



SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

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ALBANY IA

More than 210 SIA members and guests gathered in Albany May 28-31 for the 44th Annual Conference. This year's conference had a somewhat nostalgic flavor since this region of upstate New York can lay strong claim to being the "Cradle of Industrial Archeology" in North America. The Mohawk-Hudson Survey of 1969 was a pilot study for the Historic American Engineering Record (HAER), establishing standards for documentation of industrial and engineering sites that remain in use today. The SIA had not previously used Albany as a conference headquarters, having stayed in Troy (eight miles upriver from Albany) for both the 2nd Annual Conference in 1973 and the 16th Annual Conference in 1987. The Albany Hilton offered a more urbane environment than the slightly worn hostleries that some members may recall from the past two visits to Troy.

A major theme of the conference was transportation, exploring the region's strong heritage in canals and railroads. We visited some classic historic sites, like the Troy Gasholder House (the inspiration for SIA's logo), but also took in many process tours illustrating both traditional and new manufacturing technologies. The conference followed SIA's customary

format with Thursday pre-tours, Friday process and historic site tours, Saturday paper sessions and annual business meeting, and Sunday post-tour. Saturday's paper sessions were divided into three topical tracks: New York State IA, On the Land and From the Earth, and the 24th Historic Bridge Symposium. The New York State IA track featured several presentations on archival and cultural resources programs supporting industrial heritage research and preservation in the Empire State.

Many thanks go to the volunteers who sent in the following tour reports:

Thursday Tour 1 (Sharon Springs) took 42 participants to a precision investment casting company, a window-sash restoration and manufacturing shop, and a fabric reproduction mill. In each case SIA members outnumbered the workforce but had the equivalent of personal guided tours by owners and skilled workers. Ian Hay ably led the tour and provided relevant commentary on the journey from site to site.

At **AMT castings** (www.amtcastings.com), owners Beth and Lanning Brandell and General Manager Scott Stevens gave a brief introduction to the company, its products, and the lost-wax casting process, and then led four breakout groups on tours. Established on Long Island in 1966, the

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James Bouchard

At the Mechanicville Hydroelectric Plant.

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Brandells purchased the firm in 1988 and relocated it to Sharon Springs two years later at the site of a former metal-working company. AMT supplies an array of high-tolerance castings to aerospace, firearms, and other industries. The parts they make are smaller than a person's fist; some are quite tiny. The tours included the wax room, where wax is molded to shape and multiple wax patterns are joined to form to "trees" with sprues and risers, and the shell room, where layers of a slurry material are built up around the wax trees (and manipulated by a robot named Mi-shell), dried, and made ready for the foundry. Between the slurry room and the foundry, shells are placed in an autoclave where the wax melts away, leaving intricate cavities in the shells. In the foundry, molten metal is poured into the shells. After they solidify, castings are moved to the finishing room where the shell is broken away, parts are cut from the trees, and the castings are finished and inspected.

Contractors' Mill Work is a two-man operation owned and operated by Alden Witham and his son Steve. Housed in an 1868 railroad depot, the company uses 19th- and early 20th-century belt-driven machinery to recondition and

restore historic window sash or to manufacture replacements. The site visit took place in two segments: first, Alden introduced window sash and the techniques for repairing them, demonstrating muntin replacement and glazing while discussing sash components. Then came the *piece de resistance*: immersion in a shop full of vintage wood-working equipment and the freedom to pepper Alden with questions. He demonstrated "flapping belt" operation, engaging the overhead belt drive, and ran a couple of pieces through a sticker and tenoner, but spent most of the time discussing the highly specialized window-making equipment the shop contains. Numerous mortisers, an 1860s belt-driven sash sander, jointers, and table-saws crowd the otherwise spacious facility. Old railroad cars parked on a siding outside contain hundreds more machines, shafts, and pulleys for the drives, and thousands of old windows that provide replacement historic glass for repairing or creating new "period" sash.

The tour of **Thistle Hill Weavers** was led by owner, operator, and textile historian Rabbit Goody and her highly skilled staff of seven (www.thistlehillweavers.com). Thistle Hill produces replica historic fabrics for museums and historic sites and period-accurate textiles for movie sets. Looms and machinery date mostly from the 19th and early 20th centuries. Rabbit and her crew took small groups through the processes that create the diverse types of bespoke cloth. The older weaving equipment is key because it permits almost unlimited flexibility in the design and execution of samples as the weavers recreate historical patterns, color combinations, and fabric textures. The jacquard loom captivated the group, but Rabbit emphasized that, while the jacquard may have emerged as the dominant survivor, weavers created figured designs, particularly in carpets, from the 1790s through the 1860s using a variety of machines, the record of many lost to the popularity and longevity of the jacquard.

Lunch was hosted at historic **Hyde Hall** (www.hydehall.org), where Executive Director Jonathan Maney gave a tour of one of the most technically advanced houses for its era of construction, 1817-1834, with vapor light chandeliers, a watercloset, and a still-mysterious central-heating system with secrets contained in hidden flues and ductwork.

The *SIA Newsletter* is published quarterly by the Society for Industrial Archeology. It is sent to SIA members, who also receive the Society's journal, *IA*, published biannually. The SIA through its publications, conferences, tours, and projects encourages the study, interpretation, and preservation of historically significant industrial sites, structures, artifacts, and technology. By providing a forum for the discussion and exchange of information, the Society advances an awareness and appreciation of the value of preserving our industrial heritage. Annual membership: individual \$50; couple \$55; full-time student \$20; institutional \$50; contributing \$100; sustaining \$150; corporate \$500. For members outside of North America, add \$10 surface-mailing fee. Send check or money order payable in U.S. funds to the Society for Industrial Archeology to SIA-HQ, Dept. of Social Sciences, Michigan Technological University, 1400 Townsend Drive, Houghton, MI 49931-1295; (906) 487-1889; e-mail: SIA@mtu.edu; Website: www.sia-web.org.

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The *SIA Newsletter* welcomes material and correspondence from members, especially in the form of copy already digested and written! The usefulness and timeliness of the newsletter depends on you, the reader, as an important source of information and opinion.

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Matt Kierstead

Duncan Hay [SIA] (left) explains the Harmony Mills turbines, Cohoes.

Great Expectations for Great Falls, Montana 2015 SIA Fall Tour Oct. 8–10

This year's SIA Fall Tour will explore historic and active manufacturing and engineering sites in and around Great Falls. Process tours will include hydroelectric generating stations, a structural-steel fabricator, a regional airliner re-conditioner, and a Minuteman-missile training facility. Historic sites will include the Fort Benton Bridge (1889), the reconstructed Fort Benton, and the Montana State Agricultural Museum. An early-bird tour on Thursday, Oct. 8, will travel to Montana's capital city, Helena, to tour a cement plant, a plant that makes metal-oxide chemicals, and the Western Clay Manufacturing ruins (featured in *IA*, Vol 37, nos. 1 & 2).

Located along the Missouri River, Great Falls is Montana's

second-largest city. It derives its name from a major series of waterfalls along the river that presented one of the major barriers to the Lewis & Clark Expedition in 1805 and then served as the basis for Paris Gibson's hope that the falls' waterpower potential would provide the foundation for the frontier city to become the "Minneapolis of the West." Although the semi-aridity of the surrounding Great Plains prevented Great Falls from achieving Minneapolis' population, Great Falls did attract important smelters, flour mills, and other industrial operations.

Members received registration materials in late July and early August. For late registration information, check the SIA website at www.sia-web.org.

Thursday Tour 2 (USS Slater). In 1991, a non-profit group acquired the **USS Slater**, a WWII-era destroyer escort, from the Greek navy (www.ussslater.org). Today, she is docked as a floating museum on Albany's waterfront. *Slater* is one of less than a dozen surviving destroyer escorts and the only one remaining in the U.S. in its original wartime configuration. Our tour featured specially arranged below-deck access to the engine room. There we were met by a Navy veteran who had served aboard a similar destroyer escort and then accumulated 33 years at Cummins Diesel (SIA Fall Tour 2014, Madison-Columbus, Ind.). Modern tools lining the workbenches attested to volunteer efforts to return the *Slater's* engines to functionality. The diesel engines, made in Cleveland by General Motors, are ready to be started when the non-profit group's insurance company gives its okay for a sufficient quantity of oil to be brought on-board to fill their sizable crankcases.

Thursday Tour 3 (State Capitol). The **New York State Capitol**, completed in 1899 and a testament to late-Victorian architectural taste, is worth a stroll on any day, but this tour included some fascinating areas generally off-limits. The Romanesque Revival-style design, by five architects who disagreed on almost everything, provides a rich aesthetic experience. Our tour was led by Capitol Architect Bevin Collins and her recently retired predecessor James Jamieson who generously shared their experiences advocating for the use of traditional materials and skills in preserving the building. The attic above the Great Western Staircase revealed various phases of structural systems. As we stood above the laylight and below the skylight, we could see delicate-appearing wrought-iron trusses from the Trenton (N.J.) Iron Works, capping the monumental load-bearing masonry walls. Also evident were some less-than-graceful retrofits, most evident a concrete-encased, structural-steel system installed in 1911 after a damaging fire. The attic is also where the architects hang out, and we admired their collection of artifacts from various restorations. Work in these out-of-the-way spaces, much of it done during Jamieson's tenure, helped restore the building's natu-

ral light and opulence that had been lost or covered due to the WWII blackout and subsequent insensitive accretions.

Thursday Tour 4 (Downtown Albany). Our architectural walking tour of downtown Albany was led by Susan Holland and Tony Opalka of Historic Albany Foundation (www.historic-albany.org). The tour began on State Street, near the hotel, an area formerly the city's financial district, and still home to several bank branches. A number of these grand edifices are now used as event centers, and we observed a steady stream of exquisitely dressed guests (obviously not SIA conferees!) crossing between these and our host hotel. Many buildings have Classical architectural motifs, particularly porticos, but as the sun broke through the overcast sky, a slightly newer example jumped out. This was the Home Savings Bank Building of 1927 with its gleaming Art-Deco emblems reflecting the sun. Among the other highlights of this rambling architectural tour was Albany's Pearl Street, once a major shopping district and now home to restaurants and smaller stores. There we observed many examples of fancy carved granite. This is attributed to the three-decade, stop-and-go construction of the State Capitol, which occasionally left skilled craftsmen available for more modest projects.

Thursday Tour 5 (Albany Beverages). All three stops were in an old industrial section of Albany, located near the terminus of the Erie Canal, which ran along what is now Erie Boulevard to the Hudson River. Our tour began at **Nine Pin Ciderworks** (www.ninepincider.com), which takes its name from the Washington Irving story *Rip Van Winkle*, whose protagonist meets a group of men playing the Dutch bowling game and then falls asleep after enjoying too much apple-jack. Nine Pin is an offspring of New York's Farm Cider Law of 2013 that created a special license for hard-cider makers using only apples and other pome fruits grown in-state and producing under 150,000 gallons annually. Nine Pin was founded by Alejandro del Peral and is a family-run operation. We learned that each batch takes up to seven months to complete. The juice is pressed at the orchards and delivered in 330-gallon plastic containers called totes,

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which are also used to hold the finished cider for aging after fermentation. There is no residual sugar after fermentation, so any sweetness must be added.

Albany Distilling Co. (www.albanydistilling.com) opened only three ago yet is proud to be the oldest operating distillery in Albany by taking advantage of new regulations to promote handcrafted alcoholic beverages. It is only 50 yards away from the recently excavated site of a rum distillery that operated from about 1758 to 1810. John Curtin, the enthusiastic young owner, told the history of distilling in the Hudson Valley and explained today's economic and regulatory climate. As at Nine-Pin, small distillers in New York are allowed to offer tastings and sell liquor on-premises if the product is made with ingredients grown in-state. The company also makes rum, in honor of its 18th-century neighbor. We saw several stills, enjoyed the aroma of whiskey aging in fresh-charred, white-oak barrels, then had a chance to taste the result.

The **C.H. Evans Brewing Co.** (www.evansale.com) is located in the former Albany Pump Station, built in 1850 for pumping water from the Hudson to the Bleeker Reservoir. The station was decommissioned in 1932, but its two overhead cranes remain and were used to install the stainless-steel fermentation and serving tanks before the brewery opened in 1999. The owner of the company, Neil Evans, is descended from a family of brewers who owned a commercial brewery in nearby Hudson, N.Y., from 1786 to 1920. The old family business died with Prohibition so now

Neil is reviving the tradition. There is a good deal of family memorabilia on display in the pub.

Friday Tour 2 (Power & Transportation) visited five sites related to power generation and transportation with lunch at a sixth along a 20-mile stretch of the Hudson between Albany and Mechanicville. Two busloads (100 people) visited these sites in a different sequence, converging with two of the other tours at lunchtime—a choreography reminiscent of old-time SIA tours. One bus was led by Simon Litten and Hank Bankhead, the other by Duncan Hay.

