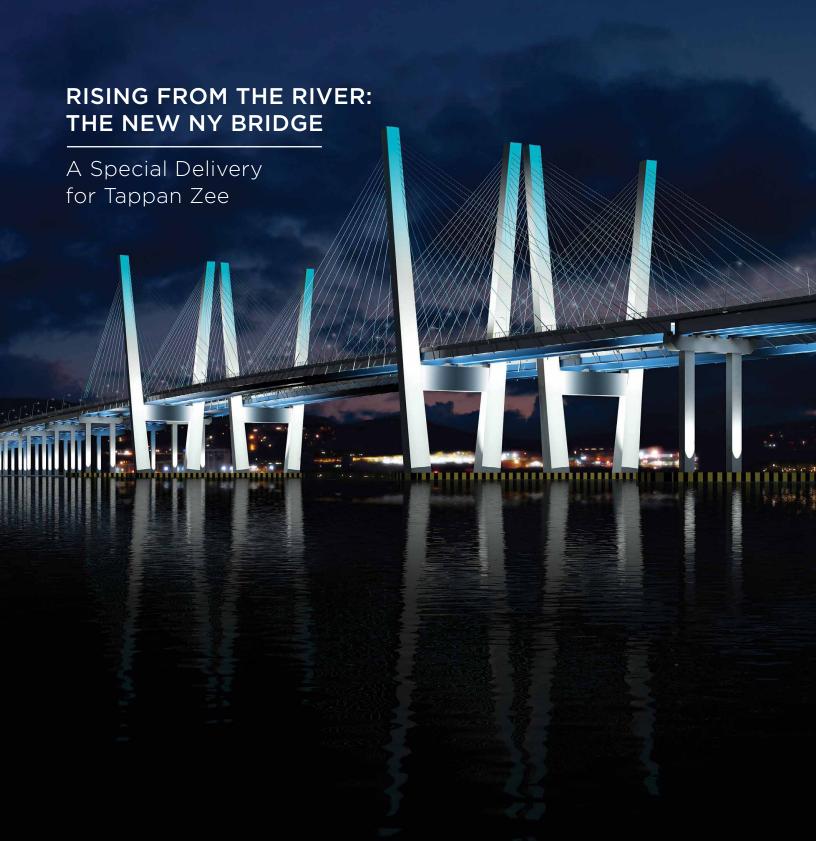


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Is Safety for the Birds? BRIDGE TO SAFETY - 30





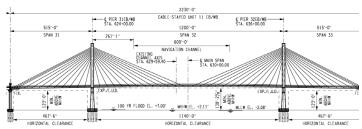
# RISING FROM THE RIVER

THE NEW TAPPAN ZEE HUDSON RIVER CROSSING

## THE DESIGN

The main span of the new Tappan Zee Hudson River Crossing is comprised of two parallel cable stayed structures, each 2,230 feet long with 1,200 foot clear mid spans across the main navigation channel. While the two bridges are structurally independent, they do share a common foundation footing and substructure.

There are four major foundations under construction in the main span - one for each of the main tower piers, and one for each of the outer 'anchor' piers. The tower piers are comprised of 64 steel piles, all six feet in diameter and driven to a depth 240 to 290 feet below the waterline. The smaller anchor piers consist of 24 of the same six foot diameter steel piles driven to a depth of 170 to 230 feet below the water line. The water depth through the main span itself is a mere 45 feet.



### THE STATUS

Two clusters of huge hollow pipes can be seen extending out of the river adjacent to the main span piers of the existing bridge. These are the 128 main span piles which have been driven over 200 feet into the riverbed and the insides excavated. The major operation now underway is the construction of the pile caps. These are massive solid reinforced-concrete blocks that affix to the top of the foundation piles such that they rest partially submerged below the water line. These will act as the base on which the main bridge towers will later stand. The bottom of

the pile caps rest only 6 to 8 feet below the water, and extend a similar distance out of the water – quite different from the common assumption that what is seen at water level extends to the bottom of the river!

## THE CHALLENGE

While conventional construction methods use fulldepth cofferdams to create a dry space for constructing pile caps from the river bed, Tappan Zee Constructors (TZC) is taking a more efficient, but no less challenging approach. A thin precast concrete platform (the pile cap soffit) is installed around the pile formation, suspended from the piles themselves, and held just a few feet above the water. Temporary water-tight forms are then installed around the perimeter of the platform and a suspended cofferdam is created. It can be likened to a giant cake tin that is lowered halfway into the water, then sealed, drained, and used to make the 'cake' itself - in this case. the permanent pile cap. Using a submerged cofferdam in lieu of a full depth one gives TZC dry conditions for constructing the pile cap, but with less environmental impact, less cost, and in less time.

Each of the main tower pier caps will incorporate almost 3,000 pounds of reinforcing steel and 12,000 CY of concrete. These materials will be installed and cast in stages such that the 'wet' weight on the soffit support is minimized until self-supporting permanent strength increases. This weight is transferred through the piles and down to the riverbed by making the pile cap and the piles structurally integral with continuity rebar and concrete. While the final product will have simple downward loads, the process is highly complex and involves varying dynamic forces: upwards, downwards, inwards, and outwards. The work must therefore be orchestrated using a precisely engineered choreography of strand jacks, braces, pumps, and pours to manage and equalize the buoyancies, weights, pressures, and live loads that inherently occur in the process.

### THE WORK

Installing the precast soffit at the tower piers was completed in early July 2014. While the completed pile caps will be over 360 feet long and 60 feet wide, the soffit of the suspended cofferdam was formed using 30 individual precast pieces weighing up to 160,000 pounds each. These 'slabs' were prefabricated off-site and shipped by barge to the job on the Hudson River. With each slab accommodating two piles through cut-

out holes, segmental installation was done by utilizing a hanger system that independently supported each slab on its respective piles. Fiberglass collars were installed over the piles to provide a form seal between the pile and the protrusion holes in the precast.

