Connections

Third Quarter 2013

VIRGINIA DISTRICT UPDATES

north carolina

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Virginia District Projects/U.S. Mississippi River Bridge/Safety Initiative/AB and Ironworkers Union

AB Connections

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thank you

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

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COVER

VIRGINIA DISTRICT PROJECTS

AB innovates to overcome the many challenges faced on these three significant projects

CURRENT *contracts*

Manufacturing
BNR/Tertiary WWTP Project, Modesto, CA
I-84 Bridges over Center Street, Newtown, CT
Symphony Park Pedestrian Bridge, Las Vegas, NV
Edna Maguire Elementary School, Mill Valley, CA
SAS OBG Cable Safety Railing CCO 188, Oakland, CA
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
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
Sorrento to Miramar, San Diego, CA
Old Steubenville Pike, Allegheny County, PA
2450 Skyway Traveler Rail Replacement, Oakland, CA
Port Mackenzie Segment Six Little Susitna Bridge, Port Mackenzie, AK
Kiefl Bridge, Somerset County, PA
Tappan Zee Temporary Maintenance Dock, Tarrytown, NY
I-190 Bridge Replacement, Niagara Falls, NY
SAS Customer Change Orders, Oakland, CA:
85 Elevator Safety Enclosures
189 Bike Path Rail Modifications

Midwest
Horseshoe Arch Pedestrian Bridges, Dallas, TX
Charleroi-Monessen Bridge Replacement, Charleroi, PA
Columbus Road Lift Bridge, Cleveland, OH
U.S. 190 Mississippi River Bridge Repairs, Baton Rouge, LA
Hurricane Deck Bridge, Camdenton, MO
Coosa River Pipeline Bridge, Clanton, AL

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. 421, Wilmington, NC
Explosives Handling Wharf No. 2, Silverdale, WA
Bridge No. 138 on NC-150 over Lake Norman, Catawba County, NC
Fire Protection System Repair - Pier R-3 Naval Weapons Station, Yorktown, VA

Western
ABFJV San Francisco/Oakland Bay Bridge, CA

Tampa
Courtney Campbell Causeway Multi-Use Trail Design/Build State Route 60, Tampa, FL
Tom's Harbor Channel Bridge Repair, Duck Key, FL
Golden Beach Bridge Replacement, Golden Beach, FL
Port Manatee Berth 12 Wharf Extension and Container Terminal, Palmetto, FL
Tampa Berth 227N Bulkhead Extension, Tampa, FL

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

NEW *hires*

Headquarters Office, Coraopolis, PA
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Tappan Zee Bridge, NYC
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Forth Replacement Crossing, Edinburgh, Scotland
Robert Cameron, Commercial Manager
Karen Beglin, Assistant Project Controller
Alan Irving, Operations Manager – Approach Viaducts
Euan Lucas, Environmental Engineer
Stewart Graham, CAD Operator

TRANSFERS *& rehires*

Joseph Rynn, Field Engineer, Tappan Zee Bridge, NYC

VIRGINIA
projects

Updates on three unique projects of the
AB Virginia District

BONNER BRIDGE SCOUR PROTECTION

Contribution by Ray Hagen, Project Manager

The Bonner Bridge Scour Protection Project consists of the installation of a crutch bent and the placement of gabion baskets and sand bags around four of the existing bents to protect the Bonner Bridge from the effects of bottom scour. The scope of work includes the placement of 1,270SY of gabion mats and 540 Nos of 3' diameter sand bags, the installation of eight 110' long 24" diameter steel piles and the placement of 130CY of class AA concrete.

The Bonner Bridge, built in 1962, is a 2.4-mile long bridge spanning the Oregon Inlet between the towns of Nags Head and Rodanthe, North Carolina. The bridge carries north and southbound NC 12 traffic to and from Hatteras Island. To the south, Hatteras Island can be accessed by a ferry but the trip is time consuming and unreliable due to extreme sand shoaling at the inlet that frequently delays ferry travel. From 1962 to present the Hatteras Inlet bottom has changed significantly from the effects of scour around the bridge. The extreme ocean currents have removed sand in such large quantities around the piles supporting the bridge that scour protection work was needed to ensure the structural integrity of the bridge.

Bonner Bridge calm day anomaly

Scope of Work

In August of 2012 American Bridge was awarded the contract to install scour protect devices between bents 158 and 162. The scour protection scope of work included the installation of 159 Nos of 12' by 6' by 75' wire gabion baskets filled with 3" to 9" trap rock on the ocean bottom, 540 Nos of 3' by 3' by 3' sand bags on the ocean bottom, eight 110' long 24" diameter galvanized steel piles supporting a 50' by 19' by 4' concrete crutch bent over the existing bent 159. When the original bridge was finished in 1962, the water depth between bent 158 and bent 162 ranged from 17' to 23' deep. The piles supporting those bents were driven to elevation – 65.5'. The water depth in the work area now is 26' to 42' deep, which leaves only 23.5' of pile embedment below the ocean bottom. The design goal of the gabion baskets was to prevent the sand from being swept away by the current and promote the accumulation of sand between the pile bents. The sand bags were placed around and under the bent cap to prevent further scour and promote sand accumulation.

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VIRGINIA PROJECTS
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Challenges

The location of the scour-protect work area, bent 158 to bent 162, was in the middle of the Oregon Inlet. The water current could be as much as six knots at this location. The most significant challenge was the ever-changing weather conditions. With the project being situated at the mouth of the Atlantic Ocean, the dynamic forces of nature had to be accounted for every day. The forces of wind, wave action and current had to be in a stable enough condition to facilitate the safe movement of barges and the progression of any in-water work. From October of 2012, the arrival of Hurricane Sandy, until the end of March 2013, the work was continuously impacted by numerous winter storms delaying the diver dependent work of gabion and sand bag installations.

"The most significant challenge was the ever-changing weather conditions - situated at the mouth of the Atlantic Ocean, the dynamic forces of nature had to be accounted for every day."