Amtrak's Rensselaer Maintenance Facility is the service hub for all Empire Corridor trains (New York City to Niagara Falls) and is responsible for 28 locomotives, several switch engines, and 60 coaches plus some baggage cars. It is located on the east side of the Hudson, just north of Albany/Rensselaer station. The current maintenance facility was opened in 1976. It has five tracks and inspection pits under roof and a wheel-turning shop in a nearby building. Daily inspection and servicing takes two hours per train. Replacing a locomotive truck (two motors and four wheels) takes five hours. Upgrade and overhaul of engines may take weeks. Our visit included a walk through the yards, the engine shop, several cars, and the cab of locomotive that was being upgraded.

Our next stop was **Empire Generating** (www.empire-gen.com), a natural gas-fired, combined-cycle, electric-generating plant with maximum capacity of 635 mW that began commercial production in 2010, located on a former



Duncan Hay

Amtrak shops in Rensselaer.



Michael Hoyt

Historic bridge tour group at Enlarged Erie Lock 28 (1842) near Fort Hunter.

Eric Nystrom—2015 Vogel Prize Recipient

From its very inception, the SIA has been fascinated with mining history. Industrial processing plants for converting raw materials into mineral products have frequently been the focus of process tours. These tours have, however, always been above ground. Seldom, if ever, have industrial archeologists ventured underground into sites either off limits or simply too dangerous to explore the places and artifacts that gave these mining sites their reason for being.

That is, until Eric Nystrom of Rochester Institute of Technology wrote “Underground Mine Maps and the Development of the Butte System at the Turn of the Century” published in Vol. 37 of *IA*. Eric takes industrial archeology underground as he explores the historical significance and industrial context of mine maps. Framing maps as important artifacts in and of themselves, Eric demonstrates that mine mapping offers vital clues to archeologists about mine company economics, development, and engineering, particularly through the work of David W. Brunton and Horace V. Winchell as they utilized the innovative Brunton pocket transit. While illustrating the close link between geology and industrial enterprise, mine maps also yield important information on company history. Eric describes the increasing role played by geologists at the turn of the 20th century who worked in concert with engineers in developing the Butte mines. Eric combined archeology and industrial and corporate history with artifact analysis to weave a compelling narrative about the individuals who pioneered underground mapping and the artifacts they left behind for future industrial archaeologists.

On behalf of the Vogel Prize Committee, it gives me great pleasure to announce the award of the 2015 prize to Eric Nystrom.

Delivered at the Annual Business Meeting by David A.



Gianfranco Archimede

David A. Simmons presents the 2015 Vogel Prize to Eric Nystrom at the Annual Business Meeting.

Simmons on behalf of the 2015 Vogel Prize Committee: Marco Meniketti, Chair, David A. Simmons, Tim Tumberg, Paul White, and Arron Kotlensky

*Each year the SIA recognizes outstanding scholarship in the field of industrial archeology with the Robert M. Vogel Prize. Named for SIA co-founding and distinguished member Robert Vogel, the award honors the author of an outstanding article to appear in the journal *IA* within the past three years. The prize consists of a cash award and a wooden foundry pattern bearing a plaque engraved with the recipient's name. Articles selected must have a clearly stated thesis and well-constructed narrative. Analysis of material culture and high-quality illustration that support the thesis and conclusion are also important measures of scholarship worthy of the prize. Selection is made by the Vogel Prize Committee consisting of five members appointed by the president, who serve five-year terms. ■*

brownfield site near the Hudson. The plant has both gas and steam turbines. Exhaust gasses from the combustion gas turbines heat the boilers for the steam units. Feed water comes from the City of Albany sewage treatment plant on the opposite bank of the river and is carefully treated before being injected into the boilers. Empire Generating is an independent power producer that sells energy 24 hours in advance, based on anticipated demand and market rates. Only two operators are required to staff the plant.

Albany, located near the head of tide of the Hudson, has served as a port since the colonial period, but the modern **Port of Albany** (www.portofalbany.us) opened in 1932 and spans the Hudson at a point 124 river miles upstream of Manhattan. The channel offers a 31-ft. minimum depth and can accept oceangoing ships up to medium capacity—but no container ships. The port currently has 21 tenants involved in a range of businesses including scrap metal, iron and steel, grain, wood pulp, fertilizer, and some machinery,

including the principal elements of today's large wind turbines. About 500,000 tons of freight move through the port annually, with GE as the largest shipper. We visited warehouses, open store areas, and shipment processing areas. Blades and generator nacelles for dozens of wind turbines had been unloaded shortly before we arrived.

Several SIA buses converged for lunch at **Erie Canal Lock 2** at the base of the Waterford flight of the **New York State (NYS) Barge Canal**. Rising 169 ft. in just over a mile, the five locks of the Waterford flight formed the highest lift in the shortest distance in the world when they opened in May 1915, just 100 years before our visit. We visited the **Canal Maintenance Shops** at Waterford, a short distance upstream, next to Lock 3 (www.canals.ny.gov). The machine shop, in operation since 1921, builds and repairs valves for 57 locks on the canal system and performs various vessel repairs. The wood shop fashions miters and quoins for the lock gates using a nearly century-old sawmill. Also

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in the shops for repairs were Derrick Boat DB-4, nicknamed "The Chief," and the state's largest towboat, the *Grand Erie*. The dry dock was being filled at the time of our visit.

The northern point of our tour was the **Mechanicville Hydroelectric Station**, currently owned by Albany Engineering Corp. It began life as the Hudson River Power Transmission Co. and retains much of its original appearance and early horizontal-shaft equipment. A dam across the Hudson creates about a 12 ft. head in summer and 17 ft. in winter. The plant entered operation in 1897 with seven units. It initially sold most of its power to GE with the remainder to local street railways. The plant remains in operation with the generators producing power at 40 Hz that is converted to 60 Hz for sale to the grid. Due to low flows in the river, only three units were operating at the time of our visit. Lock 2 of the Champlain Canal is adjacent to the station and still retains its powerhouse and 1915 DC hydroelectric generating equipment. We had a chance to compare late-19th-century AC machinery and early 20th-century DC equipment side-by-side.

Friday Tour 3 (New Tech) Our tour guide was Chris Hunter, Vice President of Collections at Schenectady's Museum of Innovation and Science (MiSci), who gave a lively commentary on the bus. First stop was at **Environment One Corp.** (www.eone.com), a subsidiary of Precision Castparts Corp., and like some other enterprises in the Schenectady area, it is a GE spinoff. We saw fabrication of the E/One Sewer System, which grinds wastewater into a slurry that can be pumped through small-diameter pipes to larger sewer mains or directly to wastewater treatment plants. The unit

can operate at low grades and in locations where conventional gravity systems cannot be installed, e.g. very flat, rocky, hilly, or wet terrains. In the same facility, EOne manufactures monitoring and control systems for power plants.

Our second visit was to **Applied Robotics** (www.appliedrobotics.com), established in 1983. Their main service is making industrial robots more cost effective and usable in more applications. They produced the first tool changers for the auto industry, making it possible for one robot to perform several tasks by automatically exchanging one tool at the end of the robotic arm for another. This reduced the number of robots required and the number of positions a car or other product needs to travel during assembly. Applied Robotics also makes collision sensors and "effectors" (grippers for lifting or moving specialized products such as heavy bags of cement). They have even created a robotic bartender for the cruise-ship industry.

We had lunch at the **Empire State Aerosciences Museum** (www.esam.org) where we had a brief tour and heard a presentation on GE's Cold War rocket-testing facility in nearby Malta. Our third stop was at the **Colleges of Nanoscale Science and Engineering** (CNSE, www.sunycnse.com), a part of the new SUNY Polytechnic Institute. The Albany campus has a partnership with SEMATECH with an emphasis on microchips. SEMATECH was formed in 1987 as a government-industry partnership to strengthen American semiconductor manufacturing. Today, businesses provide new equipment to SUNY for educational purposes and prototype testing. They are currently working on the problem of increasing wafer size from 300 mm to 450 mm. We saw an overhead track system used to move wafers encased in Front Opening Universal Pods or FOUPs from one processing point to another. We also saw a variety of production and test equipment.

Our final destination was **Scarano Boat Building** (www.scaranoboat.com), founded in 1974 as a maker of custom passenger vessels. We visited the design studio where every part



Richard O'Connor

Alden Witham at Contractors Millwork sash shop explains operation of a Baxter planer.



David Ferriter

SIA at Ross Valve.

from the hull to the seat cushions is designed. The boats are built to look like classic styles if that is the customer's preference, but the underlying materials may be entirely modern. We saw how curved structural pieces were made with plywood or balsawood veneers. Similarly, painted wood above the waterline will be paired with an aluminum hull clad with composite material below to make the boat easier to maintain. Scarano also restores older boats. We saw a lifeboat from the *Andrea Doria*, which sank in 1956, in the process of restoration. We visited the launch area that uses a 150-ton hoist from Marine Travelift. The highlight was visiting a new excursion boat, nearing completion, designed for architectural tours around Manhattan Island.

Friday Tour 4 (Hudson-Mohawk Industries), led by Ian Hay, visited four sites in the Hudson and Mohawk river valleys. **Ross Valve Mfg. Co.** (www.rossvalve.com) is a family-owned business in Troy, established in 1879. The company expanded to its current location in 2006, relocating to a factory complex that once produced Gardenway and Troy-Bilt rototillers. The Ross Technology Park, as the complex now is known, is home to Ross Valve, Troy Die Cutting (a subsidiary of Ross Valve), and Ecovative, which makes biodegradable packing materials from mushrooms and agricultural waste products. The tour of Ross Valve included the production floors and warehouse spaces. Manufacturing

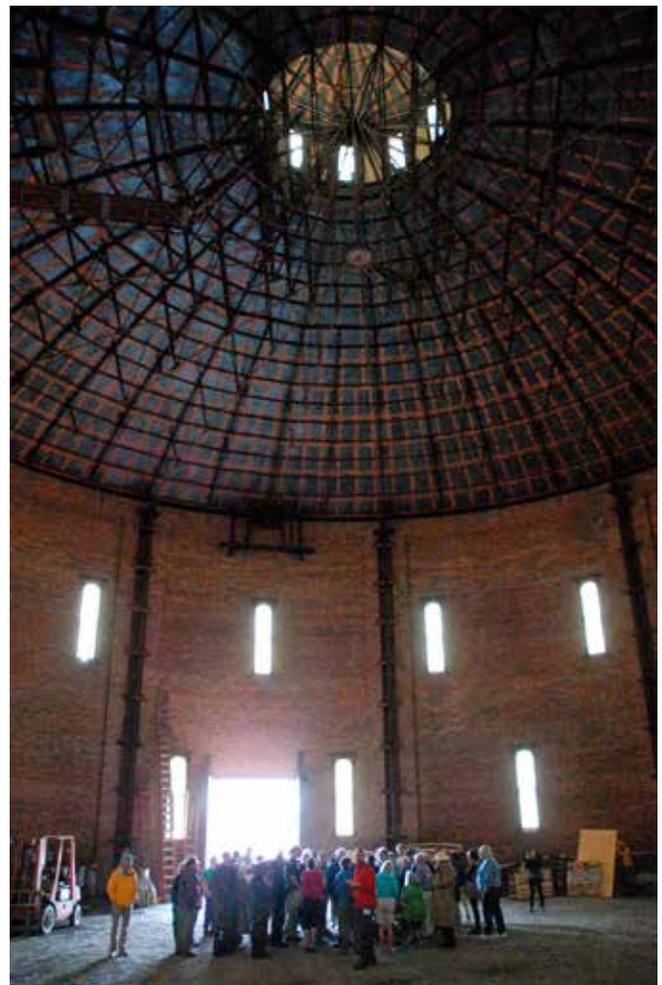
processes, including steel cutting using water jets and CNC machining, were demonstrated. Ross still operates its own bronze and iron foundry in the original plant nearby. At the NYS Canal Maintenance Shops, the tour included the machine shop and saw mill (see Tour 2). Our group met up with three others for a picnic lunch at the Waterford flight before heading south to **Mohawk Paper Co.** (www.mohawkconnects.com), on the old Champlain Canal in Cohoes. There we were shown the entire production process, from bleached paper pulp to the final test printing of the finished product. Mohawk was established in 1931 and is known historically for its fine papers for letterpress printers and today for its premium uncoated printing paper. Our final stop, **Plug Power** (www.plugpower.com) in Latham, offered a behind-the-scenes look at the production of refillable hydrogen fuel cells for forklifts. The innovative product eliminates the time-consuming and costly recharging of traditional lead-acid batteries.

Friday Tour 5 (Historic Bridges). Tour co-leaders Justin M. Spivey and Craig Williams stated early on that "bridges on the move" was this year's SIA Bridge Tour theme because the bridges had either been moved from other locations, were vertical-lift or swing movable bridges, or bridges crucial to the movement of goods on canals or railroads. The itinerary began at the **Normanskill Farm Bridge**, a Squire

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Port of Albany.



