



Connections

First Quarter 2013

FORTH REPLACEMENT CROSSING
edinburgh, scotland PAGE 6



Connections

C O N T E N T S

thank you

Much appreciation to the following individuals for their contribution to this issue:

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 Ben Reeve
 Scott Swamback
 Frank Vespaziani
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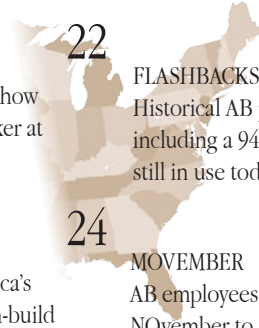
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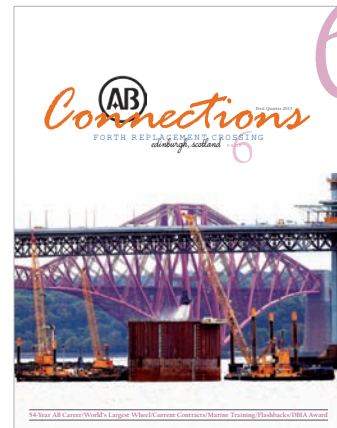


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 NEWSLETTER
by Kadi Camardese
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C O V E R
 FORTH REPLACEMENT CROSSING
 Steel caissons among the largest ever to be sunk to the seabed, anywhere in the world

Cover photo: Gordon Jack, 2012



54 Year AB Career World's Largest Wheel Contract Contracts Marine Training Flashbacks PBA Award

CURRENT

contracts

Manufacturing

BNR/Tertiary WWTP Project, Modesto, CA
Queens Ridge Vibration Upgrade, Las Vegas, NV
I-84 Bridges over Center Street, Newtown, CT
Symphony Park Pedestrian Bridge, Las Vegas, NV
Bellevue Access Road Bridge, Bellevue, OH
Edna Maguire Elementary School, Mill Valley, CA
SAS OBG Cable Safety Railing CCO 188, Oakland, CA
I-80 Bridges Group Two, Clarion and Venango Counties, PA
Emsworth Lock and Dam, Neville Island, PA
Harold Structures, NYC
Unicorn Bridge Rehabilitation, NYC
Shore Parkway, Queens, NY
Sun Valley Bridge Widening, Los Angeles, CA
George Washington Bridge Deck Replacement, NYC
Trinity County Bridges, Trinity County, CA
Mansfield Bridge Rehabilitation, Allegheny County, PA
Ambridge/Aliquippa Bridge Rehabilitation, Beaver County, PA
Columbus Road Lift Bridge, Cleveland, OH
East Clinton Street Bridge, Ithaca, NY
Fuller Road Bridge, Albany, NY
Squirrel Hill Tunnel Rehabilitation, Pittsburgh, PA
Milwaukee Light Rail, Portland, OR
Bronx River Parkway, Greenburgh, NY
Las Vegas High Roller Chain Platform, Las Vegas, NV
Granton Rancheria, Rohnert Park, CA
SAS Cable Bands, Oakland, CA
Hub and Spindle Support Stands, Las Vegas, NV
SAS Customer Change Orders, Oakland, CA:
85 Elevator Safety Enclosures
204 Stiffener Angle Retro-fit
189 Bike Path Rail Modifications
223 Split Collar Modifications

Pittsburgh

Charleroi-Monessen Bridge Replacement, Charleroi, PA
Columbus Road Lift Bridge, Cleveland, OH
U.S. 190 Mississippi River Bridge Repairs, Baton Rouge, LA

Special and International Projects

Forth Replacement Crossing, Scotland, United Kingdom
Las Vegas High Roller Observation Wheel, NV

Richmond

Wrightsville Beach Bridge, Wrightsville, NC
Bridge No. 30 - U.S. 42I, Wilmington, NC
Explosives Handling Wharf No. 2, Silverdale, WA
Bridge No. 138 on NC-150 over Lake Norman, Catawba County, NC

Western

ABFJV San Francisco/Oakland Bay Bridge, CA

Tampa

Courtney Campbell Design/Build Pedestrian Bridge, Tampa, FL
Tom's Harbor Channel Bridge Repair, Duck Key, FL
Golden Beach Bridge Replacement, Golden Beach, FL
Berth 12 Wharf Extension and Container Terminal, Palmetto, FL
Tampa Berth 227N, Tampa, FL

Kansas City

Hurricane Deck Bridge, Camdenton, MO

New York

Walt Whitman Deck Replacement, Philadelphia, PA
George Washington Bridge Rehabilitation, New York City
Walt Whitman Bridge Dehumidification, Philadelphia, PA
Tappan Zee Bridge, New York City

NEW

hires

Bruce Bartkovich, General Foreman, Las Vegas High Roller, Las Vegas, NV
Daniel Blucher, Controller, Headquarters Office, Coraopolis, PA
Jason Bohinsky, Cost Accountant, Headquarters Office, Coraopolis, PA
MaryAnn Dumaret, Accounts Payable Specialist, Headquarters Office, Coraopolis, PA
Scott Ellis, Estimator, American Bridge Manufacturing, Reedsport, OR
Jason Faltinowski, Safety Manager, Las Vegas High Roller, Las Vegas, NV
Ronald Lowe, Superintendent, Wrightsville Beach Bridge, Wrightsville Beach, NC
Kevin Matvey, Drafting Services Manager, American Bridge Manufacturing, Coraopolis, PA
Dewey McGhee, Carpenter Foreman, Golden Beach Bridge Replacements, Golden Beach, FL
John Reich, Forth Replacement Crossing, Edinburgh, Scotland, Works Manager - Towers
Matthew Stuart, Project Manager and Estimator, Kansas City Office, Overland Park, KS
Ronald Valentine, Superintendent, Bonner Bridge Scour Protection, Nags Head, NC



Look for the 'view digital library' logo on the AB website under the media/newsletter section to see archived issues of *AB Connections*

T O M M Y *melvin*

AB Superintendent: 1936-2012

Over the weekend of December 15, 2012, lifelong AB Superintendent Mr. Tom Melvin passed away. Tom had just turned 76 and continued to serve his beloved American Bridge Company, having recently completed the Kentucky Lake project before he was assigned to the Pittsburgh Storehouse.

Tom's legacy included the Minuteman Missile bases in the Midwest, the John Hancock Building in Chicago, the U.S. Steel Building in Pittsburgh, the Air Force Wind Tunnel in Tullahoma, TN, numerous projects in New York City including the George Washington Bridge, the Riverside Drive Viaduct, the Williamsburg Bridge, and the Triborough Bridge and the Woodrow Wilson Bridge in Washington, D.C. He was also involved in international projects for AB in the Bahamas and in Montevideo, Uruguay.

Tom's experience and "can do" attitude helped American Bridge Company truly "bridge" the gap that existed between our stellar reputation and our youthful inexperience during the 90s. He had a huge heart and was always looking to help those less fortunate. He will be greatly missed.