The installation of the gabion baskets and sand bags required the use of divers. Most of the dives were in 41' of water so the water velocity had to be constantly monitored by the dive master. The dives had to coincide with the slack tidal periods to ensure the safety of divers. To ensure the safest and longest possible dive windows, the diving was timed around the slack periods. The maximum safe dive time was approximately two hours around the slack ebb or flood tides. Many times during the progression of the dive work the weather conditions prevented the predicted slack tide periods from occurring. In the end, the dive work was performed safely with no incidents or mishaps. The divers installed 159 gabion units and 510 sand bags. The project completed in April of 2013.

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In order to secure the Manitowoc 4100 barge in this dynamic marine environment a barge anchoring system was designed and implemented. The four point anchoring system consisted of two 64,000-pound double drum deck winches each attached to two 5,000-pound Danforth anchors with 1-1/4" galvanized steel cable. In addition to the anchors, spuds were used once the barge was in the designated position. Spreading the anchors at the perimeter of the work zone provided the flexibility to move east and west towards and away from the bridge and north and south between the work areas using just the deck winches. The Manitowoc 4100 barge also served as the base for securing the material barges and a smaller crane barge. Throughout the project numerous winter storms impacted the work area with winds as high as 62 mph and the barge anchoring system performed without incident.

Installing the last sand bags

Incoming tide current 4+ knots

Strong currents preventing access to bent 159 cap and dive work

Setting gabion baskets tandem pick American 5299 and Manitowoc 4100

BRIDGE NO. 30 – U.S. 421 OVER SNOWS CUT

Contribution by Steve Jackson, Project Manager

AB project team

Steven Jackson, Project Manager
Steve Aguiar, Superintendent

VIRGINIA PROJECTS
continued

The North Carolina Bridge No. 30 Repair Project is located in Wilmington on U.S. 421, the last bridge before entering Carolina Beach. The top side of this four-lane rehabilitation bridge project consists of seven deck joint repairs - 22 foam joint repairs and 92,281SF of bridge deck demolition with a latex overlay. One aspect of this project consists of the removal and replacement of 472 of the bearing pads/sole plates and cleaning/painting all of the structural steel. The repairs are scheduled to be completed in three phases, while maintaining the flow of traffic to and from Carolina Beach. Phase one was completed in the middle of May, which included the removal and replacement of the deck joints, followed by the hydro demolition and latex overlay of the bridge deck on the south bound lanes, with the cleaning and painting of the structural steel under both lanes of the deck. Phase two began with the removal and replacement of the sole plates and bearing pads. It will complete in late fall of 2013, upon which phase three will begin. The northbound lanes will then have deck joints repaired, followed by the hydro demolition and latex placement. This work will take place before the tourist season starts again in the spring.

Painters installing under the structure platform

Raising jacking platform for sole plate and bearing replacement

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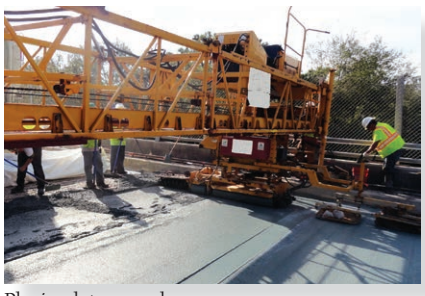

Placing latex overlay

Hydro demolition

Deck joint removal and replacement

WRIGHTSVILLE BEACH BRIDGE REHABILITATION

Contribution by Jonathon Weaver, Project Manager

AB project team

Jonathan Weaver, Project Manager
Keith Hall, General Superintendent
David Fowler, Senior Quality Control Manager

VIRGINIA PROJECTS
continued

The Wrightsville Beach Bridge Rehabilitation project was awarded to American Bridge in November of 2011 with an original value of $5.6M. The original scope of work to this double-leaf bascule bridge included replacement of steel grid deck, stringers and X-bracing, replacement of machinery components, installation of a new bridge control system and electrical equipment and an addition to the existing control house. In November of 2012, the owner, North Carolina Department of Transportation (NCDOT), awarded American Bridge a substantial extra work package including: rehabilitation of the concrete deck with a latex modified concrete overlay, joint repairs, cleaning and painting of structural steel and additional concrete repairs to the substructure. The project is currently valued at $8.5M.

This four-lane bridge over the Intracoastal Waterway accessing Wrightsville Beach is the only means of vehicular access to the highly traveled-to tourist destination. The movable span opens every hour for recreational marine traffic and on-call for commercial vessels. The work is phased to limit impacts on both vehicular and marine traffic. Deck rehabilitations may be performed only in the late-fall and winter months, and these limited restrictions authorized to both roadway and waterway traffic, present unique challenges. As the movable bridge continues to operate throughout construction, maintaining a safe work environment for the client's bridge operators is of the utmost importance. In construction of the new addition to the control house around the existing structure, temporary measures must be taken and adjusted continuously to ensure the safety of the operators and the traveling public. The bridge is operated from the existing structure at roadway level until switched to the new system, which will be controlled from the new console installed at the second story level.

Deck rehabilitations may be performed only in the late-fall and winter months, and these limited restrictions authorized to both roadway and waterway traffic, present unique challenges.

Another challenge in rehabilitating this 1957-built structure, is maintaining span balance within tight tolerances to ensure the spans are safely operated from the aged and outdated electrical and mechanical equipment. Throughout construction, each leaf must be span heavy with a positive toe reaction between 1,000 and 5,000 pounds with the bridge in the closed position. In order to accomplish these requirements, balance adjustment needs to be performed throughout construction. However, this task is complicated by the

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Containment platform installed on the far leaf to support cleaning and painting operations

Replacement of steel grid deck on the eastbound traffic lanes

Crew removes existing grid deck welds by air arc gouging

Another challenge in rehabilitating this 1957-built structure, is maintaining span balance within tight tolerances to ensure the spans are safely operated from the aged and outdated electrical and mechanical equipment.

existing balance pockets in the counterweight which were discovered to be too difficult to access. Therefore, adjustments to interior pockets could not be performed without a partial opening. When this accessibility problem was identified, American Bridge requested and was approved to change the design for the steel balance plates being installed at the toe of each leaf. This made it possible to be safely handled by two workers and used as the primary option for adjustments to span balance. Per pound, adjustments performed with the steel balance plates at the toe are 7.6 times more effective than adjustments performed in the counterweight cavities. This deviation increased efficiency and made this support task a much safer operation.

