's newest neighborhood" on the far West Side.

Solid employment opportunities, initially in construction and in peripheral businesses, follow right behind infrastructure investments.

In 2013, the construction industry accounted for over 117,000 jobs, or 3% of all employment in NYC according to the NYS Department of Labor. Income taxes on city construction wages contributed

\$298 million to the city, \$553 million to the state, and over \$2 billion to the federal government.

Construction has historically offered a path to the middle class in the city. GCA's workers have not only made a good, solid, middle class living at an average wage of over \$71,800, but have enjoyed a shared pride in building the structures and transit systems in their own backyards.

At the federal level, the numbers are even higher due to the 20% local investment requirement. The number of jobs supported by every \$1 billion in federal infrastructure investment rises to 34,770.

CONSTRUCTION INDUSTRY BENEFITS			
NYC INCOME TAXES PAID	\$298,370,987		
NYS INCOME TAXES PAID	\$553,015,191		
FEDERAL INCOME TAXES PAID	\$2,143,469,733		

The American Road and Transportation Builders Association (ARTBA) reports that on average, every \$1 billion invested by state governments in road and bridge construction supports 27,823 jobs:

9,537

on-site construction jobs

4,324

jobs in businesses that either directly or indirectly supply materials and services to the construction industry

13,962

jobs supported when those employed at the construction site or in supplier industries spend their incomes

COMPOSITION OF NYC CONSTRUCTION INDUSTRY WORK FORCE 43% WHITE MINORITY Source: U.S. Census Bureau's 2011

Finding the Political Will to Make Infrastructure a Funding Priority

For too long, infrastructure funding at the federal, state and local level has not received sufficient attention. The problem is compounded by increased use of capital funds to address deferred maintenance and administrative costs, rather than true upgrade and expansion of critical assets. From a rate of 3.5% of GDP in 1956, the nation now spends less than 1.5% of our GDP on infrastructure—at a time when those very assets first put into use in the 1950s are now reaching the end of their useful life.

While both the public and elected officials talk about the need to invest in our infrastructure, when it comes time to discuss funding options, this support evaporates. Meanwhile, our economic competitive advantage continues to erode, the recovery from the Great Recession remains one of the weakest on record, and measures of quality of life—commuting times, road conditions, airport delays, water main breaks and other metrics continue to trend downward.

At the federal level, both Congress and the Administration must make it a priority to find new funding to help build essential new projects and state of good repair programs. With the Federal Highway Trust Fund running at a \$16-17 billion deficit per year and on the brink

of insolvency this summer, the clock is clearly ticking—and loudly.

According to data from the U.S. Department of Transportation's 2010 "Report to Congress on the Conditions and Performance of the Nation's Highways, Bridges and Transit," all levels of government should collectively invest a minimum of \$123 billion this year just to maintain current physical and performance conditions on the nation's highways and bridges, growing to \$130 billion by 2016 if adjusted for inflation.

Traditionally, the federal highway program has financed about 43% of all highway improvement capital costs with state and local governments providing the balance. This means the federal highway program should currently be investing about \$63 billion in highways. Unfortunately, in Fiscal Year 2012, actual federal highway spending totaled only \$39.8 billion.

Political Will Closer to Home

New York State voters on both sides of the aisle certainly understand the relationship between infrastructure, the economy and their quality of life. In a January 2014 poll of 500 registered New York voters conducted by the American Road and Transportation Builders Association (ARTBA) and the American

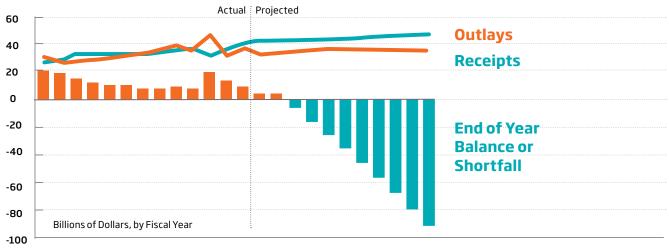
Public Transportation Association (APTA), the overwhelming majority of those surveyed readily acknowledged that roads, bridges and public transportation are important to their daily lives and to the state's economy. And three-quarters said it is very important for Congress to fix the Highway Trust Fund.