Regretfully,
Mike

Michael D. Flowers, President and Chief Executive Officer of American Bridge Company

RECOLLECTIONS OF TOMMY

Michael Cegelis, AB Senior Vice President

Tommy was the epitome of the American Bridge culture of 'we can do it'. Always positive. Always teaching. Always searching for a better way. Always helping his fellow man. His 50-year presence at American Bridge comes to a close, but his example shines on.

Alex Fattaleh, Retired AB Senior Vice President, West Coast Office

I first met Tom on the missile site in Wyoming back in 1963. One day, Tom flew his Stinson Voyager tail dragger plane right into the site. That afternoon, he took me out for a ride, and what a ride that was! I noticed a coat hanger with a cork bobbing next to my seat. When I asked him what it was he responded that it was a fuel gauge.

Tom had guts and was fearless, the real MacGyver. He was honest, reliable, dependable and loyal to AB for half a century. He had dozen of ideas how to do something because he was always planning to build it better, safer, faster and how to drive-down cost. If a new field engineer came into his office, they had better have known how much a cubic inch of steel weighed. Tom was old-school, but a good teacher to our new generation.

He was a very generous man who helped the homeless, fed the stranded cats and handed gifts to the poor children in the streets. He was strong physically and mentally, a down-to-earth person who was humble, reserved, respectful and ready to do whatever AB needed.

I would like to ask him now why he parked the company station wagon in the World Trade Center for two months. The New York police were alarmed and called me because the car was registered to AB office in Long Beach. Now I will never know. 'Coach', I will miss you and will never forget you. May you rest in peace and may God bless your soul.

TOMMY MELVIN
continued top of next page

T O M M Y M E L V I N *continued*

Dick Foster, Retired AB Accounts Payable Specialist

When I think of Tommy my first thoughts go back to when I met him while we were erecting steel at the U.S. Steel Building in downtown Pittsburgh. I will never forget him getting punched out by the labor foreman when he went to retrieve some AB tools that the laborers had confiscated while working at the basement level of the building. That was Tommy, always looking out for AB's equipment and best interest.

Tommy called me many times when I was working in the AB accounting department and would say to me "Hey, Coach! I got this idea how we can get these guys paid off quicker than bothering you guys in the corporate office." He was always thinking.

Leo Kupiec, Retired AB Construction Manager
A BIG AMEN! The homeless in New York will miss him big time. I have too many good memories of Tommy, none of which can be expressed easily. I hope he returns to the big prairie with his AB hat on.

Robert Luffy, Retired President and Chief Executive Officer of American Bridge
Tom Melvin was unique, one of a kind, and ... he was ours! He was there when I started, he was there when I retired. In all those years there was no one more loyal to American Bridge; he truly bled AB blue. It was my great pleasure to visit with Tommy on countless projects in every corner of this country and at times out of the country. (Uruguay, I'll leave that story to Alex.) His very first question was always, "How we doing Coach?" He was always more concerned with the company's health and well-being than his own.

The stories of Tommy are endless. He was old-school and no one was going to change him. He represented an era when American Bridge was the




biggest and the best, in his mind we still were. I'm glad he stayed around long enough to see and be part of our return. The greatness of American Bridge has always been its people. Tommy was and always will be one of those who made us great. We all lost a piece of who we are when we lost Tom Melvin, but his positive, can-do attitude will live on in every one who had the good fortune to work with him. He truly was a man who believed:

'Nothing is to anything for

American Bridge.' Rest in peace Tom. Thank you for a job and a life well done!

Kwadwo Osei-Akoto, AB Vice President, New York District

'Coach', 'The Devil', as most of us knew him. Never met or knew a career ironworker as dedicated to his job and company as Tom Melvin. He breathed, ate, walked, talked and slept as a true AB blue superintendent. There will never be another Tom Melvin. There are so many funny quotes I learned from him of which time will not permit repeating here; however I would like to tell a short story about him. On the last job I worked with Tom, we had to weld over 19,000' of orthotropic deck joints. By specifications, only 10 percent had to be tested for acceptance. Tom, a natural perfectionist, decided that 10 percent wasn't good enough by contract. He would perform 100 percent testing of all welds. After a long argument about this over kill, I knew I couldn't win so out of frustration, I told him that these welds will outlive both of us together. Without uttering a word for about a minute, the Coach stood up looked straight into my eyes and said, "Son, let me tell you this, I will never die." Since Tom left us, I believe 'The Devil' is still hanging around like a phantom in the air and still saying those words. Coach, we know you are still around in spirit. Guide us and rest in peace. 

F R C forth replacement crossing

These are among the largest steel caissons ever to be sunk to the seabed, anywhere in the world

Contribution by Ben Reeve, AB Project Engineer

There has been significant progress on the positioning and installation of the three enormous steel caissons on the seabed in the Firth of Forth. These 'caissons' (derived from the French word for 'casing'), will help form the north flanking tower, south flanking tower and pier S1 concrete foundations of the new bridge. The positioning of all three caissons is a significant milestone for the project and provides the first real evidence of the new bridge taking shape. The largest of the caissons is 30m (meters) (100') in height by 30m (100') in diameter, weighing a massive 1,200 tonnes (1,325 tons). These are among the largest steel caissons ever to be sunk to the seabed, anywhere in the world.

CAISSON ARRIVAL

In May 2012, the first two caissons were delivered on a barge the size of a Premier League football pitch (NFL football field). The caissons were all held temporarily at the Port of Rosyth for final preparations and outfitting with such aspects as lighting circuits, pumping systems, tremie pipes and safety features.

^{FRC}
continues on page 8



Caisson arrival

A B I project team

The on-project team

led by Thomas Nilsson, AB Construction Director,
consists of:

Jared Carlson	Richard Lamb
Carson Carney	Michael Marxer
James Carr	Matthew Murphey
Joe Corvello	Roger Northern
Apostolos Datsikas	Mark Patterson
Jonathan Davies	Dan Raynor
Shukre Despredel	Ben Reeve
Peter Ferguson	John Reich
John Henderson	Michael White
Gerard Kiely	Sean Wichman
David Kilburn	

FCBC Supervisory Board, AB Members:

Michael Flowers
Michael Cegelis

The positioning of all three caissons is a significant milestone for the project and provides the first real evidence of the new bridge taking shape.



Bridge alignment

Sinking of the caissons is an irreversible process that must be done accurately the first time, as there will be no second chances to place these large structures in the correct position on the sea bed.

CAISSON SETTING

The initial handling was done using a floating shear leg crane that was specially designed to maneuver these caissons. During the 2012 summer months of June and July, the shear leg lifted the caissons off of a semi-submersible transport barge that was pulled into position by tug boats. The maneuvering with the shear leg was aided by the fact that these large hollow-walled caisson structures actually float. Once a caisson was in position over its final location, it was lowered to the seabed using GPS (Global Positioning System) technology to ensure a strict 250mm (millimeter) (10") tolerance. The caissons then needed to be sunk into the sedimentary alluvium and glacial till that overlays the bedrock in the Firth of Forth. To accommodate this, the caissons were made of double-skinned cavity wall sections that taper to a cutting edge ring around the bottom of the caisson. Water ballast was then pumped into the caisson wall annulus, which displaced the air in the cavities and removed the caissons buoyancy. The water also increases the weight of the caissons which helps them to force their way closer to the bedrock. After this initial quick-set, 3,300m³ (4,300yd³) of concrete are pumped into the wall cavities, displacing the water and adding additional ballast to assist further sinking of the caissons into the clay and glacial till seabed layers.