Crew pulling three new submarine cables across the intracoastal waterway

To date, American Bridge and its forces have completed all deck replacement and rehabilitation on the eastbound traffic lanes, X-bracing replacement and substructure concrete repairs. The new addition to the control house has been completed with the exception to interior finishes. The new bridge control system and submarine cables have been installed and bridge electrical work substantially completed this summer. Throughout the fall, machinery replacements and refurbishments will continue along with bridge electrical work. Bridge operations were switched to the new control system this summer as the machinery continues to be replaced. Cleaning and painting of the structural steel is being performed along with the interior finishes to the new control house addition. Deck replacements and repairs to the westbound lanes will begin in October of 2013 along with the replacement of the center span lock machinery. Project completion is scheduled for February 2014.

Staging machinery components on the machinery platform for replacement

Span balance adjustment utilizing steel balance plates installed at the span's toe

LMC placement on the eastbound traffic lanes

U.S. MISSISSIPPI river bridge

As just one of two designated hurricane evacuation routes this project involves unique challenges for AB

Contribution by William Felker, P.E., Operations Manager
Imagery by Joseph Stilson, Field Engineer

AB project team

William Felker, P.E., Operations Manager
Mike Wade, Superintendent
Johnny Kelly, General Foreman
Joseph Tumas, Quality Control Manager
Ironworkers Local 632 in Baton Rouge, LA
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Field Engineers: Benjamin Berardino, Taryn Skalski, Daniel Stauffer and Joseph Stilson
Design Engineers: Nick Greco, P.E., Cory Hadden-Leggett and Win Patchell Jr., P.E.
Estimating Staff: Andrew Graff, Raymond Rieck, P.E. and Brad Saver

On January 11, 2012 the Louisiana Department of Transportation and Development (LADOTD) opened bids on a project to clean, paint and perform structural repairs to the U.S. 190 Bridge over the Mississippi River. This bridge connects East Baton Rouge and West Baton Rouge parishes just north of the Louisiana State Capitol. The successful bidder was a joint venture of Liberty Maintenance, Inc. of Youngstown, Ohio and Alpha Painting and Construction Company, Inc. of Baltimore, Maryland with American Bridge as their structural repair subcontractor. The total contract is valued at $74.8M with American Bridge's portion accounting for roughly $20M of the total contract. The overall scope of the project includes removing the existing lead-bearing coatings and rust by abrasive blasting, applying a prime coat, performing structural repairs, and finally, applying the intermediate and final coats of paint. The U.S. 190 Bridge is owned by the LADOTD. The bridge carries a single rail line across the river and it is shared by the Kansas City Southern Railroad and the Union Pacific Railroad. American Bridge's portion of the project was designed for LADOTD by the Baton Rouge office of TRC Engineering Services and TRC's subconsultant, Rahman and Associates of New Orleans. On-site inspection and project administration is being performed for LADOTD by Modjeski and Masters of New Orleans.

Painted west approach

Railroad tower diagonal bracing replacement

Bottom highway horizontal member replacement

HISTORY

The U.S. 190 Mississippi River Bridge is actually named the Huey P. Long Bridge after the 40th Governor of Louisiana but is often referred to as 'the old bridge' by the locals. (The 'new bridge' is the Horace Wilkinson I-10 Bridge in downtown Baton Rouge. It was built by American Bridge beginning in 1966 and opened to traffic in 1968.) The U.S. 190 Bridge was opened to traffic in August of 1940. It was the second Mississippi River Bridge to open in the state of Louisiana, opening five years after the first Huey P. Long Bridge in New Orleans. The U.S. 190 Bridge was one of two Mississippi River crossings in the entire state until 1958. When the bridge opened it was a blue color, but in the 1960s the state repainted the bridge its current orange color to mask the staining from a nearby aluminum plant. The most recent major rehabilitation of the bridge was in 1985 when the highway girders were widened from 12'6" centers to 15'-0" centers, allowing for wider lanes on the bridge for the motoring public.

The overall length of the bridge and approaches is 12,311' (2.33 miles) from railroad abutment to railroad abutment. The main river span is a 3,326' long cantilevered truss carrying a single rail line with two lanes of traffic cantilevered off each side of the superstructure. The railroad and highway approaches are elevated simple spans supported by a series of steel towers and bents. The railroad approaches are about 3,650' long east of the river and nearly 5,300' long west of the river. The highway approaches are over 800' long east of the river and over 1,725' long west of the river.

SCOPE

This project is Phase I Cleaning, Painting and Repairs with project limits from highway abutment to highway abutment (5,897' or 1.11 miles), including the main cantilevered truss. The Liberty/Alpha Joint Venture (JV) establishes

U.S. MISSISSIPPI
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access and performs the cleaning and painting, American Bridge performs the repairs. Notice to proceed was issued to the JV on June 28, 2012 and after a 90-day assembly period the first workers were on-site September 24, 2012. The contract duration is 520 working days. The project is presently expected to be complete in late 2014 to early 2015.

The bridge is only one of two river crossings in the Baton Rouge area, a designated hurricane evacuation route and needs to be at full operating capacity at any time upon short notice.

There are over 8,900 individual structural repairs shown within the contract documents divided into over 120 specific bid items. Repairs range from clipping the edges of plates distorted by pack rust to full replacement of structurally deficient members. There are also various bearing and bearing assembly replacements throughout the structure. In addition, the contract documents anticipate the removal of 106,000 deficient rivets and replacement with A325 bolts. This is in addition to the 40,000 rivets incidental to repairs, bringing the total to an astounding 146,000 rivet removals.