Matt Kierstead

Inside the Troy Gasholder House.

Michael Hoyt



Vischers Ferry Bridge, a Whipple bowstring of 1869, gets some love from the SIA bridge tour group.

Whipple-patented, cast- and wrought-iron, bowstring truss fabricated by Simon DeGraff of Syracuse, shortly before Whipple's patents expired in 1869. This bridge was moved here around 1900, spans a deep ravine, and now is open to pedestrians only. After seeing the famous patentee name and date raised in one of the upper-chord castings, one conferee remarked that the entire state of Texas does not have a single bridge as significant as this. It was documented in 1969 as part of the pioneering HAER Mohawk-Hudson Survey.

The next bridge, a short walk from the first, was the three-span **Normans Kill concrete arch** of 1904, now closed to traffic. We were able to walk across this narrow bridge and appreciate the polished black-aggregate finish of the parapets. Next we drove through the Port of Coeymans, where huge steel beams for the new Tappan Zee Bridge are being stored and assembled before being shipped downstream on the Hudson by barge. Our next stop was the **Livingston Avenue Swing Bridge** that carries CSX and Amtrak over the Hudson in Albany. The existing span is a 1906 replacement to an 1866 swing bridge that replaced ferries and opened the New York Central's first all-rail connection between New



Sharon McCauley

Albany Distilling Co.

York and Chicago. Here, we had a lively discussion about the trusses and the perceived load path assignments of their vertical and diagonal members.

After stopping at the stainless steel-clad **Green Island vertical lift bridge**, constructed in 1981 over the Hudson near the head of tidal navigation in Troy, we had lunch at Peeples Island State Park at the confluence of the Mohawk and Hudson. Here, tour members could walk to four nearby truss bridges, including the 1909 three-span, through-truss Union Bridge over the Hudson. This bridge was designed by Alfred Boller and fabricated by Phoenix Iron Works. It stands on piers from the first crossing over the Hudson—an 1804 covered arch-truss designed by Theodore Burr. Waterford is at the junction of the Erie and Champlain canals and our guides pointed out structures of both the 19th-century “towpath era” and early 20th-century “Barge Canal” iterations of those waterways as we rolled through town.

In the afternoon, the tour headed west, up the Mohawk. The first bridge visited was another Whipple bowstring truss at **Vischer Ferry**. This span was originally erected over the Enlarged Erie Canal in 1869, about 40 miles west of its cur-

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Christine Leggio

Inside the sawmill at the NYS Canal Maintenance Shops.



Castings at Ross Valve.

Minutes of the SIA's 44th Annual Business Meeting

May 30, 2015

Call to Order. President Amanda Gronhovd called the Annual Business Meeting to order at 12:30 p.m. Eastern time in the Governor's Ballroom of the Hilton Hotel at 40 Lodge St. in Albany, N.Y.

President's Report. President Gronhovd noted that the 1st Annual Conference was held not far away, at the Cooper Union in New York City. She recognized those who had attended that conference; acknowledged Pat Malone, who has attended all of them; and wished Larry Carr a happy birthday. She noted that this year has been one of transitions, with a new Events Coordinator, the retirement of Office Manager Don Durfee, and the renewal of SIA's contract with Michigan Technological University (MTU). While the Society is doing well, her biggest concern is the continued decline in membership. President Gronhovd asked anyone who knows someone who would be interested in becoming an SIA member to recruit him or her. She thanked the organizing committee, led by Past President Duncan Hay, for a great conference.

Recognition of Conference Organizers and Supporters. Duncan Hay began by saying that he had a great team. He recognized Headquarters staff Don Durfee, Julie Blair, and Pat Martin, as well as *SIAN* Editor Patrick Harshbarger and President Gronhovd, who provided a sounding board to overcome various challenges. He noted that a strong Presentations Committee is one key to a good conference and thanked Maryellen Russo, Justin M. Spivey, Erin Timms, and Kitty Henderson for putting together a great program. He noted that nobody would be here if it wasn't for Simon Litten, who was introduced to Duncan through a colleague and whose great energy made the 2012 Fall Tour in Utica a success. The sites that SIA got into during this con-

ference resulted from Simon's repeated refusal to take "no" for an answer. Simon also led the *USS Slater* tour and one of the Friday tours. Duncan thanked Simon's wife Edna for her support, Chris Hunter at the Museum of Science & Industry for assembling the Film Festival, Craig Williams for leading the Albany Beverages tour and for co-leading the Historic Bridges tour with Justin M. Spivey, who also led the New York State Capitol tour. Tony Opalka and Susan Holland of the Historic Albany Foundation led the Downtown Albany walking tour; Michael Barrett of the Hudson Mohawk Industrial Gateway opened a lot of doors; Ian Hay led the Sharon Springs and Hudson-Mohawk Industries tours (not to mention lots of schlepping); and Bob Radliff, Duncan's boss, saved the day on more than one occasion. Duncan noted that SIA events would not happen without our hosts, not only the ones who let us in the door, but also those who introduced us to others. He thanked the numerous volunteers who pitched in and helped, and all who attended.

Secretary's Report. Secretary Justin M. Spivey stated that minutes of the previous year's Annual Business Meeting were published in *SIAN* Vol. 43, No. 3 (Summer 2014). He asked for amendments or corrections; there being none, President Gronhovd called for a motion to approve the minutes as published. David Simmons so moved, Fred Quivik seconded the motion, and it passed unanimously.

Treasurer's Report. Treasurer Nanci K. Batchelor read her report for the year that ended December 31, 2014. The Society maintains its books and records on a cash basis, and a calendar year for tax and reporting purposes. SIA is classified as tax-exempt under the IRS Code 501(c)(3) as an educational organization and we file a Form 990 tax return yearly. In 2014, we began with a total fund balance of \$248,769. Cash receipts for the year totaled \$100,747. The majority of our annual income comes from membership dues. In 2014, the total dues received were \$61,219. The remaining balance is comprised of interest income, contributions to both the general and restricted funds, publication sales, and excess proceeds from tours and conferences. Total expenses for the year were \$97,379. The production costs of our publications, the newsletter, and the journal combined for a total of \$46,764. \$33,015 went toward labor; postage was \$2,916; insurance, prizes, awards, and scholarships were \$3,024; and the preservation grants program awarded \$2,000. We had a loss on the 2013 Fall Tour, which was not recorded until 2014. Office overhead and a few miscellaneous items made up the rest of the balance. The Society closed 2014 with excess revenues over expenses of \$3,368. The total fund balance was \$253,411, of which \$44,552 is in restricted funds. Through March 2015, the Society has had a total of \$21,185 in cash receipts and has expended \$8,962.

Headquarters Report. Executive Secretary Pat Martin reported that Headquarters is chugging along without



SIA Student Scholarship Recipients, (left to right) John Arnold, Daniel Schneider, and Jessie McNabb.

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Don Durfee with plaque presented in his honor at the Annual Business Meeting. Don is retiring after 17 years as the SIA's Office Manager.

to the conference, born in Ballston Spa, N.Y., and an active railroad modeler. After service with the U.S. Air Force in Fort Worth, Tex., and Thailand during the Vietnam War, Don earned an associate's degree in electrical technology, followed by work at Bell Labs and then at NCR. He then met his wife Mary, who was hired by MTU and brought Don along. Don enrolled in business school at MTU, earning a bachelor's degree in business administration and winning many awards before starting in the IA program, which was then in the process of becoming SIA Headquarters. Don has served SIA for 19 great years, the last 17 of those as Office Manager. Pat presented an award made by Steve Walton, a historic pressure gauge symbolizing Don's ability to handle pressure. President Gronhovd also thanked Don for his service and noted that Pat is also retiring from teaching but will remain as Executive Secretary, so this will not impact SIA immediately. She reported that a long-time SIA supporter has started a fund to benefit IA students at MTU, and anyone interested in making a donation should contact her or visit the SIA website for more information.

IA Journal. Editor Fred Quivik reported that the journal is moving along and had hoped that the latest issue would be out before the conference. Instead, he displayed a proof to show that it will be going to the printer soon. Fred acknowledged Carol Poh's service and her wonderful work as the book review editor. As soon as this issue is printed, he will be ready for the next one, a double issue on industrial waste, with all articles currently on hand, to be followed by another double issue on New Bedford, Mass., guest-edited by Pat Malone, and that to be followed by a recently proposed theme issue on the industrial history of Pennsylvania.

any major complaints from any quarter; the few minor complaints can be ignored. There have been changes in staffing; the Board hired Julie Blair as our new Events Coordinator and is now in the process of also hiring her as Office Manager to replace Don Durfee who is retiring. Don will be sorely missed, having made positive contributions to everyone's experience with SIA. Pat reminded everyone that Don is a local

By the end of 2016, the journal should be caught up to 2015. He closed by saying that he had heard some good presentations at the conference and encouraged everyone with ideas for articles to contact him.

SIA Newsletter. President Gronhovd read a report on behalf of Editor Patrick Harshbarger. In 2014, *SIAN* was published four times per its established quarterly schedule. Patrick wishes to express thanks to the many dozens of members who contributed articles and photographs. He also thanks the members who send a steady stream of interesting IA-related news clippings, books, websites, and videos, which fill out regular columns like *Publications of Interest*, which he often hears is very popular. An especially hearty thanks is due to the dedicated stalwarts who help year after year with copy editing, layout, and mailing. Without them the newsletter would be a lesser publication and considerably more work for the editor. The publication truly reflects the many interests of our members. President Gronhovd added her own thanks to Patrick for his hard work and further encouraged members to send him material for the newsletter.

Industrial Heritage Preservation Grants. Committee chair Maryellen Russo reported that two grant applications were received this year. A committee made up of Jay McCauley, Richard K. Anderson, Jr., Nanci K. Batchelor, and Pat Martin reviewed the applications and selected one recipient for a 2015 grant. The Brewery District Community Urban Redevelopment Corp., a non-profit organization in Cincinnati, Ohio, is developing a Brewery Heritage Trail. The trail illustrates the story of American immigration, ingenuity, ethnic conflict, industrialization, 19th-century living conditions, and the effects of war and a constitutional amendment on local economies. This story is told through the production and consumption of one commodity: beer. The grant application states that Cincinnati is home to the largest collection of pre-Prohibition brewery structures in the U.S. The grant is specifically to fund the documentation of the Schmidt Brothers/Crown Brewery. They will be producing as-built drawings and a three-dimensional computer model of the complex.

TICCIH Representative's Report. As TICCIH Representative Peter Stott was unable to attend, so Pat Martin reported that this year will bring the triennial Congress of the International Committee for the Conservation of the Industrial Heritage (TICCIH), Sept. 6-11, in the northern French cities of Lille and Calais, with excursions to Paris. He noted that it should be a good Congress and encouraged everyone to visit ticcih.org soon, as we are coming to the end of the registration period. He has seen some of the conference venues and there are many interesting sites. Pat encouraged everyone to look on the website or to contact him for more information.

Student Scholarships. Committee chair Alicia Valentino reported that each year SIA awards travel scholarships to assist students with offsetting expenses associated with attending our conferences. The scholarships are offered to

(continued on page 18)



SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

PUBLICATIONS OF INTEREST

Vol. 44, No. 3

Summer 2015

COMPILED BY

Mary Habstritt, New York, N.Y., Justin M. Spivey, East Windsor, N.J., and Patrick Harshbarger, SIAN editor, Wilmington, Del.