Setting south tower caisson, S1 in back

CAISSON DREDGING

Material is dredged from inside of the caissons to assist in the caisson sinking process. Floating cranes employing a grab excavation system (a heavy-duty clamshell) are capable of dredging 10 tonnes (11 tons) of material in a single scoop. The project will see a total of 46,000m³ (60,000yd³) of material dredged from inside of the caissons, all of which will eventually be returned to the seabed over two designated areas downstream.

As the caissons continue their descent, they are continually monitored to ensure exactness. If any tilt is detected, meticulous ballasting and dredging is employed to return the caisson to vertical. The caissons are stabilized by the support and friction of the surrounding material that they are being forced downward through. While this is a benefit to holding the caissons in their final position, it greatly impacts the effort to re-direct the caissons during the sinking operations. Possible issues could also arise if large boulders are encountered in the alluvium and glacial till layers. Sinking of the caissons is an irreversible process that must be done accurately the first time, as there will be no second chances to place these large structures in the correct position on the sea bed.

Placing concrete in each caisson is a non-stop, 24-hours-per-day, seven-days-per-week process that takes about two weeks for each caisson.

TEMPORARY CAISSONS

The caissons being sunk are all permanent and will be left in place. While not intended to be structural, the permanent caissons will act as added mass to help reduce any ship impact and defend against the ravages of the sea! The top of the permanent caisson is in the tidal zone, so in preparation of the foundation being placed inside of the caissons, a temporary caisson ring is added at the top of the permanent caisson. The top of the temporary caisson will always be above sea-level, allowing the inside of the caisson to be dewatered. Later, after the base foundations are complete and construction of the tower has climbed above the level of the caisson, the temporary caissons will be removed.

JET GROUTING

Before dewatering the caissons, the sea-water and sediment must be prevented from flowing back in between the bottom of the caisson and the sloping bedrock layer below. To prevent this, a strong grouted seal will be placed along the bottom ring of the caisson down to the bedrock. A frame that supports a drill rig with a 125mm (5") diameter bore is positioned around the outside edge of the caisson. The bore drills down to the bedrock, and then as it is extracted from the soil a rotating twin jet displaces the soil and places the grout, creating an in situ geometry of grouted soil.

PLACING CONCRETE & DEWATERING




South tower caisson jet grouting and drill rig

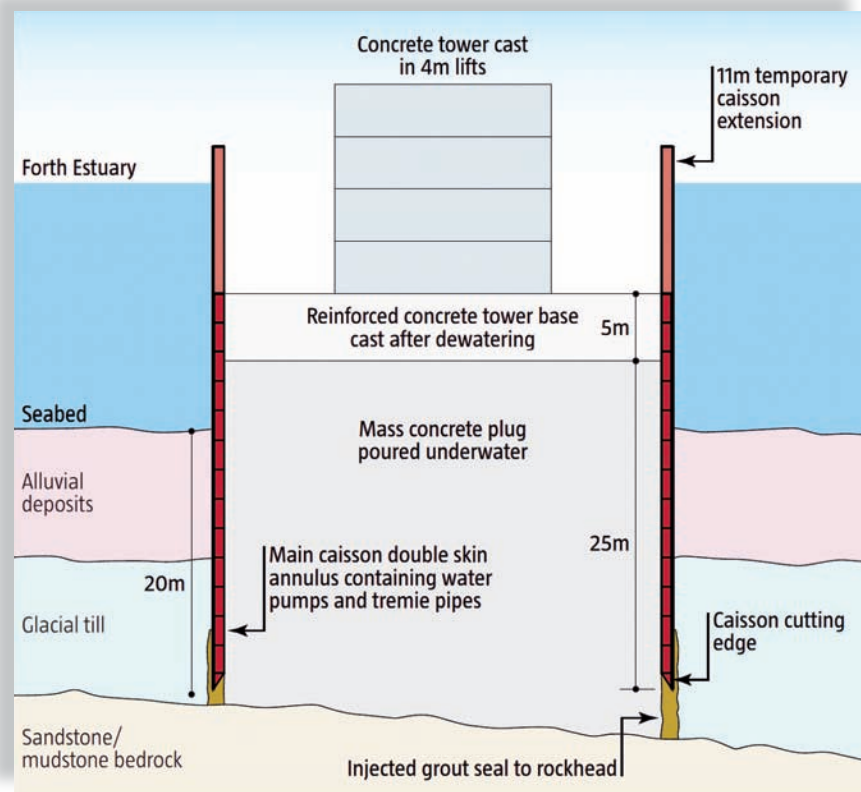
After all the dredging inside of the caissons is completed down to bed rock and the jet grouting seal is complete, an air-lift suction device will clean the bedrock surface for inspection using an underwater camera. Issues could arise if the underwater camera shows that the rock surface has unexpected fissures. After passing inspection, up to 18,000m³ (23,500yd³) of concrete will be placed in each caisson, at a maximum height of 26m (85'). This is completed by a non-stop, 24-hours-per-day, seven-days-per-week process that takes about two weeks for each caisson. The concrete of this marine foundation will form a 'plug' in the bottom of the caisson, which then allows all remaining seawater to be pumped out of the caisson. Inside of the caissons work can now be done 'in-the-dry'. At the flanking towers, the 14m (46') high reinforced concrete tower foundation bases can be formed on top of the marine foundation. The +200m (+650') towers will then be built on these foundation bases.

*FRC
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While the tower caissons landed outside the intended range,
 one of the many benefits of a design/build contract
 is the ability to accommodate such issues.

Currently, the south tower caisson is 840mm (33”) from its theoretical position and is undergoing jet grouting. The north tower caisson is 330mm (13”) from its theoretical position and is ready to begin jet grouting. The pier S1 caisson is still being sunk, but is within tolerance at 60mm (2”) from its theoretical position. While the tower caissons landed outside the intended range, one of the many benefits of a design/build contract is the ability to accommodate such issues.

The Forth Crossing Bridge Constructors, a joint venture between American Bridge International, Hochtief Construction AG, Dragados SA and Morrison Construction, are building the new 2,633m (8,639’) bridge for the Scottish Government Agency, Transport Scotland. Once complete, it is to have the world’s second longest 2,020m (6,627’) cable supported structure. Completion of the caisson and foundation works are expected in the first half of 2013 at the flanking towers location and in the second half of 2013 at pier S1. 