PLAN

As with all American Bridge projects, this one presents its own set of unique challenges outside of dealing with Louisiana's notorious heat and humidity. The U.S. 190 Bridge, being only one of two river crossings in the Baton Rouge area and a designated hurricane evacuation route, needs to be at full operating capacity at any time upon short notice. This limits lane closures to 9:00 a.m. to 3:00 p.m. daily, and only a single lane in each direction. The contract allows daily closures of the railroad track from 7:00 a.m. to 5:00 p.m., since it is only one of two Mississippi River rail crossings in the entire state. There will also be several full overnight closures, one direction at a time, through the project to allow for bearing replacements at the abutments and piers. Additionally, lane closures or restrictions have to be scheduled so as to not impact sugar cane hauling season or home football game traffic for Southern University or Louisiana State University.

The nature of the work also presents its own set of unique challenges. Detailing of structural replacement members is being done for AB by Finnoe Design, LLC in Mead, WA. The contract drawings do not fully detail the repairs. It is AB's responsibility to develop details using the contract reference drawings from the original construction. The quality of the reproductions of the 75-year-old original tracings is very poor. Thus, Finnoe details each repair to the extent they are able and forwards the details to AB's field staff. Field verification of dimensioning is performed on each member and the marked-up details are returned to Finnoe for final revision and submittal to LADOTD for review. Once the LADOTD review is complete, final details are released to AB's steel fabricator, Greiner Industries in Mt. Joy, PA.

Per contract requirements, the bridge is to be abrasive blasted and primed, inspected to confirm contract repairs and identify any repairs not specified in the contract, repaired, and then the final two coats of paint applied. By the time the first sections of the bridge were blasted and primed, the approaches had been detailed and 90 percent verified in the field. This enabled Greiner to get an early start on fabrication activities and thus keep fabrication off the critical path. Additional repairs identified in the post-blast inspections are detailed and fabricated as quickly as possible so as to not impact the flow of the repair work.

It became obvious early in the planning phase that effective management of the numerous parts and pieces was going to be crucial to the schedule, control and success of this project. In conjunction with the Liberty/Alpha Joint Venture, AB developed a system whereby the project was broken up into 65 zones corresponding to the JV's painting containments. The zones are numbered sequentially from east to west as follows: east approach zones 1 through 6, truss zones 7 through 52, and the west approach zones 53 through 65. A typical 'approach zone' encompasses both the highway and railroad structure including one bent tower and one long girder span, whereas a typical 'truss zone' spans two panel points.

U.S. MISSISSIPPI
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Overall view of truss span

Crane mat access road

Bent containment with lifts to railroad girders

U.S. MISSISSIPPI
continued

American Bridge's Engineering Department has done a tremendous job with the many required engineering submittals. Nearly all of the 123 bid items require engineering analysis of the existing structure to ensure that the work plan would not compromise the structure. AB modeled an entire approach zone using LARSA 4D which took into account all of the highway loading per AASHTO, railroad loading per AREMA and wind loading on the entire zone with the JV's containment. Detailed analysis combined with careful planning enabled development of a repair sequence that allows removal of multiple members at once without temporary supports. In addition, eight different schemes were developed for the various jacking operations required throughout the job. Jacking is required for replacing the highway bearings at both the abutment and at the piers, replacing the railroad rocker bearings at the piers, replacing bronze sliding plates throughout the approach railroad girders, railroad stirrup bearing repairs throughout the truss, replacing bronze sliding plates in the truss false chords and two different jacking schemes for vertical member repairs throughout the truss.

Bottom highway horizontal member replacement

Railroad tower diagonal bracing replacement

Anchor bolt after blasting and cleaning

STATUS

The structural repairs on the west approach commenced in late February and completed in mid-July. With a craft work force of about twenty ironworkers, primarily from Local 623 in Baton Rouge, working six days a week, work has been progressing west to east. On any given day, there is work ongoing in the railroad girders or in the towers in four to five zones. Access to the repairs is being provided by the JV's Safeway Scaffolding System, by a chain link fence access platform located underneath both the highway and railroad girders and by man-lifts. The large crew working in so many areas simultaneously requires the project staff to be constantly planning and scheming to keep everyone productive and safe. Through May the project has worked over 22,000 manhours without a recordable incident, a testament to the effectiveness of the detailed planning efforts.

Typical bent repairs include clipping gusset plate corners that have pack rust built up, replacing deteriorated horizontal and diagonal members, gusset plates, lacing bars and replacing deficient rivets. Repairs in the railroad girders include replacing deteriorated gusset plates on the top and bottom flanges, top and bottom laterals or struts, fixed and shouldered bearing bolts and bronze sliding plates at the girder expansion bearings. Future approach work includes replacing the existing fixed and expansion highway bearings, railroad rocker bearings and installing new anchor bolts at all of the bent tower bases. Work on the east approach began in late June and is expected to complete this fall.

Moving railroad ties to gain access

Multiple complete highway tower repairs

Typical railroad girder work area

After the approach work is complete, focus will be on the cantilevered truss. Repairs in the truss include replacing deteriorated lacing bars and diaphragms, miscellaneous steel repairs to a wide variety of locations throughout the sway frames, portals, columns and floor beams, as well as lateral, gusset and stiffener repairs throughout the railroad girders. AB will also install a new safety rail system running the entire length of the top chord. A substantial portion of the truss work is replacing deteriorated rivets. It is expected that over 100,000 rivets will need to be replaced throughout the truss. Access for all of the truss repairs will again be provided by the JV's chain link fence platform and Safeway Scaffolding.

HUMAN *resources*

Simplified explanation about the new healthcare offerings mandated by the government

TOPIC FOR DISCUSSION – HEALTHCARE REFORM

Since there will be many changes to healthcare beginning January 2014, the subject of healthcare reform – The Patient Protection and Affordable Care Act (PPACA) – is on everyone's agenda. To keep our employees updated, we thought we would offer a brief, simplified explanation about the new healthcare offerings mandated by the government.