This should be a wakeup call to federal, state and local officials who are increasingly paralyzed about how to adequately fund our aging transportation systems.

> **Denise M. Richardson** Managing Director, GCA

"Owners and state and local governments are not going to make a commitment to new projects without a steady source for the back end. This lack of security holds people back and focuses on fixing only what you have today instead of building what you need for the future," says GCA VP Michael Viggiano.

CASH FLOW OF THE HIGHWAY ACCOUNT OF THE HIGHWAY TRUST FUND



2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022

SOURCE: CONGRESSIONAL BUDGET OFFICE

Finding Funding Sources

Ironically, federal, state and local funding mechanisms are as archaic and inadequate as some of the infrastructure they are intended to fund. The time, though, for indecision and debate about new revenue streams has come and gone and decisive action must be taken.

America has always been number one in transportation. We are not number one today. We are way down the list. China is going to build 85 airports this year. They are building roads, and bridges, and high-speed rail. Why? To attract businesses that create jobs.

> Ray LaHood Former Congressman and U.S. Transportation Secretary October 2013

While there are potential longterm ideas being discussed, the most

immediate, if not optimum, solution is to bring the stalwart of highway and transit funding, the federal gas tax, into the 21st century. At 18.4 cents per gallon since 1993, the tax has lost more than half of its value. Adjusted only for inflation, it should be 28 cents. Coupled with the impact of increased vehicle fuel economy, the tax raises \$15 billion less per year than the need.

Gradually raising the rate and indexing it for inflation would go a long way to bringing the gas tax back in line with the value of its contribution 20 years ago. According to the American Road and Transportation Builders Association (ARTBA), each penny raises an additional \$1.75 billion in revenues based on national average fuel usage rates. Adjusted for inflation, that would mean an additional \$10.75 billion in revenues, \$6.9 billion of which could be used to finance the federal highway program and \$3.85 billion contributed to the Mass Transit Account.

Other states are changing their transportation plans to increase dedicated revenues. In 2013, Maryland lawmakers approved the first increase in the state's gas tax in 20 years, acting to replenish a transportation fund that was rapidly running out of money for highway construction and long-planned masstransit projects. Under the bill, motorists would pay between 13 and 20 cents more per gallon by mid-2016, according to

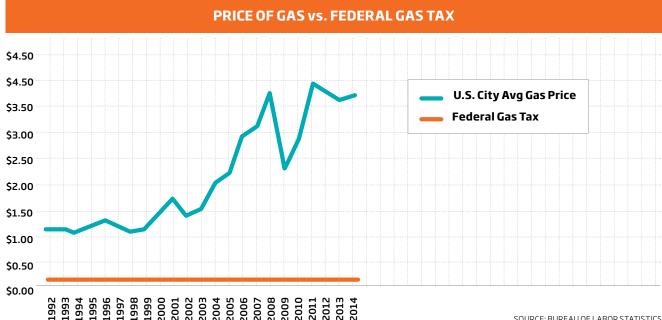
legislative analysts. The increase would be phased in, with the first bump of 4% in effect last July.

Virginia also passed legislation last year, in this case replacing the state's 17.5 cents-per-gallon tax with a new 3.5% wholesale tax on motor fuels slated to keep pace with economic growth and inflation.

Borrowing and spending is not a sustainable, longterm infrastructure strategy.

The state also boosted the sales tax on nonfood merchandise from 5% to 5.3% and allocated a larger share of existing state revenue to transportation versus other services. An additional 6% sales tax was imposed in parts of the state most in need of road improvements along with a requirement that the new money be spent on transportation projects in those areas.

The gas tax won't fix the gap between need and revenue. Other credible and dedicated funding revenues must be explored, from sales taxes and congestion pricing to public-private partnerships wherever they make economic sense. Whatever the solution, what is needed is the political will—and the political leadership—to make the kind of decisions that are necessary to adequately address our infrastructure needs.