Construction of south tower foundation

LVHR
las vegas high roller

Project shifts into high gear

Contribution by Michael Cegelis, Senior Vice President and John Callaghan LVHR Project Manager

After over 15 months of intensive engineering, planning and procurement activity, AB crews are now hard at work erecting the world's largest observation wheel in Las Vegas, Nevada. The Las Vegas High Roller (LVHR) will be a signature component of The Linq; a new \$550M open-air retail, dining and entertainment district being built in the center of the famous Las Vegas Strip by Caesars Entertainment, LLC. The Linq is anchored by the 143m (469') diameter tension wheel which will rotate some 1,100 people to a height of 168m (550'), providing spectacular views of the Vegas skyline and the surrounding mountains. American Bridge is the prime wheel contractor for the LVHR project.

Operating under a \$71M fixed price contract, AB's scope includes: design assist; procurement of the wheel superstructure components including structural steel, forgings, castings and cable spokes; procurement of the wheel's main bearings, tuned mass dampers and temporary drive system; development of erection procedures including wheel modeling and analysis; design of temporary works and structures; erection of all wheel components and of the cabins.

In this major effort, American Bridge has coordinated with a wide variety of entities not under its direct control. Primarily this has included the project owner, Caesars Entertainment, LLC, and their project management team led by David Codiga and Randy Printz. AB has also coordinated closely with the prime designer and engineer ARUP (San Francisco, CA and London, U.K.) through the development and completion of the detailed design process. We have also worked closely with WA Richardson Builders (Las Vegas, NV), the construction manager for the overall Linq project; Leitner Poma (Grand Junction, CO), supplier of the cabins for the wheel; and Schwager Davis Inc., the main drive systems contractor for the project.

The wheel is fabricated from structural steel consisting of a rim, spokes, hub and spindle, and legs – it is similar to a bicycle wheel. The 28 rim sections are bolted together to create the circular rim which will support the cabins. The rim is connected to the hub with 112 locked coil cable spokes. The hub rotates around the fixed spindle on two main wheel bearings. The spindle is like an axle. Each end of the spindle sits on top of a pair of support legs, the eastern support leg pair is connected to a brace leg which takes the transverse load.

*LVHR
continues on page 12*



Rendering views left to right: looking into cabin, inside cabin, from the strip

PROCUREMENT

American Bridge has sourced material and product from all over the world for the project. This effort has included the contracting, oversight and integration of product engineering into the permanent and temporary works, quality assurance, delivery and installation of these materials and products. Following is an overview of this effort.

STRUCTURAL STEEL (PERMANENT WORKS)

All permanent structural steel is being fabricated by Shanghai Zhenhua Heavy Industries (ZPMC), China, at their Chanxiang Island workshops on the Yangtze River. This includes the support and brace legs, the main portions of the hub and spindle and the rim and drive rail assembly – a total of 2,800mt. The work was performed in accordance with AISC (American Institute of Steel Construction) quality control procedures and to be compliant with AWS (American Welding Society) D1.5 specifications. Due to the owner's 50-year design life requirement for the observation wheel and extensive modeling by the designer, the fabrication tolerances were extremely tight and the work required extensive machining. The overall rim tolerance is +/- 25mm (1"), or .0175 percent of its diameter. The work is overseen and coordinated by resident American Bridge staff at the fabricating plant. AB-China also provided overall quality assurance services with support from Smith Emery, Inc. The owner also had quality oversight representation in the shop from Caltrop Corporation. The fabricated steel was shipped in break bulk and container ships to Muroran, Japan as well as the ports of Long Beach and Los Angeles in the U.S. and trucked to the job by Heavy Transport, Incorporated (a Bragg company). All steel is being erected by American Bridge.

CABLES

The spokes of the wheel are 75mm (3") locked coil cables provided under a supply agreement with Freyssinet (Paris, France). The ropes are manufactured by Redaelli (Milan, Italy). The cable assemblies include cast fork sockets. The sockets are pinned with spherical bearings that permit rotation and prevent cyclical and fluctuating axial and bending moments in the ropes as the wheel rotates. The cables will be installed by American Bridge and tensioned to 1293KN (290 kips) with a tolerance of +/- 5 percent.



The 120mt hub middle pipe loaded on an eight-axle line dual lane heavy trailer; due to height and weight, this piece will take several days to travel from Long Beach Pier-F to Las Vegas; the load requires many different permits and escorts allowing it to travel only during certain times of the day (the piece will be chained before it moves)



In plane view of wheel structure and platforms from which passengers will board and disembark the 28 cabins



The first of two levels of temporary trusses stabilize the support legs as they grow skyward toward their 282' apex



The trajectory of the braced leg which will connect with the main support legs at the hub and spindle



American Bridge dolly system used to transport the temporary stabilization trusses on-site

BEARINGS

The two main wheel bearings have an outside diameter of 2.6m and inside diameter of 1.6m. These high performance bearings meet the 50-year design life requirements and accommodate an out-of-plane rotation tolerance of 0.5 degrees. The bearings were manufactured by SKF (Sweden) and shipped in containers to Las Vegas, where they are being installed onto the spindle by American Bridge.

FORGINGS AND CASTINGS

The fixed spindle ends upon which the bearings will rotate, as well as the rotating hub block base to which the cable spokes will be fit are forgings manufactured by the Japan Steel Works (Muroran Works, Hokkaido, Japan). This is accomplished using ASTM A-668 material with a yield stress of 260MPa (mega pascals) and an ultimate tensile strength of 460MPa. The forging is finished with a welded overlay that was heat treated to obtain specified hardness of HRC 30 (HRC is a Rockwell scale designation) and machined to a finish of 22 microns.

TUNED MASS DAMPERS

The support and brace legs are fitted with 13 TMD's (Tuned Mass Dampers) to reduce the structure's susceptibility to vortex induced oscillations under wind loading. The TMD's were manufactured by Gerb (Essen, Germany) and contain 400 to 600Kg active TMD mass each and a damping ratio of 12 to 18. The TMD's have been installed by American Bridge forces.

TEMPORARY DRIVE SYSTEM

The temporary drive system was designed and manufactured by Enerpac (Wisconsin, U.S.) and Hengelo (Netherlands) using their gripper technology. The system has a pushing capacity of 3,500KN (439 tons) at 350 bar and a total clamping capacity of 35,000KN (4000 tons). The system will be installed by American Bridge.

*LVHR
continues on page 14*

The temporary drive system has a pushing capacity of 3,500KN (439 tons) at 350 bar, a total clamping capacity of 35,000KN (4000 tons) and will be installed by American Bridge.



A 2250 Crawler crane (background) is dwarfed by the Liebherr 1750 and its massive counterweight configuration which is required for the critical steel picks



Looking east, the Linq itself: an innovative retail, dining and entertainment complex that leads visitors from the Las Vegas Strip to the wheel



Looking west: the famous Las Vegas strip casinos form the unique backdrop for the structure



Off-loading the 107mt hub end forging from the inter-marine ship onto an eight-axle line dual lane heavy haul trailer; this is the beginning of the multi-day trip from Long Beach pier-F to the job site in Las Vegas

TEMPORARY STEEL

The project required a large quantity of temporary steel, including: leg stabilization trusses; a truss at the hub spindle level to accommodate skidding of the hub and spindle components; chainfall platforms for the 50 ton chainfalls to facilitate lifting of the rim segments and radial struts; radial struts to stiffen the rim in its incomplete state; a transfer cart for the hub and spindle components; a holdback tower for mounting of the temporary drive system; two bearing assembly frames; and dollies for hauling of rim segments and struts. All of these components were designed by American Bridge Engineering, with an independent check and stamping by Ziemann Engineering, LLC (Stamford, CT). Fabrication has been undertaken by Finnoe Design LLC (Mead, WA) and American Bridge Manufacturing (Reedsport, OR). The weight of temporary steel exceeds 1,000mt. The 50 ton air powered chainfalls are brand new units manufactured by JD Neuhaus (Germany) and sold by West Coast Wire Rope (Oakland, CA). The four units are 100 percent duty cycle machines with a lift height of 280'-0 at maximum hook capacity with four parts of chain.