GENERAL INTEREST

- ◆ Anthony J. Connors. **Ingenious Machinists of the Industrial Revolution: Two Inventive Lives from the American Industrial Revolution.** State Univ. of New York Pr., 2014. 282 pp. \$24.95. Compares the paths of two prominent inventors: Paul Moody, who followed a secure path as an engineer in the Waltham-Lowell system, and David Wilkinson, a risk-taking entrepreneur from Rhode Island who led industrial development in Cohoes, N.Y.
- ◆ Randall R. Griffey, Elizabeth Mankin Kornhauser, and Stephanie L. Herdrich. **Thomas Hart Benton's America Today.** Metropolitan Museum of Art, 2015. History and interpretation of Benton's murals painted for the New School for Social Research and donated to the Metropolitan Museum by AXA US and newly restored. The panels *Instruments of Power, Deep South, Midwest, Changing West, Coal, Steel, and City Building* depict industrial processes and machinery and their impact on regional landscapes in the 1920s and 1930s.
- ◆ IA News No. 172 (Spring 2015) includes Ian West and Robert Carr, *Gas Holders—the End of an Era* (Great Britain decommissions its last operating mainline gas holders, reflections on the development of the technology and the challenges of preserving the iconic structures); Tom Ridge, *The Historic No. 2 and No. 5 Gas Holders at the Bethnal Green Holder Station*; Colin Marr, *Gas Holder No. 1 at Hornsey Gasworks: A Structure at Risk*; and Colin Bowden, *Newman Brothers, Coffin Furniture Works, Birmingham*; plus a round-up of British IA news. No. 173 (Summer 2015) includes Robert Carr, *Gas Holders—Part 2* (surviving gas holders in European countries other than England); Derek Bayliss, *The Newcomen Engine at Elsecar—Moving Again after More Than 60 Years*; and Michael Nevell, *Industrialising Prison, Georgian Style* (archeological investigations of the 1787-1790 New Bailey Prison in Salford). Published by the Assn. for Industrial Archaeology; www.industrial-archaeology.org.
- ◆ Jonathan Waldman. **Rust: The Longest War.** Simon & Schuster, 2015. 288 pp. \$26.95. In episodic chapters, looks at corrosion and responses to it, from designing aluminum cans to withstand acidic contents like Coke and V8, to the restoration of the Statue of Liberty which suffered from galvanic action between her wrought-iron skeleton and copper skin, to the robot that scans for deterioration in the Trans-Alaska pipeline. Rev.: NYT (Mar. 10, 2015), p. D5 and WSJ (Mar. 14-15, 2015), p. C8.
- ◆ \$28.95. Beginning with Hitler's desire to design a German equivalent of the Model T, tracks the People's Car from 1938 to the present, including its central role in the economic recovery of postwar Germany and its development into a global commodity. Rev.: AHR (June 2014), pp. 826-28.
- ◆ Richard Longstreth [SIA]. **Road Trip: Roadside America from Custard's Last Stand to the Wigwam Restaurant.** Universe Pub., 2015. 208 pp., illus. \$29.95. More than 200 color photographs, mostly taken by the author in the 1970s, focus on vernacular roadside architecture 1920-1960. Short essays preface chapters on commercial strips, restaurants, gasoline stations, motels, stores, and theaters and other places of entertainment. Showcased is the imagination and whimsy of the owners and builders, as well as the entrepreneurial opportunities for attracting motorists with the types of services and goods needed on a road trip.
- ◆ John and Kris Murphey. **Miss Alma Makes a Bee Line: A Story of One Woman and Two Auto Trails.** SCA Journal (Spring 2013), pp. 22-27. Alma Rittenberry was a pioneer good-roads reformer who played an instrumental role in the development of the Jackson Highway (Chicago, Ill.-Mobile, Ala.), starting in 1911. Pushed aside by the men who took over the Jackson Highway Association in 1917, she then formed the North and South Bee Line Highway (Chicago-New Orleans, with a branch to Tampa, Fla.), somewhat predicting sections of several later federal highways.
- ◆ SCA Journal (Spring 2015) includes Douglas Towne, *The Ephemeral Roadside: Billboards* (brief history and personal observations on billboard advertising); John W. Murphey, *The Broadway of America: The Last Named Highway* (late-coming automobile-trail association promoted a transcontinental route from New York City to San Diego by way of El Paso to compete with the Main Street of America, U.S. Route 66); and Virginia Price, *Virginia Welcomes You, Highway Hospitality and the (Re)presentation of Virginia* (first opened in 1964, Virginia's interstate-highway safety rest areas referenced the Virginia's historic architecture and were meant to project an idealized image of the state to tourists.)

AERONAUTICS & AEROSPACE

- ◆ Wayne Crenshaw. **Original Hangar Still Major Part of Robins.** *Macon (Ga.) Telegraph* (Nov. 29, 2014). Building 125 at Robins Air Force Base was completed in 1944 and remains in use because of its size (595,000 sq. ft. or about 10 football fields). Work on the C-5 Galaxy, one of the largest military airplanes in

AUTOMOBILES & HIGHWAYS

- ◆ Bernhard Rieger. **The People's Car: A Global History of the Volkswagen Beetle.** Harvard Univ. Pr., 2013. 406 pp.

the world, is conducted there. A \$56 million renovation project, installing a new roof (in sections), and upgrading the fire-suppression system, is expected to take two years.

- ◆ Jack El-Hai. **Non-Stop: A Turbulent History of Northwest Airlines.** Univ. of Minn. Pr., 2013. 291 pp., \$39.95. The rise and fall of an airline that grew from a tiny regional mail carrier into an international passenger airline that survived while larger competitors like Pan Am failed, only to be destroyed by stock speculation and bad management. Rev.: *Minnesota History* (Winter 2014-15), p. 173.
- ◆ Craig S. Harwood and Gary B. Fogel. **Quest for Flight: John J. Montgomery and the Dawn of Aviation in the West.** Univ. of Okla. Pr., 2012. 242 pp. \$24.95. Montgomery's experiments with gliders in the Otay Mountains of Southern California at the end of the 19th century led to many advances in aviation knowledge. Montgomery, however, is barely recognized in standard aviation histories, largely because he avoided public recognition of his work in order to advance an altruistic research agenda. Rev.: *T&C* (July 2013), p. 669.

AGRICULTURE & FOOD PROCESSING

- ◆ Joseph Berger. **Streit's Matzo Factory, a Piece of Lower East Side History, Is Moving On.** NYT (Jan. 7, 2015), p. A16.
- Kathleen Culliton & Natalie O'Neill. **Beloved NYC Matzo Factory Closing After 90 Years.** NY Post (Jan. 6, 2015). The last family-owned matzo manufacturer in America is shuttering its Manhattan factory on the Lower East Side. The company cited the difficulty of updating 1940s-era ovens in the converted tenements, the difficulty of shipping by truck from Manhattan, and competition from Israeli imports.
- ◆ Michael C. Gabriele. **The History of Diners in New Jersey.** The History Press, 2013. 156 pp., illus. \$19.95. Part history and part reminiscences by diner owners, patrons, and experts, extolls the intrinsic role that diners have played in the state's culture and industry for more than 100 years.
- ◆ Jessica Leigh Hester. **What, Us? Gentrifiers?** NYT (Jan. 4, 2015) p. 1, 7 Metro. Li-Lac Chocolates, launched in Manhattan over 80 years ago and still locally owned and operated, recently moved its factory to Industry City, the new name for Bush Terminal, in Brooklyn. Some neighbors in the Sunset Park neighborhood called its grand opening, a "celebration of gentrification."
- ◆ Lydia Lee. **Grape Expectations: The Evolution of Historic Northern California Wineries Traces the Region's Varying Fortunes.** *Preservation* (Spring 2015), pp. 40-46. A look at mid- to late-19th-century origins of the wine industry, with a focus on some of the surviving architecture.
- ◆ Justin Mitchell. **Pass Woman Keeps Kimball's Seafood Alive for Its 85th Year.** *Biloxi Sun Herald* (Feb. 21, 2015). Seafood business in Pass Christian, Miss., has so far survived the oyster crisis that followed the BP oil spill.
- ◆ Jack Nicolay. **Belmont Farm Distillery.** *Whurk: Virginia Cultural Review*, Issue 25 (Mar. 2015), www.whurk.org. Whiskey distillery in Culpeper County continues to use a copper pot still from the 1930s.
- ◆ **Old Mill News**, Vol. 42, No. 3 (Summer 2014) includes brief histories of the Phelps Brothers Warehouse (mill warehouse in Manton, Mich.), Breneman-Turner Mill (Rockingham County, Va.), and Busti Mill (Busti, N.Y.). Vol. 42, No. 1 (Winter 2015) includes Charles Yeske, *Stover-Myers Mill—Built 1800, Pipersville, Bucks County, Pa.*, *Hurst Frame Restoration*; Brenda Krekeler, *Metamora Mill* (brief history of Indiana mill); Paul Boerger, *Hayden Flour Mills* (established 1874 in Phoenix,

Ariz., continues in operation, specializing in heritage grains); Bud Warren, *Maine's Tide Mill Culture*; Esther A. Middlewood, *Elofsky Mill—For Sale* (Presque Isle, Mich., built in 1881-82). Vol. 43, No. 2 (Spring 2015) includes Alisa Crawford, *50 Years of DeZwaan: Restoration and Revelations for America's Dutch Windmill* (in Holland, Mich., relocated to U.S. from Holland in 1964) and Charles D. Hockensmith, *The Hope Mills: A Steam Powered Flour Mill in Versailles, Kentucky* (built in 1880, now a frame and print shop). Published by the Society for the Preservation of Old Mills (SPOOM), www.spoom.org.

- ◆ Thomas Pellechia. **Over a Barrel: The Rise and Fall of New York's Taylor Wine Company.** Excelsior Editions, 2015. 270 pp. \$26.95. Traces the economic dynamism of New York's Finger Lakes wine region, the passion and ingenuity of the Taylor family who began producing grape juice in 1880, and the shortsighted corporate takeover in 1977 that took down a once-proud American family winery by 1995.
- ◆ John Thomas Slater. **Pioneer Winemakers of Chautauqua County.** *Western New York Heritage*, Vol. 17, No. 3 (Fall 2014), pp. 8-17. Survey of early winemakers in the region, especially the Brocton Wine Cellars (est. 1859). Most local vintners went out of business or switched to grape juice prior to Prohibition, but one exception was Meyer Star, who produced kosher and sacramental wines—both allowed under the Volstead Act for use in religious services. Meyer's family business is now the Cliffstar Corp., a large private-brand food products company. The 1960s saw a revival of winemaking in Western New York, with the replanting of Concord and Delaware grapes and the introduction of French hybrid vines.
- ◆ Leah Small. **City Could Soon Be Home to Craft Brewery.** *The Progress-Index* (Petersburg, Va.) (Jan. 7, 2015). Microbrewery will move to the former City Ice & Coal Co.'s 1890 warehouse.
- ◆ Bruce D. Snider. **Back to the Grind.** *Preservation* (Fall 2014), pp. 28-35. Story of a couple's efforts to revitalize a rural gristmill in Freedom, Maine, through re-use as a restaurant and home-schooling resource center.
- ◆ Henry H. Work. **Wood, Whiskey and Wine: A History of Barrels.** Reaktion, 2015. 237 pp. \$35. Tale of the "container that built America," written by a cooper. In 1910, 91 million barrels were produced in the U.S. Although the industry is much diminished, the current demand for barrels is greater than the supply as the taste for small-batch bourbons has become a trend. Rev.: *WSJ* (Feb. 14 - 15, 2015), p. C8.

WATER SUPPLY & CONTROL

- ◆ Jeff L. Brown. **Drinking the Mississippi: The Chain of Rocks Water Purification Plant.** *CE* (Feb. 2015), pp. 50-53. Located upstream from St. Louis, the Chain of Rocks site is considered the first modern water filtration plant in the U.S. First designed by Minard L. Holman as a sedimentation facility in 1894, it was expanded to include a "huge" rapid filtration system in 1915, and remains in operation today.
- ◆ David W. Dunlap. **Quiet Milestone in Project to Bring Croton Water Back to New York City.** NYT (July 23, 2014). In 2008, Croton water stopped flowing to the city as the water department worked to meet a federal requirement for filtered water. The project to build a new filtration plant, yet to be completed, has been plagued by fraud and cost overruns. Also, **Far, Far Below Ground, Directing Water to the City's Taps.** NYT (Nov. 20, 2014), p. A25. Progress on the Delaware Aqueduct bypass and other upgrades to New York City's water delivery system. The successful installation of massive

replacement guard valves on the City Water Tunnel No. 1 in the Bronx.

- ◆ Robert Ettema and Cornelia Mutel. **Hans Albert Einstein: His Life as a Pioneering Engineer.** ASCE Pr., 2014. 346 pp., illus. \$65. Biography of the son of Albert Einstein describes his career and contributions to hydraulic engineering, particularly theoretical insights and practical methods for understanding sedimentation, critical to unraveling the complexities of rivers. His family relationships and personal life are also discussed.
- ◆ Andy Newman. **Expected Benefits of Renewed Brooklyn Sewage Station Include a Creek Less Foul.** *NYT* (March 24, 2015), p. A20. The 1917 neoclassical Avenue V pumping station that sends Brooklyn sewage into Coney Island Creek has undergone architectural restoration and received \$200 million in new equipment as part of New York City's effort to stop pumping untreated sewage into local waterways.
- ◆ Les Standiford. **Water to the Angels: William Mulholland, His Monumental Aqueduct, and the Rise of Los Angeles.** Ecco/Harper Collins, 2015. 315 pp., \$28.99. Is Mulholland a hero or a villain? The Irish immigrant pulled off one of the greatest civil engineering feats of the 20th century; covered are the dam failures, worker deaths, and protests that became part of building the system that diverted water to the City of Angels.
- ◆ Teresa Stepzinski. **As Controversy Builds, Putnam County Unites to Save Rodman Reservoir.** *Florida Times Union* (Jan. 24, 2015). The earth dam with four spillway gates and a lock was built across the Ocklawaha River in 1968, creating an area of flooded woodlands that now supports a diverse habitat, including manatee cows that "lock through" with their calves to forage in the shallow reservoir. It was originally conceived as part of the Cross Florida Barge Canal, a proposed ship channel between the Atlantic Ocean and the Gulf of Mexico that was not completed. Now, various business interests downstream in Jacksonville want the dam breached to send a constant flow of freshwater through the St. Johns River. This "flushing

of the river" would support a controversial plan to dredge Jacksonville's harbor for the mega-cargo ships that soon are expected to transit the Panama Canal. Environmentalists and fishermen oppose the plan.

