



# SOCIETY FOR INDUSTRIAL ARCHEOLOGY

## NEWSLETTER

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Number 4

### SIA in the Lehigh Valley 2021 Annual Conference Review

After more than a year of postponements, adjustments, and general reconfiguring of “normal,” nearly 120 SIA members ventured to Bethlehem, Pa.—with long-delayed excitement and a touch of trepidation as the Covid-19 “Delta variant” dominated headlines—for the SIA’s first in-person gathering since the pandemic began. The 49th Annual Conference was held Aug. 24–27 at the Historic Hotel Bethlehem and throughout the Lehigh Valley, revisiting some sites seen during the 1974 (Lehigh Valley), 1979 (Pa. Anthracite Region), 1988 (Easton) and 2002 (Lehigh Valley) SIA Fall Tours while also exploring new and changed industries.

The opening reception took place on Tuesday at the **Historic Hotel Bethlehem**, where several local dignitaries welcomed the SIA to Bethlehem. Martha Capwell Fox, historian at the National Canal Museum of the Delaware & Lehigh National Heritage Corridor and author of the recently published *Geography, Geology, and Genius* (2019), kicked off the reception with a discussion on the growth and impact of industry in the Lehigh Valley. The second speaker was Charlene Donchez Mowers, President of Historic Bethlehem. She talked about the growth of the city of Bethlehem and the effort to include the Moravian district in the UNESCO world heritage designation for the Christianfeld Moravian Church Settlement.

Many thanks to the numerous members who volunteered to contribute reports and photographs for *SIAN*, making possible the following summary.

Quite a bit of activity had already taken place before the opening reception, with a pre-pre-conference rail excursion hosted by the **Reading, Blue Mountain & Northern RR** (RBM&N) and the **National Museum of Industrial His-**

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Christopher Marston

*SIA members on the Hoover-Mason Trestle at the South Bethlehem Works Blast Furnace.*

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**tory.** Although not officially part of the conference, SIA members had preferential ticket access. About 20 SIAers departed **Outer Station** in Reading, riding aboard a pair of open-window Budd RDCs (self-propelled rail diesel cars). RDCs were built from 1949–1962 in Philadelphia by Budd. Budd took one of their standard stainless 85-ft. coaches and added controls for independent operations. Twin 275-hp GM 6-110 diesels added power, plus a hydraulic torque converter drive, enabling a top speed of 85 mph. RDCs ran as commuter trains on many lines in the Northeast. Long-time commuters in our group recognized the familiar interior design and the seats with backs that flip to change the direction in which passengers face.

The train headed north for Port Clinton. The influence of geology and geography could be seen all along the route. First, we followed the Schuylkill River, which was high and muddy after the previous day's rain. Later, we followed the meandering Little Schuylkill, colored gray by coal runoff.

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; household (joint) \$55; full-time student \$20; institutional \$75; 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; email: [sia@siahq.org](mailto:sia@siahq.org); website: [www.sia-web.org](http://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.

**TO CONTACT THE EDITOR:** Marni Blake Walter, Editor, *SIA Newsletter*, 11 Esty Rd., Westmoreland, NH 03467; [sianeditor@siahq.org](mailto:sianeditor@siahq.org).

Eric, one of the train crew, said that he had heard stories that many years ago the Little Schuylkill would turn black after a heavy rain.

Our first stop was the RBM&N's complex in Port Clinton, which includes a well-outfitted steam and machine shop, turntable, and company offices and passenger station. Of interest was the overhauling of former RDG #2102, a big 4-8-4 steamer built by the Reading RR in 1948. The train next headed to Tamaqua, but the trip was suddenly interrupted by a full brake application caused by a tree across the tracks. The mechanic on board produced a chain saw and went to work, resulting in only a minor delay. In Tamaqua, we passed through a large yard full of coal hoppers brought in from mines to the north. We also saw a private "garden" railroad referred to by its owner as the Tamaqua Tunnel Ry. The narrow-gauge electric railroad is squeezed into the rear yard of a row house, on a lot no more than 30 × 100 ft. The yard is outfitted with a large collection of railroad-related hardware and signs acquired over the years. The "tunnel" is the row house's basement, with timbering added to look like the entrance to a coal mine. Motive power are two operable electric mine locomotives.

After leaving Tamaqua, we had a photo-op at the **Buck Mountain Tunnel**. The tunnel cuts through a ridge that contains a coal seam and a former mine shaft. On the return trip, the conductors shown floodlights through the open windows to illuminate the tunnel wall. Along the way to our last stop, Girardville, we passed former coal mining sites and slag piles, as well as the location of the famous **St. Nicholas Coal Breaker**, the last one in the region, now dismantled. Girardville is home to **Hibernian House**, a bar once owned by Jack Kehoe, who was accused of being a local leader of the Molly Maguires (an Irish Catholic secret society), found guilty of murder, and executed in 1878. While historians still debate Kehoe's actual role in the events that led to his death, there is little doubt that the evidence presented against him was highly tainted and influenced by coal mining business interests bent on preventing unionism, labor unrest, and questioning of their authority in the anthracite



Patrick Malone

**SIA members operate quarry hoist machinery at the Slate Belt Heritage Center in Bangor, Pa.**



region. They unabashedly used anti-Catholic, anti-Irish sentiment to their advantage. Kehoe's great-grandson, Joe Wayne, owns the bar and was instrumental in persuading Pennsylvania's governor to issue a posthumous pardon to Jack Kehoe in 1979. Wayne's Hibernian House displays artifacts related to his great-grandfather, including heavy prison shackles. Wayne royally welcomed the SIA with a banner announcing our visit and a police escort from the train to his bar!

The schedule for this year's conference followed the traditional pattern, but was held earlier in the week than the typical SIA conference, with pre-conference tours on Tuesday, process tours on Wednesday, paper sessions and the Annual Business Meeting on Thursday, banquet at the National Museum of Industrial History Thursday night, and post-conference tours on Friday.

*Tuesday Tour 1: An Embarrassment of Bridges.* Those attending Tuesday's pre-conference bridge tour were shown a wide range of historic bridge types. Organized and led by Patrick Harshbarger [SIA], the tour included 16 bridges that ranged from 1858 to 1935 and included a stone arch, a wooden truss, several cast-and-wrought iron trusses, multiple pinned and riveted steel trusses, a unique cantilever, a suspension bridge, and filled concrete arch bridges. Highlights of the bridges visited included the **Hill-to-Hill Bridge** (1921–24) located adjacent to the conference hotel that reflected early—and less-than-successful—attempts to accommodate automobile traffic. Three examples of cast-and-wrought iron bridges, dating between 1860 and 1870, that had been influenced by Francis Lowthorp's 1857 and 1860 patents and fabricated by Bethlehem's Beckel Iron Foundry and Machine Shop were inspected. These includ-

ed the 1860 **Walnut St. Bridge**, which was restored by a group of Lehigh engineering students in the 1990s, including SIA member Perry Green (who gave a detailed talk of his experience during the paper sessions). The novelty of the **Northampton Street Bridge** (1895–96) in Easton, an eye-bar cantilever designed and constructed to accommodate the 1806 Timothy Palmer covered bridge on the same site, was explained. A nearby site in Easton was a veritable cornucopia of railroad trusses of the 1890s and early 1900s. Tour members explored the unusual wire rope suspension bridge (1904) designed by **John A. Roebling's Sons Co.** spanning the Delaware River at Riegelsville. **Knetchts Covered Bridge**, a Town lattice truss dating to 1873 was examined, and a three-span stone arch—whose 1858 construction date was the tour's earliest—concluded the parade of bridges. Our last stop was at **Lehigh University's ATLSS (Advanced Technology for Large Structural Systems) Research Center**. Within a system of strong wall and strong floor construction, the emphasis at the center is on testing large-scale structures through hybrid simulation, an approach that combines physical tests with mathematical modeling and digital instrumentation. The quality of the bridge tour was summed up by a first-time annual conference registrant who observed that Patrick had done "a spectacular job of finding interesting bridge sites."

*Tuesday Tour 2: An Embarrassment of Slate.* At the turn of the last century, Pennsylvania's Slate Belt was the largest slate-producing region in the U.S. Slate quarrying began in 1808 in Slateford, near the Delaware Water Gap. Its center later shifted about 10 miles southwest to Bangor, at the base of Blue Mountain, largely due to the enterprise of Robert M. Jones, an experienced slate worker who emigrated from

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Blast from the past: Michael Hoyt [SIA] captured this image from the SIA's 2002 Lehigh Valley Fall Tour. Visitors today are greeted with a redesigned Hoover-Mason Trestle pedestrian walkway and the SteelStacks outdoor concert stage in this same area.



north Wales in 1848. After the Civil War, the Slate Belt grew to encompass over 100 quarries, attracting a large immigrant workforce. Blue-gray to blue-black in color, the rock was well suited for splitting into thin sheets. The vast majority of the slate mined was used to produce roofing tiles; it was also made into school slates and blackboards. Today just two slate quarries operate, and with our knowledgeable tour leader Mike Piersa [SIA], a historian at the National Museum of Industrial History, we visited both of them.

First, however, was a lesson in context: a stop at the **Slate Belt Heritage Center** located in the former Bangor Town Hall and Fire Station (1907). The center's nine rooms are chock-full of artifacts and displays, and local volunteers proudly showed off the highlights. In a small park outside, they demonstrated a 1900-vintage Bangor-built mine hoist, operating on compressed air. A lucky few conference participants took turns at the controls. Our next stop was the **Blue Mountain Antique Gas & Steam Engine Assn.** in Jacktown. The group's large building is stuffed with steam engines (some formerly employed at local slate quarries), steam-powered agricultural equipment, thresher engines, and the like. The builder's plate on an enormous steam-driven road roller prompted an "aha!" moment for rock-and-roll music fans: "Buffalo Springfield Roller Co., Springfield, Ohio." Outside, interesting displays included a cutaway of a steam tractor boiler and, nearby, the only locally preserved slate quarry locomotive, a gasoline-powered "dinkey."

The **Penn Slate Co.** mines and manufactures slate products used in roofing, construction, and architectural applications such as windowsills, countertops, mantels, and floor tiles. In Pen Argyl, John Dally showed us around the **Dally Division quarry**, pointing out one mine that had been worked to a final depth of about 350 ft. and an extension recently begun, together with the associated cableways, man-cages, and slate mill. The crew was on lunch break, precluding live action. The day ended at Penn's sister quarry in Slatington. Known until recently as the **Penn Big Bed Slate Co.**, company president Pete Papay, whose grandfather

started the company in 1934, regaled the group with a brief history and fielded questions. With the quarry's Myers belt saw—the modern method for extracting rock—out of commission, Papay has resumed blasting with black powder. We inspected the site's five aerial cableways and toured the adjacent mills, where a small crew operated saws and grinders that reduced large slate sheets to tiles and windowsills, and another machine that applied a beveled edge to sills. The work is hard, hot, dusty, and repetitive. It surprised no one to learn that a workforce of 74 had dwindled to 12. On a blistering hot day, the hale and hearty trudged the circular path leading down into the pit, where Papay's son showcased the tools and techniques used to free the rock, from traditional jack hammers to a modern airbag. As the bus paused at a **Pen Argyl cemetery**, we glimpsed the outsized heart-shape monument that marks the final resting place of the actress and blonde bombshell Jayne Mansfield (1933–1967). Mansfield's remains occupy a slate vault mined at the Stephens-Jackson Co. in Pen Argyl. Only the oldest SIA hands had ever heard of her.

*Tuesday Tour 3: Walking Tour of the Moravian Industrial Quarter.* The tour began along the Monocacy Creek, where we met our guide, Loretta, who has been studying Moravian history and giving tours for 37 years. She began by explaining that the Moravians were pioneers in the concept of urban planning. In 1741, when Moravians arrived at the 500 acres that would become Bethlehem, they designated the low land along the creek to power waterwheels and serve various industries. The higher land would be used for housing, removed from the noise of the smithy and the smell of the tannery.

At its peak, the Industrial Quarter had 50 trades, including tanners, textile spinners and weavers, textile dyers, potters, carpenters, wheelwrights, coopers, and saddlers. Early buildings were wood, and later replacements limestone masonry. The few buildings that remain are limestone. The tannery is the oldest remaining Moravian tannery in the U.S. Luckenbach Mill and the miller's house still stand. There are ruins of

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Patrick Malone

*SIA tour group deep in the quarry of the Penn Big Bed Slate Company at Slatington, Pa.*



Patrick Harshbarger

*The historic bridge tour group on the Walnut St. Bridge of ca. 1860, a rare cast- and wrought-iron truss preserved in Hellertown, Pa.*





# Vernon J. Mesler

## 2021 General Tools Award Recipient

*The following citation was read at the 2021 Annual Business Meeting in Bethlehem, Pa., by Fred Quivik, chair of the General Tools Award committee.*

This year's recipient has made exceptional contributions to IA, specifically for his attention to the care, understanding, maintenance, and restoration of iron and steel bridges. He has done this by rescuing bridges and re-erecting them in a park dedicated to saving old bridges, by educating and training a new generation in the craftsmanship of hot riveting, and by instilling in professional engineers and the staffs of highway departments an appreciation for the techniques useful in repairing historic metal bridges. He has accomplished these contributions through workshops sponsored by the National Park Service and at other university, trade, and conference events, and he has furthered that work through his website.

The 2021 General Tools Award recipient is Vern Mesler, a welder and steel fitter who helped build modern highway bridges and who then learned hot riveting and applied his new skill in helping to save historic bridges that were threatened by the new bridges that had been his livelihood.

