# 32nd Annual New England Conference on Industrial Archeology

Hosted by the Southern New England Chapter for Industrial Archeology (SNEC-SIA)
at **Clark University**, Jefferson Academic Center, Room 218, Worcester, Massachusetts
Saturday, March 30, 2019

SCHEDULE

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| 8:30-9:25 A.M. | Registration | |
| 9:25-9:30 | Greetings and Opening Remarks | |
| 9:30-10:00 A.M. | *Stilted Segmental Arch: Architectural Symbol of Industry* | Sara Wermiel, Ph.D<br>Jamaica Plain, MA |
| 10:05-10:35 A.M. | *Mt. Hope Bridge: New England's First Major Suspension Bridge* | Robert Dermody<br>Bristol, RI |
| 10:35-10:50 A.M. | 15-minute break | |
| 10:50-11:20 A.M. | *Making Places: Beyond the Historic Resource Survey* | Renée Tribert<br>Hamden, CT |
| 11:25-11:55 A.M. | *Building Community with Industrial History – A Project Report from Amesbury, Massachusetts* | John Mayer<br>Amesbury, MA |
| 12:00-1:30 P.M. | Luncheon Break | |
| 1:30-2:00 P.M. | *The Arkwright Bridge: A Rehabilitation Feasibility Assessment* | Emeline Young<br>Barrington, RI |
| 2:05-2:35 P.M. | *The Preservation Challenges of Echo Bridge* | Barbara Kurze<br>Boston, MA |
| 2:35-2:50 P.M. | 15-minute break | |
| 2:50-3:20 P.M. | *The Institute for Industrial Art and History – An Overview and Archeology Opportunities* | John Schroeder, Ph.D.<br>North Andover, MA |
| 3:25-3:55 P.M. | *The "Eblana" Brewery in the Great Brewery Landscape of Roxbury and Jamaica Plain, Boston* | Patrick Powers<br>Revere, MA |

PAPER ABSTRACTS and BIOs

**Stilted Segmental Arch: Architectural Symbol of Industry**

As factories as a building type evolved in the 19th century, their architecture ran the gamut from plain to elaborate. One decorative element that often appeared on factories was a molding over the tops of windows that consisted of a segmental arch on stilts. This element itself could be expressed very simply, with just a few projecting bricks, or more elaborately. Interestingly, this particular form was common on industrial buildings and warehouses not only in the U.S., but in Great Britain and Europe as well. Its presence practically identified a building as an industrial building.

In this presentation, a variety of examples of buildings with these stilted segmental arches will be shown, from the U.S. and abroad, illustrating the interesting choice of this form to announce the utilitarian purpose of a building.

**Sara E. Wermiel** is an independent scholar, historic preservation consultant, and teacher. Her specialties are the history of 19th-century technology, industrialization, and urbanization. Her research areas include the history of structural fire protection, new construction materials and assemblies, general contracting, and building typologies (e.g. warehouses, lighthouses), as well as business history topics (fire insurance and textile industries). Her teaching has focused on historical construction materials and assemblies, and policies and programs to protect built heritage. Wermiel received a B.A. from Oberlin College; professional degree in urban planning from Hunter College, City University of New York; and PhD in urban history and history of technology from the Massachusetts Institute of Technology.

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**Mt. Hope Bridge: New England's First Major Suspension Bridge**

The Mt. Hope Bridge opened with a festive public celebration on October 24, 1929. The design and construction of the 6000-foot steel suspension span were aesthetically and technically innovative. Locally, it was promoted as the bridge that would "…take the island out of Rhode Island". The bridge replaced sail, steam, and even horse powered ferries that had run between Bristol and Portsmouth for over 200 years. It was designed by the noted American bridge engineer David B. Steinman, of the consulting firm Robinson and Steinman, from New York City.

Steinman's pioneering design included many structural innovations, such as "cable bents" with straight back-stays, extremely long plate girders for the approaches, and strategically located anchorages. The design also included the first use of a carefully chosen color scheme, and custom designed lighting system. It's gracefully curved deck spans 1200 feet between 285-foot-tall towers braced with gothic styled arches. Shortly after its opening, the Mt. Hope Bridge received the "Most Beautiful Steel Bridge" award from the American Institute of Steel Construction. In 1976, it was added the National Register of Historic Places. During its 90-year history, the Mt. Hope Bridge has had a profound impact on the development and growth of Bristol and all of Aquidneck Island. Its striking form spanning over Narraganset Bay has become a local icon. This paper will tell the story of the conception, design and construction of the Mt. Hope Bridge, and address its legacy as it approaches its 100th anniversary.

**Robert J. Dermody** is a Professor in the School of Architecture, Art and Historic Preservation, where he teaches architectural design studios and the structures courses. Mr. Dermody has a B.S. in Civil Engineering from the University of Massachusetts at Amherst, and a Master of Architecture with a concentration in Structures from the University of Illinois at Urbana Champaign. He is a founding member of the Building Technology Educators Society, and is a licensed architect in Massachusetts.