With the entire cofferdam soffit suspended just inches above the high tide water, TZC crews then installed reinforcing steel and concrete closures that tied all 30 suspended slabs together. This created a single concrete soffit platform 360 feet long and 60 feet wide, still entirely suspended above the water on 64 piles.

Following this, 161-foot tall sheet metal walls were installed around the perimeter of the soffit and made watertight, giving the team a full cofferdam, all while still suspended. Next, the entire structure was lowered into its final position, halfway submerged in the Hudson River.

For this critical lift-lower operation, a custom system requiring 34 VSL strand jacks was staged on dunnage beams spanning the top of the piles. From an automated control panel, the entire cofferdam was raised a few inches off the temporary hanger rods before being lowered several feet into the water – a delicate process that took several hours.

With both cofferdams at final elevation, crews proceeded with sealing the pile cut-outs and installing uplift bracing prior to pumping the cofferdams dry. With these huge submerged structures now resembling the hull of a ship, the buoyancy forces actually exceed the weight – thus creating the need to install the uplift bracing between the cofferdam and the piles, prior to pumping the water out. Both main span cofferdams were in position and pumped dry by mid-September 2014. A success so far!

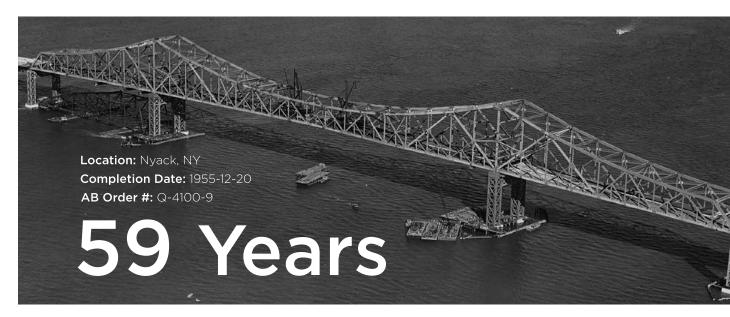
# THE FORECAST

In a race against the looming winter temperatures, TZC crews are working around the clock to get the pile caps completed. A two-foot high secondary temporary slab is currently being placed inside the cofferdam ahead of placing the permanent infill. The secondary slab layer acts to both counter the current buoyancy forces, as well as make a fixed connection between the soffit and piles to replace the uplift bracing. Uplift bracing and excess pile lengths will then be cut out to make way for the permanent reinforced concrete fill that will also extend 130 feet down into the hollow piles. The work is ongoing and the challenge is far from conquered!



# SIDE GLANCE

# AS THE "NEW NY" BRIDGE GOES UP, A LOOK AT THE ORIGINAL TAPPAN ZEE IT STANDS NEXT TO.



American Bridge has a long history with the Tappan Zee Bridge. Not only is AB a member of Tappan Zee Constructors, the consortium building the new crossing, but was also the prime superstructure contractor for the original bridge. AB was responsible for the 7,300 foot deep-water portion of the 16,000 foot crossing that connects Westchester and Rockland Counties.

It was in the 1920's that plans began for the bridge that would eventually be called the Tappan Zee. After World War II, the need for a bridge became apparent because of demands on the regional highway system. Plans started moving forward in 1949 when the New York State Thruway Authority (NYSTA) decided on plans for a highway connecting the major cities of New York State. Work on the bridge began in March 1952, and in December 1955 the bridge was completed and opened to the public. It was dubbed "Tappan Zee" after the area's pre-colonial days: Tappan, after the Native American tribe, and Zee, the Dutch word for sea. It is a fitting name, as the bridge crosses the Hudson at one of its widest points.

The bridge was constructed by erecting the anchor (flanking) spans on falsework trusses and cantilevering the 1,212-foot mainspan from both directions. The 20 deck truss approach spans were constructed at an on-land yard facility and floated into place. Each span was about 250 feet long, by 64 feet wide, by 26 feet deep, and weighed 830 tons. The Tappan Zee Bridge tipped the scales at a total of 48,896 tons.

The existing Tappan Zee Bridge carries seven lanes of traffic across the Hudson River. Of the seven lanes, the middle lane has the ability to switch directions depending on traffic needs. The bridge was designed to carry 100,000 vehicles per day, however traffic volumes have grown to about 138,000 per day, making the need for the new bridge apparent. Even with the extra adaptable lane, traffic still occurs frequently as it is one of the primary crossings of the Hudson River for residents, commuters, and travelers.

Work began in late 2013 on the replacement span, featured in this issue of Connections.