Vernon J. Mesler was first introduced to SIA members at a pre-conference workshop at the 1998 Annual Meeting in Indianapolis. Organized by Jim Cooper, SIA member and Indiana's leading historic bridge preservationist, the workshop demonstrations focused on hot riveting, heat straightening, and hand forging of steel and iron bridge members. At the center of all this activity was Vern, a straight-talking, good-humored, and extremely knowledgeable individual. He was the first person many participants had ever encountered with a depth of hands-on experience that opened new visions of older iron and steel structures, especially bridges. Patrick Harshbarger recalls that here was someone who appreciated the workmanship of the Golden Age of structural iron and steel in ways few others could. Over the next two decades, Vern has become a leader of a movement aimed at bringing these techniques back into use as approved tools for the authentic restoration of historic metal-truss bridges, a resource rapidly disappearing from the American landscape.

Vern's version of industrial archeology stems from an understanding of technology through hands-on experimentation. And like many SIA members, he came to our field rather late in life. For 34 years, he worked as a welder, fitter, foreman, and materials manager at the Douglass Steel Fabrication Corp. in Lansing, Mich. Founded in 1952, Douglass Steel has been a leading supplier of steel bridges as well as steel-frame buildings of all kinds. Vern directed welding operations for the fabrication of bridges for Michigan's highways. During this time, he also joined the Lansing Community College faculty as a welding instructor.

Vern's emergence onto the historic bridge scene began in 1997, a time when historic metal-truss bridges on Michi-



David Simmons

**Vern Mesler (right) receives the General Tools Award from Fred Quivik at the 2021 SIA Annual Business Meeting in Bethlehem.**

gan's highway system were threatened, especially those on the rural county roads. It was then that Vern hooked up with the director of the Calhoun County Road Commission to develop a historic bridge park in which historic metal-truss bridges threatened with demolition could be authentically restored and reused as pedestrian trail bridges.

Vern's odyssey began with the rescue and repair of a 64-ft. Pratt pony truss fabricated in 1897 by the Michigan Bridge Co. Anxious to use the proper techniques that duplicated the original technology of this bridge, Vern tracked down two retired ironworkers who had helped build the Mackinac Bridge in the 1950s. They taught him the historical technology of hot riveting, and he adopted a new passion and calling: to educate and train a new generation in this craftsmanship of a by-gone era through annual living history demonstrations of riveting and heat straightening. Vern's first restoration was completed in 1999, and over the next several years, he led projects to preserve and restore four other metal truss bridges. The most ambitious was the Charlotte Highway Bridge, a 176-ft. Whipple through truss fabricated in 1886 by the Buckeye Bridge and Iron Works of Cleveland, Ohio. Working on these projects, Vern has developed a keen eye for interesting and often overlooked details, like a punch mark in an eye bar that offers guides to the original press operator of the forge.

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In contrast, most modern engineers and contractors have understood little of those techniques and took as undisputed fact that old, broken, bent or corroded structural iron could not be restored, let alone returned to safe use under any circumstances.

Professional organizations were soon taking notice of Vern's efforts. In 2001, the Michigan Section of the American Society of Civil Engineers recognized his work at the Calhoun Park as a Historical Civil Engineering Landmark. In each of 2005 and 2006, the American Public Works Association listed his work in Calhoun County as the public works project of the year.

All the while, Vern was refining his own personal skills as a historic bridge restoration specialist. Mike Mort, author of *A Bridge Worth Saving: A Community Guide to Historic Bridge Preservation*, observed that Vern's skill, "honed by a lifetime of metal fabrication in industry and the classroom, was nothing less than astonishing." Mort had watched Vern "wield a rivet gun as if it were a sculptor's chisel and [saw] him command a cutting torch as if it were a calligrapher's pen. His knowledge of metal fabrication," Mort continued, "is further complemented by a pure and passionate respect for honoring the craftsmanship of the original creators." Vern asserts that, "No written documentation of a destroyed metal truss bridge can take the place of one's hands and eyes searching for the marks of a craftsman's tools."

In 2008 Vern began a series of workshops using Lansing Community College as an educational site for students, engineers, and historic preservationists. The following year he received a grant from the National Park Service to create a two-day workshop at Lansing. The first day consisted of papers and case studies from national experts, followed by a day of hands-on introductions to a full range of restoration processes for historic metal. Four more of these annual "Iron and Steel Preservation Workshops" were held at Lansing through 2013.

Vern has also taken his show "on the road," giving presentations and workshops at conferences, universities, and trade groups, including at the 75th anniversary of the Golden Gate Bridge in 2012, and he was featured in a documentary on the bridge. He gave demonstrations of hot riveting to apprentice ironworkers and the San Francisco Maritime Museum.

In addition to his projects at Calhoun County Bridge Park, Vern formed his own company, VJM Metal Craftsman, LLC, to take on more far-ranging bridge projects. He has personally restored other metal trusses in Michigan, Indiana, and Ohio and has consulted on dozens of other projects. You can learn more about Vern's work and passion for the subject through his website, [www.historicbridgerestoration.com](http://www.historicbridgerestoration.com), as well as the series of newsletters he's written and edited over the years under the titles of the *Craftsman's Newsletter* and *Iron and Steel Preservation Newsletter*.

Indicative of Vern's influence is the growing cadre of contractors who advertise their experience with riveting structural iron and steel on historic bridge projects. These

firms and individuals, many trained or influenced by Vern, have become resources for restoration of historic metal-truss bridges. The Ohio Dept. of Transportation issued statewide Historic Bridge Riveting Guidance in 2015, the first time that a state DOT has issued written instructions explaining the conditions under which it would officially endorse and fund historic bridge projects involving hot riveting. This endorsement is significant, given the strong taboo against rivets that has prevailed in the engineering profession since the 1950s and 1960s. While it still is unusual for historic restoration techniques to be used for historic bridges on heavily traveled highways, metal-truss bridges are increasingly restored for use in light service with far more care and respect for the original craftsmanship and materials than just a few decades ago. It's hard to imagine this would have happened without Vern having led the way.

Vern accepted the award of the "famous" plumb bob, stating: I am quite honored and surprised. The other thing is I especially like the fact that the Society for Industrial Archeology has used a tool as an award. I didn't get a plaque, I didn't get a lot of fancy words, I got a tool, and those folks know I love tools.

I have a lot of hammers at home, I love the rivet hammer, and I love working with the craftsman that handles the tools; the definition of a craftsman is one that respects their tools. Watch how a craftsman or woman handles their tools and how they respect them.

Anyway, I do know a lot of folks here at SIA that have helped me over the years. I have learned a lot from the folks that I have dealt with, so I really appreciate this award, and I thank you.

*The General Tools Award is the highest honor that the SIA can bestow. The award recognizes individuals who have given sustained, distinguished service to the cause of industrial archeology.*

*The General Tools Award was established in 1992 through the generosity of Gerald Weinstein [SIA], chairman emeritus of the board of General Tools & Instruments, LLC of New York City, and the Abraham and Lillian Rosenberg Foundation. The Rosenbergs founded General Hardware, the predecessor to General Tools. The award consists of an engraved sculpture ("The Plumb Bob") and a cash prize.*

*The recipient of the award is determined by the members of the General Tools Award committee, appointed by the President of the SIA, who serve three-year overlapping terms. The 2021 committee members were Frederick Quivik, who served as chairman, David Simmons (who will serve as chairman in 2022), and Brian Shovers.*

*Criteria for selection are as follows: (1) the recipient must have given noteworthy, beyond-the-call-of-duty service, over an extended period, to the cause of industrial archeology; (2) the type of service for which the recipient is recognized is unspecified, but must be for other than academic publication; (3) it is desirable but not required that the recipient be, or previously have been, a member of the SIA; and (4) the award may be made only to living individuals.*

# CALL FOR NOMINATIONS 2022

*President, Vice President, Secretary, Treasurer,  
Two Directors, and One Nominations Committee member*

## Attention SIA Members!

This is your opportunity to help maintain the quality, strength, and diversity of leadership that has kept the SIA growing for more than four decades. We have seven important positions to fill in the coming year and you can help choose the next leaders of your organization.

SIA's elected officials work for you to carry out the business of the organization. They represent the SIA to others, recruit new members, and plan the future of your Society.

In 2022, there will be seven (7) openings: President, Vice President, Secretary, Treasurer, two members of the Board of Directors, and one member of the Nominations Committee. We need candidates willing to give their time, knowledge, and experience to the SIA.

This year's Nominations Committee is asking you to identify candidates—friends, colleagues, or perhaps even yourself—who are qualified and willing to serve. (If modesty precludes self-nomination, please find someone to nominate you.) Each candidate must be an SIA member in good standing and must consent to being considered for nomination.

The deadline for nominations is **Mon., Jan. 17, 2022**. If you have any questions or need additional information, please don't hesitate to contact **Diana Bouchard**, Chair, SIA Nominations Committee, 3839 Marcil Ave., Montreal QC H4A 2Z5, Canada; 514-484-4815, [dianab@aei.ca](mailto:dianab@aei.ca).

## Positions Open in 2022:

**President** (2-year term). The President is the principal executive officer of the SIA and, subject to the control of the Board, in general supervises and controls the business and affairs of the SIA and sees that all orders and resolutions of the Board are carried into effect. The President is a member of the Board and presides at all meetings. To be eligible for this position the candidate must have served on the Board for a minimum of one (1) year as a voting member.

**Vice President** (2-year term). The Vice President is a member of the Board and in the absence or disability of the President performs the duties and exercises the authority of the President; and in general performs all duties as from time to time may be assigned by the President or the Board. To be eligible for this position the candidate must have served on the Board for a minimum of one (1) year as a voting member.

**Secretary** (3-year term). Serves as a member of the Board; takes official minutes at Board meetings and the Annual Business Meeting; and maintains official records.

**Treasurer** (3-year term). Serves as a member of the Board; is the SIA's accounting officer who records and reports on all financial transactions, and uses this data to evaluate the SIA's financial position.

**Directors** (3-year term). Two (2) of seven director positions are open this coming year. The Board meets approximately four times per year (both in person and online), in-

cluding during the Annual Conference. Directors govern official business and affairs of the SIA, and often chair committees that oversee operations such as publications, grants, and local chapters.

**Nominations Committee Member** (3-year term). One (1) of three elected members who assist with recruiting and evaluating nominees and monitoring annual elections, with the assistance of the immediate past president as an *ex-officio* member. It is expected that members will attend the Annual Conference to count ballots, and that each member will chair the committee during the final year of their term. The Chair announces the results of the election at the Annual Business Meeting during the Conference.

All nominations will be reviewed by the Nominations Committee, which will present a slate of candidates to the membership. Each nomination must include the name, address, telephone number, and email address of the person being nominated, the office for which the nomination is being made, and evidence that the candidate consents to being nominated. Once the slate is selected, the Nominations Committee will request a brief biographical statement and a photograph from each nominee.

For summaries of the nomination process and responsibilities of SIA officials, view the SIA Bylaws at <https://www.sia-web.org/about/bylaws/>. If you're unsure about the process or the obligation, please call or write the Nominations Chair at the address above. Current officeholders and their terms are shown below for your reference.

## SIA Officers

Saul Tannenbaum, President (2020–2022)  
Arron Kotlensky, Vice President (2020–2022)  
Christopher Marston, Past President (2020–2022)  
James Bouchard, Secretary (2019–2022)  
Nanci K. Batchelor, Treasurer (2019–2022)

## Board of Directors

Bob Newbery (2019–2022)  
Seth Price (2019–2022)  
Jacob Kaplan (2020–2023)  
Lynn Rakos (2020–2023)  
Gerry Weinstein (2020–2023)  
Erik Nordberg (2021–2024)  
Scott See (2021–2024)

## Nominations Committee

Diana Bouchard (2019–2022)  
Marc Belanger (2020–2023)  
Rebecca Burrow (2021–2024)  
Christopher Marston, *ex officio* (2020–2022)

## TICCIH Representative

Paul White (2021–2024)



# Call For Papers

## SIA 50th Annual Conference, Portland, Oregon

**T**he SIA invites proposals for presentations and poster displays at the 50th Annual Conference in Portland, Ore., June 9–12, 2022. The presentation sessions will be held at the conference hotel on Sat., June 11.

The SIA seeks presentations on all topics related to industrial archeology, industrial heritage, history of technology, social change related to industry, and historic industrial structures and bridges. Papers about industries in Oregon and timbering history are particularly encouraged. Poster displays are also encouraged, and can be on works in progress or finished projects. All presentations and poster displays should offer both interpretation and synthesis of data and be offered by members of SIA.

**The deadline for proposals is Jan. 31, 2022.**

<https://www.sia-web.org/50th-annual-conference-portland-oregon/>

**Presentation Formats:** Proposals may be for individual presentations 20 min. in length, a group of three or four presentations on a common theme filling a 90-min. session, or a 90-min. panel discussion with 2–5 discussants (a formal moderator is optional, but encouraged). SIA will provide computers, data projectors, screens, microphones, and speakers as needed in each presentation room. Posters will be on display all day Saturday with a dedicated time for presenters to be present at their poster for discussion.

**Proposal Formats:** Proposals should be submitted online unless special arrangements have been made. Each proposal must include:

1. The presentation title (you will indicate the type of presentation—single paper, session proposal, or poster—on the submission form)
2. A 300-word abstract that outlines the scope, findings, and conclusions of the presentation
3. Contact information including name, affiliation, email address, mailing address, and telephone number for each presenter
4. A brief biographical statement of 150 words for each presenter

5. The software (incl. version) used to create your presentation and any additional audio-visual requests beyond the standard equipment listed above.

For 90-min. themed sessions or panel discussions, the organizer should submit a title and a brief description of the theme, along with all of the above information together as a group as prompted on the online submission form. If any of these items is missing, the proposal cannot be considered. Note that the above word counts apply separately to each presenter in a group. Note that all speakers are expected to be SIA members and pay the registration fee (for either the full conference or one-day rate).