SOURCE: BUREAU OF LABOR STATISTICS

Getting the Most for Every Dollar Spent

With money for infrastructure

investment at a premium, maximizing every construction dollar has never been more important. But GCA leaders and its members agree: more could be done to increase the efficiency of the construction process in the region.

Consistency, collaboration, cooperation and ongoing conversation between governmental agencies and contractors would allow for the planning and delivery of projects more quickly and cost effectively. Unfortunately, current procurement statutes restrict such interaction and actually work against the public interest rather than work toward enhancing it.

Empowering personnel at the project level with more decisionmaking capability would save both time and money on the job, suggests GCA Treasurer Art Corwin. While the GCA was responsible for adding owner delay of contract penalties to construction contracts, according to Corwin, "Contractors don't want delays. We want work to continue uninterrupted through job completion."

Federal, state and local governments must also aggressively implement other substantive streamlining efforts, from the length of environmental reviews to the way they grant Categorical Exclusions. One prominent government official, lamenting the 10-year, \$88-million environmental impact statement process for the Tappan Zee Bridge, questioned whether the same result could have been reached in half the time at half the cost.

Better cross-agency project coordination and sequential planning must be used to take advantage of highly skilled and specialized construction labor forces that could transition from one project to another, minimizing start up costs and reducing the time it takes to train those individuals.

Other significant efficiencies will only come with proactive legislative action. Reform of the Scaffold Law (Labor Law 240/241), which, along with court decisions, imposes absolute liability on owners, employers and contractors for gravity-related injuries, would also result in a dramatic reduction in the cost of construction. Now only unique to New York, with other states having repealed their statutes over the years, the 1885 law designed to protect workers from unsafe conditions while building high rises has been replaced by workers compensation and OSHA safety standards in every other state.

According to the New York State Court of Appeals, New York's Scaffold Law "imposes liability even on contractors and owners who had nothing to do with the plaintiff's accident." In every other state and in every other type of general liability case in New York the legal standard is "comparative negligence."

Because the law affords a contractor, owner or employer virtually no defense, it is one of the most frequent sources of litigation in New York State. In 2012, more than half of the top 30 publicly disclosed lawsuit settlements were related to the Scaffold Law. One quarter of those cases were against public entities including the largest Scaffold Law case, which was against a school district. In fact, since 1988 the number of Scaffold Law cases has increased 65%.

As a result of the Scaffold Law, insurance costs have increased in the past three years from 2-4% of the cost of a construction project to 8-12% of the cost of the project.

SCAFFOLD LAW RESIDUAL COSTS

To taxpayers:

\$785 million annually through increased project insurance costs

••••• To NYC School Construction Authority:

8-10 New Schools forgone each year due to increased insurance costs

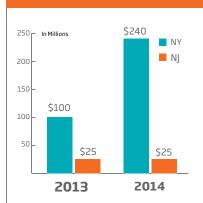
To the MTA:

General Liability Insurance Costs up from 4% to 7% of total construction value while deductible increased from \$500,000 to \$1.5 million for less coverage

To the Port Authority of NY and NJ:

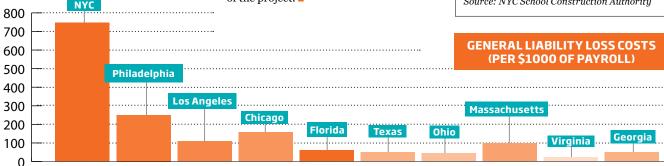
Average incurred claim costs on the NY side of a Hudson River crossing are 225% higher than on the NJ side of the same crossing.

NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY INSURANCE COSTS



Liability costs for the same school construction insurance program are significantly higher in New York than in New Jersey as a result of NY's Scaffold Law.

Source: NYC School Construction Authority



Source: Insurance Services Office 2011, Bridge or Elevated Highway Construction



ECCO III Enterprises constructs a bridge spanning the Van Wyck Expressway at Kennedy Airport.



William A. Gross Construction installs a new storm barrier along Rockaway Beach, Queens.

The Role of the Contractor

In December 1908, the first meeting of the General Contractors Association took place at the Engineers Club on 40th Street across from the New York Public Library. Today, this landmarked building, originally constructed with funds donated by Andrew Carnegie, contains a plaque in recognition of those "ordinary men doing extraordinary things."