Starting in January 2014, employers must offer what the government is calling 'minimum essential coverage' to all employees. There are three different levels of calculations that an employer must work through in order to see how they measure up when it comes to healthcare offered to the employees. The calculations are long and confusing, but the bottom line is that it comes down to what an employee pays for employee - only coverage. Family coverage amounts are not considered. If an employer does not 'pass' all three calculation tests, then they must offer employees vouchers to go to **Exchanges** – separate entities that will be set up to create a more organized and competitive market for health insurance by offering a choice of health plans. There will be four 'metallic levels' on the exchange: platinum, gold, silver and bronze. Each level will offer different percentages of coverage. Public exchanges will offer the government sponsored plans and the private exchanges will offer comparable plans by insurance companies.

There are three different levels of calculations that an employer must work through in order to see how they measure up when it comes to healthcare offered to the employees.

So with all of that information, how does American Bridge fit into this? At this time, our employees should not have to 'shop' for healthcare at the exchanges. Since the employees pay only 15 percent of the overall cost and the plan has a lot to offer, American Bridge easily passes the government calculations and our employees need not worry about alternative healthcare.

If at any time you have questions on healthcare reform or American Bridge's healthcare, please call Kathy Bonetti at 412-631-1079 to discuss in further detail.

EMPLOYEE ASSISTANCE PROGRAM

The Employee Assistance Program (EAP) is provided to American Bridge employees at no cost. It is affiliated with the company's life insurance policy. The EAP program can assist employees in many different areas such as, stress and anxiety management, depression, financial and legal concerns, identify theft and fraud resolution among other items. EAP also has a WorkLife Services Program where Horizon Health can perform research and provide referrals for such areas as locating a reputable child care or elder care service, education, adoption, travel, daily living, etc. To utilize the services you can contact Horizon Health at 888-293-6948. The phone answers 24 hours a day, 365 days a year. You can also visit their website at www.horizoncarelink.com. Enter 'standard' as the login ID, then enter 'eap4u' as the password. Please contact the Human Resources Department with any questions regarding the EAP service.

HIGHMARK BLUE CROSS/BLUE SHIELD

Effective January 1, 2014, two pharmacies will no longer be available through our medical provider. They are Target and Walgreens. If you use Walgreens or Target and have new prescriptions you are getting filled, you may want to start utilizing a new pharmacy now. If you go into a Walgreens or Target after January 1, 2014, they can transfer over any existing prescriptions and refills you may have to another pharmacy. It is quick and easy with only a phone call from the old pharmacy to the new pharmacy. All other pharmacies, which were in the network in the past, will stay in the network. If you would like to locate a new pharmacy close to you, log in to the Highmark website at www.highmarkbcbs.com and you will see a locator tab in the middle of the page. Click on 'Find a Pharmacy'. Then you will click on the Premier network. If you have any questions, call the Human Resources (HR) Department.

AB FOCUS *safety*

AB initiates a comprehensive safety awareness program to focus attention on single safety topics

Contribution by Henry Mykich, Director of Safety and Scott Gammon, P.E., DBIA, Vice President – Midwest District and Chairman of Senior Management Safety Committee

The Senior Management Safety Committee for American Bridge Company initiated a comprehensive safety awareness initiative in 2013 called the *AB Focus on Safety* program. The initiative is to focus attention on a single safety topic each month that has a high degree of relevance to typical AB construction operations. In development of the 2013 topic list, various resources were reviewed by the committee, including OSHA's list of the top 10 most frequently cited construction standards in 2012. The final list of 2013 *AB Focus on Safety* topics include:

February	Eye/Face Protection
March	Fall Protection
April	Cranes
May	Rigging
June	HazCom
July	Electrical Safety
August	Forklifts
September	Fire Protection
October	Personnel Lifts/Scaffolds
November	Respiratory Protection
December	Ladders

The final week of each month, the corporate safety department distributes to all employees with an AB email address an *AB Focus on Safety* topic outline for the subsequent month. The topic is required to be used by all AB construction projects as a mandatory 'Toolbox Talk' during the first week of the following month. In addition, every Monday morning all AB employees receive an AB Safety Gram e-blast in their company inbox. The message provides brief tidbits of information related to the monthly focus topic. For AB employees working on a joint venture project or not directly associated with AB's construction operations, program participation is not mandatory; however, the *AB Focus on Safety* topic and AB Safety Gram may be reviewed to enhance their overall safety and health knowledge.

Our stated safety mission at American Bridge is to: 'Protect the health, safety and welfare of each other through the achievement of a ZERO incident workplace'.

Our stated safety mission at American Bridge is to: 'Protect the health, safety and welfare of each other through the achievement of a ZERO incident workplace'. The safety committee believes that achievement of our mission demands that we remain ever vigilant in our efforts to keep safety in the forefront, and that the program is just one additional tool that we can use to do just that - keeping safety in the forefront.

ABridge to SAFETY excellence

EMPLOYEE *profiles*

Employees talk about the rewards and challenges of working for American Bridge

Nick Greco, P.E.

Starting in the construction industry in 2000, Nick Greco has extensive experience in erection and planning of large and complex projects such as the Las Vegas High Roller in Nevada, the San Francisco/Oakland Bay Bridge Self-Anchored-Suspension Superstructure in California, the Woodrow Wilson Bridge Bascule Spans in Washington, D.C., the Puerto Rico Convention Center, the San Diego Padres Baseball Stadium (Petco Park) in California and the Gateway Boulevard Bridge over Cumberland River in Tennessee. He has attained considerable and varied knowledge throughout his career from holding the positions of intern, field engineer, project engineer and chief engineer. Nick has been published in the ASCE Journal of Structural Engineering, holds a Master's and Bachelor of Science in Civil Engineering from the University of Pittsburgh and is affiliated with the American Institute of Steel Construction and the American Society of Civil Engineers.

What are the most rewarding and unique aspects of your current job?

There is no better feeling than seeing your work product come to life. A lot of time, effort and collaboration by multiple individuals is put into all of our work plans whether it's a single operation like a critical lift or the overall sequence of erection. It makes you very proud to see these plans executed safely and successfully and motivates you for the next challenge.

What do you enjoy most about working for American Bridge?

The present culture here at American Bridge, built on over 100 years of successful history, is second to none in our industry. AB is made up of some of the industry's most talented and focused individuals proud to represent the American Bridge name, work together as a team and execute the most challenging projects safely and successfully, while having fun in the process.