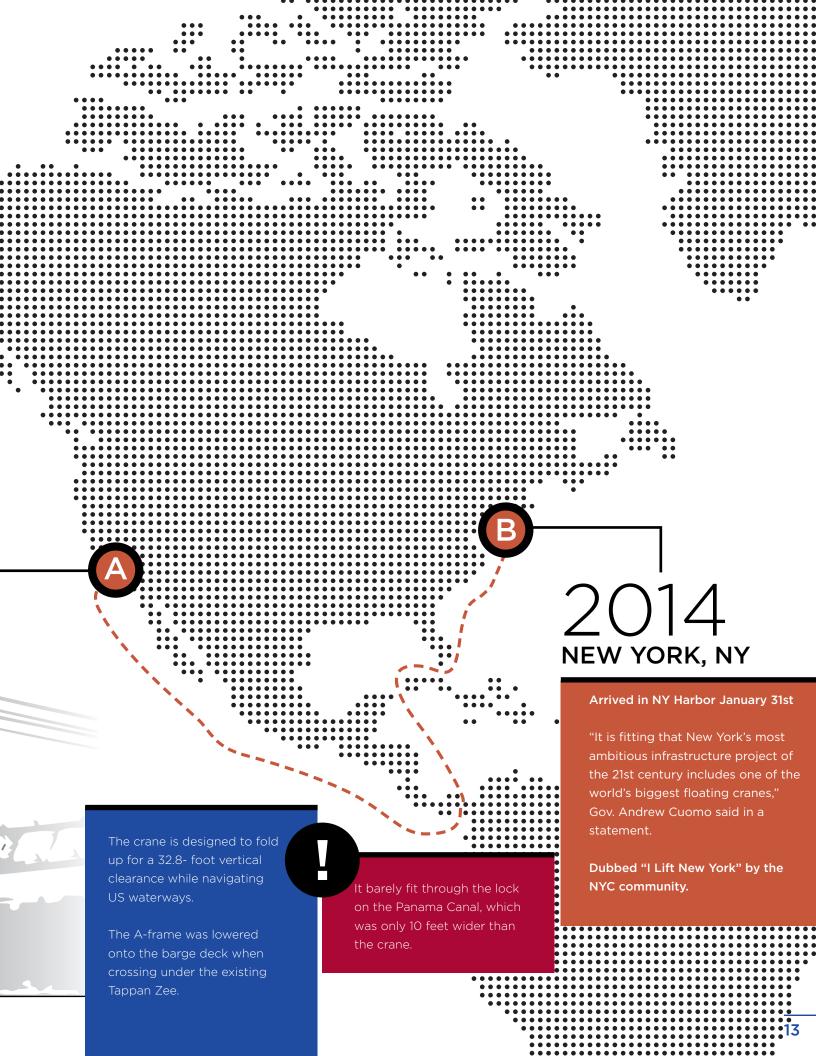


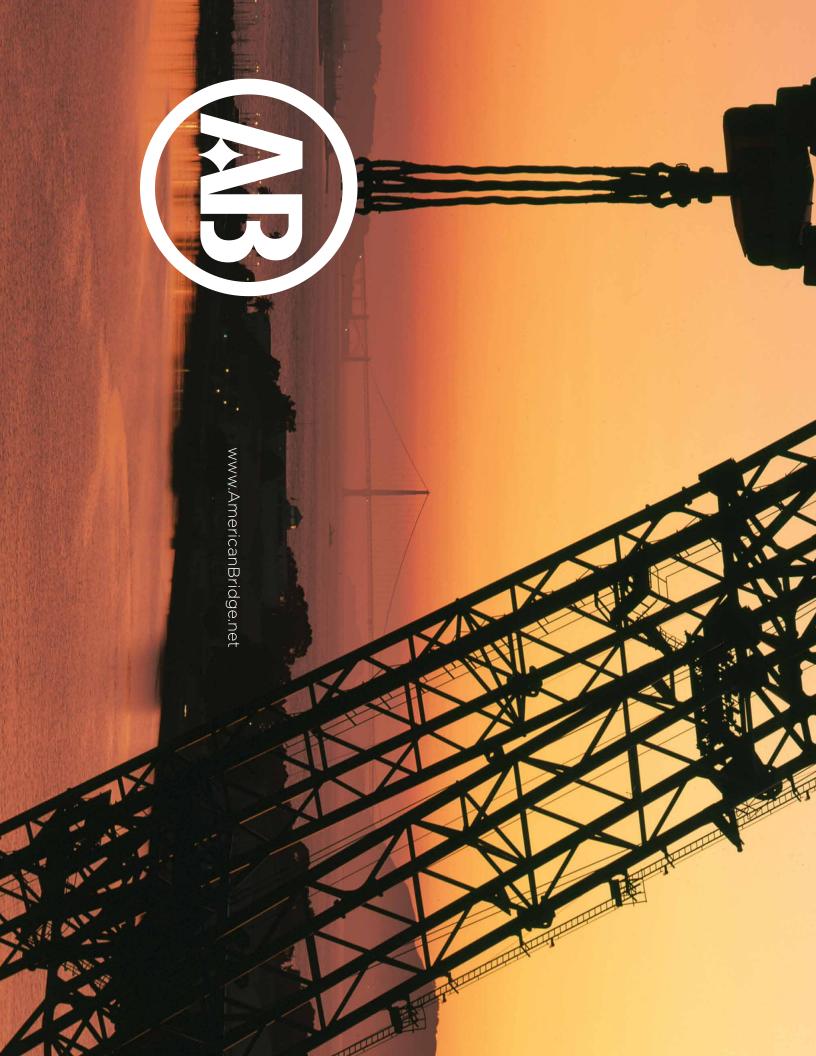
# THE LEFT COAST LIFTER

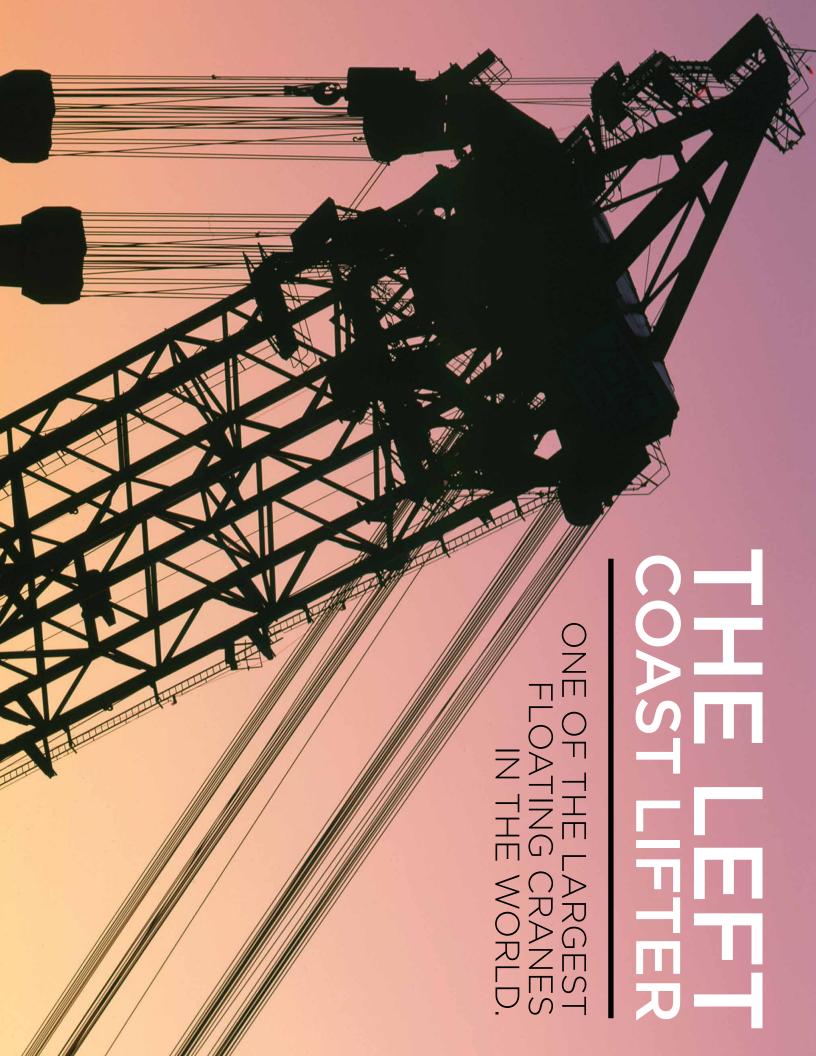
One of the world's largest floating cranes, the Left Coast Lifter, is owned by American Bridge and Fluor. Built to lift the massive deck segments on The San Francisco-Oakland Bay Self-Anchored Suspension Superstructure, it has now moved on to the next task: helping construct the Tappan Zee Hudson River Crossing. Guided by tugboats and outfitted with a specially-designed boom support, the Left Coast Lifter safely navigated its nearly 6,000 mile journey from Oakland, CA to New York.











# JON DALE CHAIRMAN OF THE BOARD

# 1. Your resume shows a wide range of experience with various types of companies, but there's an obvious specialization in the construction world. What is it about construction that you find particularly interesting?

Like many people in this industry, my father was involved in construction, and so to some extent, I have always been interested in what Civil Engineers (and Engineers in general) do for society. Our projects make enormous differences to people's lives. The building of roads, railways, airports, shipping facilities, and utility services are what allows our society to function. People don't often take that much notice because they are used to them being there. But the importance can be seen the minute that any are disrupted. We affect the communications, health, safety, and comfort of almost everyone in the country. That's a massive impact that few other industries have.

# 2. You've been at American Bridge since June. What are your early thoughts and observations about AB?

American Bridge is a company that is justly proud of its history. One only has to look at the iconic structures and projects that we have been involved in to see the impact that AB has had on the infrastructure and buildings of the United States. The fact that we are self-performing much of what we build and are having an influence on the designs, means and methods by encouraging excellent engineering, is something that I can relate to.

American Bridge is a small to medium sized company that, I am happy to say, is punching above its weight. This is good, but we need to consolidate that position. We have to improve

our systems and how we utilize the individual skills in the company. American Bridge needs to learn from some of the good things that larger Joint Venture partners do, and prepare ourselves to move to being a medium to large company. Doing things the way we have always done them will not be sufficient for the next phase of our development. We need to develop our people, systems, and procedures to ensure that we have the right tools to do the bigger job.