**MAKING PLACES: Beyond the Historic Resource Survey**

Connecticut Trust for Historic Preservation staff have presented twice at the NEIAC annual meeting: first in 2015 to introduce the historic mill program, Making Places, a survey and pilot grant program intended to promote the renewal and reuse of historic industrial properties; and again in 2017 to offer an update on survey findings. The current presentation proposal focuses on how the historic resource inventory has been used to engage and educate a range of audiences interested in the opportunities presented by Connecticut's industrial heritage.

What began as a historic resource inventory, in compliance with SHPO's regulatory responsibility under Section 106, evolved into a central source for technical and financial assistance to stimulate redevelopment. The scope of the inventory was expanded to include data of interest to owners, economic/community development agencies and developers on the more than 1500 historic mills identified. Our website, Mills: Making Places of Connecticut (still under construction when we last presented in March 2017) makes available the survey results, and is a tool for educating owners, municipal officials and the public about the process, incentives and benefits of redeveloping vacant mills; it also promotes a general appreciation of factory space by marketing retail and cultural activities in historic mills.

Case studies and the award-winning website will be highlighted.

**Renée Tribert** has been Making Places Project Manager since September 2014, after sixteen years spent in environmental consulting. She has an MS in Historic Preservation from the University of Pennsylvania and has been curator/collections manager at the Harriet Beecher Stowe House and the New Britain Museum of American Art.

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**Building Community with Industrial History – A Project Report from Amesbury, Massachusetts**

How can a focus on industrial history build identity and bring a community together? What types of programs are effective in generating interest, participation and support? Where do you begin when there is no existing framework for operations?

This is an update and progress report about the Amesbury Carriage Museum and efforts to establish an industrial history center. Three years ago – what had been an all-volunteer organization – launched a bold initiative, hired their first-ever professional staff person, and began efforts to become a meaningful if not vital resource for the community.

This report will highlight program accomplishments over this three-year period – culminating with a gift of space and the current challenge of a capital campaign to fit out what is named – "the Industrial History Center at Mill 2."

John Mayer, Executive Director of the Amesbury Carriage Museum will present the report. John will share some of the historical discoveries that provide depth and value to the project and outline a progression of activities since he began his work in March, 2016.

For all involved in industrial history, this program will resonate as a case study about building community around industrial history. This is not an easy process – and the future is not secure. Primarily the challenge is to build a stable financial base. Will industrial history provide the power?

**John Mayer** is the Executive Director of the Amesbury Carriage Museum. He began his work for the museum in March 2016 and is responsible for leading the organization towards the goal of establishing a headquarters with space for exhibits, programs and collections. John has worked for over 30 years in

the museum field with expertise in non-profit administration, exhibit development, curatorial practice, care of artifact collections, and preservation of historic structures. He is a graduate of the Hagley Program at the University of Delaware with a Master's Degree in History and a Certificate in Museum Studies. In addition, he has a Bachelor's Degree in Fine Arts from the California College of Arts and Crafts. He has served as museum curator at Maine Historical Society, curator at Strawbery Banke Museum in Portsmouth, NH, and director and curator of the Manchester (NH) Historic Association.

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**The Arkwright Bridge: A Rehabilitation Feasibility Assessment**
Considered structurally deficient and closed to modern vehicular traffic, the 1888 historic wrought-iron Arkwright Bridge will be evaluated for the feasibility of rehabilitation into a pedestrian bridge. The study will focus on creating an existing condition report of the deck, superstructure, and substructure; and subsequent structural analysis of the bridge members, to determine if the structure is in sound condition. A rehabilitation plan including wrought-iron repair methods and bridge rehabilitation methods will make up the second half of the report. This paper aims to assist the town of Coventry in saving their historic bridge and to additionally serve as a case study to examine the importance of historic iron bridges and how they can be rehabilitated and brought back to public use.

**Emeline Young** did her undergraduate work in Structural Engineering at UC San Diego, focusing on non-destructive evaluation and building health. She writes: "I've always had a great love of old buildings, and wanted to use my engineering knowledge to work with historic structures and preserve or rehabilitate them. I decided to go back to school for Historic Preservation and come to the east coast, because in terms of our country the older structures are out here. I had the opportunity to intern with Wiss, Janey, Elstner Associates this past summer and my love for the cross between engineering and preservation only grew. I will be starting work full-time with them after graduation in May. My goal is to learn more about old buildings and discover new ways to save them as we move forward in the modern day."