To submit your proposal and for further information, go to the online form linked at <https://www.sia-web.org/50th-annual-conference-portland-oregon/>.

For questions please contact Steven Walton, SIA Presentations Committee Chair, [sawalton@mtu.edu](mailto:sawalton@mtu.edu).

**Student Travel Scholarships.** The SIA awards travel scholarships to full-time students and professionals with fewer than three years of full-time experience. The scholarship stipends are intended to help students offset expenses associated with attending SIA events (e.g., airfare, hotel, registration, etc.). To be eligible for a scholarship, the applicant must become a member in good standing. Student memberships are available for as little as \$20/year. Applications should consist of 1) a letter demonstrating a commitment to IA from the student, and 2) a letter of reference from a faculty member or an individual active in the SIA. For information or to apply for the 2022 Annual Conference in Portland, Ore., June 9–12, please contact Patrick Harshbarger, [pharshbarger@hunterresearch.com](mailto:pharshbarger@hunterresearch.com); (609)-695-0122, ext. 115. Deadline for applications is Mar. 31, 2022.



# Minutes of the SIA's 50th Annual Business Meeting

## August 26, 2021

Vice President Arron Kotlensky called the Annual Business Meeting to order at 12:58 p.m. (ET) in the Hotel Bethlehem, Bethlehem, Pa., with 100 people present in person and 28 online via Zoom webinar. He announced that our President, Saul Tannenbaum, is being released from hospital at about this time and is not able to attend, but he sent the following statement.

**President's Report.** "You have no idea how much I was looking forward to seeing all of you in person in Bethlehem and calling this 50th Annual Business Meeting to order at this 49th Annual SIA Conference, in this the 50th anniversary year of the Society for Industrial Archeology. This ongoing off-by-one anomaly will be a continuing legacy of these pandemic years and a small reminder of the strangeness we've all experienced in our own ways. I trust you all have had a great and safe time in the Lehigh Valley, the result of the hard work of SIA leadership and staff, as well as local organizers in Bethlehem, all of whom have stepped up in my absence, something for which I'm personally grateful. This has truly been a unique planning experience. I look forward to seeing all of you next year in Portland, Oregon."

**Secretary's Report.** Secretary James Bouchard stated that minutes of the previous year's Annual Business Meeting were published in *SIAN* Vol. 49 No. 3 (Summer 2020). He asked for amendments or corrections; none were forthcoming.

Vice President Kotlensky called for a motion to approve the 2020 Annual Business Meeting minutes as published. Fred Quivik so moved, Robert Timmerman seconded the motion, and it passed unanimously.

**Treasurer's Report.** Treasurer Nanci K. Batchelor read her report:

"The following report is for the year that ended Dec. 31, 2020. 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.

We began 2020 with a total fund balance of \$282,921. Cash receipts for the year totaled \$77,510. Most of our annual income comes from membership dues. In 2020, the total dues received were \$56,910. The remaining balance is made up 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 \$93,357. The production costs of our publications, the newsletter and the journal, combined for a total of \$47,454. \$37,128 went towards labor, postage was \$1,999, and insurance, prizes, awards, and scholarships were \$8,775. Office overhead and a few

miscellaneous items made up the balance.

The Society closed 2020 with excess expenses over revenue of \$15,847. That means that for 2020 we spent more than we brought in. The total fund balance was \$267,495, of which \$54,796 is in restricted funds. This was expected due to the publication of two double issues of the journal in 2020. I had mentioned the probability of a loss at last year's Annual Meeting after reviewing the proposed production schedule for the journal in 2020.

Through June 2021, the Society has had a total of \$43,091 in cash receipts and has spent \$30,712."

Batchelor noted that there were no tours and conferences in 2020 and that a loss rather than a surplus was mentioned as a possibility at the last Annual Business Meeting.

Vice President Kotlensky called for a motion to approve the 2020 financial statements as presented. David Simmons so moved, Amy Federman seconded the motion, and it passed unanimously.

**Headquarters Report.** SIA Headquarters Manager Daniel Schneider reported:

"Our membership numbers rebounded moderately after last year, so we have 912 current members compared to 882 at this time last year. We're still short of where we were at the end of 2019 when we had 962 members, but maybe we still have time to get back to that point.

Those of you who are here in Bethlehem all provided an image of your proof of vaccination; I want to say thank you for doing that, and everyone did so without much difficulty, which made my life a little bit easier. However, I did want to say that those proofs of vaccination are all going to be deleted at the end of the event, so we won't be holding on to anything. I felt it was important to let you know this in terms of medical record sensitivity."

Executive Secretary and IA Editor Steve Walton thanked Schneider for keeping things running remarkably smoothly in these difficult times. Covid is upending everything.

**IA Journal.** Walton thanked people for coming and welcomed them again to Bethlehem. He followed up directly from Daniel, first saying that we are up to 248 subscribers on our YouTube channel. Please subscribe if you haven't.

Second, he would love to see many of your talks here being extended into articles. Having these talks turned into journal articles is how he normally ends his publications report, but he is putting it up front because we have almost nothing unsolicited in the hopper. Last year, because of COVID, we didn't have a conference, which is part of the reason for the shortage of articles, and he is hearing the same thing from other editors across the field.

We do have a single issue coming out that is going to copy editing next week or the week after, so you'll see this

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issue in the autumn of 2021. It includes articles on a worker's day at an Alaskan gold mine in the early 20th c., on the industrial art of the engraver Joseph Pennell, and on the aluminum industry and Manitowoc, Wisc.

After this, two special issues are planned, one on brass and copper, shepherded by our past editor, Fred Quivik, and then a double issue on WWII home front industries, also brought together by Fred. This brought Steve to once again urge presenters to consider turning their papers into publishable articles.

Finally, Steve gave special thanks to Carol Poh, who's been our book review editor for eight years, and who has retired. Her work has been invaluable for these years. We are looking for a new book review editor; it's not an incredible amount of work. You get to see all the new books coming out, and you find people to review them. To that end, Steve has followed Carol's practice and Terry Reynolds's before her, in placing photocopies of the books that we currently have available for review. If you're interested in reviewing any of those, put your name on the sheet on the second page of each photocopy pack, and Steve will sort them out and send the books out to reviewers.

Vice President Kotlensky thanked Steven and added that the sale of articles through JSTOR is beginning to provide some revenue [Walton later clarified that the amount was over \$4,000 last year]. These articles provide good scholarship and spread the word about SIA, so therefore the more journal articles we have, the better people get to know the SIA, which leads to more members and more friends.

**SIA Newsletter.** SIAN Editor Marni Blake Walter reported that over the past year, four issues of the SIAN were published. The current issue (Summer 2021) is nearing completion and will be sent to layout soon after this conference. Coverage of this conference will appear in the Fall 2021 issue. Many thanks to everyone who volunteered to

cover the events at this conference, as well as everyone who helps throughout the year, whether contributing articles, news items, or publications and websites of interest or helping with proofreading, layout, and mailing. All these contributions have been especially important over the past year and are always appreciated. Please keep all the news and notes coming in. Thank you!

**Tours & Conferences.** SIA Events Coordinator Courtney Murtaugh stated that it's good to be here in Bethlehem. Like everyone else, we had a very unusual year that can be described by pivot, schedule, reschedule, negotiate, and renegotiate. Since Chicago, Courtney has been working with the local committee to plan and implement this conference. We have been meeting with the leadership team since January to determine conference status, logistics, and COVID protocols and also working with the hotel to reschedule and negotiate revisions in the contract due to the pandemic.

We also worked on securing the hotel rescheduling and the new date in contract negotiations with the Portland, Ore. conference hotel.

We worked with the local organizers to plan the Portland, Maine Fall Tour, and after the conference had to be canceled, we dealt with canceling the hotel, which imposed no penalties, thank goodness.

Due to the pandemic, we also met with the local committee chair for the Portland, Ore. conference to determine any Covid-related or other issues in the local area that could potentially impact the conference.

Rebecca Burrow, who is leading the local Portland conference committee, was invited forward to provide details of the conference. She stated that the 2022 Conference will run from June 9–12, 2022 based at the Benson Hotel in downtown Portland.

The main industry that built the town is lumber, and

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## SAVE THE DATE!

### SIA's 50th Annual Conference • Portland, June 9–12, 2022

On behalf of the local planning committee, we are looking forward to welcoming you to the Annual Conference in Portland, Ore., June 9–12, 2022. After the success of the Lehigh Valley Conference in Aug., there is significant optimism that the pandemic situation will be reasonably under control for June 2022. You have likely seen much about Portland in the news over the last year and half, and much of that looked troubled. But come see the real city, recovering from both pandemic and protests and ready to welcome guests.

As has been the case worldwide since last spring, many businesses are still uncertain of their public opening hours, so a certain amount of flexibility is required in planning at

this time. What can be guaranteed is that there is plenty of industrial history ready to be seen in Oregon. Planned conference tour destinations include lumber and paper mills, lots of hydropower, both early iron and modern steel mills, historic scenic highways and bridges, high-tech factories, and a variety of food and alcohol processing facilities.

We encourage those of you who are traveling from further afield to consider a longer stay in the Pacific Northwest. A guide to other local destinations will be available on the SIA website in time for conference registration. We look forward to seeing you in June!

*Sincerely, the Portland 2022 Planning Committee*



## Susanna Kuo and Rick Minor— 2021 Vogel Prize Recipients



Corinna Campbell-Sack

**Vogel Prize winners Susanna Kuo and Rick Minor at the Oswego Iron Furnace.**

*Committee chair Fred Quivik read the Vogel Prize citation at the 2021 Annual Business Meeting in Bethlehem, Pa.*

Every year, the SIA highlights outstanding scholarship in the field of industrial archeology with the Vogel Prize. Named in honor of SIA co-founder and distinguished member Robert M. Vogel, the award recognizes the author of the best article to appear within the last three years in the Society's peer-reviewed journal, *IA: The Journal of the Society for Industrial Archeology*. The Vogel Prize consists of a cash award and a unique, genuine wooden foundry pattern mounted on a plaque engraved with the recipient's name. As chair of this year's Vogel Prize committee, I'd like to thank this year's committee, especially Steve Walton, for their work.

That the foundry pattern evokes American iron is again appropriate for this year's winner. After evaluating articles for a clear thesis and narrative, including high-quality illustrations and analysis of material culture, the committee is pleased to have selected "The Oswego Furnace: Industrial Archeology at the First Iron Works on the Pacific Coast," *IA* 42, No. 1 (2016): 37–54, by Susanna Kuo and Rick Minor, as the 2021 Vogel Prize winner.

"The Oswego Furnace" examines the history and physical remains of the first iron furnace built and operated on the Pacific Coast of the U.S. Built in 1866 in Oswego, Ore., eight miles south of Portland, the stone masonry furnace operated intermittently over nearly 20 years before being replaced by a more modern cupola furnace. Despite the

failure of the company that owned it, the Oswego furnace stood for decades until the City of Oswego purchased the property for a park. The furnace was listed in the National Register of Historic Places in 1974, and 30 years later the City received a Save America's Treasures Grant to develop preservation plans for the furnace. A series of archeological projects ensued, led by the authors. They researched the Connecticut experiences of the Oswego furnace's builder and the Connecticut furnaces that served as models for the Oswego furnace. Archeological excavations by Rick Minor's firm in 2006, 2009, and 2010 revealed evidence of several modifications the furnace's owners made in an effort to improve its performance so that it could compete with iron being shipped to Oregon from elsewhere. Findings from the historical and archeological work are now incorporated in the interpretation of the preserved furnace.

Susanna Kuo helped lead the effort to preserve the Oswego furnace, and Rick Minor's firm, Heritage Research Associates, performed the archeological analysis. The authors first presented their work at the SIA Annual Meeting in Seattle in 2011. They expanded upon that paper to produce their article for *IA*. It is clearly written and well-illustrated with historical and present-day photographs and helpful drawings. The article contributes to our understanding of the initial efforts to transfer iron-smelting technologies across the North American continent in the frontier phase of Euro-American settlement of the Pacific Northwest.

Susanna and Rick's acceptance was read by Fred Quivik:

We are pleased and honored that our article on the Oswego Iron Furnace was selected as the winner of the Vogel Prize. We are sorry that we cannot accept this award in person.

Although Susanna grew up less than a mile from the Oswego Furnace, her interest in the iron works wasn't ignited until she saw a copy of the 1992 issue of *IA*, which was devoted to iron and steel. For this reason, the Vogel Prize has special significance for her.

For his part, Rick first became aware of the Oswego Iron Furnace when his firm was hired to conduct archeological investigations in advance of major landscape changes in the park where the furnace stands. Little did he realize how this seemingly routine project would lead to this successful collaboration with Susanna that culminated in the publication in *IA*.

We remember our first encounter with SIA, when we presented a paper on the Oswego Iron Furnace at the Annual Conference in Seattle in 2011. We immediately felt welcomed and comfortable among people with common interests in industrial heritage.

Once again, we thank you for this award. We are truly humbled for our names to be included with those of past winners who have been so important in the history of the Society for Industrial Archeology.

## CALL FOR NOMINATIONS

### 2022 SIA General Tools Award

The SIA General Tools Award Committee is seeking nominations for the 2022 General Tools Award. This year's committee members are David Simmons, Chair, Brian Shovers, and another to be determined. Give this committee some work to do, reviewing nominations for distinguished service to industrial archeology. Any SIA member in good standing may make a nomination.

Remember, the General Tools Award is the highest honor the SIA can bestow. It recognizes individuals who have given sustained, distinguished service to the field of industrial archeology. The award is presented at the SIA's annual business meeting.