RAILROADS

- ◆ Jeff L. Brown. **Around the Bend: Horseshoe Curve.** *CE* (Jan. 2015), pp. 42-45. Completed in 1854 and a tourist destination since 1879, the Pennsylvania RR's Horseshoe Curve may be America's best-known segment of railroad track. Brown discusses the surveying and route-planning decisions that led to this choice of location. [The topographical rationale of the curve is explained and illustrated in *IA*, Vol. 6, No. 1 (1980), pp. 44-45.]
- ◆ Clay Chandler. **Mississippi Railroad Museums on 'Track for Tourism Boost.** *Jackson Clarion-Ledger* (Feb. 14, 2015). The King RR Heritage Museum, the Mississippi Agriculture & Forestry Museum, and the McComb RR Museum are becoming regular stops on the Delta tourism trail.
- ◆ Verina Dobnik. **NYC Subways Slowly Upgrading from 1930s-era Technology.** *NYT* (Dec. 21, 2014). Of the subways two-dozen major lines, just one, the L linking Manhattan and Brooklyn uses computerized, automated signals. The others are controlled by 22 underground "towers" that make use of electro-mechanical systems and human dispatchers, who continue to put pencil to paper to track the progress of most trains.
- ◆ Duke Harrington. **'Roosevelt Ride' to be Restored.** *Kennebunk (Me.) Post* (Mar. 6, 2015). The Seashore Trolley Museum is moving forward with plans to fully restore the Narcissus, an early 20th-century interurban car that operated from 1914 to 1933 on the Portland-Lewiston electric line. The wooden car, complete with stained glass windows, has been in storage since 1969. President Theodore Roosevelt rode the car in 1914 during his Bull Moose Party campaign. Extensive background on the car, as well as the museum's fundraising efforts and restoration plans.
- ◆ Winnie Hu. **Riding the Bronx Rails.** *NYT* (Jan. 4, 2015), p. 1, 7 *Metro*. Test drive of abandoned tracks in the Bronx using a speeder inspires discussion of re-using old tracks for tourism.
- ◆ Michael Laris. **U.S. Effort to Help Build Homegrown Streetcar Manufacturer Falls Short.** *Washington Post* (Nov. 29, 2014). Despite favorable treatment from the U.S. government and orders from Washington, D.C., Tucson, and its hometown, Portland, Ore.-based manufacturer United Streetcar is now "in hibernation." President Kevin Clarke cites difficulties with parts suppliers and the lack of a standardized design.
- ◆ Eileen R. McCormack. **"He Was a Dear Friend." Robert C. Minor: Steward on James J. Hill's Private Railway Car.** *Ramsey County [Minn.] History* (Winter 2015), pp. 3-11. Presents evidence of a close relationship between Hill, founder and president of the Great Northern Ry., and Minor, the African-American steward on his private rail car. The car was often used by family members and Minor was respected and remembered fondly by Hill's wife, children, and grandchildren.
- ◆ Bill Shrankler and Frederick L. Johnson. **Shadows of Time . . . Minnesota's Surviving Railroad Depots.** Woodbury [Minn.] Heritage Soc., 2013. 256 pp. \$40. Illustrated compendium of 168 of the remaining railroad depots in the state. Organized in two parts, those on the National Register and those not, and then by region.
- ◆ Rachel Smith. **Devils Backbone Expansion Includes Plans for Historic Depot.** *Nelson County (Va.) Times* (Mar. 19, 2015). Brewpub is restoring 1870 depot, originally located in nearby Arrington.

CONTRIBUTORS TO THIS ISSUE

Gianfranco Archimede, Paterson, N.J.; Bill Barksfield, East Hagbourne, Oxon, U.K.; Marc N. Belanger, Taunton, Mass.; Julie Blair, Houghton, Mich.; James Bouchard, St. Constant, Que.; Arlene Collins, Houghton, Mich.; Don Durfee, Houghton, Mich.; Donald Empson, Stillwater, Minn.; David Farrier, Kernersville, N.C.; Dennis Furbush, Jackson Heights, N.Y.; Mary Habstritt, New York, N.Y.; Duncan Hay, West Roxbury, Mass.; Neill Herring, Jesup, Ga.; Michael Hoyt, Silver Spring, Md.; Carol Johnson, Oak Ridge, N.J.; Matt Kierstead, Marlboro, N.Y.; Susanna Kuo, Lake Oswego, Ore.; Christine Leggio, Philadelphia, Pa.; Simon Litten, Altamont, N.Y.; Sharon McCauley, San Jose, Calif.; Jean McClellan, Woodstock, Conn.; Anita McKelvey, Philadelphia, Pa.; Bill McNiece, Indianapolis, Ind.; Vern Mesler, Lansing, Mich.; Cydney Millstein, Kansas City, Mo.; Steve Muller, Troy, N.Y.; Sandy Needham, Jackson Heights, N.Y.; Richard O'Connor, Washington, D.C.; Gordon Pollard, Morrisonville, N.Y.; Fred Quivik, Houghton, Mich.; John Reap, Sun City West, Az.; Joe Seely, Chicago, Ill.; Joel Shprentz, Reston, Va.; David A. Simmons, Galena, Ohio; Justin M. Spivey, East Windsor, N.J.; Lloyd Tepper, Villanova, Pa.; Craig Terry, Albany, N.Y.; Tyler Turpin, Richmond, Va.; Bill Vermes, Middleburg Heights, Ohio; Robert M. Vogel, Washington, D.C.; Dean Wood, Eilerslie, Ga.; Suzanne Wray, New York, N.Y.

With Thanks.

- ◆ David A. Thompson. **The Mail is Coming! 100 Years of the Railway Post Office in Minnesota.** *Minnesota History* (Spring 2015), pp. 206-216. Describes the rail network and the logistics that ensured delivery of mail and packages of all kinds in Minnesota and throughout the country.
- ◆ **Timber Transfer**, Vol. 27, No. 2 (Summer 2015) includes Dick Ullery and Jim Bacon, *Pursuing the "Dream", Restoration of the East Broad Top [EBT] Boilerhouse, Coalbin, Machine Shop, and Foundry, Part I*; Ron Pearson, *SMOKELESS!, Coal Cleaning along the East Broad Top, Part V: Boney Loader, Conveyors, and Coal Unloading Shelter*; and Rich Wickett and Lee Rainey, *Fate of Second Number 4 Discovered* (brief history of Baldwin-built ten-wheeler locomotive of 1901, the boiler of which has been found reused as the lining for a culvert under the EBT). Published by Friends of the East Broad Top. \$35/yr. with membership. www.febt.org.
- ◆ **Tourist Railroads & Railway Museums**, No. 20 (Spring 2015) includes *Endangered Railroad: The Lake Superior & Mississippi* (the latest of a series of small tourist railroads battling against rails-to-trails projects); Aaron Isaacs, *A Different Take on Rail Preservation* (New York's High Line project); Linda Smith, *Rio Grande RPO Restoration* (post office car restored at the Cumbres & Toltec); J. Craig Thorpe, *"This Painting Makes Me Want to Ride That Train!"* (the role of original paintings and other artwork in promoting museums and tourist railways)
- ◆ Richard White. **Railroaded: The Transcontinentals and the Making of Modern America.** W.W. Norton, 2011. 660 pp., illus. Makes the counterargument that the transcontinental railroads of the late-19th century were not the measure of American economic and technological achievement but one of the great boondoggles of history, mismanaged and corrupt, and entirely unnecessary in the context of the time, resulting in tragic consequences for the Western landscape and its people. Rev.: *B&L* (Spring 2014), p. 154-5.

POWER GENERATION

- ◆ Sean F. Johnston. **The Neutron's Children: Nuclear Engineers and the Shaping of Identity.** Oxford Univ. Pr., 2012. 314 pp. \$62.99. The parallel stories of nuclear engineering in Canada, Great Britain, and the U.S. to show the differences in approaches to nuclear design from WWII to the present. Rev.: *T&C* (July 2013), p. 692.
- ◆ Lesley Tomory. **Progressive Enlightenment: The Origins of the Gaslight Industry, 1780-1820.** MIT Pr., 2012. 348 pp. \$28. Highly detailed description of the European origins of gas lighting. Rev.: *T&C* (July 2013), p. 661.
- ◆ **Windmillers' Gazette**, Vol. 34, No. 1 (Winter 2015) includes Christopher Gillis, *Friend and Foe: Windmill Towers Served as Guides to Early Aviators and Sometimes Became Dangerous Obstacles*; T. Lindsay Baker, *Chain Pumps, From the Ancient World to the American Farm* (an endless chain running over a rotating wheel or drum for lifting water in buckets or cups spaced at intervals along the chain); and "Erector Set" Toy Windmills. Vol. 34, No. 2 (Spring 2015) includes T. Lindsay Baker, *A Close Look at the Enterprise Windmill* (solid-wheel wood windmills made by Sandwich (Ill.) Enterprise Co. from 1860s to 1900) and Christopher Gillis, *Windmills as Air Compressors—Part One*. Avail: \$20/yr., www.windmillersgazette.org.
- ◆ Vivian Yee. **On Brooklyn Campus, Annual Antique Display Goes Out With Terrifying Wail.** *NYT* (Jan. 1, 2015), p. A16. Conrad Milster's [SIA] last New Year's Eve steam whistle blast at Pratt Institute, a tradition since 1965.

BUILDINGS & STRUCTURES

- ◆ Jeff L. Brown. **Planning the Paris of the Plains: Kansas City's Parks and Boulevards.** *CE* (June 2015), pp. 48-51. The park and boulevard system of Kansas City, Mo., is listed on the National Register of Historic Places and is a National Historic Civil Engineering Landmark. The city park board's engineer, George E. Kessler, was also a landscape architect with an "ability to find beauty in unlikely places."
- ◆ Robert M. Frame III [SIA] and Richard E. Mitchell. **Constructing Suburbia: The Hidden Role of Prestressed Concrete.** *Minnesota History* (Winter 2014-15), pp. 158-172. Traces the development of prestressed concrete and its acceptance by engineers, how the rapid spread of highways and suburbs made it desirable for construction, and its use in Minnesota bridges, shopping malls, stadiums, and even a humble pioneering picnic shelter. Many photos and vintage ads are included.
- ◆ Gracia Lopez Patino. **Helical Industrial Chimneys in Spain.** *CH*, Vol. 28, No. 2 (2013), pp. 51-78. Remarkable patterned-brick chimneys built with helical twists in their shafts.
- ◆ Lillian Sizemore. **Black Gold: Thar's Oil in Them Thar Walls.** *SCA News* (Spring 2015), pp. 2-3. Historic background of two glass mosaic murals depicting oilrigs and the Port of Los Angeles in Los Angeles's Wilshire Grand Hotel, which closed in 2012. The hotel opened in 1950 as The Statler.
- ◆ Martin Treu. **Signs, Streets, and Storefronts: A History of Architecture and Graphics Along America's Commercial Corridors.** Johns Hopkins Univ. Pr., 2012. 384 pp. \$49.95. An examination of the signs that Americans once put up and now have lost, as well as the architecture it embellished, from the mid-19th century to the present. Rev.: *T&C* (July 2013), p. 672.

ABBREVIATIONS:

CE	= <i>Civil Engineering</i> , published by the American Society of Civil Engineers
AHR	= <i>American Historical Review</i>
B&L	= <i>Buildings & Landscapes</i> , Journal of the Vernacular Architecture Forum
CH	= <i>Construction History</i> , Journal of the Construction History Society
MHJ	= <i>Mining History Journal</i> , published by the Mining History Assn.
MHN	= <i>Mining History News</i> , published by the Mining History Assn.
NYT	= <i>New York Times</i>
SCA	= Society for Commercial Archeology
T&C	= <i>Technology & Culture</i> , published by the Society for the History of Technology
WSJ	= <i>Wall Street Journal</i>

Publications of Interest is compiled from books and articles brought to our attention by you, the reader. SIA members are encouraged to send citations of new and recent books and articles, especially those in their own areas of interest and those obscure titles that may not be known to other SIA members. *Publications of Interest*, c/o SIA Newsletter, 305 Rodman Road, Wilmington, DE 19809; phsianews@aol.com.

Come to Kansas City, the Paris of the Plains For the SIA 2016 Annual Conference

The 2016 Annual SIA Conference will take place in Kansas City, Mo., located at the bend of the Missouri and Kansas Rivers. Officially incorporated in 1853, 32 years after the state of Missouri was admitted to the Union, the city was initially called “The Town of Kansas” after the Kansa Indians who lived in the area. Kansas City has a rich history in Missouri River trade, outfitting for wagon freighting on the Santa Fe and Oregon trails, and agriculture and milling. With the first crossing of the Missouri in 1869 (the Hannibal Bridge), Kansas City became a major player in the livestock industry and by the 1880s, ten rail lines delivered stock to the industrial area known today as the West Bottoms. The Kansas City Livestock Exchange was the “largest building in the world devoted exclusively to livestock interests.” Today, Kansas City remains second only to Chicago as the “busiest train center in the country.”