# 3. How do you see your role developing going forward?

My job is to be a link between Mike Flowers, as President, and the rest of the Board of Directors. We need to be able to bring the whole wealth of experience and influence of the board and its members to be at Mike's disposal, to help Mike steer the Company through these next few years. There are members on the Board who have helped develop companies like American Bridge and have seen the good and bad that can happen when going through the growth process. Helping the executive team to take advantage of the opportunities that arise, and to avoid the pitfalls will be an important part of what I will be doing.

# 4. What are your near-term goals for American Bridge? Your long term?

The near-term is to help prepare American Bridge for the next phase of growth. There is work to do in getting the systems, procedures, and structure right to make moving to the next phase easier.

In the long term, we have the task of creating this bigger, more diverse company, but we should not lose the essential elements that make American Bridge a company that succeeds in delivering quality products that are appreciated by our clients. This means winning more of the complex projects that are contributing to our success. Doing more of the type of work that we are already doing, but spreading ourselves across more regions - both those tasks will mean more people. When we have done that successfully, we will look at new areas to develop into. We are already an attractive company to work for, but our aim is to be one of the top companies that people aspire to join.

# 5. What steps would you envision as being necessary to accomplish these goals?

As I suggested earlier, we have to launch from a stable and effective platform. That means better systems that our people use. It means more people. It also means that we are going to have to spread work around so that we use the most appropriately qualified people to carry out the multitude of tasks that are required to deliver a large complex project.

Change and the way that we introduce change will be a key factor in our success. Change can be uncomfortable for some, but we *can* make it easier. Creating an environment where change is comfortable and welcomed will be an area where we will have to focus our efforts.

# 6. As American Bridge looks more and more to international markets, how do you envision enhancing our footprint in Europe?