How did your background/previous work prepare you for your current role?

Nothing could have prepared me more than my 10 years out in the field. The field is truly where you become a better, well-rounded American Bridge engineer working day-to-day with the project superintendent, foremen and your fellow field engineers. It's where you build your construction means and method knowledge from your day-to-day experience of coordinating and overseeing an operation and how to implement all the tools and equipment available into a work plan.

What is the most challenging project(s) you worked on at AB and why? Please explain.

Every job I have worked on and am currently working on has been extremely challenging and that's what makes our company great. If I had to pick one project, it would be the San Francisco/Oakland Bay Bridge Self Anchored Suspension Superstructure. The scale of the project is enormous but the technical challenges are even bigger. Working on the construction of the tower was an experience of a lifetime. We had a great team that worked really well together to overcome all the challenges we faced. The sheer size of the tower pieces forced us to be very innovative with the erection engineering, rigging and equipment used to erect the tower. In addition to working on the means and methods of the tower we also had to coordinate the design of and erection plan for the T1 erection tower (the tower used to build the tower). Coordinating all of this amongst ourselves and with other designers, suppliers and project staff around the globe was a hard challenge to overcome.

What advice can you offer to those seeking a career similar to yours at American Bridge?

The best advice I could give would be to have a very positive attitude, a strong work ethic and be ready to work with lots of personalities. You can be the smartest and sharpest engineer but you must have that 'can do' attitude, be ready to make the most out of your day every day to keep the project moving, and to work with your team or else those smarts won't do you much good.

Jeremiah Beiter, E.I.T.

Jeremiah started his career with American Bridge in 2012 as a field engineer on what will be the largest observation wheel in the world once complete – the Las Vegas High Roller. Before joining American Bridge, Jeremiah worked as a tradesman for Bedrock Developers, LLC and as a co-op intern at Massaro Corporation Construction Management Services, LLC. Jeremiah holds a Bachelor of Science in Civil Engineering with a concentration in Structural Engineering from the University of Pittsburgh.

I understand you did a study-abroad program in Ecuador on a senior design research team while studying at the University of Pittsburgh. Can you tell me about your time there?

As part of my senior design project for the University of Pittsburgh I had the opportunity to travel to Tena, Ecuador. I lead a group of my classmates in the design of a water treatment facility that was cost effective and that the indigenous people could easily maintain long-term. It was my first exposure to a developing country and I gained useful insight into the various ways people live outside of the U.S. The project posed unique challenges to my team. We implemented local materials we were unaccustomed to working with, navigated through cities where we did not speak the local language and designed a system that could be afforded by an extremely impoverished village. I gained priceless experience in using various testing and data collecting equipment and my role as project leader gave me experience in project management.

What undergraduate programs or courses that you took are helping you on the job today?

My Steel Structures course was vitally useful as the majority of my current work revolves around steel design. The various design classes I took also gave me experience in working with teams to complete a project.

How did your background/previous work prepare you for your current role?

My background in construction gave me the ability to immerse myself in the civil engineering industry, allowing me to understand the main processes quickly. Experience as tradesperson has been a proven aid in connecting the way each worker performs with my designs. It has prevented situations where a similar design may not allocate room for a worker to access and perform a task. My experience in construction exposed me to a variety of equipment providing knowledge of different options available to me to complete unique tasks.

As a construction management co-op I learned all of the major documents associated with the civil engineering industry and how they are utilized and processed for increased project efficiency. During this time, I worked on a multiple-prime-project that taught me the intricacies and strategies of dealing with numerous contractors. I have been trained to recognize common job site hazards through my exposure to many OSHA policies and a site inspection by an OSHA official. Each of these experiences and my continued learning at American Bridge gives me the knowledge I need to complete my current job as safely as possible.

How does it feel to be a part of the team building what will be the world's largest observation wheel? What have been the most challenging aspects of the project to this point?

I feel a great sense of pride in being an iatrical part of the Las Vegas High Roller and am excited to tell people about the wheel and the capabilities of American Bridge. I look forward to facing the unique challenges each day and am constantly innovating new methods to overcome them successfully. The most difficult aspect to overcome thus far in the project has been coordinating efforts locally in Las Vegas with the work globally. Many systems use unique numbering sequences that must be adapted to maintain steady flow of work and translations across the different nations create many new obstacles.

What do you enjoy most about the environment in the AB field and how does it differ from the other companies you have worked with?

I really enjoy the responsibilities I'm given at American Bridge. I have the privilege of working alongside a great project team that is always willing to help, but I am trusted to take on large efforts and complete them. Everyone I have met while at AB has a great respect for the work we perform and high expectations of their fellow employees. I really enjoy being in a working environment that challenges me, as well as respects and appreciates the manner in which I perform that work.

WELLNESS *program*

The year is past the halfway mark, but you can still complete programs offered for all of 2013

We are now more than half-way through the year and the 2013 Wellness Program. If you are not yet participating in the Wellness Program, you can still start at any time.

Individuals participating in the *10,000 Step Challenge* should be well into the program and nearing completion within the next several weeks. Even if you did not participate in the program initially, you can still sign up and start at any time.

Remember, you can obtain points for many things you are already doing such as dental exams, eye exams and physicals. If you should forget to take your wellness certificate with you to appointments, there are other ways to verify you completed an item such as providing an Explanation of Benefits (EOB). It is so easy to participate in the program and obtain points towards many incentives.

If you have any ideas for wellness incentives or programs, please contact the Human Resources (HR) Department. We are always looking for input from the employees and fresh ideas for the program.

Please keep in mind that some items are featured in certain months, but can be completed any time throughout the year.

COMING MONTHS

September – The focus for September will be CPR and First Aid training. You can contact your local American Red Cross to find out about training classes near you. The easiest way to find your local Red Cross is to visit www.redcross.org and enter your zip code. If you do not have access to a computer, you can call 1-800-REDCROSS. American Bridge will reimburse you for the cost of the training up to a total of $75.