Here's what we're looking for: (1) the recipient must have given noteworthy, beyond-the-call-of-duty service, over an extended period, to the cause of industrial archeology; (2) the type of service for which the recipient is recognized is unspecified, but must be for other than academic publication; (3) it is desirable but not required that the recipient be, or previously have been, a member of the SIA; (4) the award may be made only to living individuals. Teams, groups, agencies, firms, or any other collective entities are not eligible.

Think of a name, then start a nomination. The committee can help you finish. You can write a statement of 2–3 pages identifying the qualifying accomplishments. Or, write a partial nomination describing one sector of the person's work you know best, with suggestions of others who might know more about the candidate's career. Nominations also may be collaborative efforts submitted by two or three members.

Supplementary material (the candidate's resume, for example) may be added. Nominations must also include the name, address, phone, and email of the nominator.

Information on the award and examples of successful nominations appear on the SIA website for many of the members who have received the award to date: [www.sia-web.org/activities/awards/general-tools-award](http://www.sia-web.org/activities/awards/general-tools-award).

Previous recipients are Emory Kemp (1993), Robert Vogel (1994), Edward Rutsch (1995), Patrick Malone (1996), Margot Gayle (1997), Helena Wright (1998), Vance Packard (1999), Eric DeLony (2000), Robert Merriam (2001), Charles Parrott (2002), Alex Barbour (2003), Charles K. Hyde (2004), Lance Metz (2005), [no award given in 2006], Patrick Martin (2007), Chris Andrae (2008), Carol Poh (2009), Robert Gordon (2010), Richard Anderson (2011), Jane Mork Gibson (2012), Bob Frame (2013), Jet Lowe (2014), [no award given in 2015], Duncan Hay (2016), Patrick Harshbarger (2017), Fred Quivik (2018), David Simmons (2019), Brian Shovers (2020), and Vern Mesler (2021).

The General Tools Award was established in 1992 through the generosity of Gerald Weinstein [SIA], then chairman of the board of General Tools & Instruments Co. LLC. High Road Capital Partners acquired General Tools & Instruments in Feb. 2014 and have been pleased for the SIA to continue using the company's name on the award. The award is funded by the Abraham and Lillian Rosenberg Foundation. The Rosenbergs founded General Hardware, the predecessor to General Tools. The award consists of a citation, a commissioned sculpture ("The Plumb Bob"), and a cash award.

Please email or call David Simmons, this year's committee chair, if you are interested in making a nomination for 2021. He'll be happy to talk about it. Nominations are due on Mar. 31, 2022 to David at [everetsherman1877@gmail.com](mailto:everetsherman1877@gmail.com).

## Eric DeLony Industrial Heritage Preservation Grant Fund

### Application Deadline: Mar. 1, 2022

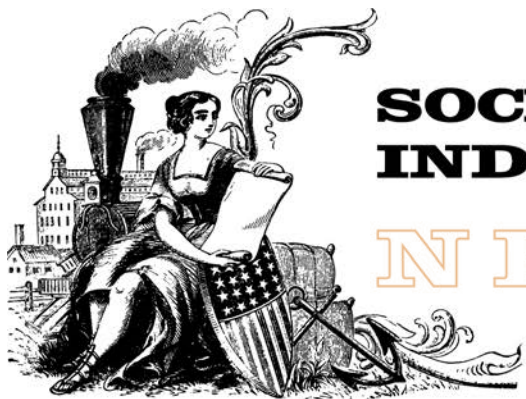
The SIA offers grants from the Eric DeLony Industrial Heritage Preservation Grant Fund from \$1,000 to \$3,000 for the study, documentation, recordation, or preservation of significant historic industrial sites, structures, and objects. Funds may be used for a range of projects including, but not limited to: increasing public awareness of preservation efforts, photography, videography, preparing inventories, and developing measured drawings of extant significant industrial sites, structures, maritime facilities, and industrial artifacts. Grant recipients must agree to prepare a written summary of their project suit-

able for publication in either the *SIAN* or for *IA*, the Society's scholarly journal.

Grants are open to qualified individuals, independent scholars, nonprofit organizations, and academic institutions. Organizations are preferred over individuals. Substantial participation from state, county, or local history organizations is encouraged, although such groups do not necessarily need to be a sponsoring agency.

For info on how to apply: [www.sia-web.org/activities/preservation-grants](http://www.sia-web.org/activities/preservation-grants)





# SOCIETY FOR INDUSTRIAL ARCHEOLOGY NEWSLetter

## PUBLICATIONS OF INTEREST

Vol. 50, No. 4

Fall 2021

COMPILED BY

Mary Habstritt, New York, N.Y., Patrick Harshbarger, Wilmington, Del., and Marni Blake Walter, SIAN editor, Westmoreland, N.H.

### GENERAL INTEREST

- ◆ Reid J. Epstein. **Where Facts Were No Match for Fear.** NYT (Oct. 24, 2021). [www.nytimes.com](http://www.nytimes.com). A detailed story of how a multi-year effort in Great Falls, Mont. [2015 Fall Tour, including sites at Fort Benton] to designate the region as a national heritage area, which would provide federal funding to help draw more visitors and preserve underfunded local tourist attractions, was crushed by campaigns of misinformation and untruths.
- ◆ William Neff. **Scientific Reclamation: How the Iconic Jefferson Memorial Was Restored.** Washington Post (Oct. 22, 2021). [www.washingtonpost.com](http://www.washingtonpost.com). A worsening biofilm infestation was cleaned off the structure's dome using high-tech lasers to vaporize the biofilm without risking the surrounding environment. Then low-volume steam cleaning jets were used to blast the biofilm ash. Interactive graphics show details of the process.
- ◆ **TICCIH Bulletin 94** (4th Quarter, 2021) includes Géraud Buffa, report on *The Long Conversion of the Arles Railway Workshops*; Miles Oglethorpe, *TICCIH Global Networking Meeting a Success*; updates from around the world including Gwen Stricker, *Chicago's Crawford Electric Smokestack: Demolition and Environmental Justice*; Sandra Pichlak, *Spatial Policy in a Postindustrial City*; Nadezhda Solonina and Olga Shipitsyna, *A Revalorization of a Historic Industrial Territory*; Yonca Erkan, *Sustainable Management of Industrial Heritage Research*; Maria Vittoria Santi, Anna Frangipane, and Annamaria Nicastro, *Heritage Analysis and Conservation Tools*; Priyanka Panjwani, *Historic Lighthouses of India: Beacons of Resilience*; Simon Musasizi, *The First Railway Museum in Uganda*; UNESCO World Heritage updates: David Gwyn, *The Slate Landscape of Northwest Wales*; Mohammad Hassan Talebian and Sara Taymourtash, *The Trans-Iranian Railway*; Barry Gamble, *Rosia Montana Mining Landscape*; and *Liverpool - Maritime Mercantile City Deleted*; TICCIH news and conference updates, training and job announcements, and book reviews.

### IRON & STEEL

- ◆ Ken Kobus [SIA]. **Man of Steel: Three Generations of Steel Workers.** StoryCorps, [storycorps.org/stories/ken-kobus-and-ron-barraf](http://storycorps.org/stories/ken-kobus-and-ron-barraf). Kobus tells friend Ron Barraf about his father, John Kobus, who worked in a steel mill for nearly 40 years, describing the imprints the mill made in their lives. An animated video is also available: [storycorps.org/animation/man-of-steel](http://storycorps.org/animation/man-of-steel).
- ◆ Louise Miskell and Gemma Almond, eds. **Shaped by Steel: Landscapes, Lives and Legacies of a Global Industry.** Arts & Humanities Research Council and Prifysgol Abertawe Swansea University, 2021. 160 pp., illus. E-book: <https://online.flippingbook.com/view/345089148/>. Twenty-one contributors examine topics related to workplace and community identities, steel closures and steel furnaces, and interpreting and preserving steel heritage, through examples of former steelworks around the world.

### MINES & MINING

- ◆ **Appreciating the Slate Landscape of Northwest Wales.** Current Archaeology (Sept. 1, 2021). <https://the-past.com/feature/appreciating-the-slate-landscape-of-northwest-wales/>. On July 28, UNESCO added the Slate Landscape of Northwest Wales to its list of World Heritage sites. Describes the reasons for its inscription and details many of the natural and human-made features of the landscape related to the slate industry. Includes numerous photos.
- ◆ Bruce Boulton. **Dartmoor Tin Mining: History and Heritage.** Halsgrove, 2021. 144 pp., illus. Tells the story of tin miners and mining in Dartmoor (England), including photos from the earliest days to the present. From early tin streaming activity to later underground workings, remains of blowing houses, wheel pits, and tinnerns' burrows are seen in abundance on the moorland landscape. The final chapter describes Kelly Mine, Lustleigh, where work continues to preserve and restore a former mine site, the last of its kind on Dartmoor.

- ◆ Ron Pearson. **In the Beginning, There Was Rockhill #1.** *TT* Vol. 33, No. 2 (Summer 2021), pp. 14–28. History of the Rockhill #1 coal mine, with its coal shipments beginning on the East Broad Top RR (Pa.) in 1874. Includes photos and maps of mine fields and equipment.

## WATER TRANSPORT

- ◆ John Warren. **The Sinking of the Lake George Steamboat John Jay.** *New York Almanack* (Oct. 8, 2021). [www.newyorkalmanack.com](http://www.newyorkalmanack.com). In 1856, the 140-ft. steamer John Jay caught fire while carrying 70 passengers across Lake George in upstate N.Y. Most of the terrified passengers narrowly escaped, but travel to the popular tourist destination fell off dramatically. The wreck was recently explored and a link to underwater video is included.
- ◆ Walker Orenstein. **As Energy Use Changes in the Great Lakes, So Too Does the Port of Duluth-Superior.** *Minnpost* (Apr. 20, 2020). [www.minnpost.com](http://www.minnpost.com). As power plants convert from coal to cleaner energies, the Superior Midwest Energy Terminal [SIA Conference Tour Site, 2000] has seen a drop in shipments that is likely to continue. Includes historical data on tonnage shipped.

## RAILROADS

- ◆ Ben Brachfield. **Brooklyn Tunnel Impresario, Transit Advocate Bob Diamond Dies at 62.** *Brooklyn Paper* (Aug. 24, 2021). [www.brooklynpaper.com](http://www.brooklynpaper.com). An amateur rail historian's lifetime achievements include re-discovering the Long Island RR's 1844 tunnel beneath Atlantic Ave. in 1981. He led tours of the tunnel via manhole for over 20 years.

## AUTOMOBILES & HIGHWAYS

- ◆ Lawrence Ulrich. **Car History Timeline: From 3-Wheeled Buggies to Self-Driving Vehicles.** *History.com* (May 7, 2021). [www.history.com/news/car-history-timeline](http://www.history.com/news/car-history-timeline). Concise compilation of the milestones and innovations that drove the automotive revolution. With photos and links to other sources for additional information.

## BUILDINGS & STRUCTURES

- ◆ Donald Friedman. **The Structure of Skyscrapers in America, 1871–1900: History and Preservation.** Assn. for Preservation Technology International, 2020. 450 pp., illus. \$55. Friedman, a New York-based consulting engineer with a specialty in historic preservation, examines the early development of skyscrapers, mainly in New York City and Chicago. The book is written with an eye on why engineers were making choices to use different types of iron and steel frames to push their buildings above ten stories, which was the practical limit for load-bearing wall structures. Includes a catalogue of 441 skyscrapers built within the pre-1900 time frame, as well as significant discussion

of how those surviving buildings can be preserved and adapted to present-day uses. Rev.: *CH*, Vol. 26, No. 1 (2021), pp. 160–62.

- ◆ James Gifford. **Frank B. Gilbreth, General Contractor: Construction Projects 1895–1910.** *CH*, Vol. 26, No. 1 (2021), pp. 69–96. Examines Gilbreth's background as a bricklayer and general contractor specializing in early uses of reinforced concrete. Identifies some 90 projects with closer examination of MIT Lowell Labs, Boston, Mass. (1902), St. Croix Paper Mill, Sprague's Falls, Me. (1905), Georgetown Steam Plant, Seattle, Wash. (1906), Mutual Life Building, San Francisco, Calif. (1906), McGraw Pub. Building, New York, N.Y. (1907), and Champion Paper Mill, Canton, N.C. (1907). The author suggests that Gilbreth's desire to innovate with new methods of handling materials, particularly masonry and concrete, and championing of the cost-plus contracting method, were significant achievements in their own right and not just the background to Gilbreth's famous relationship with scientific management expert Frederick Winslow Taylor. Gilbreth left his very successful contracting business in 1910 and devoted the last years of his life to promoting scientific management with his wife Lillian Gilbreth, one of the first industrial psychologists. The couple and their ideas about efficiency were eventually popularized by the movie, *Cheaper by the Dozen*, based on a book written by one of their children.
- ◆ Zoe Rosenberg. **Budd Plant To Be Redeveloped as Life Sciences Hub.** *Philadelphia Inquirer* (Aug. 6, 2021). [www.inquirer.com/business/biotech-lab-manufacturing-budd-plant-20210809.html](http://www.inquirer.com/business/biotech-lab-manufacturing-budd-plant-20210809.html). A facility that once fabricated metal products for the automotive

## CONTRIBUTORS TO THIS ISSUE

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*With Thanks.*



and transportation industry, central to a bygone era of Philadelphia's economy, will be redeveloped as a biomanufacturing center. The former Budd Co. plant began operations in the 1920s, fabricating metal for multiple automobile companies, including General Motors, Buick, Ford, and Dodge. The Plymouth Group recently acquired the property and partnered with Centerbridge Partners, L.P. to turn the former plant into Budd Bioworks, along with mixed-use spaces when complete. More info about the Budd Co. can be found in the *Workshop of the World* publication produced by the Oliver Evans Chapter: [www.workshopoftheworld.com/nicetown/budd.html](http://www.workshopoftheworld.com/nicetown/budd.html).