CRANES

Because of the size and weight of the hub and spindle, the height of the support legs, and the lack of access to the work, American Bridge found it necessary to use a large crane to do some of the work. The heavy lifts are made by a Liebherr 1750 crawler crane, which has a trailing counterweight cart and a mast and is configured with 367' of boom. A Manitowoc 2250 crane is used for the smaller picks and with the jib as the hook for the man basket. An 80 ton Rough Terrain crane is used in the yard as needed. The cranes and the operators are provided by Dielco Crane Service, Inc., a local Las Vegas company under a subcontract agreement.

STATUS

The LVHR project moved into the construction phase in October 2012 with the beginning of the erection of the support legs. At the current time the support and brace legs erection is complete, and the hub/spindle erection is ongoing. Rim erection will begin in April and be complete in October 2013, followed by cabin erection and commissioning. The erection of the LVHR will be covered in a future issue of *AB Connections*.

APPRECIATION

As the project procurement cycle moves toward completion, American Bridge wishes to heartily thank Caesars and their main representatives David Codiga and Randy Printz, as well as ARUP, WA Richardson Builders and all of the above suppliers, whose dedication to this unusual and complex project has enabled a successful initiation of the field construction activity. 

TRAINING

marine water survival

Requirement to all employees prior to performing any type of work over water


Contribution by Joseph Corvello, AB Safety Manager

American Bridge has a proud history of building some of the world's most recognized complex structures, many which involve working over some of the most challenging bodies of water. One drastic and current example of the extreme working environment in which AB thrives, is the Forth Replacement Crossing in Scotland, United Kingdom. American Bridge International (ABI) is part of the Forth Crossing Bridge Constructors (FCBC) Joint Venture constructing the new bridge over the Firth of Forth (Estuary of the Forth River) with an overall length of 2.633m (meters), including a cable supported structure of 2,020m (world's second longest).

The current at the bridge site located 12 miles from the North Sea runs six to eight knots in both directions. Recognizing the risk that a worker may enter the water, all employees on the project performing work over water attend an extensive Water Survival Training course which provides the knowledge, understanding and practical use of lifesaving devices such as automatic inflation life jackets and rescue life rafts. During the training session, the students learn rescue techniques for retrieving persons, dangers associated with long-term exposure to water, first aid procedures, and most importantly, proper use of life jackets and rescue rafts. Once instruction is complete, participants are fitted with life jackets at the poolside and given practical instructions on how to remain calm should they enter the water.



Students find the training extremely effective since it is a simulation of a dangerous accident. They begin by falling into the water. Their life jackets automatically inflate, immediately bringing them to the surface in the upright position. Once each participant is in the water they receive instruction on how to group together while panicked, a practice that increases visibility to the rescuers as the group becomes a mass of orange. This method also aids in keeping the individuals more calm and reassured. The groups then break off and must swim the length of the pool, which demonstrates the difficulty of swimming to safety. Typically, most tire quickly and find themselves in distress. This is a display of exhaustion to further support the importance of staying together as a group and waiting for a rescue team to arrive. Finally, the group has the opportunity and benefit of a life raft. They learn how to turn the raft upright, how to deflate their life jackets just enough to allow them to access the raft and how to aid others getting into the life raft.

The Water Survival Training course is a requirement to all employees prior to performing any type of work over water. Training will continue through the life of the project through drills for injury, rescue or mass evacuation. American Bridge and its FCBC partners put safety first, the Water Survival Training course being just one of many routine steps taken by the company to prevent accidents. AB employees are skilled in safety training before they are exposed to potential jobsite hazards, ensuring their ability to protect themselves and others. 



S P O N S O R S H I P

pittsburgh

AB sponsors Children's Home of Pittsburgh and Lemieux Family Center



Dr. Jennifer Arnold

In November of 2012, American Bridge was one of six sponsors of the fundraising event for The Children's Home of Pittsburgh and Lemieux Family Center. A luncheon was held in the Lexus Club at the CONSOL Energy Center, Pittsburgh, in partnership with Jameson's Army. The event honored the first recipient of The Children's HOMETown Hero Award, Dr. Jennifer Arnold. Dr. Arnold is a medical director for the Pediatric Simulation Center at Texas Children's Hospital, assistant professor of pediatrics at Baylor College of Medicine and one of the stars on The Learning Channel's show *The Little Couple*. She completed her residency at Children's Hospital of Pittsburgh of UPMC and her Fellowship in neonatology at Magee-Womens Hospital of UPMC. She currently resides in Dallas, TX, but still considers Pittsburgh home in many ways. Dr. Arnold was the featured speaker at the luncheon. This is just one of the numerous local and citywide events and organizations sponsored by American Bridge.

All proceeds from the luncheon directly benefitted the fragile children and their families served at The Children's Home.

The Children's Home of Pittsburgh, established in 1893, is an independent, non-profit licensed organization that promotes the health and well-being of infants and children through services, which establish and strengthen the family (<http://www.childrenshomepgh.org/>).

Jameson's Army is a non-profit organization raising awareness on Congenital Heart Disease (CHD). It was started in 2012 by co-founders, Danielle and Patrik McKain. Their son, Jameson, has battled CHD for the past 20 months. It was during a routine ultrasound when the McKains learned that their unborn son was missing the left side of his heart and through the love and support of family and friends, an army was formed in honor of Jameson and those living with CHD. The focus of Jameson's Army is to support children and families affected by CHD and those who support them. Some of the benefits provided by the money raised include care package drops to the heart center at Children's Hospital of Pittsburgh and delivering cough pillows to comfort patients after surgery and help in their road to recovery (<http://www.jamesonsarmy.org/>). @



Dr. Arnold was a featured speaker at the AB-sponsored luncheon

DBIA award

DBIA certification demonstrates commitment to design-build done right

Scott Gammon, P.E., Vice President of American Bridge Company, has successfully completed the requirements for the nationally recognized Designated Design-Build Professional™ certification. The Design-Build Institute of America (DBIA) awarded the certification to Scott upon his successful completion of coursework and formal examination in all aspects of design-build project delivery. By completing these requirements, candidates earn the right to display 'DBIA' after their names, identifying them to design-build end-users and the industry at large as professionals experienced in this form of project delivery.