Europe is an important market for American Bridge. In the UK, the construction market is growing. We currently have the Queensferry Crossing, another iconic bridge that we are building. We have been invited to join two of the country's largest contractors on the M4 Newport Bypass, which has another interesting bridge. There are a variety of other opportunities in the UK and across Europe. So Europe is an important place.

Initially, our intention is to seek out projects on an opportunistic basis while we build a management team there. It is very demanding for our senior management to oversee projects in a foreign country, and across time-zones without being a resident. So having a team based in the Europe is essential for the long-term growth of that part of our business. Once we have a team in place, we will be able to consider taking projects on a more structured and planned way as we are doing in the US, or even consider increasing the size of our business there by buying a company to accelerate that process. But that is really for the future.

# 7. The culture at American Bridge is unique and highly valued. How does AB keep that culture as it grows into a larger company?

Growing to become a much larger company will mean that we will have to do things differently. We will have to change some of the ways we carry out our jobs. We will have to work with new people, and more often in Joint Ventures where we are likely to be influenced by other cultures and systems. But we should not think that this is a threat to us - it is more of a challenge to get others to act the way we do. Learn from the good processes that they have and use them, but keep true to the AB way. Keep doing what we've been doing and continue to hold dear the values that make American Bridge the company that it is. In the new strategic plan that Mike and the team are refining right now, they have a section that defines these values. Focusing on the customer, self-performing, taking on the complex projects and applying our engineering skills, developing great engineers and project managers, and giving brilliant people a chance to excel are some of the things that contribute to this culture. (AB)

### ANY OTHER COMMENTS, REMARKS, INSIGHTS?

American Bridge is a tremendous company that is moving up the leagues, to some degree we have been punching above our weight, which is good. We have to keep doing that as we put on a bit more muscle and we have to get smarter. That will mean more people and could even mean acquiring new skills and new companies.

I am a great cycling fan and there is a famous coach who introduced the theory of incremental gains. This means looking at everything you do everything. Take what you do apart and improve it as much as you can. Once you have improved everything, do it all again. And again.

This is what we have to do at American Bridge. In business just as in sports, training, good tactics, getting more good people on the bench, giving people opportunities to show what they can do, never being totally satisfied with what you have done, and remaining focused on the prize will all help us get to the next stage in the development of this great company.

# PAUL DRISCOLL

# CHIEF FINANCIAL OFFICER



# 1. How do you plan to balance leading the Accounting and Finance, Human Resources, Information Technology, and Legal departments?

I'm a newbie here so my first task is to get to know everyone by listening and learning from the good people in this great company. My leadership style is to understand the mission and what we are trying to accomplish here at American Bridge, make sure we have really smart people (smarter than I for sure) in the right positions to support the company mission, and let them do their jobs while providing whatever support I can to help them be successful.

# 2. You have a lot of experience and interest in the construction industry – as a Chief Financial Officer, you could essentially pick from many industries. What draws you to the construction industry?

It's a short answer - the unique people in civil construction. The people in this business are not only hard working, smart, driven individuals working, in simple terms, to fulfill the requirements of a contract, but what they do to produce in the bridges, highways, transit, and other infrastructure works is mind boggling to an older finance guy like me. They create some of the most innovative solutions to problems and leave a tangible legacy for all of us to safely use and enjoy.

# 3. How do you think your past experiences have prepared you for your new position at American Bridge?

I'm very humbled to join a company with the stature and reputation of American Bridge, and must prove my worth to the people of this company every day. However, I have been fortunate to spend the last 30 years of my career learning this business from a fine competitor to American Bridge and am forever grateful to those individuals for all they have taught me over the years. I have plenty to learn here at AB, but I believe together, our experiences will give us a great chance of future success.

# 4. What do you think will be most challenging about your new job at American Bridge?

The answer is more than just one thing. Getting to know and earn the trust of the people, understanding what truly makes this company successful, what needs improvement, and helping this company leverage that success and solve important problems to help formulate and execute a successful business plan for the future.

### 5. What are your thoughts on failure?

I don't particularly like it, but one of the realities of failure is that it happens to all of us sooner or later. The key is how we react to and, most importantly, learn from the failures in our lives. There is no greater teacher than the "school of hard knocks" but I believe we can minimize the consequences of our failures by being good listeners to those who have been through the "war" before us, resolve not to make the same mistake twice, and take a risk – you might fail, but think of what you will learn in the process.

### 6. What is your best career advice?

Find something you are passionate about and are good at doing, and follow that passion as far as your talent will take you. Live honestly and with integrity – it will follow you wherever your career

goes and you will never be sorry about it. Learn from the smart people around you – they have a lot to offer if you will just ask and listen. Stretch yourself - don't be afraid to take a risk but know and be able to accept the consequences of taking that risk.

# 7. When you're not working, what could we find you doing?

This may not be exactly what you were asking, but I love seeing my wife Jan on the weekends. Our home is in Boulder, Colorado and she is not able to join me here in Pittsburgh quite yet, so I'm presently a commuter back and forth between Denver and Pittsburgh. I love climbing the mountains in Colorado, and like spinning classes and indoor cycling as exercise as well as all things to do with sports teams.

I'm very humbled to join a company with the stature and reputation of American Bridge

— PAUL DRISCOLL
CHIEF FINANCIAL OFFICER

# DAVID MOLLISH

# DIRECTOR OF HUMAN RESOURCES



When hiring new employees, American Bridge looks for the best of the best, which is why it is no surprise that with more than 24 years of experience in a variety of industries managing human resources, safety, training, and other administrative areas, David Mollish has joined American Bridge as the Director of Human Resources.