## BRIDGES

- ◆ Knapp, Ronald G. [SIA]. **In Search of America's Old Covered Bridges.** *Built Heritage* Vol. 5, No. 9 (2021). <https://doi.org/10.1186/s43238-021-00028-8>. PDF version: <https://built-heritage.springeropen.com/track/pdf/10.1186/s43238-021-00028-8.pdf>. Reviews the history of covered bridges in the U.S. and presents three wooden covered bridges constructed in the 1820s along a 10-mi. stretch of the Wallkill River in New Paltz, N.Y. Of the three, only Perrine's Bridge, constructed first in 1821 and covered in 1822, is still standing with intact Burr timber trusses. Using documentary records, 19th-c. building practices are examined, as are the 20th-c. debates about preservation versus replacement.
- ◆ Lee Rainey. **East Broad Top Bridges and Trestles, Part One.** *TT* Vol. 33, No. 2 (Summer 2021), pp. 5–13. Overview of all the bridges and trestles that existed along the East Broad Top RR (Pa.) and its branches during common-carrier days, over 83 years of freight operations. Bridges covered include examples of wood, iron, steel, and concrete construction.

## POWER GENERATION

- ◆ Nicole Saraniero. **Photos Inside the Abandoned Penn Station Power Plant.** *Untapped New York* (Jan. 25, 2021). [untappedcities.com/2021/01/25/penn-station-abandoned-power-plant/](http://untappedcities.com/2021/01/25/penn-station-abandoned-power-plant/). Penn Station's largest remnant, a granite building at 242 West 31st St., facing the south side of Madison Square Garden, once served as Penn Station's coal-fueled power plant generating electricity for heat, light, elevator hydraulics, refrigeration, and garbage incineration. (The electricity used to power the trains was generated by a different power plant on the east bank of the East River at Hunter's Point.) The plant was obsolete by the late 1980s, but many photos of it can be viewed here. And related: Michelle Young. **Don't Demolish Penn Station Twice: Save the Powerhouse.** *Untapped New York* (Mar. 11, 2021). [untappedcities.com/2021/03/11/save-penn-station-powerhouse/](http://untappedcities.com/2021/03/11/save-penn-station-powerhouse/). Penn Station powerhouse, or more officially, the Penn Station Service Building, located at 236-248 West 31st St., is at risk of demolition. Describes the situation and the launch of the Coalition to Save the Penn Station Powerhouse.

- ◆ **Windmillers' Gazette.** Vol. 40, No. 3 (Summer 2021) includes Michael Werst and Christopher Gillis, *WinPower and Its Vaneless Wind-Electric Plants*; Etienne Rogier, *Halladay Standard Windmills Erected in France by Schabaver*; T. Lindsay Baker, "We Could Not Keep the Wheel On It": B.H. "Tex" Burdick's Battle with Turbulence in the Delaware Mountains of West Texas; A. Clyde Eide, *Some Confusing Windmill Vignettes*; and other news and notes. Avail: \$20/yr., published quarterly. Christopher Gillis, Editor, P.O. Box 788, Buckeystown, MD, 21717; [www.windmillersgazette.org](http://www.windmillersgazette.org).

## MISC. INDUSTRIES

- ◆ Charlie Campbell. **Silicon Ally: Inside the Taiwan Firm That Makes the World's Tech Run.** *TIME*, Vol. 198, Nos. 13–14, Oct. 11/18, 2021, pp. 82–86. Insights into the history and operations of Taiwan Semiconductor Mfg. Co. (TSMC), the world's largest contract manufacturer of semiconductor chips. The firm controls more than half the global market for made-to-order chips and has become critical to supply chains for everything from automobiles to phones throughout the world. Its location in Taiwan is even further heightening tensions between China and the U.S., both of which rely on TSMC for state-of-the-art chips. Ironically, the U.S. leads the world in designing the chips and China in inserting the chips into consumer products, but neither has current significant capabilities to manufacture the chips. TSMC was founded in 1993 by Mark Lui, and the article includes background about his college education and experiences working for Intel and AT&T Bell Labs in the U.S. before establishing his own "fab" for making chips in Taiwan.

## ABBREVIATIONS:

CBT	= <i>Covered Bridge Topics</i> , published by the National Society for the Preservation of Covered Bridges
CH	= <i>Construction History</i> , Journal of the Construction History Society
CHSA	= Construction History Society of America
NYT	= <i>New York Times</i>
TICCIH	= The International Committee for the Conservation of the Industrial Heritage, <a href="http://ticcih.org">ticcih.org</a>
TT	= <i>Timber Transfer</i> . Published by Friends of the East Broad Top. Avail. with membership. \$30/yr. <a href="http://www.febt.org">www.febt.org</a> .
WSJ	= <i>Wall Street Journal</i>

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# An Early Artifact of the Benjamin Franklin Bridge

When the Delaware River Bridge (renamed the Benjamin Franklin Bridge in 1956) opened to traffic in 1926, it was the first motor vehicle span connecting Philadelphia and N.J., and with a main span of 1,750 ft., the longest clear span of any suspension bridge in the world. The overall length of the bridge, including its steel deck truss approaches, is 9,573 ft. In 1929, when the nearby Tacony-Palmyra Bridge opened about 6.6 miles upstream, the operators of the Delaware River Bridge arranged for 100 steel signs to be posted around the region – possibly as a means to direct traffic away from the new rival. The author's collections include one of these signs.

Proposals to span the Delaware River between Philadelphia and Camden, N.J., date to 1818, when Messrs. Farrand and Sharpe proposed a bridge from Camden to Windmill Island, with a ferry between the island and the foot of South St. in Philadelphia. In 1851, John Trautwine proposed to cross the river with four 1,000-ft. spans. In 1868, committees in both cities recommended the construction of T.S. Speakman's suspension bridge, which would have included two bascule sections. None of these bridges was built.

At the dawn of the 20th c., the only bridge across the Delaware River between Philadelphia and N.J. was the Delair RR bridge, which opened in 1896 and remains in use today. Otherwise, transportation between the city and N.J. consisted of ferries and car floats. Most of the ferries, and all of the car floats, were owned and operated by the railroads.

In 1914, the City of Philadelphia and the State of N.J. began serious efforts for the location, design, funding, and construction of a vehicular bridge between Philadelphia and Camden. In 1919, the bi-state Delaware River Bridge Joint

Commission was established.

During 30 years of browsing antiquarian book fairs and flea markets in Pennsylvania, New Jersey, and Delaware, the author has, on three occasions, found a copy of the "Final Report of the Board of Engineers of the Delaware River Bridge Joint Commission of the States of Pennsylvania and New Jersey," submitted to the Commission on June 1, 1927. The Final Report consists of 157 pages of illustrated text and six appendices. It contains narratives, maps, graphs, construction progress photographs, engineering calculations and specifications, and technical drawings for the bridge. The Chairman and Chief Engineer of the Board was Ralph Modjeski. Five placements for the bridge were considered (Fig. 1 of the Final Report).

Rarer is the "Report of the Delaware River Bridge and Tunnel Commission to the Governor and General Assembly of the Commonwealth of Pennsylvania," dated May 29, 1919. It presents the report of the consulting architect (Warren Laird of the Dept. of Architecture at the Univ. of Pa.) dated Nov. 30, 1918.

In a letter to the governor and the General Assembly dated May 29, 1919, Commissioners Thomas Smith and John Windrim recommended that the Philadelphia terminus be located in Washington Square, as per Laird's recommendation. One of Philadelphia's five great public squares laid out in 1682, William Penn designated it (the southeast square) as a potter's field in 1706. Laird's report does not mention the graves that might have been disturbed, which include approximately 2,000 American and British soldiers of the Revolutionary War, in addition to free and enslaved Blacks, Native Americans who died of smallpox, victims of yel-



Michael Bernstein

Left, presumed obverse of an early Delaware River Bridge token issued by the Philadelphia Rapid Transit Co. (PRT). According to the PRT route map of May 1936, the fare was 10 cents. PRT rail service across the bridge (predecessor of the present-day Lindenwold High-Speed Line of the Port Authority Transit Corp.) began on June 7, 1936. The PRT was reorganized as the Philadelphia Transportation Co. on Jan. 1, 1940, which helps to date the token. New tokens of the same design were issued, with PTC replacing PRT. Right, presumed reverse of the PRT token.



low fever, and others. In an accompanying letter of dissent, Commissioner Alfred Burk objected to using Washington Square. In recommending that the terminus be located six blocks to the north, at Race St., Burk considered the costs of acquiring properties around Washington Square and Race St., and the “class and type” of the buildings. He considered those located along Race St. to belong to a “lower and inferior class.” The area along Vine and Race Sts. near the riverfront included warehouses and wholesale businesses, while the neighborhood of Washington Square included better residential and commercial properties. Burk also thought it “questionable whether Washington Square can be used from a legal standpoint.” A report of June 9, 1921, discussed the final selection. The area adjoining the east side of Franklin Square (the northeast square), between Race and Vine Sts., would be the site of the bridge plaza.

The Tacony-Palmyra Bridge opened on Aug. 15, 1929, fully three years after the opening of the Delaware River Bridge. Constructed by the Tacony-Palmyra Bridge Co. (a private N.J. enterprise), it includes a double-leaf bascule

section that is still in frequent use. It connects the town of Palmyra, N.J., with the Tacony section of Philadelphia very near the site of the historic Disston saw works. In that year, the toll for a passenger car on the Delaware River Bridge was 25¢, while the fare was 35¢ on the Tacony-Palmyra Bridge. “Led horses or cattle” could cross the Delaware River Bridge into Center City (downtown) Philadelphia for 20¢ per head, while the toll for “any animal being led” was 25¢ on the Tacony-Palmyra Bridge. Pedestrians had the Delaware River Bridge footwalk for free, but paid 5¢ on the Tacony-Palmyra.

Data contained in the 1932 edition of “The Bulletin Almanac & Year Book” reveal that traffic on the Delaware River Bridge for the period of July 1930 through June 1931 was 12,320,064 vehicles, or approximately 1,026,672 per month on average. The data for the Tacony-Palmyra Bridge for the period of Aug. 1930 through July 1931 reveal that the average daily traffic was 4,456 vehicles, or approximately 133,680 per month. These data concur with the “1931 Traffic Flow Map of Philadelphia” prepared by the City of Philadelphia Department of Public Safety, which shows that

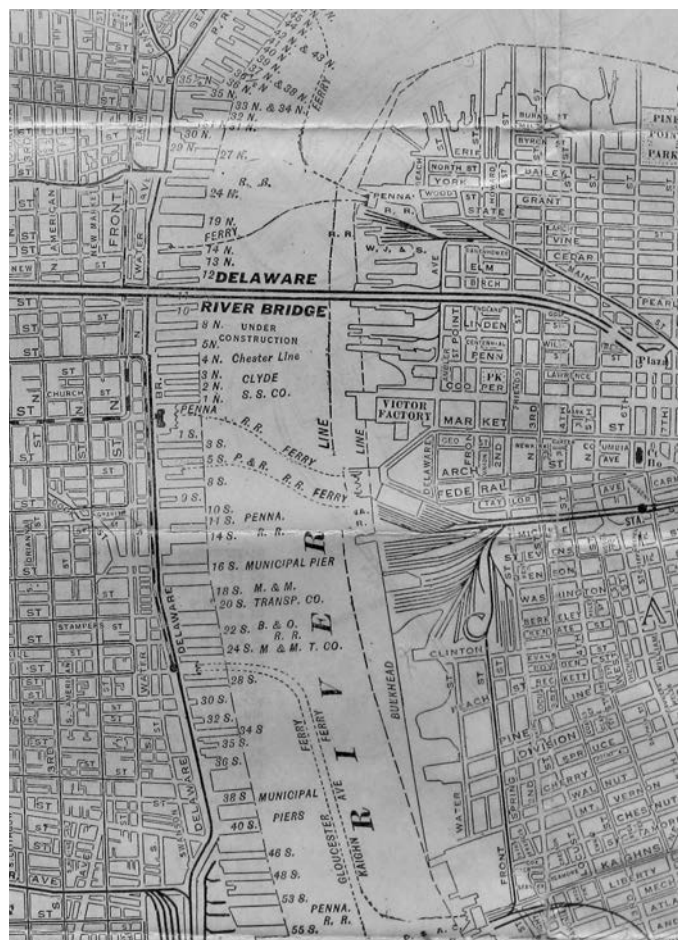
(continued on page 18)



For Sept. 10, 1926, the *Bulletin Year Book and Almanac* (1927) states “Los Angeles floats over city accompanied by airplanes.” The large building at the lower right is the Victor Factory. The ferry just north of the bridge is traveling between Vine St. and the Pennsylvania RR terminal in North Camden. Photo from the Final Report.



Camden plaza, ca. 1931. The light-colored building at the right (in line with the toll-attendants' stations) was, and still is, the bridge administration building.



Delaware River Bridge “Under Construction.” Philadelphia is to the left. Camden is to the right. Construction began on Jan. 6, 1922. The first traffic crossed on July 1, 1926. Six ferry lines are shown, the last of which ended its run on March 31, 1952. The “Victor Factory” on the Camden waterfront south of the bridge was the plant of the Victor Talking Machine Co.



## **BENJAMIN FRANKLIN BRIDGE** (continued from page 17)

traffic on the Delaware River Bridge far exceeded that of the Tacony-Palmyra Bridge. Of course, the two bridges are not geographically or mechanically alike. The Delaware River Bridge directly connected Camden (then an industrial city of 119,000) and Philadelphia's central business district. Also, some drivers might have avoided the Tacony-Palmyra Bridge (as they do today in favor of the Betsy Ross Bridge, despite its higher toll) due to delays for test openings, re-seating of the bascule leaves, and the passage of ships.