One hundred five years later, the members of the General Contractors Association continue to build the extraordinary projects that have a profound impact on quality of life and economic vitality. From the contractors that took the risks to build the city's first subway, water and sewer lines, to their successors today who are building the systems' expansion projects, the work of GCA members touches the lives of all New Yorkers and everyone who visits here.

Unlike the architects and developers whose names become synonymous with their projects, the contractors toil in anonymity, and unlike design and engineering, the perception persists today that the contracting segment of the industry requires no special training, no special skills and no particular acumen. Nothing could be further from the truth. To be a successful contractor in today's industry requires a highly trained, skilled and experienced workforce and a management team that possesses the technical knowledge and business savvy to navigate the most complex physical and political environment in the country.

From the most complicated designbuild projects to the more routine rehabilitations, contractors bring their skills, expertise, vision and competence to building and rebuilding the city—every day.

Airports

The Van Wyck Expressway is notoriously congested and JFK Airport is one of the busiest airports in the country. Put the two together and you have the making of an ultra intense work environment. The demolition and replacement of a bridge spanning the Van Wyck Expressway, and running alongside the AirTrain and an active runway at JFK Airport, is an example of the challenges contractors face every day.

Construction operations were constrained by the hundreds of aircraft, trains, and service vehicles that moved about the work zone daily. Full AirTrain shutdowns were required for any work adjacent to the tunnel portal, limits were set on the maximum height of construction equipment used near the active taxiway, and operations were suspended because of conflicts with aircraft operations. "Some days were so busy with air traffic it didn't make sense to work in certain zones," says ECCO III Project Superintendent Eric Class.

Despite the delays, ECCO III overcame both landside and airside obstacles to complete the project several months ahead of schedule.

Beaches/Parks

Whether it is repairing beaches or rehabilitating parks, GCA members are the experts at performing work ahead of schedule and with minimal impact to the surrounding community.

After the damage caused by Hurricane Sandy, cleaning up and restoring New York City's beaches was a high priority. Contracted on an emergency basis, William A. Gross Construction installed a wall along Rockaway Beach to protect both the community and the beach from future storms. Working on an active beach during the summer the contractor had to develop strategies to work around the public and adjacent housing, put down wood mats in order to efficiently move equipment over sand, maintain traffic, and stage material delivery-all while expediting the project. The assignment took a seasoned eve and the ability to think fast and make decisions on the flv.

"Because it was an emergency contract, there was a limited window of time in which to resolve design problems, obtain permits, and answer questions," says Steve Rizzo, the contractor's Vice President of Operations.

Despite the challenges, work was completed ahead of schedule, and the beach clean and ready for the Memorial Day summer kickoff. SPECIAL ADVERTISING SECTION GCA



Yonkers Contracting Co. replaces two bridges carrying I-84 over Dingle Ridge Road using the bridge sliding technique for the first time in New York.



Waterworks, a Judiau Contracting and OHL joint venture, connects the trunk and feeder mains to Water Tunnel No. 3.

Bridges

Replacing a bridge may seem like a simple task—like following the directions for a Lego project. Such a simple viewpoint misses the complex problem solving and practical design skills the contractor brings to the table. In the case of the replacement of two independent bridges carrying I-84 traffic over Dingle Ridge Road in Westchester County, New York, the contractor was tasked with delivering the project in an accelerated time frame.

Conventional replacement would have taken more than two construction seasons. The contractor, Yonkers
Contracting Company, figured out a methodology to demolish the bridge and replace it over the course of two weekends. While the proposal called for sliding the 3-span bridge into place, achieving this within a confined right-of-way over a local roadway on a 15-degree incline had never been done before. With only a partial weekend shutdown for each direction of this segment of I-84, the contractor had no margin for error.

Over an eight-month time period the contractor figured out every element of the construction process to make sure the complex task was completed over the two weekends allotted. This included redesigning the proposed support structure and working with the project owner on the best concrete mix to meet the strength requirements.