With previous HR experience at CONSOL Energy, Inc., Aker Kvaerner, and GAI Consultants, Inc., David has been successful in creating programs that allowed those HR departments to excel. In 2011, he was also named one of the top human resources professionals in Western Pennsylvania by the Pittsburgh Business Times which was selected from a 10-county Pittsburgh, PA metropolitan area. He has also published numerous journal articles in national magazines on the topic of leadership development. David holds a Bachelor of Science in Business Administration, a Master of Arts in Communications, and a Master of Business Administration, and also has senior management and executive level experience.

1. You have developed very successful programs at your previous places of employment. How do you plan to continue or implement new and successful ideas at American Bridge?

I started with a training needs assessment survey of senior managers. I now have feedback on some key areas of focus. I will begin to develop and customize training modules and courses one at a time, with a priority on the most critical needs of American Bridge. Certain programs can be implemented more rapidly than others. Our course catalogue will grow over time until we have an exceptional variety of "Fortune 500like" programs in place. Separately, I plan to begin monthly brown bag "lunch & learns" that employees can attend on interesting business topics. We will use a NetMeeting or WebEx system approach whereby employees can join the seminar from anywhere. As a teaser, the first topic will be "Non-Verbal Communication." This particular lunch and learn seminar has been popular in the past. Finally, we will be rolling out a new employee orientation or "on-boarding" program to better educate employees about the Company on their first day of employment.

# 2. What benefits and values come from leadership development programs?

With my former employer, we were able to fill many key positions over time with our leadership development graduates because we had them fully prepared for senior management roles. Also, our employee turnover rates were extremely low for individuals who were invited to attend the seminars, which was a measurable cost savings. I hope to help many employees at American Bridge grow as leaders. Coming from growing companies in the past, I can tell you that the need for leaders will increase exponentially as we expand. Employees attending American Bridge's future leadership development programs will become better managers, develop better business acumen, learn to master their project management skills, customer interface skills, etc.

# 3. How have your previous experiences prepared you for your new role at American Bridge?

Fortunately for me, I had great mentors at a young age and I have consistently managed employees since I was 23. Also, I have been exposed to many unique Human Resources challenges both domestically and internationally, and I have significant experience with mergers and acquisitions, should American Bridge want to take on one of these challenges in the future. I spent the first 10 years of my career in the coal industry where Human Resources and labor relations were tactical and key to the success of the business. I was able to apply this strategic HR management focus with past employers in the engineering and construction industry. Finally, I have adopted the belief that the Human Resources professionals exist to add value to the organization and to treat managers and employees like we would treat our external clients.

### 4. What are your thoughts on failure?

I hold the manager and the employee equally accountable for failure. Once the leadership development programs begin, this topic will be discussed at length. You have probably heard the saying that people don't leave their companies, they leave their supervisors. Most people don't come to work every day wanting to fail. Conversely, managers do not want to hire people who are going to fail. When failure occurs, there is typically a breakdown in communication between the manager and the employees. A manager needs to be skilled at setting performance expectations, motivating staff, having a fair, but firm management style, and so on. Employees can prevent failure by asking their supervisors questions and listening intently to the answers. Ask your manager from time to time, "how am I doing?" and "what can I do to improve?"

# 5. What are the highlights of your experiences at AB so far?

I have met many great people, traveled to a few offices, and I have been able to work on some high level, challenging projects which will benefit American Bridge in the very near future. I love to be challenged, and I find the opportunities at American Bridge to be very exciting.

### 6. What is your greatest strength?

I try to listen to the needs of others and come up with effective solutions. I have a creative, but results-oriented mind, so innovative ideas will be implemented. I will strive to make a difference at American Bridge Company.

# NEW

Bret Clark Field Engineer

Carson Copeland Crane Operator

Paul Curlett Crane Operator

Jon Dale Chairman of the Board

Paul Driscoll Chief Financial Officer

Chris Edwards General Foreman

**Brian Gordon** Section Manager Technical

Gary Green Mechanic

Michael Green Cost Accountant

**Todd Harper** Benefits Accountant

Catherine Hennessey Payroll Administrator

**lain Johnston** Engineer

Jason Loebig Field Engineer

Amy Lyrio-Takis Document Control Manager

James Mawson Project Manager

Stephen Mazzanti Help Desk Technician

Zachary McKee Help Desk Technician

Tyler Michak Field Engineer

Josh Munzek Field Engineer

Francis Mydlinski Quality Manager

**Heather Nicholson** Marketing Communications Manager

Linda Olivera Senior Administrative Coordinator

Jake Oronzio Field Engineer

Todd Owens Design-Build Manager

James Paul Concrete Foreman

Roger Price Crane Operator

Kevin Ritchey General Foreman

Patrick Ryan Field Engineer

Allan Seidl Concrete Foreman

Nick Lamb Business Development Manager, Europe Mary Sensebaugh Accounts Receivable Specialist

Michael Smith Quality Control Inspector

John Stager Senior Tax Accountant

Michael Veltri Field Engineer

# TRANSFERS

CJ Biskner General Foreman, from San Francisco/Oakland Bay Bridge Self-Anchored Suspension Superstructure to Queensferry Crossing in Edinburgh, Scotland, U.K.

**Aaron Kent** General Foreman, from San Francisco/Oakland Bay Bridge Self-Anchored Suspension Superstructure to Queensferry Crossing in Edinburgh, Scotland, U.K.

Ethan Kent General Foreman, from San Francisco/Oakland Bay Bridge Self-Anchored Suspension Superstructure to Queensferry Crossing in Edinburgh, Scotland, U.K.

John Perine General Foreman, from San Francisco/Oakland Bay Bridge Self-Anchored Suspension Superstructure to Queensferry Crossing in Edinburgh, Scotland, U.K.