In 2009, a representative of the Delaware River Port Authority (administrator/operator of the Ben Franklin Bridge) told the author that 100 Delaware River Bridge highway signs were posted in 1934 as a device intended to divert traffic away from the Tacony-Palmyra Bridge. In his *Hidden City* article of Aug. 13, 2018, Harry Kyriakodis [SIA] states that

100 signs were manufactured and posted in 1929. In Aug. 2021, another representative of the DRPA informed the author that 100 signs were manufactured in 1929. The representative reported having no information regarding an eye toward the Tacony-Palmyra Bridge, and did not reply to a question as to whether a map or a list of sign locations exists.

A photograph in the *Public Ledger* newspaper of Jan. 25, 1930, shows one of the newly installed signs at 6th and Chestnut Sts. The photo caption states "Because of the difficulty the average motorist has in locating the Delaware Bridge [sic] approaches, the Bridge Commission is placing 200 signs at strategic points in the city and on roads leading to the city." Perhaps the reference to 200 signs is a reporting or typographical error, or maybe 200 signs were anticipated.

The chronology seems laggard with respect to the reported



*The author's Delaware River Bridge sign in daylight. Length 36 in., width 15 in., weight 9 lbs.*



*Delaware River Bridge with Camden in the foreground, ca. 1929. To the left, a ferry is traveling between the Pennsylvania RR terminals at Market St. in Philadelphia and the downtown section of Camden. To the right, two ferries are going to or from the Pennsylvania RR terminals located at Shackamaxon St. in Philadelphia and North Camden (Cooper Point). The eventual demise of the ferries was largely attributable to the bridge.*

problem with the Delaware River Bridge, but timely with respect to the opening of the Tacony-Palmyra Bridge. Posting of the signs more than three years after the Delaware River Bridge opened, but less than five months after the Tacony-Palmyra Bridge opened, could be viewed with suspicion, especially when considered with the DRPA's original account. Perhaps the difficulty some drivers might have had in finding the approaches to the bridge was a convenient cover story, in whole or in part, for the Delaware River Bridge signs. Or



The author's collection.

*Portion of a low-level oblique aerial photograph of May 14, 1926. A construction tripod is visible at the bridge plaza (to the right of the tower). Framed presentation photo 30 in. × 20 in., by Victor Dallin.*

perhaps the signs were just smart business practice, like any other promotional or advertising device developed in response to new competition.

The author's sign is slightly reflective, a weathered remnant of the original surface. The visual device is a horizontally outstretched bird that points the way, which is said to be a goose. There are no embossed features or glass reflectors. The sign does not bear a serial number. Where this sign was posted is impossible to determine.

In preparation for the Bicentennial celebration of 1976, a modernized version of the Delaware River Bridge sign was produced. Naming the "Ben Franklin Bridge," it bears a round Bicentennial seal and a re-designed goose. One of these signs was still present on a pole outside 1828 Ridge Ave. in Philadelphia (see the Kyriakodis article) on the Google Earth photo of Sept. 2009, but it had been removed by the time of the photo of Aug. 2019.

The author bought his sign at a N.J. flea market about 20 years ago. He has not found one for sale on the Internet during 12 years of occasional searches. A sign for the Tacony-Palmyra Bridge (probably from the Bicentennial era) has been offered on the Internet for years at \$1,200, which was recently raised to \$1,499.

With regard to durable artifacts, I say that if you can't own a piece of the bridge itself, one of its old official highway signs might be the next best thing.

Michael Bernstein

## LEHIGH VALLEY (continued from page 4)

the butchery and dyeworks, and a reconstructed smithy.

The Moravians were fortunate to have a spring. The current springhouse is a replica of the original. As the city grew, they developed a pump system to deliver the water uphill. This was the first pumping station in America. Philadelphia claims to have the first pumping system, but Loretta assured us the Moravians built theirs first.

The tour moved on to the **Moravian Museum of Bethlehem**. This is housed in one of the original structures, the Gemeinhaus (community house) and three adjacent buildings. The museum highlights the industrious nature of the Moravians, with examples of their products, including pottery, tinware, furniture, and leather goods. They have a wooden fire engine, which was pumped by men pulling on the bars on either side. The tongue extending from the front looked like it was meant for hitching horses, but in fact it was drawn by men. Horses tended to panic at the sight of a fire; humans were less likely to bolt, so we were told.

*Tuesday Tour 4: An Embarrassment of Museums.* With Kara Mohsinger as the tour leader, the group visited three important museums and historic sites in the Lehigh Valley. We began at the **Sigal Museum** in Easton, home to exhibits on the history of the region. The next stop was the historic bank of blast furnaces along the **Hoover-Mason Trestle**, a well-

preserved artifact of the **Bethlehem Steel South Works**, interpreted for the group by former steelworkers. The final stop was a visit to one of our conference co-hosts, the **National Museum of Industrial History**. The museum houses over 200 artifacts from across the world, showing the evolution of industrial technology including a 115-ton Corliss steam engine, 20 ft.-tall steam hammer, and exhibits on factory life.

*Wednesday Tour 1: Anthracite, Anthracite, Anthracite.* Once again, geography and geology rule the day. The tour, with conference chair Bode Morin [SIA] as our guide, began with a drive through the gently rolling hills of the Lehigh Valley where the main land use is agriculture. After we crossed Blue Mountain (and the Appalachian Trail, which runs along it), we entered Panther Valley. It was easy to tell this is coal country because waste rock piles seemed to be everywhere.

At **Lehigh Anthracite**, we were given an introduction to the mine and its product. Our orientation stressed the fact that anthracite is valuable because it burns without producing smoke. Most of the world's coal is bituminous, which is not smokeless. A bit of trivia about this difference is that in World War I, U.S. ships burned anthracite so that there would be no smoke to give the enemy an early warning about their location.

Nearly all of the anthracite in the U.S. is in northeastern

*(continued on page 20)*



Pa. Three main coal seams run through the region roughly from Jim Thorpe to Harrisburg. Because of the tectonic activity that lifted and folded the Appalachian Mountain region (and compressed bituminous into anthracite), the coal seams are tilted, which makes them harder to mine than the flatter bituminous coal seams of western Pa. It's worth the work, though, because of the qualities of anthracite—higher carbon content, less volatility, and no smoke. Because of its valuable properties, anthracite has been called “black diamond,” and Lehigh Anthracite's logo is a diamond with a flame above it.

When anthracite mining started in the last quarter of the 18th c., the work was all underground, which continued into the 1960s. Surface mining began in the 1940s and continues to this day. We were shown a map of the extensive property—8,000 acres—and where we would be going to watch the mining process. We would see “Job 88,” where coal is being removed from a huge deposit appropriately called Mammoth.

Our first stop was to a breaker, where coal is crushed into smaller pieces. This increases uniformity and helps to split

off any pieces of waste rock attached to the coal. Waste material can be separated from coal using a variety of methods including centrifuge-like devices, but in early days of mining, pieces of waste rock were removed by hand from coal passing by on a conveyor belt. This work was done by young boys called “breaker boys.” Older miners or those who had been injured would work on the breaker, too. It was said that the breaker was where a miner started and ended his career.

Our next stop was a viewpoint within the Job 88 area where we could watch the actual mining process. Hydraulic shovels scoop up coal and dump it into the trucks that carry it to the breaker. Looking at a previously mined area, we could see just how steep the angle of the coal seam is. The equipment was so far away that it looked tiny, but we got an up-close look at one of Lehigh's hydraulic shovels. It isn't tiny!

Going back in time, our next stop was **Number 9 Coal Mine and Museum**. This mine was started in 1855 and closed in 1972. Work to convert it to a museum began in 1992. Today, visitors can enter the mine in converted coal cars to learn about how the coal was removed from the mountain and what it was like to work there. We could see—and feel—that water could be an issue. Flooding from groundwater is a problem with any mine. Groundwater dripped from the rock “ceiling” above us. The mine had three levels below the one that is now open for visitors. Since there is no intention of opening the lower levels, they no longer pump out groundwater, leaving the two lowest levels permanently flooded.

A mine was a noisy, dusty, dark place to work. Today there is ample lighting throughout the tunnels. Early miners didn't have that luxury—they wore cloth caps with a small oil lamp on top. Not even hardhats! The one part of the miner's experience we did have was the temperature. Hundreds of feet below the surface, the temperature stays within a few degrees



Andre Weltman

*Tour group viewing a demonstration of the Baldwin Universal Test Machine.*



Tony Meadow

*Tour participants investigate the base of an anthracite-fired furnace at Lock Ridge Park and Furnace Museum in Albertus, Pa.*



of 50°F all year long. On a hot humid August day, that felt good at first, but by the end of the hour, it became clear that it's a very damp 50.

We learned that boys graduated from breaker work to being mule leaders, guiding the mules quickly to wherever they were needed. We learned about the dangers of gases in the mine. And yes, the miners did have canaries to warn them of buildup of gas. If the canary stopped singing, it was time to get out! The problem was that the canary couldn't tell them which gas hazard was the problem. Carbon dioxide would cause suffocation. Methane would explode. The guide demonstrated a modern version of a Davy lamp. If there is carbon dioxide, a flame inside the lamp will diminish when the lamp is lowered, because carbon dioxide sinks. If there is methane, the flame will grow larger as the lamp is held higher, because methane rises.

We next visited **Highwood USA**, manufacturers of synthetic lumber (they don't like the term "plastic wood," even though it is a wood substitute made out of plastic). Their products include outdoor furniture and spa cabinets, the outer walls of hot tubs. The plant we saw makes the spa cabinets. Both lines have been booming in the past year because people have been staying home and upgrading their living areas.

Highwood uses polystyrene in its products. Some of their raw material is recycled, such as foam products like cups, "clamshells," and trays used for packaging meat in supermarkets. The first step is to make uniform pellets that can be fed into the machines that make the wood. The process begins by extruding the plastic through a die. The strands of plastic look like very long spaghetti coming out of a pasta machine. A blade cuts through the ends of the strands, producing pellets. Pellets go into the next machine, where the material is extruded into strips of synthetic wood. The quality control lab has equipment to test for strength and durability. One machine simulates environmental conditions of light and temperature change, and material is then evaluated to see how it has changed. Another machine drops a weight onto a sample to see if it will dent or break.

After Highwood, we returned to our study of anthracite with a quick photo stop at **Jeddo Coal Co.** We got a good look at draglines in the pit. Jeddo's 8700 Marion dragline

with its 85-cubic-yd. bucket is used for removing overburden as well as coal.

Our last stop was **Eckley Miner's Village**, a restored coal patch town and movie set for *The Molly Maguires*, operated by the Pa. Historical and Museum Commission (PHMC). Patch towns were company-owned towns built to provide housing for workers close to the mine. Rough wooden buildings housed the "pickers" who worked at the breakers. More substantial double dwellings housed better-paid laborers. Some of the double dwellings are open for tours, but others are occupied by private tenants. Farther down Main St. are single-family dwellings, which were occupied by mine supervisors and foremen. At the far end of the street stands the owner's home, the best house in town. Eckley also has two churches and a doctor's house. Two structures not original to the town remain from the filming of "The Molly Maguires," released in 1970. One is a smaller-than-scale breaker and the other is a company store. Eckley did have a company store, but at a different location than the reproduction.

*Wednesday Tour 2: Go East.* With Don Young [SIA] as the tour leader, the group experienced industrial culture spanning eastern Pa. into northwestern N.J. The day began at **Lehigh University's 1909 Fritz Lab**, a scaled-down copy of the Bethlehem Steel Machine Shop. Tour guide Robin Hendricks, a research scientist at the lab, recommended to the group "don't stand too close" during a demonstration of a massive Baldwin material stress-testing device. The Baldwin is capable of 5 million lbs. of compression but in the demonstration for SIA tour members, was exerting a mere 100,000 lbs. on a rubber dock bumper used in commercial shipping.

Next, Don narrated a driving tour of the former **Bethlehem Steel** properties in South Bethlehem. The mill shut down in the 1990s but several buildings on the massive site have been saved and reused. We walked the **Hoover-Mason Trestle**, a High Line-inspired walkway that allows visitors to walk past five remaining blast furnaces. At ground level in front of the trestle, an open-air stage called **SteelStacks** features live shows on weekends. Then after crossing the Delaware River to Phillipsburg on the N.J. side, tourgoers took a short excursion to view a rare Chinese-built Tang Shan steam locomotive under restoration by the **New York, Susquehanna & Western Ry.**

(continued on page 22)



Kathryn Fox

**Coal country: a view of Lehigh Anthracite's mining operations, Tamaqua, Pa.**



Thomas Koller

**SIA members explore Reading Outer Station prior to the rail excursion.**

**Technical & Historical Society.** The SY-class steam engine was built in 1989, when steam was still active on railroads in China before the government shut it down prior to the 2008 Olympics. We enjoyed lunch at the nearby **Phillipsburg RR Historians** facility, where SIAers were treated to a 1,500-ft. long ride on the 1/6 scale Centerville & Southwestern miniature RR. Our final stop was the 1913 **People's Water Co. Pump House**, which ceased operations in 1969. Here volunteers Alex Karnes and Phillip Beard enthusiastically showed off their ongoing preservation efforts to restore the 51-ft.-tall Allis Chalmers triple expansion steam powered pumping engine.