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**The Preservation Challenges of Echo Bridge**
Echo Bridge was constructed in 1876-1877 by the Boston Water Board to carry the Sudbury Aqueduct over the Charles River and deliver critical water supplies to the City of Boston at a time of rapid development and population growth. The 500-foot-long bridge is supported by seven granite arches: one with a span of 28 feet, five with spans of 37 feet and the main arch stretching over the Charles River with a span of 130 feet. At the time Echo Bridge was built, it was one of the earliest long masonry bridges built in the United States and was the second longest after the Cabin John Aqueduct Bridge (1864.)
The top of the bridge has always served as a promenade and a connection between the City of Newton and the Town of Needham. The original cast iron railings atop the bridge are still in place and consist of decorative railing posts spaced 8' apart, pipe rails forming the top rail and bottom rail, and crossing intermediate rails. There are decorative cast iron rosettes halfway between each post. The bridge was individually listed on the National Register of Historic Places in 1980.
The bridge also serves as an access point to Hemlock Gorge which was one of the first parks acquired in 1893 by the newly established Metropolitan Park Commission to become part of the Metropolitan Park

System of Greater Boston. As the first regional park system in the United States, it contributed significantly to the American park movement of the 19th and early 20th centuries.
This paper will tell the history of Echo Bridge and the preservation efforts around this iconic structure and landmark.

**Barbara Kurze** is the Senior Preservation Planner for the City of Newton, Massachusetts and staffs the four local historic district commissions. She previously worked for the Massachusetts Historical Commission and the GSA Center for Historic Buildings and has an M.A. in Historic Preservation from Boston University. She is also the caretaker of the 1661 Blake House in Dorchester.

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**The Institute for Industrial Art and History – An Overview and Archeology Opportunities**
The IIAH is a 501 C3 exempt museum located at 9 Village Way, North Andover. The museum was incorporated in 2016 and has existed in one guise or another for 25 years.
We are guided by the words of Theo Jansen: "The walls between art and engineering exist only in our minds." At the IIAH, we are advocates of the idea that the technology we enjoy today, is an extension of our scientific & industrial heritage. Our mission is to help the public experience this heritage and enjoy it as both engineering and art.
We accomplish our goal by: Interactive displays at our North Andover, MA USA facility; Restoration of antique machinery; programs and demonstrations at schools, meetings etc.; Publications and presentations in relevant journals and society meetings; Open houses and workshops where likeminded people gather and share.
The collection in North Andover is divided into several areas and displayed in buildings about the 3-acre campus. The areas include: Steam engines and associated equipment; Gasoline and Air Engines; Horns and whistles; Automobiles and Automobilia; Clocks and watches Scientific instruments; Auxiliary equipment; and A Library/document archive.
This presentation will give a pictorial overview the collection and how we interact with the public.
A compound steam engine, boiler and related documentation was recently donated to the IIAH by the estate of Richard T. Voss. The engine/boiler had been installed in a wooden boat the Jack Holder, built in 1898. We are in the process of restoring the hardware and reproducing the boat based on the documentation and other research. This will be made into a traveling display for exhibit and other museums.

**John Schroeder** is the Director of the Institute of Industrial Art and History. He received his BS degree in Chemistry from the University of Missouri and his Ph.D. degree in Chemistry from the Massachusetts Institute of Technology. He is the founder and owner of the Ontar Corporation and does research in atmospheric radiative transport.

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**The "Eblana" Brewery in the Great Brewery Landscape of Roxbury and Jamaica Plain, Boston**
The former John R. Alley & Sons Brewery, also known as the Eblana Brewery, was built in 1886 and designed by prominent American brewery architect, Otto Charles Wolf. John R. Alley & Sons thrived as a prosperous brewery in the Mission Hill/Parker Hill community of Roxbury until Prohibition shut it down in 1920. After serving several miscellaneous purposes throughout the 20th century, the brewery building has been abandoned for over a decade. This structure has come under demolition delay multiple

times due to its deteriorating condition by neglect. Community efforts are being made to preserve such a majestic and iconic structure. In this paper, I propose to articulate the Eblana Brewery's distinct historical value and its local community throughout the years and how its rehabilitation can still serve a purpose to its present community.
Through historic texts, estate atlases and property documents, I will convey the Eblana Brewery's historical narrative in context with the Roxbury community along with its Brewmaster John R. Alley. I will survey US Census documents to relay names of supposed workers who lied nearby to provide a broader picture of the historic brewery landscape. I consider using architectural drafts from the Chicago Historical Society to give an architectural analysis of the brewery in terms of design and function as a brewery. In the conclusion of the paper I will share past ideas and proposals to argue that the brewery structure can be preserved and still contribute to its community through adaptive reuse.

**Patrick J. Powers** is a Preservation Planning Intern for the Massachusetts Historical Commission, where he is gaining experience in the field of Historic Preservation. Patrick has a B.A. in Art History and minor in Architectural History from Penn State University at State College, PA and an M.A. of Preservation Studies with a concentration in Architectural History from Boston University. He has been working with the Friends of Mission Hill Society as well as other Preservation groups since pursuing his Masters to help in preserving one of the community's most endangered historic structures.