"Everything was on the line for a 20-hour shutdown," says Yonkers President John Kolaya. "We had to react immediately to situations as they arose."

Water

Constructing the Third Water Tunnel is only one part of expanding and adding resiliency to the city's water supply. A series of shaft connections and trunk and water mains is essential to bring the new water supply from the Third Water Tunnel to those areas in need

Working in some of the densest, most highly visible neighborhoods in Manhattan-from Lincoln Center to the Meat Packing District to the Upper East Side—contractors connected ten shafts to Water Tunnel No. 3 to bring water up to the distribution network. The trunk mains were attached to the shafts and the distribution mains connected to the trunk mains. Hundreds of workers from virtually every heavy construction trade kept at it through days when the thermometer never dipped below 95 degrees, through winter blizzards, and even Hurricane Sandy to complete a job that will remain invisible to the public eye, yet will have enormous benefits for New Yorkers.

The current set of projects involves installing 11 miles of distribution mains ranging in size from 12 to 20 inches and 6 ½ miles of trunk water mains ranging from 24 to 60 inches. Working in a 10-ft trench on a 30-ft-wide road is challenging—especially when the work takes place in the middle of Chinatown or adjacent to Lincoln Center. Just transporting materials, machines and manpower to the site was a major logistical feat.

To install the water mains, contractors first had to move or replace the jumble of pipe and cables beneath New York's streets. Underground is a mysterious and often difficult place, and it's par for the course to find abandoned utilities, facilities that did not appear on drawings, vaults of buildings encroaching on work areas, and gas mains in an unexpected place. "These are the usual surprises in an underground job," says Rich Ocken, Vice President at Judlau Contracting.

Contractors had another formidable maze to negotiate as well—the network of multiple stakeholders, including agencies with their own permit process, private utilities, and public community board meetings. Michael Capasso, whose company C.A.C. Construction worked near the Holland Tunnel and the surrounding Tribeca neighborhood, says, "Even the celebrities living there had an opinion about how the project should be progressing."

Behind the scenes, contractors were negotiating the supply network, in some instances becoming consummate shoppers, scouring the worldwide market for the right materials, and scheduling them to arrive at precisely the right time. "For many materials, from bolts all the way up to the pipes themselves, only a handful of manufacturers make the kind of specialized product that was required," says Ken Durkin, Executive Vice President for John P. Picone, Inc.

GCA TRAINING

Building Success for DBE and M/WBE Businesses

To assist small and emerging

businesses in becoming successful and to provide the training and jobs critical to growing New York's middle class, the General Contractors Association of New York (GCA) partners with Manhattan College's School of Civil & Environmental **Engineering and Yonkers Contracting** Co. to offer an annual construction management course for minority and women-owned businesses (DBE and M/ WBEs). The course focuses on tips, tools of the trade and practical knowledge essential for growing a business in the complex public works market in the metropolitan area. It differs from the myriad of other training classes by offering the unique perspective of New York's prime contractors who navigate the industry's challenges and are eager to help small self-performing contractors with advice for success.

The three-day intensive course, held every January, includes panel discussions with prime contractors and course exercises, and features some of the most high-profile contractors in the industry serving as instructors. Attendees participate in sessions covering technical issues including bonding, estimating, construction accounting, scheduling, insurance and safety. Additionally, because public work is risky and fraught with many unique legal, regulatory and contractual requirements, the course covers the essential elements of public contract law, record keeping, certified payrolls and compliance.

The core components of the course include:

Understanding project scope and specifications and estimating

Bonding and insurance

Safety

Contracts

Obtaining and finding work



"We talk about specific contracts and give real world instruction," said Dr. Moujalli Hourani, Chairman of the Department of Civil and Environmental Engineering at Manhattan College. "This course is for those already working in the heavy civil and public works construction fields and who want to broaden their knowledge base and strengthen their skill set."