*Wednesday Tour 3: A Day Set In Cement.* Martha Capwell Fox [SIA], whose presentation during Tuesday evening's opening reception helped orient conferees to the Lehigh Valley's industrial history, led Wednesday's cement tour. The first stop was at **Coplay's Saylor Park**, where the world's only remaining continuous-firing vertical cement kilns, also known as Schoefer kilns, have been preserved. A variety of interpretive signage surrounding the brick kilns—originally 120 ft. high but shortened by 40 ft. in the 1950s for safety reasons—explains their use producing Portland cement between 1893 and 1904 and the more recent efforts to maintain them. Tour members could not help being attracted to a pair of concrete "Safety Follows Wisdom" monuments awarded over a series of years beginning in 1928 to Lehigh Cement by the Portland Cement Assn. in recognition of their exemplary safety records.

The next visit was to **LaFarge/Holcim Cement's Whitehall Plant** at Cementon, among the oldest cement plants still operating in the nation, as witnessed by the concrete mule stables that stand near the plant's entrance. The plant contrasted sharply with former cement production that encased the plant and neighboring countryside with thick layers of fine cement dust. The plant's combination communications/environmental officer, who served as guide, explained that the company is committed to a net-zero carbon pledge by 2030 and a full-throated embrace of OSHA standards. Along with replacing coal with old tires as a fuel source, the

plant incorporates fabric filters to trap fugitive material for recycling back into the production process and containerized air systems with silos of hydrated lime that scrub pollutants from the exhaust.

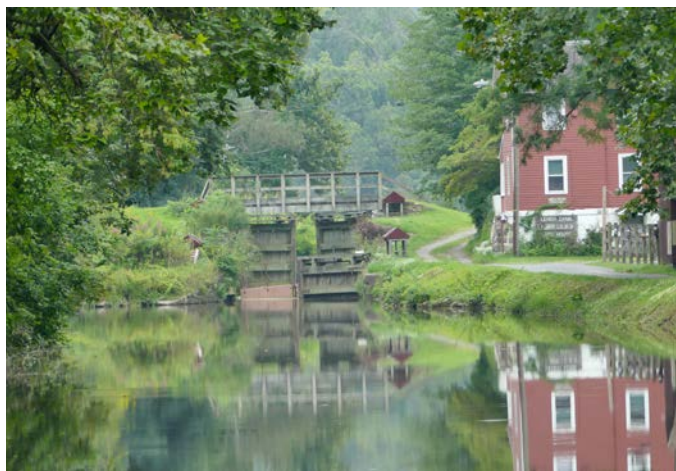
The tour then traveled to the **Atlas Cement Memorial Museum** in the Northampton City Hall where curator Ed Pany, a former high school teacher and city councilman, provided a very personal and enthusiastic tour. Since being established 25 years ago, the museum has taken on the personalities and idiosyncrasies of the workers and their families who donated 3,500 artifacts to the museum. Visitors are able to experience a full history of the Portland cement industry from its beginnings here in 1895 to its local demise with the closing of Atlas Cement Co. in 1982. The museum's exhibits admirably illustrate all the elements of the industry, beginning in the quarry and following through the processing from laboratory to bagging, and even to the farms used for feeding workers.

After lunch, the bus headed to Whitehall to see the **Swope & Bartholomew** pattern shop and nearby **Bridesburg Foundry**. Like many long-standing pattern shops, Swope & Bartholomew had numerous old, interesting wooden patterns to explore but, in contrast to these vestiges of the past, shop owner Warren Bartholomew demonstrated how they have fully embraced new computer-aided technology to design and fabricate their patterns from a variety of new, high-tech plastics and alternative materials. The neighboring 7-acre Bridesburg Foundry is a major client of S&B. Following an introduction to the foundry's product lines and specialty non-ferrous alloys—including the bell metal necessary for Schulmerich handbells—by President John Bankos, the tour was guided onto the foundry floor to watch a hot metal pour and inspect recent castings.

The tour ended on the grounds of the **Lehigh Crane Works** in Catasauqua, site in 1840 of the first commercially successful use of anthracite to produce pig iron. The location is a challenge for local preservationists since the majority of the facility has been demolished, leaving a mere handful of



*Life-size replica of a canal boat at Breadlock Park.*



*Canal lock and lock house seen from the boat on the Lehigh Canal.*



historic buildings standing, including an early, but modified, foundry building. Much of the site is now used as a municipal dumping ground for construction debris.

*Friday Tour 1: An Embarrassment of Canals.* Led by Martha Capwell Fox and Daphne Mayer, the first stop was at **Inclined Plane 9W** in western Morris County, N.J. Restoring this site along the Morris Canal was a family project. Jim Lee, Sr. began the restoration and lived in the lock keeper's house. The next two generations continue the work. Our guides were Jim Lee, Jr. and Jim Lee III. They met us at the top of the incline, after we walked up the 1,600-ft.-long slope from the bus drop-off. This hike raised us 100 ft. and drove home the challenges faced by the developers of the canal. Locks can raise a canal boat for small changes in elevation, but we learned that this height change would have required a flight of 10 locks. It was faster to float the boat onto a wheeled cradle, and winch the boat up to the next segment of the canal. The winch at 9W was water powered, driven by a reaction turbine that looks like a lawn sprinkler. As water rushed out of the turbine, action-reaction forces caused the turbine to turn, driving the winch.

Our next stop was at **Bread Lock Park**. Lock keepers supplemented their income with small businesses that served the boatmen and their families. At this lock, the keepers' wife baked bread, so the lock became known as Bread Lock. The park has a full-scale replica of a canal boat.

Our third stop was the **National Canal Museum**, which is along a section of the Lehigh Canal. The museum houses displays that explain how canals were used and what life was like working on the canal. The museum offers boat rides along the canal. We boarded the **Josiah White II**, and watched as the mules towed us to the lock keeper's house and then back to the museum. The guide on the boat talked about the canal and also extolled the virtues of mules. He said they are not stubborn; they have a strong sense of self-preservation and won't do anything dangerous.

*Friday Tour 2: An Embarrassment of Iron Furnaces.* This tour was the brainchild of tour leader Brian Schmult [SIA], who provided a most excellent adventure! We visited four

furnaces representing Pa.'s early iron smelting history. The sites ranged in condition from stabilized ruins with minimal interpretative signage, to extensively restored iron plantations with guiding docents.

During the bus ride, Brian detailed the various facets of the iron business. In some cases, a furnace would perform multiple functions. For instance, Joanna Furnace not only smelted the ore but also produced iron castings for stoves. Brian also gave an excellent overview of the mineralogy and chemistry of iron production to explain how the production processes were often common, yet specific to local conditions. Brian further addressed the basic advantages and disadvantages of iron in its various forms.

**Lock Ridge Furnace**, Alburtis, Pa., was our first stop. Lock Ridge began construction of its two furnaces in 1867, first poured iron in 1868, and continued operations to 1921. Lock Ridge was the only successful anthracite-fueled furnace on our itinerary, and contained stabilized ruins and restored original buildings. An example of the former was the cathedral-like carpenters' shop with its remaining picturesque stone arches. Examples of the latter were the nicely preserved weigh master's house and the casting house.

A unique feature of Lock Ridge was the exposed iron furnace hearth outside the north end of the building. The remains still have pipes embedded between the refractory brick lining and supporting stack masonry. These pipes/passages constituted a rudimentary system for circulating cooling water at the hottest parts of the furnace to remove excess heat and keep the tuyeres from melting. Member Matthew Kierstead recognized this and gave us a detailed discussion of the purpose and significance of this aspect of furnace design, a feature not found in many other furnace remains.

A visit to **Hopewell Furnace** (Berks County) followed. Hopewell was first documented and restored by the Works Progress Administration (WPA) in the 1930s, and is now operated by the National Park Service (NPS). The site includes many original buildings from the Iron Master's House to the furnace and cast house. Other structures, like the charcoal shed, were reconstructed on their original loca-

(continued on page 24)



David Simmons

*Swope & Bartholomew pattern shop owner Warren Bartholomew demonstrates the importance of having removable sections in some of the more intricately carved wooden patterns in the firm's older inventory.*



David Zwolak

*Hopewell furnace and cast house.*



tions. Hopewell began operations ca. 1770/1771.

We first stopped at the unreconstructed remains of one furnace. We next walked to the main furnace with its restored, operating waterwheel driving two adjacent blowing-tub piston bellows. The bellows emptied into a central equalizing chamber (plenum) that fed air to the tuyeres. The bellows system is believed to be the only one of its type still operating in the U.S.

At Hopewell, a steam engine was installed in 1880 to power its bellows as a backup against low water or a frozen headrace. This and related efforts ultimately failed and Hopewell went out of blast for the last time in 1883. We spent a scant two hours at Hopewell, but it is worthy of a much longer visit to fully appreciate its features.

**Warwick Furnace** (Chester County) was our next stop. Warwick consists entirely of stabilized ruins including the furnace, blower building, and the charcoal building (with surprisingly intact stonework). The site is in what was the Warwick iron plantation, and is now the private property of the French and Pickering Creek Conservation Trust. Access is not usually open to the general public. Brian provided a basic orientation and we were able to climb around and explore the ruins after signing release forms. The Iron Master's house is near the furnace site, but is in private hands and was not accessible.

Warwick began in the early 1730s, and operated continuously from 1738 to 1867. This foundry produced a number of products including pig iron, consumer goods, cannon castings, and various revolutionary war armaments. Notably, Warwick was the foundry selected by Benjamin Franklin to cast components for his iconic stove, the "Pennsylvania Fireplace," produced there from 1742 to 1765. George Washington brought 8,000 troops to the area in Sept. 1777 to repair muskets and obtain cannons.

**Joanna Furnace** (Berks County) was our final stop. Joanna

is another restored example of an "iron plantation" which processed metal from smelting to a finished product. This cold-blast charcoal furnace operated from 1791 to 1898. The Joanna site is similar to Hopewell, but on a more compact scale. Joanna has been restored to its 1898 appearance and is currently operated by the Hay Creek Valley Historical Assoc. Our group was greeted and led by authentically garbed docents who provided information with an historical flourish.

We first visited the charcoal building, which has been converted to a museum. The building housed photos, archeological remains found during restoration, informative placards, dioramas, and full-size exhibits depicting the iron industry. Also on display was an extensive collection of preserved cast iron stoves.

Our next stop was the restored office/store building with period furnishings. We concluded our tour inside the cast shed next to the remarkably well-preserved furnace with its firebrick bosh still intact! The resident foundryman docent normally explains the processes to school children. Once he recognized that we already knew how an iron furnace operates, the foundryman shifted to discussion about engaging visitors and giving demonstrations. Joanna is another site worthy of a longer visit.

*Friday Tour 3: Historic Bethlehem Walking Tour.* Led by certified guides from **Historic Bethlehem** in period dress, participants in the walking tour learned the story of Bethlehem's unique beginnings in 1741. The walk covered 275 years of Bethlehem history with stops at the 1741 Gemeinhaus, 1762 Waterworks, 1758 Nain-Schober House, and the 1752 Apothecary.

The SIA recognizes the many volunteers and organizations that made this conference possible. Thanks to the local planning committee, Ann Bartholomew, Mark Connor, Ed Hoy, Bill Inderieden, Jet Lowe, John McConnell, Kevin Mock, Missy Nerino, John Rohal, Jill Schennum, Trevor Shellhammer, Kris Thompson, Ron Triani, and Ethan Wallace, and to tour leaders Martha Capwell Fox, Patrick Harshbarger, Daphne Mayer, Bode Morin, Kara Mohsinger, Mike Piersa, Brian Schmult, Don Young, and Nick Zmijewski-



At the New York Susquehanna & Western Technical & Historical Society shop, front quarter view of Susquehanna 142, which is undergoing required inspection. The boiler, cylinder supply pipes, and cylinders have been stripped of their sheetmetal jackets and lagging (insulation) as needed for testing.



Skip hoist at Bethlehem Steel, viewed from the Hoover-Mason Trestle.

## CHAPTER NEWS

**Northern New England** held a Fall Tour on Oct. 16, beginning in Campton, N.H. with a visit to the Blair Covered Bridge. This Howe truss was built in 1869 and repaired following damage from tropical storm Irene in 2011. Next, in Livermore Falls the chapter viewed the noted pumpkin seed or upside-down bridge and remnants of an old pulp mill below it. A visit to Dole Mill followed lunch at the Common Man. The tour concluded with a stop at the remnants of what was once the world's largest bobbin plant and a visit to the Campton Historical Society, where more was learned about the plant.

**Roebling** (Greater N.Y.-N.J.) held its annual corn roast at Gerry Weinstein's Engineerium on Sept. 25. Members took an industrial waterfront tour on Oct. 13 aboard the *Solaris*, a 100% solar-powered tour boat operated by the Hudson River Maritime Museum in Kingston, together with a guided visit to the museum.

**Southern New England** held a bike tour of the Sudbury Aqueduct, Oct. 9, cycling about 12 mi. between the Charles River (Echo) Bridge in Newton and Waban Bridge in Wellesley, Mass. The tour traversed the route of the aqueduct, which was built 1875–1878 to expand the supply of water to the Boston region, and included stops at several aqueduct structures.

**Support Your Local Chapter.** For info on a chapter near you or to start one, check out the local chapters section of the SIA website ([www.sia-web.org](http://www.sia-web.org)). ■

ki, who collectively organized tours and events, rescheduled, and rearranged as needed to plan and carry out a full multi-day itinerary. Thanks also to the presentation committee, who developed the day of paper sessions: David Simmons, Saul Tannenbaum, Christopher Marston, Steven Walton, and Bob Newbery, and to Daniel Schneider at SIA Headquarters, and Courtney Murtaugh, SIA Events Coordinator, who provided vital logistical and organizational support. Finally, a thank you to our many tour hosts for welcoming us to their sites and businesses, and to our sponsoring partners, who helped to make the conference possible: National Museum of Industrial History, National Canal Museum, Industrial Archives & Library, Delaware and Lehigh National Heritage Corridor, Anthracite Heritage Museum, and the Pa. Historical and Museum Commission.