# EMPLOYEE AWARDS



# Mike Flowers, ASCE Roebling Award

Michael D. Flowers, P.E., M.ASCE, and CEO of American Bridge, is the recipient of the prestigious **Roebling Award**. Given yearly by the American Society of Civil Engineers (ASCE), it recognizes outstanding leadership in construction of modern civil engineering's most challenging bridge projects. In announcing the award, ASCE highlighted his leadership on the San Francisco-Oakland Bay Bridge Self-Anchored Suspension Superstructure. Congratulations, Mike!

# Richard A. Schrader, P.E., M.ASCE

Board Member for American Bridge, Richard A. Schrader, P.E., M. ASCE, was selected as the recipient of ASCE's 2014 **Professional Practice Ethics and Leadership Award**. The award recognizes an engineer practitioner's incident-specific or career-long application of ethics to achieve success as a leader. American Bridge congratulates Mr. Schrader.



- ◆ American Bridge was named the "Top Achiever" by the Missouri Department of Transportation in multiple categories. High marks were received in Quality, Prosecution and Progress, and Contract Compliance for the Specialty Contractor Group. AB was recognized at the joint MoDOT/AGC meeting this fall.
- ◆ Pittsburgh Post-Gazette "Top Workplaces" Award
- ◆ ENR Southwest "Project of the Year Sports/ Entertainment" for the Las Vegas High Roller

# (AB) PROJECT WINS

- Angus Macdonald Bridge Suspended Spans Deck Replacement, Halifax, Nova Scotia
- ♦ Christophe Harbour Marina Phase 1, Basseterre, St. Kitts and Nevis
- ♦ Three Nations Bridge Demolition, Cornwall, Ontario
- ♦ U.S. 69 Missouri River Bridge, Platte County, MO/Wyandotte County, KS

# THE BEAVERS DINNER

### A "dapperly" dressed American Bridge

contingent attended the 2014 Beavers Award Dinner on Friday, January 17, 2014 held in Los Angeles, CA. Led by Mike Flowers and Terry Poole (not pictured), the group included current



AB employees Mike Cegelis, Bob Kick, Kwadwo Osei-Akoto, Brian Petersen, Kevin Smith and Lou Wehar. Joining them for the evening was Alex Fatalleh, former AB Senior VP.

The Beavers is a social, honorary organization formed, organized, and managed by the construction companies and individuals who are or have engaged in heavy engineering construction. The dinner recognizes contributions to the construction industry, providing awards in four main categories; "Management", "Supervision", "Engineering," and "Service and Supply". Mike Flowers, AB President and CEO, received the distinguished "Supervision" award in 2013.

# CORAOPOLIS FIRE DEPARTMENT



AB President and CEO Mike Flowers was presented with this picture as a gift from the Coraopolis Fire Department for American Bridge contributions. The gentleman in the photo with Mike is Lieutenant Robb Cardiman.

# THE 3RD ANNUAL CHILDREN'S HOMETOWN HERO LUNCHEON

# Omni William Penn Hotel, downtown Pittsburgh Friday, October 24, 2014

American Bridge employees attended the luncheon, which was held at the Omni William Penn Hotel in downtown Pittsburgh. The event included lunch, a short program, and a silent auction and raffle, in which all proceeds benefited The Children's Home of Pittsburgh and Lemieux Family Center. During the short program, Dan McCoy, a Pittsburgh native, spoke. Dan was born

with spina bifida and hydrocephalus, a condition in which an abnormal accumulation of fluid occurs in the brain. Despite all this, Dan won the sled hockey gold medal at the 2014 Paralympic Winter Games. He currently plays with the Pittsburgh Penguins sled hockey team. Dan is also pursuing a degree in rehabilitation science and sports medicine. The Children's Home of Pittsburgh and Lemieux Family Center is an organization that American Bridge is proud to support with our sponsorship.



# FLASHBACKS

# 13 Years

# FORTY-FIVE COMMUNICATIONS ROOMS AT ELEVATED STATIONS

Location: New York, NY

Completion Date: 2001/09/30

**AB Order #:** 491710





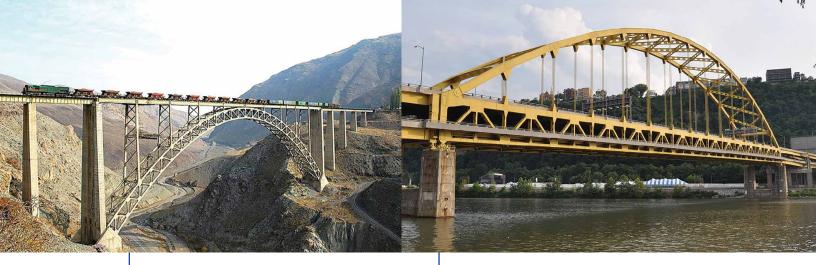
AB Employees: Angus Adams, Superintendent; Daniel Murphy, Field Engineer; George Terrance, Ironworker Foreman; John Raposa, Field Engineer; Jonathan L. Hart, Field Engineer; Kwadwo Osei-Akoto, P.E., Project Manager; N. Michael Cegelis, Senior Vice President; Peter Bereza, Safety Manager; Scott Yeager, P.E., Field Engineer

The Forty-five Communications Rooms project included the design and construction of 45 communications rooms at elevated stations in Brooklyn, Queens, Bronx, and Manhattan boroughs of New York City. These rooms house communications equipment and are located adjacent to, or between, the elevated tracks. The work included structural support framing which is either cantilevered off the existing platform girders, framed between sets of track girders, or supported by drop columns to new foundations in the street or sidewalk below. American Bridge self-fabricated the structural steel supports. The work also included the erection of prefabricated rooms which were pre-fit with doors, hardware, finishes, and air conditioning units and had preinstalled electrical and mechanical systems. New

York City Transit provided general arrangement drawings that sized and located the units, along with a performance specification. The 45 rooms range in size from 250SF to 800SF and aggregate 16,000SF. Of the 45 rooms, 42 of them were prefabricated in units and erected with cranes or jacks over, adjacent to, or beneath the tracks, while the remaining three were built in place.