"As a business development manager who has worked in the AEC industry for two decades, it is important to encourage small businesses to develop high-quality business practices and for those who have succeeded in building strong businesses to share some keys to success," said Heather Cuffel of Yonkers Contracting. Cuffel served as both a panelist and moderator during the course. Minimizing cost over-runs, crafting strong relationships, ensuring the safest possible worksite, complying with all contract scope and specifications, identifying and meeting schedule requirements and milestones, planning carefully and coordinating and ensuring proper document controls were key themes that stuck in course participants' minds. "Relationship building is key and this

concept was just one of several important aspects stressed in all the sessions throughout the course," said a recent course participant Kathleen Makowski. "Being in a small intimate setting with

This class has the potential to make a huge difference in our industry-helping the subcontractor to learn important skills and giving the hiring organizations confidence that their subcontractors are ready to successfully execute their tasks.

John Kolaya President, Yonkers Contracting Co.

my peers and hearing from the best of the best gave me the additional confidence I need to succeed in what's becoming an increasingly competitively bidding environment."

MAKING CONNECTIONS

GCA Networking Event Builds Relationships Between Contractors and DBE and M/WBE Contractors



Torronce Addison, MWDBE Compliance Director for John P. Picone Inc., discusses bidding opportunities with attendees at the GCA's 6th Annual DBE and M/WBE Networking Event.

The General Contractors

Association of New York held its sixth annual DBE and M/WBE Business Enterprise One-on-One Networking Conference this May, once again bringing together general contractors, agencies and firms for a dynamic morning of meeting, information exchange and presentation of project-specific opportunities.

More than 30 GCA member exhibitors and government agencies—including MTA, DEP, the Port Authority of New York and New Jersey and DOT—were on hand actively seeking to partner with unionized and certified DBE and M/WBE firms, and to assist those needing help with parts of the certification process.

What makes this event so successful, according to Denise M. Richardson, Managing Director of the General Contractors Association, is the faceto-face interaction of DBE and M/WBE firms with the people responsible for achieving participation goals on heavy construction contracts, including procurement managers, compliance officers and DBE and M/WBEs.

"There are contractors here working

on, among other projects, Hudson Yards, Kosciuszko Bridge, the Tappan Zee Bridge, submitting bids for LaGuardia Airport Redevelopment—these are real opportunities," said Richardson. "With an estimated \$36 billion budgeted for these four projects alone, there is work out there for D/M/WBEs."

The exhibitor table at Tappan Zee Constructors, LLC, was busy with people trying to get the attention of Community Outreach and Diversity Manager Carla Julian, who had stacks of information to distribute about working on the \$3.9 billion Design-Build project. "We have a 10% M/WBE goal and we want to inform people there is work. We want people to participate in our procurement process—we have tons of opportunities on our website," she said.

John Papagiannakis, the Outreach Coordinator for Skanska Koch, said his firm is selective about which events they attend, but find exhibiting at the GCA conference is always a win. "We come to promote specific projects we're working or bidding on. Our work in steel erection requires specialized expertise, which can be very hard to find," he said, noting, "The GCA networking events have been very successful for everyone over the past six years."

Rizzo Ahmad, President of Rizzo Construction, said he comes every year to the event and always makes good connections, something he values as an MBE member of the GCA. "A lot of my work is this," he said, waving his arm around the room. "Partners. I want to see everyone and make new contacts."

Jennifer Carey, President of JLC Environmental Consultants, Inc. agrees, noting that she met up with old clients as well as made new connections. "As a certified WBE, my goal is to explore all opportunities that will bring me work. Networking events like this help me make those connections that will drive revenue and growth."

Introductions made at the event are the first step in building relationships—a key theme of the DBE and M/WBE Construction Management Course the GCA sponsors each year. To further relationships and work opportunities, the course is advertised at the networking event and participants are surveyed for new training suggestions.

MOCS Director offers encouraging changes.

Keeping its promise of a minimal program agenda and maximum networking time, GCA event speaker Lisette Camilo, the newly appointed Director and General Counsel of the NYC Mayor's Office of Contract Services (MOCS), kept her remarks short and to the point.