DBIA certification demonstrates commitment to design-build done right. These design and construction professionals have mastered the best practices associated with the entire design-build process - from project procurement through post-award. Both A/E/C firms and public agencies train personnel from a variety of disciplines and departments in the best-practices developed by DBIA.

Three years substantial design-build work experience is an additional prerequisite for Designated Design-Build Professional™ certification. Maintaining the credential requires a minimum of 24 hours of continuing education credit every two years.

Founded in 1993, the Design-Build Institute of America (DBIA) is the only organization that defines, teaches and promotes best practices in design-build projects. Design-build is an integrated approach that delivers design and construction under one contract with a single point of responsibility. Owners select design-build to achieve best value while meeting schedule, cost and quality goals.

While American Bridge has had significant design involvement in its projects since its founding in 1900 through product design, detailing, engineered erection procedure development and temporary works design, the company began active design build delivery practice in the late 1940s. From the 1940s through the 1960s, the company designed (using in-house engineers) and built dozens of structures on the Inter-American




Scott Gammon, P.E.,
AB Vice President

“I would like to congratulate Scott on this great accomplishment. Since he joined the American Bridge team in 2010, he has gone above and beyond our expectations. This is just another example of the talented employees that continue AB’s legendary reputation in innovation.”

Michael Flowers, P.E., President and CEO of American Bridge

Highway in Guatemala, Honduras, Nicaragua, El Salvador, Costa Rica and Panama. Other notable design build projects undertaken by American Bridge include the 25th of April Bridge in Portugal (1966), the Angostura Bridge over the Orinoco in Venezuela (1967), the BNSF Galveston

Bascule Bridge (1989), the Castaway Cay cruise ship excursion port in Abaco, Bahamas (1998), the Lions Gate Bridge North Viaduct Rehabilitation in Vancouver, BC (2001), the elevated Peoplemover system at Orlando International Airport (2004) and the Forth Replacement Crossing in Scotland (2016). 

WELLNESS program

Highlights for 2013 and 2012 raffle winner

The Wellness Program ended 2012 with great success, once again! Those who participated in 2012 enjoyed the additional benefits that the program has to offer, like earning \$50 gift cards and free vacation days. The grand prize raffle was held on Monday, January 14, 2013. Phil Gerace, ABM Coraopolis Superintendent, was the big winner. Congratulations Phil!

The 2013 Wellness Program has been launched. The program overview, wellness certificate and point's checklist can all be found on the Access site or by contacting the HR (Human Resources) Department. If you have not participated in the past, consider trying out the program for 2013. Most of the items are things you are already doing and the others are very easy to participate in. Please keep in mind that items are featured in certain months, but many of them can be completed any time throughout the year.

Many new items have been added to the program for 2013, while some of the old favorites such as *Drop 10 in 10* and the *10,000 Step Challenge* are still included. Here are some other things you can look forward to over the next couple of months with the Wellness Program:

COMING MONTHS

february – This month, we will kick off the first newsletter campaign of 2013. This newsletter is called *Real Food 101*. HR will send out correspondence regarding this campaign in early February. You will receive 10 wellness points for signing up for this newsletter campaign.

Also in February, sign up for any or all of the video workshops. There are three videos available: *Manage Your Stress in the Moment*, *Stressed is Desserts Spelled Backwards* and *How to Stay Happy*. Each video is

American Bridge's wellness program has come a long way over the past three years and was recently recognized by Highmark Blue Cross/Blue Shield in their quarterly newsletter, which is distributed to all companies that utilize Highmark's benefits. It was a featured article on the benefits of a company wellness program.

approximately 45 minutes in length. To obtain points, you must complete a feedback survey regarding the video. If you would like any of these videos, please contact the HR Department. February is not the only month to view the videos, you can do this any time during the year.

march – Our focus for this month is the Wellness Profile through Highmark Blue Cross/Blue Shield. This assessment will help you understand what steps you can take to improve or maintain your health by creating a personal healthy

lifestyle plan customized to your individual needs. It also provides valuable information that you can share with your personal physician. Your privacy is very important and this assessment is completely confidential and adheres to all HIPAA (Health Insurance Portability and Accountability Act) regulations. If at any time you are uncomfortable completing a question, you may skip to the next. It can be completed easily online. The profile can be found at www.highmarkbcbs.com. If you completed this assessment last year, you can do it again for 2013. Please note: if you do not have medical insurance through American Bridge Company, the HR Department can provide you with a separate group number that will allow you to access the website tools. If you do not have access to the internet, you can complete a paper copy of the Wellness Profile.


WELLNESS
continued bottom of next page

RETIREMENT

announcement

Employee retires after 38 years with American Bridge

As a tribute to his 38 years of service at American Bridge, a luncheon was held in Ralph Whitney's honor upon his retirement in December of 2012. He began his career in 1974 as a field accountant working on numerous multimillion dollar steel construction projects throughout the eastern and central regions of the U.S. In 1991 Ralph began work in the corporate headquarters as assistant safety administrator, until 1993 when he was promoted to his current position, loss control manager. He plans to travel and visit with family during his retirement. American Bridge would like to thank Ralph for his loyalty to the company and wish him a most enjoyable retirement.

"I enjoyed all of my assignments over the 17 years I traveled for AB, as I was able to see places that I may not have ever traveled to like Texas, Alabama, a couple times in Baltimore, Ohio and New Jersey. The jobs I remember most are the I-95 overpasses in Baltimore, MD with Blackie Bullard as Superintendent; the Mianus River Bridge in Greenwich, CT with Roger Larsen as Superintendent; the Glade Creek Bridge in Beaver, WV; the D-Wing at Presbyterian Hospital, Pittsburgh; and the Society Tower in Cleveland, OH with Jack White as Superintendent." 




Left to right: Jody Porterfield, AB Safety Manager; Dick Foster, Retired AB Accounts Payable Specialist; Henry Mykich, AB Safety Director; Ralph Whitney, Retired AB Loss Control Manager; Dom Rinaldi, Retired AB Senior Accountant

WELLNESS *continued*

Also featured in March is the Health Assistant Web. Six health issues are addressed: emotional health, exercise, nutrition, stress management, tobacco cessation and weight management. Each topic is a self-guided program that begins with a series of questions to help you create a customized program based on your health focus and desired participation level. Goals will be set and activities will be available to choose from to achieve those goals. Self-monitoring of your progress is simple. The tracking feature monitors your progress, provides feedback and encourages celebration of success. The health assistant can be found on the Highmark Blue Cross/

Blue Shield website www.highmarkbcbs.com. In order to obtain points for the health assistant, you must complete two out of the six topics. You can print out a progress report and send it to the HR Department for your points.

april – In this month we will turn our focus to getting outdoors. HR will send out information on how to find a walk/run-a-thon in your area. If you choose to walk, run or even volunteer at an event, you will receive wellness points. Be sure to take your Wellness Program goal completion certificate with you to have signed by one of the event organizers. Keep in mind this program can be completed throughout the year, not only in April. 

AB's Connection to the Statue of Liberty

Contribution by Frank Vespaziani, an AB Contacting Manager from 1965 to 1980

Webster defines serendipity as a talent for discoveries by accident. Let me tell you about a recent bit of serendipity that I encountered.