October – The month of October is the beginning of the flu season. It is very important to stay healthy and that is why American Bridge will reimburse you if you receive a flu shot. You must get your wellness certificate signed and turned in the HR Department in order to receive points. We will also need a copy of the receipt for reimbursement.

Kathy Bonetti, Director of Human Resources, American Bridge Company

RETIREMENTS *2013*

Two long-term AB employees were assets to the company for many years

After 26 years with American Bridge as the receptionist at the corporate location, **Diane Bush** was happy to announce her retirement. Anyone that calls into the corporate office has probably spoken to Diane over the years. Her last day was August 30 and after she will begin enjoying her new non-work schedule. Please join me in thanking Diane for her devoted service to American Bridge. She will be missed.

Taking her place will be Maudee Parkinson who will be moving from American Bridge Manufacturing Coraopolis to her new position.

Larry Smith was one of the first management employees hired in 1999 when American Bridge launched a new fabricating company, American Bridge Manufacturing (ABM). He has been an integral part of our ABM management team and has been an invaluable asset in the growth and development of our company as well as a trusted advisor to me. He will be sorely missed on both a professional and personal level.

A retirement luncheon was held in May at the American Bridge corporate headquarters cafeteria where many of Larry's coworkers joined together to celebrate Larry's many accomplishments with good food, conversation and some Larry Smith stories.

Jake Bidosky, Senior Vice President, American Bridge Manufacturing

AB published

American Bridge's involvement and effect on the Ironworkers Union since 1937

American Bridge has had a strong presence in the construction industry ever since the company was formed in 1900. In the book *Without Blare of Trumpet*s by Sidney Fine, the history of American Bridge's involvement with the International Association of Bridge, Structural, Ornamental, and Reinforcing Ironworkers Union (Ironworkers) is depicted. The book covers the 20th century open shop movement as well as the main role played in that movement by the National Erectors' Association (NEA) in which American Bridge was a founding and prominent member. [1] Fine depicts American Bridge's influential role in the association, along with the early 20th century resistance to unionism by the building and construction industry employers, including American Bridge. In its early history, American Bridge preferred to negotiate with the Ironworkers on a job by job or city by city basis. For their part, the Ironworkers preferred not to sign a national agreement, but rather to negotiate with American Bridge on a local by local basis.

After its experience under a union agreement that expired in 1905, American Bridge was very resistant to the Ironworkers, particularly in its many fabricating plants. According to Fine, AB was "determined from the time the steel company formed, and consistent with its labor policy, not to permit the existence of unions in its fabricating plants" (p. 23) and therefore American Bridge was a member of the NEA. The NEA was an organization created "as a negotiatory organization before becoming the nation's first successful national belligerent organization in the building industry" (p. 23) and it served as the nation's "most belligerent national antiunion employer association" (p. 272). According to Fine, the NEA would have been nothing without American Bridge and one other steel fabricating company, Bethlehem Steel.

Fine, S. (1995). Without Blare of Trumpets: Walter Drew, the National Erectors' Association, and the open shop movement, 1903-57. Ann Arbor: University of Michigan Press.

" ... resulted in many years of violence and bloodshed that did not end until a verbal agreement was reached in 1937 between the NEA and the Ironworkers to hire union labor. "

For the next 32 years, the NEA worked to counter the Ironworkers efforts to organize the steel erection industry. This resulted in many years of violence and bloodshed that did not end until a verbal agreement was reached in 1937 between the NEA and the Ironworkers to hire union labor. The NEA continued on after the verbal agreement as an organization prepared to counter any ongoing difficulties in the labor relations of the members, but dissolved when American Bridge and Bethlehem terminated their membership in 1951. American Bridge has been a union employer since the verbal agreement in 1937, though the company did not sign an international agreement until 1962. American Bridge continues to employ Ironworkers under an international agreement today. AB

[1] This original NEA is not to be confused with the new NEA, now known as The Association of Union Constructors (TAUC). American Bridge was also one of the founders of this entity, and is still an active member.

FLASHbacks

Lift bridge built by AB nearly over 70 years ago still carries over 83,500 vehicles daily

Straits of Mackinac Bridge Traveler Replacement

Mackinaw/St. Ignace, MI

AB Order No.: 491210

12 years ago

AB Employees: Dallas Compeau, Superintendent; John R. Schober, P.E., Operations Manager; Josh Perry, Field Engineer; Michael D. Flowers, P.E., Senior Vice President; Michael Cegelis, Vice President – Business Development; Peter Balwant, Field Engineer; William Johnson, Office Manager

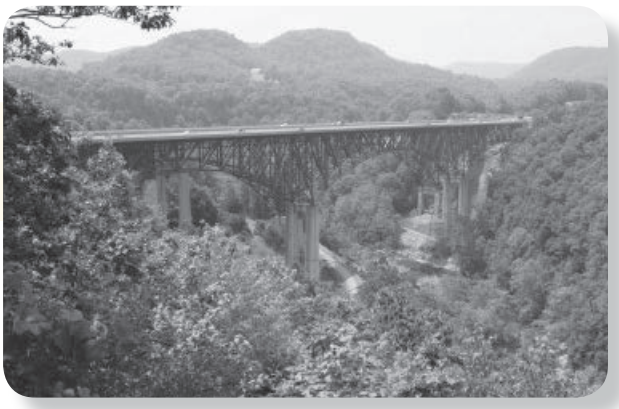
In 2001, American Bridge was the general contractor for this rehabilitation project and self-performed all rail fabrication and vehicle and rail erection tasks. The work included the replacements of the inspection traveler vehicles and 7,400' of the railway system on the 21,000' crossing of the Straits of Mackinac (AB order no. Q-5300-20), originally built by American Bridge in 1957. The work included removal of the six existing traveler vehicles, removal and replacement of 14,800LF of traveler rail in the suspended spans, replacement of rail expansion joints in the existing truss span in ten locations and the furnishing and erection of eight new self-propelled electric inspection vehicles. The vehicles were manufactured by the American Crane and Equipment Company in subcontract to American Bridge. The new travelers are as follows: two each in the south and north truss approach spans; one each in north and south suspended side spans; and two in the main span. The four suspended span travelers have an electric drive transversally movable platform to permit access to the stiffening truss and a hydraulic driven vertical lift to access the bridge stringer system. This bridge, located in Mackinaw/St. Ignace, Michigan, has the longest suspended structure in the United States. In 2001, American Bridge was awarded the National Erectors Association (NEA) Craftsman Award for Ingenuity and Innovation in Construction, Category III (75,001-150,000 work hours) for the traveler replacement project.