Many of the conference tours, now being organized, are in the general vicinity of the Westin Crown Center, the conference hotel. Tour destinations under consideration include Hallmark Cards, Union Station, the Power House (now home to the Kansas City Ballet), Boulevard Brewing Company, the Limestone Caves/Subtropolis, the Harley Davidson and Ford factories, Faultless Starch, Zahner Sheet Metal, the historic Pratt & Whitney Plant, the Eighth St. Tunnel, the ASB Bridge and other historic bridges, and the Steamboat *Arabia* Museum. For those members interested in architecture, art, and libraries, tours of the historic Old Town District, historic West Bottoms, the Library District, Performing Art Center, the Nelson Atkins Museum of Art, Film Row, Ft. Leavenworth, and the River Walk (where many historic bridges are up close and personal), as well as the Linda



Missouri Valley Room, Special Collections, Kansas City Public Library

Completed in 1868, the Hannibal Bridge (no longer extant) was the first to cross the Missouri.

Hall and the Harry S. Truman libraries are in the works for pre-conference activities.

If all goes as planned, Kansas City’s starter streetcar line will be up and running. This initial route stretches from Main and Pershing (the location of the conference hotel), north along Main, through the central business district to historic Old Town just south of the Missouri River. “First Fridays” when the city’s art galleries are open during the evening hours, will be held during the week of the conference. Many of these galleries are within walking distance of the hotel or can be reached by streetcar.

Cydney Millstein



Richard Wehowski

Kansas City skyline, Mar. 2014.

CHAMBERLIN MILL RESTORATION PROGRESS REPORT

Chamberlin Mill, a rare sawmill in Woodstock, Conn. [tour site—SIA Fall Tour 2011], has a long history and a renewed future, thanks in part to a 2014 Industrial Heritage Preservation Grant from the SIA.

Deed research traces the use of this long-lived mill site to the 18th century when Mannaseh Hosmer chose a fast-moving section of the Still River for grist and sawmill operations. While the building we see today dates from a later, post-Civil War period, when penstocks and water turbines supported circular-saw technology, evidence remains in the stones of the north foundation wall of an early mill configuration. Surrounding the surviving penstock is a 60 sq.-ft. section of rebuilt wall, large enough to accommodate an earlier undershot wheel. A gristmill stone recovered from the river over 50 years ago gave further evidence of mill activity pre-dating the current circular-sawmill use. This millstone, unfortunately, was removed from the site.

Following Mannaseh Hosmer's tenancy, the property was owned by seven generations of the Sessions-Chamberlin family, until purchased in 2008 by The Nature Conservancy as part of its 98-acre Still River Preserve. Abijah Sessions, the earliest of the line, was a Revolutionary War veteran who owned mills in his hometown of Union as well as in Woodstock.

A simple post-and-beam structure, approximately 30 by 50 ft., with two, wide, gable-end openings at the main level, Chamberlin Mill stands adjacent to Old Turnpike Road, once part of the Central Boston to Hartford Turnpike, an 1820s stage route. At the mill's river level, penstock, turbine, and tailrace remain intact. The turbine, thought to be of Upham manufacture, is buried under mud, where it will remain until the structure is restored. The penstock is no longer functional. Above the turbine, a shaft and large bevel gears lead to the mill's main drive

shaft, still complete with wood pulleys and flat leather belts that for many decades provided power to the Lane #1 circular saw, manufactured in 1873, and Muzzy shingle mill.

The Great Flood of 1936 destroyed waterpower capacity at the mill but it did not deter the tenacious Chamberlin descendants of Abijah Sessions. They continued to operate through the 1960s, with power provided to the saw by a straight-eight internal-combustion engine. According to family oral history, Raymond Chamberlin drove a 1928 Studebaker President to the mill, cut it down, and attached the engine section directly to the saw's main arbor shaft. The straight-eight, known for its superior and steady power, saw several decades of use, and remained on site, open to the elements, when The Nature Conservancy acquired the property in 2008.

This past fall, the engine was taken under the wing of Mystic Seaport restoration volunteers, who are painstakingly and expertly bringing it back to life. The plan is to re-connect it to the Lane #1 circular saw once it is restored. Chamberlin Mill has over three-quarters of the parts necessary for this work. It is actively looking for remaining Lane #1 uprights and other parts.

While waterpower sawmills were once familiar sights in New England towns, dotting nearly every running stream in this naturally forested region of the country, and serving to provide much needed lumber for the farmsteads and villages we now claim as the part of the architectural landscape, these mills gradually gave way to portable steam operations and, ultimately, large distant producers of lumber. Almost all of the structures have disappeared. Because of the Chamberlins' tenacity and Yankee ingenuity, this mill has survived remarkably intact. Now, a tenacious community is resolved to keep this rare treasure alive for future generations to enjoy.



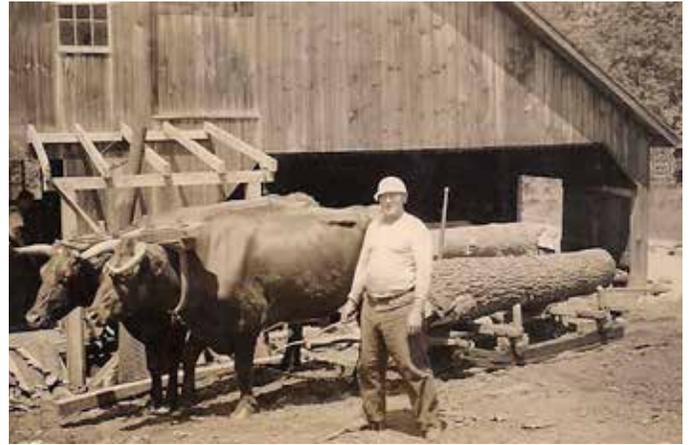
Chamberlin Mill, view from the east.



Volunteers remove a hay conveyor that had been used to carry sawdust from the Chamberlin Mill, 2012.

Beginning in 2009, the Woodstock Historical Society and Woodstock Historic Properties Commission undertook a study of the mill's potential and completed interim stabilization measures, supported by grants from the Connecticut Trust for Historic Preservation and Society for the Preservation of Old Mills, matched by in-kind donations and local funding. In 2013, Chamberlin Mill, Inc. (CMI) was established as a non-profit corporation to serve as a long-term steward for the site. In early 2014, The Nature Conservancy gave the mill and a small piece of property at the corner of its Still River Preserve to CMI, allowing plans to go forward with revitalization of the mill as a publicly accessible historical and educational asset.

With funding from the SIA, matched by CME Associates of Woodstock, architectural plans and specifications have been completed, paving the way for the first phase of restoration to proceed in 2015. This phase, which comprises repairs to the dry-laid fieldstone foundation, has already been funded by the Summer Hill Foundation. CMI is now focused on raising funds for the second, most challenging phase of the restoration, involving drainage, sills, and other structural elements along the north and east walls. Phase 3 will include replacement of the corrugated metal roof, and Phase 4 will be stabilization of the turbine supports, turbine conservation, and excavation of the tailrace.



Chamberlin Mill, circa 1939.

Though restoration is anticipated to take at least five years, small-scale programming has been initiated. CMI looks forward to welcoming members of SIA and the general public to a fully restored and operational mill within a decade. In the interim, visits of interested parties can be arranged as feasible, and progress can be followed at www.chamberlinmill.org.

Jean McClellan

IA IN ALBANY *(continued from page 8)*

rent location. It was moved to carry a farm road during the 1920s, after the Barge Canal opened, and moved again to its present location over a surviving watered portion of the Enlarged Erie Canal in 1997. Although it is some distance from its original site, it was good to see this bridge in something approximating its original context.

After a long bus ride through Schenectady, we stopped at Enlarged Erie Canal lock 28 at Yankee Hill, on the outskirts of Fort Hunter, an especially well preserved example of stone double locks built between 1836 and 1862 to accommodate booming canal traffic. Our next stop was **Schoharie Aqueduct** at Fort Hunter, the remains of a 13 arch stone and timber structure built in the 1840s to carry the Enlarged Erie Canal over Schoharie Creek, supplanting a troublesome slack-water crossing that had plagued canallers since the 1820s. Several of the aqueduct's stone arches have collapsed to erosion, some as recently as 2011. Our team of bridge specialists discussed strategies for stabilizing the inherently unstable National Historic Landmark structure with staff of the NYS Office of Parks, Recreation, and Historic Preservation who manage the site.

Our final stop of the day was at Barge Canal lock E12 in Fort Hunter. The movable dam is suspended from a two-span Pratt through-truss. There are nine of these distinctive structures in the Mohawk Valley section of the Erie Barge Canal, all erected 1915. Although they look like bridges from a distance, only two carry traffic, leaving wags and puzzled travelers to call the others "bridges to nowhere." At the beginning of each navigation season, uprights are

lowered from the trusses, followed by horizontal steel panels that form a dam, raising water levels above each lock. In the fall, the panels and uprights are raised and swung up against the underside of the bridge deck to allow free passage of floods, ice and debris. We studied the complex system of chains and electric "mules" that made it all work and concluded the tour by watching a recreational boater with his dog pass through the lock, speeding off downstream in an effort to reach the next lock before it closed for the evening.

Friday night IA Film Fest. Chris Hunter dug into the archives

(continued on page 23)



Worker at AMT removing a heated shell for casting.

Richard O'Connor

full-time students or emerging professionals. Applicants must demonstrate an interest in, and a commitment to, the field of industrial archeology. Scholarships are funded through a dedicated account. This fund relies on annual contributions for replenishment, and members are encouraged to consider making a donation at the time that they receive their annual dues notice. This year, through members' generosity, SIA was able to award two \$700 scholarships and one \$350 scholarship. Jessie McNabb is pursuing a master's degree in historic preservation at the University of Vermont. We welcomed her to her first SIA conference, where she is presented a paper on the development of perforated radial bricks used in the construction of industrial chimneys. Daniel Schneider is completing his second year of studies toward a master's degree in industrial archeology from MTU. Daniel has an interest in the development of die-stamping machines used to manufacture wood printing type and presented a paper on that topic. John Arnold is a Ph.D. student in the MTU program. John is pursuing IA as a second career after establishing himself as an architect. He is very interested in the relationship between nature and culture as recorded in industrial landscapes as he prepares to embark on his dissertation work. He is currently working on a preservation plan for copper mining-era buildings in Calumet. Alicia asked everyone to join her in congratulating and extending a warm welcome to this year's student scholarship recipients and encouraged each of them to submit their research for publication in the *IA* journal.

2015 Fall Tour Preview. Fred Quivik noted that some may have attended the 1989 Fall Tour in Butte and Anaconda or the 2003 Fall Tour in northeastern Montana. He and Brian Shovers organized both and will be doing another one in Great Falls, the state's second largest city with good air travel connections and the falls of the Montana River, which are still used for hydropower. Founder Paris Gibson envisioned Great Falls becoming the Minneapolis of the West, which did not happen, although it did become the location of important smelters, which are no longer extant, and flourmills, which unfortunately are not willing to let SIA members tour their sites. We will, however, see the two oldest of the five hydroelectric power plants, Rainbow Falls and Ryan, in spectacular scenery; ADF, a large structural steel fabricator based in Québec but with facilities in Great Falls; Avmax Co., which refurbishes aircraft from regional airlines; and Malmstrom Air Force Base, one of the headquarters for Minuteman missile system, where we will be visiting the training simulator. We will also visit Fort Benton, downstream of Great Falls at the head of steamboat navigation, and the Benton Bridge, the first to span the Missouri and the first steel bridge in Montana. The event is scheduled for Oct. 9-10, with an optional early bird tour to Helena on Oct. 8 to visit the remains of a brick manufacturer, the Ash Grove cement plant, American Chemet (oxides for the metals industry), and possibly a Boeing plant.

2016 Conference and Tour Preview. President Gronhovd introduced Julie Blair, SIA's new Events Coordinator, and encouraged all SIA members to welcome her. President Gronhovd thinks that Julie is doing a great job so far and

looks forward to continuing to work with her. Julie stated that she has been fortunate to have a gentle transition, standing in Duncan Hay's shadow during this conference and watching Fred Quivik put together a great Fall Tour. She invited everyone to Kansas City for the 2016 Annual Conference (see article in this issue). She is working with local coordinator Cydney Millstein to develop tour itineraries. One of the jewels in the crown of Kansas City industry is Harley Davidson's power assembly plant, which we hopefully will be able to visit. Union Station will be host to the opening reception or banquet. The tentative location for the 2016 Fall Tour is the Fox Valley of Wisconsin, and Julie is open to additional suggestions from groups to organize future events in their local areas. Her contact information is on the SIA website. She has heard wonderful things about previous study tours and is interested in developing more. She encouraged everyone to document SIA events for *SIAN*, which not only shows how great they are to members who do not attend, but also helps recruit new members.