I recently read an article in the June 2012 issue of *Structure Magazine* (Great Achievements - Notable Structural

Little did I know that the Statue of Liberty would be included in the DNA of a company that later would become the largest steel fabricating and erecting company in the world.

Engineers) which detailed the life story of a Norwegian born structural engineer named Joachim Gotsche Giaver. Giaver immigrated to the United States in 1882 and a year later moved to Pittsburgh to work for the Shiffler Bridge Company. During Giaver's employment at Shiffler Bridge as chief engineer, his most recognized project included the design, fabrication and construction of the structural framework for the Statue of Liberty.

This immediately peaked my interest because during my time as a contracting manager for the ABD

(American Bridge Division of U.S. Steel) in New York City during the 1970s, I worked with ABD's Shiffler transmission tower plant in obtaining contracts for the fabrication of transmission tower components for American Electric Power. In some ways, Lady Liberty's steel frame looks very similar to a steel transmission tower. Could this be the plant that started out as the Shiffler Bridge Company?

Some research using a book entitled *A Directory of American Bridge Building Companies, 1840 - 1900*, identified the Shiffler Bridge Company as having a plant in Pittsburgh, in the Lawrenceville section at

48th Street. It was part of the roll up merger orchestrated by the J.P. Morgan group in 1900 to create the American Bridge Company. The booklet *American Bridge Company (1938)* states that this 48th Street plant was ultimately closed in 1921.



This picture may not be easily recognized as the Statue of Liberty because it is the iconic monument's skeleton!

Keystone Bridge, another of the original roll-up companies, had a plant just three blocks away in Lawrenceville; on 51st Street. The 1938 American Bridge Company booklet detailed the construction of a new transmission tower plant in 1911 on the 51st Street site of the closed Keystone Works. This 51st Street plant was the one I

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THE COMPANIES THAT MERGED TO FORM AB IN 1900:

- American Bridge Works, Chicago, IL
- Berlin Iron Bridge Company, East Berlin, CT
- Buffalo Bridge Company, Buffalo, NY
- Detroit Bridge and Iron Company, Detroit, MI
- Edge Moor Bridge Company, Edge Moor, DE
- Elmira Bridge Company, Elmira Heights, NY
- Groton Bridge Company, Groton, NY
- Gillette-Herzog Manufacturing Company, Minneapolis, MN
- Hilton Bridge Company, Albany, NY
- Horseheads Bridge Company, Horseheads, NY
- Keystone Bridge Company, Pittsburgh, PA
- Koken Iron Works, St. Louis, MO
- Lassig Bridge and Iron Company, Chicago, IL

- Lafayette Bridge Company, Lafayette, IN
- Milwaukee Bridge Company, Milwaukee, WI
- New Jersey Steel and Iron Company, Trenton, NJ
- Pencoyd Iron Works, Pencoyd, PA
- Post and McCord, Brooklyn, NY
- Pittsburgh Bridge Company, Pittsburgh, PA
- Rochester Bridge Company, Rochester, NY
- Schultz Bridge Company, McKees Rocks, PA
- Shiffler Bridge Company, Pittsburgh, PA
- Toledo Bridge Company, Toledo, OH
- Union Bridge Company, Athens, PA
- Wrought Iron Bridge Company, Canton, OH
- Youngstown Bridge Company, Youngstown, OH



HUMAN resources

Important benefit information for 2013

401K PROGRAM

All salaried and hourly non-union employees can enroll in the American Bridge Company 401k program at any time. You can also change the percentage you are deferring on a monthly basis throughout the year. Now that the new year has begun, why not consider enrolling in the plan, if you have not already done so, or increase your deferral percentage.


If you would like an enrollment packet or you need a savings form to update your contribution percentage, please contact the HR department at 412-631-1000.

BENEFICIARY FORMS

It is important to ensure that your beneficiary information for life insurance and/or 401k is up-to-date. In the upcoming months you will see correspondence from the HR Department asking you to update your beneficiary information. It is very important that the HR Department have the *most up-to-date* beneficiary forms in the employees' personnel files. You can find both beneficiary forms on the American Bridge Access site under HR Forms or you can contact the HR Department to provide you with the forms. If you are unsure of your current beneficiary election, contact the HR Department at 412-631-1000.

HIGHMARK BLUE CROSS/BLUE SHIELD

Highmark Blue Cross/Blue Shield has enhanced their website by partnering with WebMD. Now when you log in to their website, you will see a whole new look and many more features available. You will have access to your wellness profile, digital health assistant programs, recipes, videos, health topics and health management centers. There is also a section included on the site that tracks all of your appointments and diagnosis along with any medications that you may use. The site is easy to maneuver. Once you complete certain items such as the wellness profile or the digital health assistant, etc., you will receive notices recommending different areas of the site to visit with topics associated with answers to your various questions.

The HR Department encourages everyone that has medical insurance through American Bridge to obtain a password and check out the new site. Many of the new wellness items are associated with information on the site. 


AB PUBLISHED *continued*

had worked with on transmission tower projects in the 1970s. Perhaps after the closing of the 48th Street plant in 1921, the 51st Street plant was given the name Shiffler because of its ties to what was produced in the original Shiffler plant located three blocks away. Why do I say that? Because in many ways, one can also see the similarities between the steel framework in the Statue of Liberty and the steel structure of an electric transmission tower.

Statue of Liberty – The First Hundred Years is a book that covers the history of the statue from its early conception, to fundraising



on both sides of the Atlantic, to its trial assembly in Paris much like the shop assembly of a cantilever truss bridge and eventual construction on Bedloe's Island in the New York harbor.

An article about an obscure Norwegian structural engineer led me to Pittsburgh and one of the original companies in the merger that created American Bridge. Little did I know that the Statue of Liberty would be included in the DNA of a company that later would become the largest steel fabricating and erecting company in the world. Just a little bit of serendipity I would say. 

references

- Giaver, Joachim Gotsche and Richard G. Weingardt, P.E. Structure Magazine. Reedsburg, WI, NCSEA/CASE/SEI, 2012.
- Darnell, Victor C. Directory of American Bridge Building Companies 1840-1900. Washington, D.C.: Society for Industrial Archeology, 1984.
- Williams, Marshall. American Bridge Company. Pittsburgh, PA: American Bridge Company, 1938.
- Weisberger, Bernard A. Statue of Liberty: The First Hundred Years. New York, NY: American Heritage, 1987.