Camillo said the City is taking strides to improve the business climate for minority and women-owned businesses by making the process less "byzantine"—something the GCA has been advocating for years. In Fiscal Year 2013, \$58 million prime contracts and \$40.5 million subcontracts were awarded to certified small business enterprises. "It sounds good, but when you consider the City's total \$16.5 billion of procurement, we know we can do better," Camilo said. "We want to increase the volume of contracts awarded, provide input and support,

SPECIAL ADVERTISING SECTION GCA



Lisette Camilo, Director of the Mayor's Office of Contract Services



Disadvantaged, minority and women-owned firms discuss bidding opportunities with GCA members and public agencies at the 6th Annual GCA Networking Event on May 16, 2014.

and help increase our SBEs' capacity and bond readiness."

In her introductory remarks, GCA's Richardson announced a new initiative to help member firms meet their goals.

In coordination with FTI Consulting, a global business advisory firm, the association is developing an M/WBE Directory for the heavy construction industry. "With D/M/WBE statewide

participation goal over 17% and several agencies hitting the 20% goal, a directory will be of great assistance to those seeking firms for partnering opportunities."

BANK OF AMERICA

THE FOURTH REGIONAL PLAN

How It Will Keep New York a Competitor in the Global Economy

by Robert D. Yaro, President, Regional Plan Association and **Denise M. Richardson,** Managing Director, General Contractors Association of New York

To evaluate where New York is now trending in the world economy, it is useful to compare New York's infrastructure investment and policies to London's, as the two cities compete for primacy as the global center for businesses that rely heavily on intellectual capital.

In 1999, the British Government created the Greater London Authority (GLA) to develop a strategic plan and to manage the region's vast transportation system under its transportation subsidiary, Transport for London (TFL). TFL immediately set about restoring London's deteriorated Underground transit system. It also instituted one of the world's first congestion pricing systems and used the funds generated by this system to finance a major expansion of the region's bus system.

In conjunction with restoring its system to a state of good repair, TFL initiated several system expansion projects including:

- Crossrail, a new \$28 billion east-west transit link stretching from Heathrow Airport in East London that will add 10% to the capacity of the Underground system.
- The London Overground, a new surface rail transit system. In the six years since the initial segments opened, ridership has risen to 500,000 daily passengers, and is expected to surpass one million daily passengers by the end of the decade.
- Docklands Light Railway, serving East London.
- Various revitalized transit hubs that have been restored through a partnership between TFL and Network Rail, the national rail infrastructure operator.

These projects have been financed through partnerships between the GLA and the UK government, often in cooperation with public-private partnerships. The GLA has adopted region-wide commercial property assessments as well as Community Infrastructure Levies—value capture systems in districts that will benefit from new rail services—to pay its share of the cost of these systems. In addition, TFL and commuter rail operators have adapted "smart card" collection fare systems that reduce the cost of fare collection.

The British government has also completed the HS1 high-speed rail link between London and the Channel Tunnel, providing high-speed intercity rail service to Paris, Brussels and Amsterdam as well as commuter rail services that dramatically cut travel times between London and formerly isolated cities in Kent. The UK Government is now also committed to building HS2, the high-speed rail link from London to Manchester, with eventual extensions to Glasgow and Edinburgh. This system will bring virtually every major city in the UK within a few hours of the Capitol, creating a single megaregion-scale economy encompassing most of Britain.

Meanwhile, the New York metropolitan area continues to struggle with a fragmented planning and capital investment process that has become increasingly politicized. The potential impact on New York's ability to remain competitive with London and other global cities has yet to be measured. As the anchor of the region that generates 11% of national GDP, the loss of New York's competitive advantages could have profound implications for the U.S. economy.

With this in mind, the Regional Plan Association is now preparing a new strategic metropolitan plan for the New York metropolitan area, its fourth regional plan since the 1920s. Although RPA is a civic group and not a government agency, these plans have had wide influence over the metropolitan area's growth over the past nine decades.

RPA's Fourth Regional Plan, to be completed in 2016, will set forth bold proposals for the infrastructure investments needed to accommodate the next generation of growth and development in the metropolis. The Fourth Regional Plan will also propose financing strategies and governance reforms needed to complete these investments.