Because of the wide geographic diversity of the work, the project required careful logistical planning. Since most work took place in close proximity to active transit tracks and over urban streets and sidewalks, it required close coordination with transit and street operations, as well as local businesses and a wide variety of other stakeholders in each location.

In 2001, this project won the Allied Building Metal Industries, Inc. Safety Award for outstanding safety performance.



# 44 Years

# GHOTOUR VALLEY BRIDGE

Location: Ghotour River, Iran Completion Date: 1970/07/01 AB Order #: K-2400-09

# 56 Years

### **FORT PITT BRIDGE**

Location: Pittsburgh, PA
Completion Date: 1958/11/04
AB Order #: Q-8625-36





American Bridge fabricated and erected the Ghotour Valley Bridge, a double chord deck arch railroad bridge in a remote location in northwestern Iran. It was the highest bridge in the Middle East when it was built, and remained so for over 30 years, until recently when it was surpassed by Iran's Karun three dam bridges and the Lali Bridge. The bridge is 390' above the Ghotour River and the rocky river gorge for a total length of 1,453' with a pin-to-pin dimension of 732'. American Bridge fabricated the 3,655 tons of structural steel at the Ambridge, PA shops and then shipped the steel to the site via sea and rail. American Bridge also performed all temporary works engineering, which included a specially designed cableway system. The cableway was directly anchored in the hill above the bridge on one side, and by a fixed tower with a transverse traveler at the other end. Tieback of the uncompleted arch was via 2 1/4" cables anchored directly to rock and traveling across the bridge deck. This truss-arch bridge resembles the original Burro Creek Bridge, which was also designed by American Bridge and featured in the Flashbacks in the last issue of AB Connections.

The Fort Pitt Bridge, just one of Pittsburgh, Pennsylvania's many bridges, was completed 56 years ago in 1958. It is a steel, double decker bowstring arch bridge with a length of 1,210', a main arch span of 750' and a width of 62'. The arch length from pin to pin is 750', the arch width is 62', and the total arch rise is 125'. It carries four upper lanes and four lower lanes across the Monongahela River, and acts as a major artery in Pittsburgh, carrying Interstate 376 and connecting the southern and western suburbs to the city.

Because of the fame that this bridge carries and because it is also known as the 'best way to enter an American city', it has been featured in a few major films. It is a focal point in the 2013 film *The Perks of Being a Wallflower* and it also appears in a documentary of Led Zeppelin's 1973 tour, *The Song Remains the Same*, the 1993 film *Striking Distance*, and the 2011 film *Abduction*.

The bridge was erected on falsework bents both in the river and on top of the truss. The total weight of structural steel is 8,019 tons and the average daily traffic is 150,000 vehicles.



# 69 Years

# HARRY S. TRUMAN BRIDGE

**Location:** Kansas City, MO **Completion Date:** 1945/05/29

**AB Order #:** H-6800-10

# 93 Years

# LIBERTY MEMORIAL BRIDGE (BISMARCK-MANDAN BRIDGE)

Location: Bismarck, ND Completion Date: 1921/06/01

AB Order #.: unknown





American Bridge constructed the Harry S. Truman Bridge, a 23-span, 2,577' single-track railroad bridge with a main span of 427'. It was completed in 1945 and is still open to traffic today. The bridge, which is the 10th longest span in the U.S., crosses the Missouri River and is used by the freight trains of the Canadian Pacific and Union Pacific Railroad to connect Jackson and Clay Counties, MO in Kansas City. It was built for the Chicago, Milwaukee, St. Paul and Pacific Railroad (Milwaukee Line) and Chicago, Rock Island and Pacific Railroad (Rock Island Line) and connected to the Kansas City Terminal Railway. This bridge includes 19 girder spans of approximately 75' each, three fixed spans of 250' each and a 417' vertical lift channel span. The bridge was named after Harry S. Truman, a Kansas City native, who had just become the 33rd U.S. President when the construction of the bridge commenced. Erection was performed by locomotive crane, travelers and guy derricks, and 120,000 man-hours of effort were consumed. The total weight of steel was 4,568 tons.

In 1921, American Bridge completed the Liberty Memorial Bridge, also known as the Bismarck-Mandan Bridge, a two-lane bridge dedicated to the soldiers who served in WWI. It was a Warren-Turner designed 1,428' through riveted truss span bridge with three 476' truss spans. This bridge was the first automotive bridge to span the Missouri River in North Dakota, connecting the 'twin cites' of Bismarck and Mandan. In March 1997, the bridge was posted to the National Register of Historic Places and 11 years later, in October 2008, it was demolished. The average daily traffic in its last year of operation was 14,700 vehicles. The total tons were 2,624.



American Bridge's Safety Policies extend beyond the people working on the project - we consider the environment and animals, too. In March, AB staff on the Coosa River Bridge in Alabama noticed a pair of osprey spending quite a bit of time around the site, and were worried they'd attempt to build a nest on one of the two towers, which were scheduled for blasting and painting this year. The field team of Superintendent Dallas Compeau and Site Manager Bob

Sisco researched the birds and their nesting habits, and came up with a plan to build a platform for the osprey to use. After checking with the owner, the team mounted the platform to the gas pipeline suspension bridge. The research and adherence to the Migratory Bird Treaty Act paid off - the osprey took to the platform and immediately built a nest. Later in the Spring, two chicks appeared, evidence that the bridge work and the birds are peacefully coexisting.





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