Local Chapters. Committee chair Ron Petrie led the traditional standing roll call of local chapter members and noted that a new chapter has been proposed in Minnesota. He would like to start more local chapters in new places and encouraged anyone interested to contact him.

Nominations Committee. President Gronhovd called for SIA Board members and staff to stand and be recognized. She then recognized departing Directors Erin Timms and Gianfranco Archimede, departing Nominations Committee chair Susan Appel, and departing TICCIH representative Peter Stott. Susan Appel then noted that this year's slate held a larger than usual number of candidates, which is a positive development. She encouraged everyone to volunteer to the Society and recognized Lynn Rakos, who will become the new committee chair; committee member Anna Lee Presley, who recently started a new job and could not attend; ex officio member Duncan Hay, who was a life-saver in difficult times; Headquarters staff, especially Don Durfee, for their advice and insight; members who voted; and those who ran for office. She announced the election of Bode Morin as TICCIH Representative, Bill Vermes to the Nominations Committee, and new Directors Marc N. Belanger and Steven A. Walton.

Vogel Prize. David Simmons read the Vogel Prize citation on behalf of committee chair Marco Meniketti (see article in this issue).

General Tools Award. General Tools Award Committee chair Helena Wright noted that it was customary at this time to introduce a veiled and mysterious character, an individual unnamed but described in terms of his or her accomplishments and contributions to the Society over an extended period. After describing the award and recognizing past winners, Helena announced that this year the suspense was over early; as in 2006, we had no nominations. That doesn't mean there were no qualified candidates, only that no one brought a name forward. We published the call for nominations in the newsletter and online; we pleaded with some individuals to provide a few paragraphs to get us started, but to no

IA ON THE WEB

Calisphere (www.calisphere.universityofcalifornia.edu) offers a wide range of historic photographs and primary sources on California history contributed by 120 libraries, archives, and museums. There is a strong IA component in the subject index including topics of agricultural equipment, assembly line, automobile industry, bridges, Central Pacific RR, computers, dams, electricity, electronics industry, environmental destruction, hydraulic mining, Gold Rush, industrial facilities, irrigation projects, lumber, military facilities, oil industry, Panama Canal, railroads, reservoirs, Richmond shipyards, transcontinental railroad, Union Pacific RR, and water use and supply.

Claybank Brick Plant (www.claybank.sasktelwebsite.net). Photos and guidance for visiting what is regarded as North America's best preserved brick-making site in southern Saskatchewan. Fire brick, used mostly in lining boiler fire boxes, was produced here from 1914 to the 1960s.

Historic Mill Dams on the Chattahoochee River (www.south-res.com/uptowncolumbusdams/index.php). Presents the findings of several years of research and archeological investigation into the dams of the Eagle and Phenix Mills in Columbus, Ga. and Phenix City, Ala. Includes photographs, timeline, and materials for educators. After the two masonry dams of 1882 and 1904-07 were breached, remains of the several wood dams of the 1840s to 1870s were visible and documented. The investigations were conducted by Southern Research.

USS Constitution Dry Dock (<https://www.dvidshub.net/video/404710/uss-constitution-dry-dock#.VbaEWkt1L8s>). On May 18, 2015, Old Ironsides entered dry dock for a nearly three-year restoration of the hull. This video shows preparation of the dry dock and caisson. Follow the links to see her moved into the dock.

"IA on the Web" is compiled from sites brought to the editor's attention by members, who are encouraged to submit their IA Web finds: phsianews@aol.com. ■

avail. She assumed responsibility for the lack of a nominee this year, but lives in hope that next year's General Tools Award Committee Chairman Chuck Parrott will be able to lead everyone through the familiar suspenseful build-up to announce an awardee. She asked SIA members to please consider developing a nomination. It's really not an arduous task; submissions are limited to three pages. The nomination should address the specific accomplishments that qualify the nominee for the award. Full details are available on the SIA web site, and any SIA member in good standing may nominate someone. The Society has many worthy individuals who are eligible for this award. Helena hopes that we can return to the former practice of having several nominations

IA EXHIBITS

American Precision Museum in Windsor, Vt. (tour site—2010 SIA Fall Tour) opened *The Tool Revolution*, a new permanent exhibit that explores how machinists and machines of the Robbins & Lawrence Armory helped with the establishment of an industrial America. Iconic historic machine tools are paired with video clips showing how the machines worked and modern processes similar to the historic ones. Info: www.americanprecision.org.—AMP e-Newsletter (June 2015)

The **National Museum of Industrial History**, to be located at the former **Bethlehem Steel Works** (tour site—2002 SIA Fall Tour, Lehigh Valley, Pa.), has announced the appointment of Amy Hollander as the museum's new executive director. With the hire, NMIH continues on course to open to the public in mid-2016. Hollander was formerly with the Red Mill Museum Village in Clifton, N.J. Among Hollander's responsibilities will be managing major capital projects to rehabilitate the former Electric Repair Shop buildings to house the museum's collections and exhibits.—NMIH Press Release (May 5, 2015)

The **Warren Lasch Conservation Center** in North Charleston, S.C. has opened a new interactive exhibit area just outside the lab where the remains of the submarine **Hunley** can be viewed as they are painstakingly preserved. The *Hunley* became the first successful combat submarine in Feb. 1864, when the experimental Confederate vessel rammed a torpedo into the *USS Housatonic*. The *Hunley's* crew signaled their success to shore but then never returned. The mystery of the *Hunley* was uncovered when she was located on the ocean bottom in 1995 and raised in 2000, in essence a highly intact time capsule with an amazing array of artifacts. The new exhibit interprets how and why the *Hunley* was built, includes details about the mission, and describes excavation and conservation of the submarine. One of the favorite exhibits is an animation of the mission where visitors can follow orders to turn cranks and levers as if they were crew. Info: www.hunley.org. ■

at the ready for consideration, in the pipeline, an appropriate metaphor for the SIA. She asked members to take some time to recognize the contributions of their colleagues who have given so much. As President Gronhovd called for new business, Helena's husband Robert M. Vogel stormed the lectern to offer a brief addendum, that Helena herself had received the award in 1998.

Adjournment. With no new business forthcoming, President Gronhovd adjourned the meeting at 1:33 p.m. Eastern time.

*Respectfully submitted,
Justin M. Spivey, Secretary*

IA ON THE NATIONAL REGISTER

The following is a compilation of industrial heritage and related sites listed on the National Register of Historic Places (U.S.) from Mar. 28 to July 2, 2015.

Boston National Historical Park, Charlestown Navy Yard, Boston, Mass. Updated listing for the navy yard, originally listed in 1966. Established in 1800, the yard closed in 1974 and the park is home to the *USS Constitution* and *USS Cassin Young*.

Brookline Reservoir of the Cochituate Aqueduct, Brookline, Mass. National Historic Landmark (NHL) designation. The reservoir and its principal gatehouse, constructed in 1846-48, are the most intact original component of Boston's water supply system. Designed by two pioneering engineers, John B. Jervis and Ellis S. Chesbrough.

Cape San Blas Lighthouse and Port St. Joe, Port St. Joe, Fla. Built in 1883, the 98-ft.-tall lighthouse is noteworthy for its iron frame.

Carolina Casket Co., High Point, N.C. Slow-burn, heavy-timber frame, and brick-walled factory, built in 1929.

California Powder Works Bridge, Santa Cruz. NHL designation. Constructed in 1872, the Smith-truss covered bridge is considered the most outstanding of nearly two-dozen Smith trusses surviving in the U.S.

Coleman-Franklin-Cannon Mill, Concord, N.C. Textile mill, established in 1898 as an African-American-owned and -operated concern, with the intention of encouraging widespread employment of black workers in the textile industry. Complex of buildings includes mill, picker room, warehouse, boiler house, and smokestack.

Duquesne Brewing Co., Pittsburgh, Pa. Brewery complex, dating to 1899 and operated until 1972, is highly intact and slated for redevelopment as artists' lofts.

Fayetteville Fire Dept. Fire Station 3, Fayetteville, Ark. Modernist-style brick firehouse, built in 1963 to a design by architect T.E. Shelton.

Francis Metallic Surfboat, Douglas, Mich. An iron-hulled, 26-ft. rescue craft, believed to date from 1854, currently in the collection of the Saugatuck-Douglas Historical Society, not far from the vessel's original lifesaving station on the Kalamazoo River. Designed by Joseph Francis, who was awarded a Congressional gold medal for his inventions of lifesaving equipment.

Grist Mill Bridge, Dam and Mill Site, Duplain Twp., Mich. Milling activities began at the Elsie Mill in 1845. Site

includes a Parker through-truss bridge, built in 1901 by the Detroit Bridge & Iron Works; a masonry dam built in 1912; and the ruins of the mill's foundation.

Historic Road Infrastructure of Texas, 1866-1965, Multiple Property Submission. A framework intended to provide a tool for Texas DOT to evaluate the National Register eligibility of roads, bridges, culverts, roadside parks, and landscaping.

Hoodoo Ridge Lookout, Troy vicinity, Ore. An early intact fire lookout, built in 1925 and located in the Umatilla National Forest.

Kellerman Motor Car Co., St. Louis, Mo. Automotive dealership, built in 1922.

Kocourek & Son Hardware, Hazen, Ark. Two-story commercial building, built in 1906-07, claimed to be the oldest continually operated business between Memphis and Little Rock.

Lehigh Valley RR Barge 79, Brooklyn, N.Y. Wood barge, typical of mid-19th-century construction, was listed in 1988 in Edgewater, N.J. Updated listing reflects restoration and relocation to the Waterfront Museum in Brooklyn.

Madras Army Air Field North Hangar, Madras, Ore. Built in 1943 to support the training of B-17 bombardment squadrons.

McCleery Calendar Factory, Washington, Iowa. Hugh McCleery started the factory in 1903; it reached its peak of operations in the 1970s, employing over 350.

Murphy Grist Mill, Beekman, N.Y. Built in 1889, the two-story mill has been rehabilitated as a small museum and community meeting space.



Construction of the Pathfinder Dam, c. 1908.

Casper Journal

Norfolk & Western RR Historic District, Norfolk, Va. This 167-acre industrial district includes more than 207 historic resources, mostly warehouses and factories, bordering an almost 2-mi. length of the former N&W mainline (now Norfolk Southern).

Packhouse Ford, Sharpsburg vicinity, Md. Historic crossing of the Potomac River.

Pathfinder Dam Historic District, Alcova vicinity, Wyo. Cyclopean masonry dam on the N. Platte River, constructed between 1905 and 1909 to create an irrigation reservoir. The district includes the dam, its operating facilities, and the archeological site of a construction camp.

Peck and Hills Furniture Co. Warehouse, Chicago, Ill. Warehouse, built in three stages from 1905 to 1927, is notable for its flat-slab reinforced-concrete construction.

R. F. Outen Pottery, Matthews, N.C. Workshop, brick kiln, and clay-storage shed, constructed *circa* 1952 by Outen, who learned his craft from a line of traditional backcountry potters.

Remington Rand Building, St. Louis, Mo. Remington Rand, a typewriter and calculating machine company, which also built the early UNIVAC computer, commissioned architect Gyo Obata to design the Modernist office of 1957.

Sewanee Fire Lookout Tower, Sewanee, Tenn. Built in 1933-34 by the CCC. The complex includes two utility buildings, a crew cabin, a vehicle service platform, and the lookout operator's cabin.

Sound Democrat Mill and Mine and Silver Queen Mine, Silverton vicinity, Colo. Stamp mill of 1905-06 is one of the most complete in Colorado, along with its associated mines.



Wikimedia

Stamps at the Sound Democrat Mill.

South Fourche LaFave River Bridge, Hollis vicinity, Ark. Two Parker pony-truss spans, built in 1933.

State Highway 16, Brazos River Bridge Segment, Graford vicinity, Texas. WPA-era stone-arch bridge and associated roadway.

State Highway 203 (Old TX 52) Bridge at Salt Fork of the Red River, Wellington vicinity, Texas. Steel through-truss of 1939.

Strother Field Tetrahedron Wind Indicator, Winfield, Kan. Three-dimensional, triangular, galvanized-tin, wind indicator of 1942 at Strother Army Air Field, a WWII pilot training base.

U.S. Army Fort Umpqua, Corvallis vicinity, Ore. Site of fort, established in 1859 to implement treaties with Oregon tribes. Abandoned in 1862. No buildings survive.

United States Carriage Co., Columbus, Ohio. Small-scale industrial building housed a carriage builder and later industries in the downtown district.

Waterloo Village Boundary Increase, Byrum Township, N.J. The 19th-century iron forge and canal village's historic district boundary was expanded to include Morris Canal inclined plane, an ice-house ruins, and grade of an iron-ore railroad.