Bluestone River Bridge

Mercer County, WV

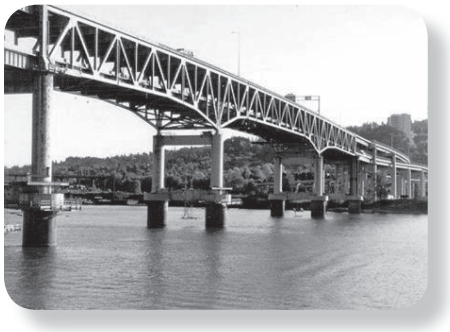
AB order No.: K-7066-71

35



In 1978, American Bridge fabricated and erected the Bluestone River Bridge, a four-span deck truss with one simple span of 288' and three-span continuous truss of 296', 518' and 296' in Mercer County, West Virginia. The bridge has a mainspan length of 518' and the truss length is 1,501'. The bridge has a width of 37.5', which allows it to carry two lanes over the Bluestone River. It has a clearance of 219' and weighs a total of 2,785 tons.

This unit is connected through transverse shafting and through two spur-gear reduction units to operating pinions that engage racks bolted to the tower sheaves.



Marquam Bridge
Portland, OR
AB Order No.: V-8832-37

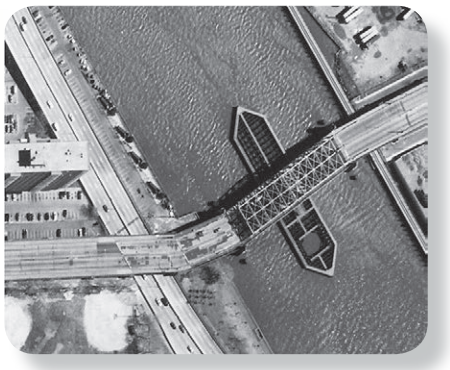
47

American Bridge completed the Marquam Bridge in 1966. This double deck steel continuous truss highway bridge carries Interstate-5 across the Willamette River in Portland, Oregon. It is the busiest bridge in this major metropolitan area with over 136,000 vehicles crossing daily. The main span is 440' and the two side spans are each 301'. The total length of the bridge is 1,044', the width is 57' and it has a vertical clearance of 130' from the lower deck. The upper deck of the bridge carries traffic northbound while the lower deck carries traffic southbound. Originally, the bridge was designed to carry three lanes with shoulders on each deck; however, the bridge now carries four lanes and has no shoulders on the decks.

Passaic River Roadway Lift Bridge
Newark/Kearny, NJ
AB Order No.: H-3050-9

72

In 1941, American Bridge fabricated and erected the bridge superstructure and installed all operating machinery for the Passaic River Roadway Lift Bridge crossing the Passaic River connecting Newark, New Jersey to Kearny, New Jersey. The crossing contains 16-spans and is 1,916' long with a 332'- 6" tower drive vertical lift main span. The bridge is 64' wide and has four lanes for traffic and 6' wide pedestrian walkways. Each of the two main span towers were constructed of two by four-column braced units over the sidewalks connected by portals over the roadway and with trusses and girders at the tops of the towers. The 1,350-ton lift span is operated by 64 plow ropes rolling on four by 15' diameter sheaves, 16 per sheave. The liftspan machinery is tower drive and operation is by a 200HP electric motor in each tower that turns a central herringbone gear reduction unit. This unit is connected through transverse shafting and through two spur-gear reduction units (one at each side of the tower) to operating pinions that engage racks bolted to the tower sheaves. The couplings adjacent to the side gear units are made adjustable by special drilling to permit one counterweight sheave to be rotated with respect to the other when necessary to make the two liftspan shoes at each end of the span seat simultaneously on the piers. This adjustment permits accuracy of seating within .01". In addition to the two 200HP electric motors, a pair of 100HP tie motors are used to synchronize the travel ends of the span. The liftspan was erected on falsework adjacent to the bridge and floated in using tide power only. The average daily traffic on this bridge is 83,500 vehicles.



145th Street Swing Bridge
New York, NY
AB Order No.: AB 1281

111

AB Employees: P.V. Shabbs and W.J. Duddon, Foremen

Over 100 years ago, American Bridge constructed the 145th Street Bridge, a swing bridge in the Manhattan borough of New York City that carries four lanes over the Harlem River connecting West 145th Street and Lenox Avenue. The bridge consisted of a 380' thru lattice rim bearing draw (swing) span with three lines of trusses and two deck lattice spans 120' each with seven lines of girders, and the deck was concrete on buckle plate. The total weight of structural steel was 2,322 tons. AB

Connections
NEWSLETTER
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BEAVER award

Mike Flowers wins Golden Beaver Award

The Beavers is an organization of construction companies in the heavy and highway engineering construction industry. Each year they recognize individuals who have demonstrated particular skill, responsibility and integrity. The Fifty-Eighth Annual Award Dinner was held in January. More than 2,000 members of the industry attended this black-tie event held in Los Angeles, CA. On January 18, 2013, Mike Flowers was awarded the 2013 Golden Beaver Award in the category of Supervision for his achievements and contributions to the industry, and for most recently, in recognition for his exceptional leadership on the construction of the San Francisco/Oakland Bay Bridge Project.

Unfortunately, Mike was unable to attend the dinner to receive his award. On Thursday, August 15, 2013 at The Beavers 50th Annual Beaverdilly, Dave Woods, Executive Director of Beavers, Inc. and Beavers Charitable Trust, officially recognized Mike and presented him with his award.

Michael P. Flowers, American Bridge President and CEO with his award

Dave Woods, left, with Michael Flowers, right, at Beaverdilly