RPA is using both conventional and innovative techniques for engaging the public in the creation of this plan. An "ideas competition" will invite the public to submit their own proposals for infrastructure, housing, climate and other measures to underpin the region's growth for the coming quarter century. Outreach is also being complemented by a series of online and social media-based, interactive media. The first of these can be found at fragile-success.rpa.org.

RPA's earlier regional plans became models for similar planning efforts in other U.S. and global cities. Earlier regional plans completed in 1929, 1968 and 1996 set forth proposals for most of the major infrastructure systems and urban development that have underpinned the New York region's growth and development during this period. It is now time to take those best practices that have been adapted by other cities and reapply them to the New York region to assure that we retain and enhance our economic competitive advantages. Technology advances, population growth and changing demographics all demand that the region's infrastructure meet the needs of the 21st century. We can't afford any less.



New York's Opportunity to Invest In Climate-Ready Infrastructure

By Marcia Bystryn, President, New York League of Conservation Voters, www.nyclv.org



Gantry State Park in Long Island City, Queens, NY was designed to make it difficult for storm surges to enter and to make it easy for water to drain out to minimize damage.

The state of our infrastructure is one of the most pressing issues facing the United States and especially New York. According to the American Society for Civic Engineers' most recent Report Card for America's Infrastructure, 60% of New York's major roads are in poor or mediocre condition, 27% of our bridges are functionally obsolete and the price tag to fix our ailing water and wastewater facilities now tops \$57 billion.

The effects of climate change only underscore the need to act quickly. In New York City—home to the nation's largest transportation network—temperatures and precipitation are expected to be markedly higher by midcentury, and sea-level rise could be as great as 11 inches by the 2020s, creating major challenges for our waterfront areas.

That's why we are heartened that New York State is taking action now to align public investments with the climate projections that will soon be realities.

In late June, the State Legislature approved the Community Risk and Resiliency Act, (A.6558-B /S.6617-B) sponsored by Assembly Member Robert Sweeney and Senator Diane Savino. Passed with overwhelming bipartisan support, the bill will soon head to Governor Andrew Cuomo's desk.

The Community Risk and Resiliency Act will ensure that state monies and permits include consideration of the effects of climate risk and extreme weather events—or in plain English, climate thinking will be factored into state planning and infrastructure investments.

The bill does three things. First, it requires the New York State Department of Environmental Conservation to establish science-based, sea-level-rise projections no later than January 1, 2016. That will help set the standards that investments should meet.

Second, the bill requires that extreme weather events, flooding, storm surges and sea-level rise be factored into the state's infrastructure investment strategy. The goal is to make smart-growth initiatives, drinking water and sewage treatment facilities, waterfront revitalization projects, coastal rehabilitation projects and parks more resilient to our changing climate.

And finally, the bill also makes it easy for municipalities to make smarter investments, too. The bill requires the New York Departments of State and Environmental Conservation to prepare model local laws to help municipalities get on board.

The Community Risk and Resiliency Act won't cost taxpayers anything. In fact, it will actually save money over the long term, by building right the first time instead of having to replace infrastructure when a storm hits.

And its standards are not overly onerous. Projects authorized under the New York Rising Community Construction Program—which provides rebuilding and revitalization assistance to communities severely damaged by Hurricanes Sandy and Irene and Tropical Storm Lee—are already using the standards right now.

May marked the 351st consecutive month with above-average temperatures. This means that people 28 years old or younger have never lived through a month that was colder than average. In addition, the National Climate Assessment and Development Advisory Committee report indicates the Northeast has experienced a greater increase in extreme precipitation over the past few decades than any other region in the United States.

New York has our work cut out for us: The time to invest in our infrastructure and prepare for the changing climate is now. Approving the Community Risk and Resiliency Act is a good first step. ■

A Salute to the GCA Members

An association's strength is

based on the commitment of its members. The GCA members are always there, willing to take the business risks to deliver complex projects under difficult conditions, and ready to lend a hand in a disaster, to provide financial assistance to a range of philanthropic endeavors and to foster the development of the next generation of industry leaders.

On behalf of the entire GCA staff, I extend our appreciation to the GCA members for their dedication and support to the association.

Denise M. Richardson *Managing Director*

* Member of the Executive Committee

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