Weber River Railroad Bridge, Ogden, Utah. This steel, Pegram through-truss of 1897 is a rare design and the oldest railroad bridge in Utah still in its original location.

Western Macaroni Mfg. Co. Factory, Salt Lake City, Utah. The pasta company was established by Italian immigrants in 1905 and within a decade it had grown to be the largest pasta distributor in the Intermountain West with a capacity of six tons of pasta per day.

Woodward & Tierman Printing Co. Building, St. Louis, Mo. Reinforced-concrete daylight factory of 1925. Located in the Mill Creek Valley industrial district.

Wyoming Central Office of the Bell Telephone Co., Philadelphia. Central exchange of 1912, notable for its Colonial Revival style by architect John T. Windrim. Its construction prevented Bell's largest competitor, Keystone Telephone Co., from expanding service into a wide swath of North Philadelphia.

IA on the National Register is compiled from the National Register Weekly List supplemented by information gleaned from other sources. ■

WORKSHOPS & CONFERENCES

Iron & Steel Preservation Conference and Workshop, May 18-20, 2016, at Purdue University, West Lafayette, Ind. The event, a partnership with Lansing Community College, which has hosted the conference in the past, has the goal of giving those responsible for making decisions about the repair, rehabilitation, and restoration of metals confidence in specifying appropriate industrial processes selected from both contemporary and traditional technologies. Participants will gain knowledge from presentations, demonstrations, and hands-on experiences. Scheduled demonstrations include shielded metal-arc welding, flux-cored and metal-cored arc welding, oxygen-fuel and air-carbon arc cutting, braze welding, flame straightening, and shop and field riveting. Purdue faculty and students will provide information on the university's current research on testing built-up riveted girders at Bowen Laboratory. Continuing education units and professional development hours are available. A limited number of scholarships are

available to support students. Info: Vern Mesler, meslev@gmail.com, (517) 614-9868.

The 13th Michigan Railroad History Conference will be held at Lansing Community College-West Campus on Oct. 17, 2015. A full slate of papers on Michigan railroad topics is being offered with keynote speaker Larry Baggerly presenting on *New York Central Revisited—in Detroit*. Full-day pre- and post-conference field trips will be caravan style at no additional cost for those attending the conference. On Oct. 16, participants will receive a guided tour of the Michigan Ry.'s branch line between Lansing and Owosso, and on Oct. 18 the branch line between Lansing and St. Johns. Registration is \$50 prior to Oct. 1 and \$70 after. Payments to MRHC, Box 852, Royal Oak, MI 48068, include e-mail and any special dietary needs (for lunch) with the registration. Info: www.michiganrailroadhistory.org. ■

CHAPTER NEWS

Oliver Evans (Greater Philadelphia) toured Greenbank Mill in May. Greenbank is a reconstructed grist and textile mill near Newport, Del. The chapter held its annual picnic at the Fairmount Waterworks Interpretive Center on June 15. The guest speaker was Donald W. Linebaugh [SIA] who made a presentation based on one of his latest books, *The Springfield Gas Machine: Illuminating Industry and Leisure, 1860s-1920s* (Univ. of Tenn. Pr., 2012). Developed just after the Civil War, the Springfield Gas Machine was a lighting system marketed for use in homes and businesses beyond a city's gas mains.

Roebling (Greater N.Y.-N.J.) has continued to explore its region by offering tours every few weeks this spring and summer. In April, the chapter visited the Split Rock Iron Furnace site and took a driving and walking tour of the Morris Canal near Phillipsburg, N.J. In May, chapter events featured Shippenport, a small industrial village on the Morris Canal, and an architectural walking tour of Princeton. In June, the chapter toured Picatinny Arsenal, Paterson industrial architecture, and the Morris Canal Inclined Plane at Ledgewood. In July, chapter members gathered at the Decker-Kincaid Homestead, Mines, and Forge Site of 1785. The chapter is currently planning for the 35th Annual Great Falls Symposium on the IA of the New York-New Jersey Area to be held in Paterson at the Rogers Locomotive Storage Building on Oct. 24.

Southern New England Chapter. On Apr. 15, a small group of SNEC-SIA members met in Chepachet, R.I. for a tour of the FM Global Research Campus and the Chepachet Village Middle Privilege Archeological Site. FM Global is one of the world's largest insurance companies and is the modern-day descendant of the "factory mutuals"

(FM) that trace their origins back to 1835, when famed Rhode Island industrialist Zachariah Allen persuaded his fellow mill owners to form their own mutual fire insurance company, with a system of premiums based on the effectiveness of safety equipment, the adequacy of the apparatus, and safer methods of factory construction. The campus covers 1,600 acres in the western part of the Town of Gloucester, near the Connecticut border. It is said to be the only facility of its kind in the world, with four main laboratories for fire technology, natural hazards, electrical hazards, and hydraulics. SNEC members were treated to several demonstrations, including a burn test performed on a set of plastic pallets, wind uplift on a membrane rubber roof, and a 2x4 shot out of a compressed-air cannon to simulate debris in a windstorm. After lunch, the group headed a few miles down the road to Chepachet for a brief tour of the Middle Privilege Archeological Site led by Erin Timms [SIA] who investigated the site as part of a nearby stormwater and environmental remediation project. Middle Privilege was developed in the late-18th century with a tannery and blacksmith shop and later integrated a gristmill, distillery, sawmill, and cotton mill. The smaller mills were eventually replaced with a larger brick and stone mill complex that operated as a cotton mill under the name F. R. White Co. In 1895, White added several large additions that accommodated over 400 workers. However, in 1897, the mill complex burned and was never rebuilt.—Marc N. Belanger

Support Your Local Chapter. For info on a chapter near you or to start one, contact Ron Petrie, SIA Director, Local Chapter Chair (ron@siahq.org) or check out the local chapters section of the SIA website (www.sia-web.org). ■

Abba G. Lichtenstein (1923–2015)

Abba G. Lichtenstein, 92, passed away at his home in Washington, D.C. on Mar. 13. Abba was a national leader in historic bridge preservation, known for his willingness to challenge conventional perceptions that historic bridges were either too expensive or too technically difficult to save. Abba emigrated from Lithuania to the United States as a child and eventually attended the Ohio State University, earning a degree in engineering. He went to work for consulting engineers Goodkind & O'Dea in New Jersey during the 1950s. Morris Goodkind, the former New Jersey State Bridge Engineer, suggested that Abba focus on bridge inspection and rehabilitation at a time when most bridge engineers were intent on new bridge construction for the interstate highway system. Abba recounted it was great business advice since once the interstate program wound down there were thousands of old bridges that needed inspection providing steady work. Abba founded consulting engineers A.G. Lichtenstein & Associates of Fair Lawn, N.J., in 1963. His investigation of the 1967 collapse of the Silver Bridge across the Ohio River and testimony to Congress helped to establish the National Bridge Inspection Standards (NBIS), a regular program of nationwide bridge safety inspections that continues to this day. Abba examined many hundreds of historic

bridges over the course of his career, yet he was perhaps best known for working with the National Park Service to restore the Roebling Aqueduct over the Delaware River at Lackawaxen, Pa., in the late 1980s. The project won numerous awards. He also had a passion for historic canals and contributed to several restoration projects on the C&O Canal and the Delaware & Raritan Canal among others. Abba was active in professional engineering societies, particularly the American Society of Civil Engineers (ASCE) and the American Association of State Highway and Transportation Officials (AASHTO). He understood as well as anyone that the national standards, which he'd help to develop, placed at risk the preservation of historic bridges. He actively sought out methods that could bring old bridges up to acceptable levels and sought to educate engineers that the standards were not absolutes but subject to professional judgment and flexibility. Abba was willing to cross professional lines and work closely with preservationists, which won him a great deal of respect. Even when his answers weren't favorable to preserving a bridge, those who knew Abba understood that he had considered all of the viable options. Abba assisted former HAER Chief Eric DeLony with organizing many of the SIA's historic bridge symposiums in the 1980s and 1990s. He also served a term on the SIA Board in the mid-1990s.—Patrick Harshbarger

IA IN ALBANY *(continued from page 17)*

of GE industrial films housed at MiSci to assemble an eclectic yet structured playlist of movies depicting manufacturing in the region from the time of Edison through the 1960s.

Sunday Tour (IA Landmarks). Despite darkening skies, our very enjoyable bus trip started with a detailed tour of the industrial streets of Albany heading north toward Cohoes. Two buses traveled in tandem, one led by Duncan Hay, the other by Michael Barrett, who showed us how the construction of I-787 changed the waterfront, pointing out where several buildings had stood and under which streets the original canal is now buried. Our first stop was the **Harmony Mills** complex in Cohoes, once a significant textile center, now apartments. Impressive in scale and setting, Harmony Mills once ranked as the largest cotton mill complex in the nation. We went into the basement of Mill 3 (1871) to see a pair of massive Boyden turbines that drew power from Cohoes Falls. The basement felt like a Roman grotto or underground aqueduct. Our next stop, after the rain began, was Cohoes Falls, especially sublime in the darkening sky. Our tour guides described the ongoing rehabilitation of Troy as we peered through the window and the pouring rain. The **Troy Gasholder House** was magnificent, like the Pantheon, and with similar acoustics. It was built in 1873 for the Troy Gas Light Co. and originally sheltered a telescoping, water-sealed gas, iron storage tank, since removed. The half-elevation of the beautifully detailed HAER documen-

tation drawing has served as the SIA's logo since its organization in the early 1970s. Our final stop, the **Hudson-Mohawk Industrial Gateway at the Burden Iron Works Museum** (www.hudsonmohawkgateway.org), was a welcome refuge from the rain as two buses of wet visitors probably caused the humidity control to fail. We explored the museum's eclectic exhibits on the history of iron working in South Troy and the region, which are housed in the former Burden Iron Works' Romanesque Revival-style office, constructed in 1881-82.

The SIA owes special thanks to the companies and organizations that opened their facilities to visitors, especially those who agreed to take multiple groups and larger numbers after some tour offerings proved especially popular. In addition to the companies and individuals named above, we received terrific support and assistance from staff of Erie Canalway National Heritage Corridor, New York State Canal Corp., New York State Museum, NYS Office of Parks, Recreation & Historic Preservation, and the Albany Convention and Visitors Bureau.

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CALENDAR

2015

Oct. 8-10: SIA FALL TOUR, GREAT FALLS, MONT.
Info: www.sia-web.org.

Oct. 8-11: Society for the History of Technology (SHOT) Annual Meeting, Albuquerque, N.M. Info: www.historyoftechnology.org.

Oct. 16-18: The 13th Michigan Railroad History Conference, Lansing, Mich. See article in this issue. Info: www.michiganrailroadhistory.org.

Oct. 24: 35th ANNUAL GREAT FALLS SYMPOSIUM ON THE IA OF THE N.Y.-N.J. AREA, PATERSON, N.J. Sponsored by the Roebling Chapter. Info: <http://roebblingsia.org/symposia.html>.

Nov. 1-5: Assn. for Preservation Technology International Annual Conference, Kansas City, Mo. Info: www.apti.org.

Nov. 3-6: National Preservation Conference, Washington, D.C. Sponsored by the National Trust for Historic Preservation. Info: www.preservationnation.org.

Nov. 4-8: Society for the Preservation of Old Mills (SPOOM) Annual Conference, Santa Rosa, Calif. Info: www.spoom.org.

Dec. 3-9: 18th Australian Engineering Heritage Conference, Newcastle, Australia. Includes four days of pre-conference touring. Info: www.engineersaustralia.org.au/heritage-2015. Also available a pre-pre-conference tour of industrial heritage sites in New South Wales, organized by Heritage of Industry Tours, www.heritageofindustry.co.uk.

2016

Jan. 6-9: Society for Historical Archaeology Annual Conference, Washington, D.C. Info: www.sha.org.

Mar. 16-19: National Council on Public History Annual Conference, Baltimore, Md. Joint meeting with the Society for History in the Federal Government. Info: www.ncph.org.

Apr. 6-10: Society of Architectural Historians Annual Conference, Pasadena, Calif. Info: www.sah.org.

May 18-20: Iron & Steel Preservation Conference & Workshop, West Lafayette, Ind. Repair, rehabilitation, and restoration of metals. See article in this issue. Info: Vern Mesler, meslerv@gmail.com; (517) 614-9868.

May 25-29: Railway & Locomotive Historical Society Annual Meeting, Moscow, Idaho. Info: www.rlhs.org.

June 2-5: SIA 45th ANNUAL CONFERENCE, KANSAS CITY, MO. See article in this issue. Info: www.sia-web.org.

June 11-14: Mining History Assn. Annual Meeting, Virginia City and Gold Hill, Nev. Info: www.mininghistoryassociation.org.

June 16-19: 6th International Early Railways Conference, Newcastle-upon-Tyne, England, U.K. Info: www.earlyrailways.org.uk.

June 22-26: Society for the History of Technology (SHOT) Annual Meeting, Singapore. Info: www.historyoftechnology.org. ■