With contributions by Charlie Fineran, Kathryn Fox, Patrick Harshbarger, Matthew Kierstead, Tom Koller, Arron Kotlensky, Patrick Malone, Christopher Marston, Tony Meadow, Ray Merrill, Mike Piersa, Carol Poh, John Reap, Brian Schmolt, David Simmons, Steven Walton, Andre Weltman, and David Zwolak

## SITES & STRUCTURES

### Claudius Crozet's Blue Ridge Tunnel Reopens

The Blue Ridge Tunnel (Tour Stop, 2018 Annual Conference, Richmond, Va.) has recently reopened to pedestrians and bicyclists after a 20-year rehabilitation effort. The 4,264-ft.-long tunnel was constructed by hand labor—mostly Irish immigrants and enslaved African Americans—between 1850–1859 under the direction of Claudius Crozet, chief engineer of the Blue Ridge RR. The partially brick-lined tunnel, which featured a dress-stone elliptical arch on the west portal, was bypassed by a new concrete tunnel built by the Chesapeake & Ohio RR in 1944 and had been closed for several decades. The Virginia DOT funded the \$5million project.

The tunnel officially reopened in Nov. 2020 as part of the 2.25-mi.-long Claudius Crozet Blue Ridge Tunnel Trail and has since had approx. 100,000 visitors. A trailhead on the east, Nelson County side features an expanded parking lot around the historic Afton depot. It is also accessible by a steep trail on the west side in Augusta County. Future phases include upgrading the trail on the Augusta County side and constructing new bike trail connections to the towns of Crozet on the east and Waynesboro to the west.

Christopher Marston



West portal of the Blue Ridge Tunnel.

Christopher Marston



many facets of the lumber industry, ranging from the old and now-decrepit paper mills up through the very modern cross-laminated timber plants, are still going. We have potential availability to tour this industry, but can't promise any specific tours—we're still in the Covid world, and not everything is open.

We also have museums; we can visit the Spruce Goose [the largest wooden airplane ever constructed, the seaplane built by Howard Hughes] and likely spots to see hydropower at the Bonneville Dam and the Dalles Dam. There are locks both at Oregon City and on the Columbia River. The brewing industry is one of the big draws of Portland these days, and certainly we can go visit some places associated with that industry.

We hope to see you there. We are also putting out a guide that will talk about some of the other things to see in the area. Rebecca acknowledged it's a long trip for most of the membership. She encouraged members to come and stay for longer than just the conference time because there's lots to see in Oregon.

Vice-President Arron Kotlensky thanked Rebecca. He also mentioned a couple of other places that are in the hopper as potential sites, either fall tours or possibly for the annual meeting as well: Grand Rapids, Mich., the postponed Maine tour, California oil country, and Western Pa.

Please, if you have any ideas and want to organize something, get in touch with the board or Courtney.

**Eric DeLony Industrial Heritage Preservation Grants.** Christopher Marston reported for Committee Chair Duncan Hay: Longtime Chief of HAER Eric DeLony died in Oct. 2018, and his children, Rieyn and Theodore, pledged to establish a fund in his honor. The SIA agreed to rename its grant program as the Eric DeLony Industrial Heritage Preservation Grant Fund. After a long probate process, Rieyn recently contacted the SIA to say she was close to releasing the first of three segments of approximately \$4,000–5,000 each through a donor-advised fund. These donations would add up to \$15,000 in the grant fund.

Unfortunately, Duncan Hay reported that the committee had three feelers, but no applications this year. The board will therefore work with the committee to publicize the grant program and put the generous donations of the DeLony family and our members to good use in memory of Eric DeLony.

We also awarded no SIA travel grants this year because we had a dearth of student presenters, partly because the

conference took place at the beginning of the school year.

**TICCIH.** The International Committee for the Conservation of the Industrial Heritage (TICCIH) representative Bode Morin announced that he is rotating off as U.S. national representative to TICCIH but will remain on the TICCIH Board. The SIA is the U.S. organizational member of TICCIH. The TICCIH Communications Committee is working on blog, social media, and messaging platforms in multiple languages. SIA members are welcomed and encouraged to submit materials for the global audience.

SIA members are encouraged to join TICCIH, which has multiple membership levels starting at \$10/year. Michigan Tech serves as the HQ for both SIA and TICCIH. TICCIH will have a Zoom general meeting on Sept. 3, 2021, which is open to the public. The TICCIH Montreal Congress has been postponed to Aug. 2022. TICCIH has been developing World Heritage Theme studies on various topics to assist in the preparation of nominations. Recent ones include textiles and oil heritage. The oil heritage study will be presented at a conference in Ontario, which is now rescheduled for 2022.

**Tours and Conferences.** Bode Morin offered another round of thanks for our planning committee. As Courtney and Daniel have said, this conference has been a long 40 months in the making. He thinks that much of the most imminent challenges of Covid-19 were managed by the SIA leadership who did a remarkable job providing cautious leadership to make sure that we had enough protocols in place to conduct a safe conference. We need to thank them again. And he thanked our local committee including Kara Mohsinger, Mike Piersa, Don Young, Nick Zmijewski, Martha Capwell Fox, who was out selling her book in the lobby, Brian Schmult, Patrick Harshbarger, and Jet Lowe and John McConnell who helped early on in the planning process. David Simmons coordinated the paper sessions, and Daniel and Courtney managed the ups and downs and ins and outs of Covid-19 and getting this conference pulled off. Thanks again to all.

**Chapter Recognition.** Vice President Kotlensky noted that it's been a challenging past 14 months for everybody planning a conference and promoting local chapters. He noted that he would like to have a chapter leadership roundtable through Zoom to talk about the state of the chapters and ways that the national and local groups could assist one

## CONFERENCES & WORKSHOPS

**Construction History Society of America** announces a new **Call for Abstracts** and rescheduled 7th Biennial Meeting on Construction History at Kennesaw State Univ., June 2–4, 2022. CHSA invites researchers and practitioners to submit presentation abstracts on subjects relating to construction in North or South America for the 7th Biennial Meeting. All presentations are limited to a 20-min. slide show format and

must be in English. Each abstract must include authors' names, contact information, institutional affiliations, an abstract of 4,000 characters (maximum), key words (selected, if possible, from the list of topics and subjects), and a one-page curriculum vitae indicating titles and publications or other relevant work for each author. **Deadline: Jan. 3, 2022;** author notification: Feb 14, 2022. Info: [www.chsa7thbiennialmeeting.org](http://www.chsa7thbiennialmeeting.org). ■



## IA EXHIBITS

**American Weathervanes: The Art of the Winds**, at the American Folk Art Museum (New York, N.Y.) through Jan. 2, 2022, highlights the beauty, historical significance, and technical virtuosity of American vanes fashioned between the late 18th and early 20th c. The exhibition includes the graceful figure of Fame blowing a trumpet and standing en pointe, attributed to well-known manufactory E.G. Washburne & Co. in N.Y.C.; a Dove of Peace commissioned by George Washington for his home in Mount Vernon; and an eagle possibly made in the foundry of revolutionary patriot Paul Revere. The exhibition also includes beautifully articulated wood sculptures by Harry Leach that functioned as patterns for weathervane molds for the Cushing & White and L.W. & Sons manufactories in Waltham, Mass., watercolors of historic weathervanes painted for the Index of American Design, and rare archival materials that illuminate the development of the weathervane in the U.S. Info: [folkartmuseum.org](http://folkartmuseum.org).

**Landscapes of Extraction: The Art of Mining in the American West** runs Nov. 7, 2021–Mar. 6, 2022 in the Steele Gallery at the Phoenix Art Museum. The exhibit explores the evolution of the art of mining, with works from the 1910s through today that depict regional landscapes of enterprise and examine how mining has altered the natural environment on a spectacular scale. Info: [phxart.org/exhibition/landscapes-of-extraction/](http://phxart.org/exhibition/landscapes-of-extraction/).

**Majolica Mania: Transatlantic Pottery in England and the United States, 1850–1915**, on view at the Bard Graduate

Center Gallery (New York, N.Y.) through Jan. 2, 2022, traces the development and dissemination of one of the 19th c.'s most significant and successful ceramic innovations. Introduced by Minton & Co. at the Great Exhibition of 1851 in London, majolica quickly became a commercial sensation, celebrated for its three-dimensional ornament and vibrant polychrome lead-based glazes. From the 1850s through the turn of the 20th c., dozens of English and American potteries made majolica. Their impressive products, as well as manufacturing processes, are on display. Info and online exhibit companion: [exhibitions.bgc.bard.edu/majolicamania](http://exhibitions.bgc.bard.edu/majolicamania).

**Travelers, Tracks and Tycoons: The Railroad in American Legend and Life**, on view at the Grolier Club (New York, N.Y.), May 4–July 30, 2022, will take visitors on a journey from the earliest days of railroads in America to the modern era. Maps, photographs, documents, and historic paper ephemera showcase the development and influence of the railroad industry on North America and its peoples. Visitors will be able follow in the footsteps of visionaries, inventors, politicians, workers, and travelers as they crossed the continent on a ribbon of rail. Now part of a vast network including trucks, cars, airplanes, and ships, railroads remain a vital part of our national and global infrastructure. The exhibition is drawn from the collections of the John W. Barriger III National Railroad Library, St. Louis Mercantile Library, Univ. of Missouri-St. Louis, and is organized by curator Nicolas Fry. Info: [www.grolierclub.org](http://www.grolierclub.org). ■

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## MINUTES (continued from page 26)

another. The traditional roll call of chapters was held.

**Vogel Prize.** Committee chair Fred Quivik read the Vogel Prize citation. He accepted the award on behalf of Susanna Kuo and Rick Minor, and read their acceptance statement (see article elsewhere in this issue).

**General Tools Award.** Committee chair Fred Quivik read the General Tools Award citation. Vern Mesler accepted the award with a statement of thanks (see article elsewhere in this issue).

Vice President Kotlensky expressed his congratulations to Vern on receiving the General Tools Award and to Susanna and Rick as Vogel Prize winners.

**Recognition of Outgoing Board Members.** Vice President Kotlensky recognized outgoing board members David Simmons and Rebecca Burrow and noted that our hooks are still in them because David will take on the General Tools Committee chair next year and Rebecca is planning next year's Conference, so you never quite get away. A round of applause ensued.

**Nominations Committee.** Christopher Marston read the Nominations Committee report for Chair Ian Hay: The

SIA Nominations Committee works every year to encourage members to serve and help lead the Society forward in its events and missions. This year's committee consisted of Ian Hay, Diana Bouchard, Marc Belanger, and myself as past president. Next year, we will be looking to fill positions for Director, Nominations, and Vice President, which is only a six-year commitment. The results of this year's SIA election are Paul White as TICCIIH Representative, Rebecca Burrow elected to the Nominations Committee, and Erik Nordberg and Scott See elected to the Board of Directors. Please congratulate all the winners.

Vice President Kotlensky thanked Christopher, again offered congratulations to the winners of the election, and said that he and the other Board members look forward to working with them.

**Adjournment.** At 1:59 p.m. (ET), Vice President Kotlensky called for adjournment, which was moved by Perry Green, seconded by Rebecca Burrow, and carried.

*Respectfully submitted,  
James Bouchard, Secretary*

# **SOCIETY FOR INDUSTRIAL ARCHEOLOGY**

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## **CALENDAR**

Please be advised to confirm all events and dates due to the coronavirus pandemic.  
All information was current, as best as could be determined, at the time of publication.

### **2022**

**Jan. 5–8:** Society for Historical Archaeology Annual Conference, Philadelphia, Pa. Info: [www.sha.org](http://www.sha.org).

**Apr. 27–May 1:** Society for Architectural Historians Annual International Conference, Pittsburgh, Pa. Info: [www.sah.org](http://www.sah.org).

**May 30–June 3:** World Canals Conference 2022, Reshaping Landscapes: Waterways in Transition, Leipzig, Germany. Postponed from 2020. Pre- and post-conference tours. Info: [wccleipzig2022.com](http://wccleipzig2022.com).

**June 2–4:** Construction History Society of America 7th Biennial on Construction History: Quarrying History, Kennesaw State Univ., Ga. Postponed from 2020/2021. Info: [www.constructionhistorysociety.org](http://www.constructionhistorysociety.org).

**June 9–12:** SIA 50th ANNUAL CONFERENCE, PORTLAND, ORE. See call for papers and save-the-date notice in this issue. Info: [www.sia-web.org](http://www.sia-web.org).

**June 23–26:** Mining History Assn. Annual Conference, Birmingham, Ala. Info: [www.mininghistoryassociation.org](http://www.mininghistoryassociation.org).

**TBD:** Society for Commercial Archeology Summer Tour: NYC, The Golden Age of Air Travel, New York, N.Y. Postponed to summer 2022. Check back for updates. Info: [sca-roadside.org](http://sca-roadside.org).

**TBD: SIA FALL TOUR, CENTRAL AND MID-COAST MAINE.** Postponed from 2020. Info: [www.sia-web.org](http://www.sia-web.org).

**Aug. 28–Sept. 3:** TICCIH International Conference: Industrial Heritage Reloaded. New Territories, Changing Culturescapes, Montréal, Qué. Rescheduled from 2021. Info: [patrimoine.uqam.ca/evenements/ticcih2022/](http://patrimoine.uqam.ca/evenements/ticcih2022/).

**Sept. 22–24:** Preserving the Historic Road International Conference, Advocacy to Action: Meeting the Challenges of the Next Generation, Portland, Ore. Info: <http://historicroads.org>. ■