FLASH *backs*

Eastern U.S. projects past - from NY to CT to PA to MD to KY

Lake Cumberland Bridge Burnside, Kentucky AB Order No.: 430510



AB Employees: Donald Jones, P.E., Project Executive; Jerry Kent, Superintendent; Kevin Buddie, Field Engineer; Larry Tussey, Foreman; Peter Balwant, Surveyor; Win Patchell Jr., P.E., Means and Methods Engineer

American Bridge completed this 1,712' new, replacement bridge crossing Lake Cumberland in Eastern Kentucky in 2006. AB was the superstructure general contractor for the four-lane bridge which included a 1,572' two-span continuous steel truss that is 130' tall at the center, and has a vertical clearance of 84' over normal pool elevation. The contract also included roadway approach sections of 1,312' on each side, the cast-in-place concrete roadway deck on the bridge and the demolition of the existing 1,591', eight-span deck truss bridge and associated piers. The weight of the structural steel was 11,850 tons. The bridge was erected by the balanced cantilever method using an innovative erection scheme that minimized falsework requirements and eliminated the need for additional steel for erection purposes. American Bridge engineers developed a methodology that utilized American Bridge owned falsework

strutted diagonally to the pier, eliminating the need for bents in the deep water. In addition, AB accelerated the construction of the precast concrete approach span and first five panel points of the truss to facilitate steel delivery to the water based erection rigs, avoiding the need for a construction staging yard.

Chesapeake Bay (William Preston Lane, Jr.) Bridge II Annapolis, Maryland AB Order No.: K-3800-39

American Bridge held the general superstructure contract for this 32-span, 14,500' bridge crossing the Chesapeake Bay in Annapolis, MD, which involved a 2,950' suspension bridge with a 1,600' mainspan. The contract included all work on the bridge above the concrete piers including the suspension bridge's steel towers. The deck truss is supported by main cables fabricated from 61 Preformed Parallel Wire Strands (PPWS) and the roadway surface is a 6.5" concrete cast-in-place on a metal deck. The crossing also includes a secondary channel through cantilever truss span of 1,719', including a main span of 780'. American Bridge fabricated and erected all structural steel and manufactured the PPWS strands for the project, in addition to serving as general contractor for the superstructure contract. Since the completion of construction in 1973, American Bridge has also contributed to Chesapeake Bay Bridge preservation projects including the bridge redecking (AB Order No. 466010) in 2010.



40

Fort Duquesne Bridge Pittsburgh, Pennsylvania

AB Order No.: V-2781-98

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Pittsburgh is known as 'The City of Bridges', it hosts hundreds of countries each year for the International Bridge Conference. The Pittsburgh region has served as the head office location for American Bridge since 1904, when it relocated its corporate offices from New York City. AB has been a prime player in the construction of the city's most iconic bridges, like the Roberto Clemente, Andy Warhol, Rachel Carson and the Fort Pitt, to name a few. Opened to traffic in 1960, the Fort Duquesne Bridge has a main arch span of 423', a width of 62' and carries eight traffic lanes (four on both the upper and lower decks); the total weight of structural steel is 4,690 tons. This double-deck, steel tied arch bridge was erected by building the entire tie truss first, and then erecting the arch sequentially. The bridge runs through downtown Pittsburgh's central business district (AKA 'Golden Triangle'), crosses the Allegheny River and touches down right between Heinz Field Football Stadium and PNC Park Baseball Stadium. Due to the city's initial delay in constructing the bridge it was formerly known as the 'Bridge to Nowhere' (the northern end of the mainspan was left hanging in midair). Once contracted to complete yet another signature structure of Pittsburgh's skyline, AB completed the bridge in less than one year.



Bronx Whitestone Bridge New York, New York

AB Order No.: H-1058-9 (towers) and H-1350-2 (cables)

74

In 1937, American Bridge was awarded the Bronx Whitestone Bridge contract which involved the fabrication and erection of the two 375' steel towers. Some months later, AB won the contract to supply and erect the main and suspender cables for the bridge. The cables each contained 37 strands of 276 wires, compacted to a diameter of 21.75" (552mm). The strands were erected using the airspinning method, and contained a total of 3,959 tons of steel wire. This iconic suspension bridge crosses the East River connecting the New York City boroughs of Queens and the Bronx. By 1939, the Bronx Whitestone Bridge would alleviate local traffic on the RFK Triborough Bridge (AB Order No. G-5504-10; completed 1936) and provide upstate New York and New England drivers an easier commute to the 1939-1940 World's Fair. The construction of the bridge was on a strict schedule and completed in about two years, on April 29, the day before the opening of the fair.

Just over 50 years later, in 1991, American Bridge was awarded a contract for the rehabilitation of the Bronx Whitestone Bridge (AB Order No. P916BR). This involved the replacement of 12,000LF of reinforced concrete roadway deck on the approach and suspended spans including stringers and floor beams and the replacement of the tower deck hinge pins. It also included the rehabilitation of the stiffening girder anchoring system, the installation of roadway joints and inspection platforms at the towers and anchorages.

In 2010, American Bridge completed a strengthening of the bridge main and suspender cables.


When the Bronx Whitestone Bridge first opened, it was the fourth longest main suspension span in the world and it carried approximately 17,000 vehicles per day in four traffic lanes. Today, the bridge has the 23rd longest main suspension span in the world and carries approximately 110,000 vehicles per day in six traffic lanes.



Thames River Railroad Bridge Groton, Connecticut

AB Order No.: D-4812-17

94

Almost a century ago, in 1919, American Bridge constructed a two-track, five-span through truss bridge over the Thames River connecting New London and Groton, CT. Each day, at least two freight trains and 36 passenger trains cross and more than four times it opens for marine traffic. In 1982, American Bridge renovated the bridge (AB Order No. J-1670-79) which involved the repair and replacement of pins, bushings, bearings, machinery, piers and trusses. The bascule mainspan of the bridge was replaced within the last 10 years but the remainder of the original structure is still in use today. 



In 1983, AB completed another project on the Thames River Railroad Bridge which involved the repairing and replacement of pins, bushings, bearings, machinery, piers and trusses under AB Order No. J-1670-79.

AB
Connections
NEWSLETTER
By Kati Camardese
Please contact the
Communications and Marketing Department
with news and inquiries:
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or view archived issues visit:
<http://www.americanbridge.net/Media/newsletters.php>

S U P P O R T *movember*

GWB employees volunteer for men's health
Contribution by Scott Swamback, AB Field Engineer

On November 1, 2012, twelve audacious American Bridge workers on the GWB (George Washington Bridge) project put elegance aside and committed to growing a MOstache (hence the name MOvember and since it takes place in NOVember) for 30 days. Regardless of the shape, fullness or style, their finely groomed upper lip bristles made them walking, talking billboards for a serious cause - men's health, specifically prostate and testicular cancer initiatives. While taking advantage of a respectable reason to grow a mustache, Movember participants raise awareness and funds to support the cause.

This year the AB team from the GWB raised \$1,700, with American Bridge's George Terrance raising \$635 alone. The team not only raised funds during the month of Movember, but also gained the interest of many others who will hopefully join the cause in future years. You can learn more about Movember at Movember.com, and view the teams page by searching 'AB.' 



Left to right: Patrick Norton, Ironworker; Christopher Kehl, Ironworker; Chad Ford, Field Engineer; Peter Moeller, Teamster; Joshua Perry, Project Manager; Scott Swamback, Field Engineer; Zach VanLemmeren, Field Engineer; Raymond Capo, Laborer; Kevin Rigby, Ironworker; Bruce Phillips, Field Engineer; Michael Comstock, Field Engineer