

# ROEBLING CHAPTER

## Society for Industrial Archeology

September 2008

Vol. 17 No. 3

### CHAPTER EVENTS

#### **LAKE SOLITUDE DAM UNION FORGE IRONWORKS THE TISCO COMPLEX, AND SOLITUDE HOUSE MUSEUM**

*High Bridge, New Jersey*

*Saturday, October 11, 1:30 – 4:30 PM.*

*Meet at Solitude House Museum*

The Lake Solitude Dam was built a century ago to provide water power for the Taylor-Wharton Iron and Steel Company. The company history has roots in the American Revolution when, as the Union Forge Iron Works, it supplied arms to troops. It continued supplying munitions through the Korean War. We will visit the massive Lake Solitude Dam which is an example of highly innovative engineering in its use of a steel framework core. At The TISCO Complex we will tour the ruins of two remaining structures of the Taylor Iron and Steel Company. We will meet at the Solitude House which was built in 1725 and became the centerpiece of the Union Forge Iron Works.

Today the municipality is studying whether the dam should be repaired or breached. RCSIA has written letters in support of maintaining the dam and endorses restoring its use for water power (see "Historic Preservation Committee News" below). The Union Forge Heritage Association (UFHA) is looking to generate interest and ultimately funding to preserve the industri-

al heritage of High Bridge where important resources may be lost through municipal action or benign neglect. The Lake Solitude Dam was placed this year on Preservation New Jersey's "10 Most Endangered" list while The TISCO Complex made the list last year.

The tour of the dam will be led by historian and RCSIA member, Mary Delaney Krugman. Karen Larsen, VP of Operations of the UFHA will be presenting the history of Solitude House. William Honachefsky, Jr., VP of Public Relations will be speaking about the history of Union Ironworks and the evolution of the company to becoming Taylor Wharton Iron and Steel Company. UFHA President, Michael Gronsky, Jr., will guide the tour of The TISCO Complex.

#### **Directions from I-78 to Solitude House at 7 River Road, High Bridge, NJ 08829:**

From westbound route I-78, take exit 18 onto Beaver Avenue. At West Street, the third road on the right (with the big church on the corner), turn right. Continue under the railroad bridge. The street names changes to Dewey Avenue. When Dewey Avenue ends at a T-intersection, turn right onto Washington Avenue. Keep to the left to stay on Washington Avenue, as it bends around the factory complex. Small parking lot will be on left, look for "Museum Parking" and "Path to Museum" signs. The path passes by the site of the original forge. Museum phone: 908-638-3200.

From eastbound Route I-78, take exit 16. Go through the traffic light at the end of the ramp, cross



*Lake Solitude Dam, High Bridge, NJ.*

(Photo by Rob Tucher)

over route 31, then turn left at the end of the bridge. Keep left and merge onto Route 31 north. At the second traffic light, turn right onto Route 513 North (West Main Street), towards High Bridge. After the High Bridge police and emergency squad, take Arch Street on the right (do not go up the hill). When Arch Street ends at a T-intersection, turn right onto Washington Avenue. Keep to the left to stay on Washington Avenue, as it bends around the factory complex. Small parking lot will be on left, look for "Museum Parking" and "Path to Museum" signs. The path passes by the site of the original forge. Museum phone: 908-638-3200.

For public transit options please contact Lynn (contact info on back page).

**THE 28<sup>TH</sup> ANNUAL  
DREW SYMPOSIUM ON  
INDUSTRIAL ARCHEOLOGY IN THE  
NEW YORK – NEW JERSEY AREA**

*Sunday, October 26, 2008  
at the Hall of Sciences, Drew University,  
Madison, New Jersey – From 9:30 AM to 5 PM*

**S**ymposium coordinators Tom Flagg and Allison Rachleff have put together a great line up of speak-

**Call for Nominations  
CHAPTER OFFICERS**

**E**lection of the chapter officers will be held at the Annual Business Meeting in January (date yet to be determined – the formal notice of the meeting will be in the December newsletter). Nominations for all four elected offices – President, Vice-President, Treasurer and Secretary – are sought as all officers serve one-year terms. All current officers are eligible to run again.

Please consider running for Vice President or cajoling your friends into running. Our current VP, Tolga Morawski, will be relocating out of the area and will not be able to commit much time to RCSIA. We need a motivated and reliable one of you, our members, to help the chapter carry on!!!!

All chapter officers must be members in good standing of the national Society for Industrial Archeology and well as of the chapter. Please nominate candidates by sending names of worthy chapter members to the Nominating Committee Chair Tom Flagg no later than December 15, 2007. Tom may be reached at tflagg@sunyo.edu or (212) 938-5778.

ers so make sure you keep the day free to join us at Drew. The fee is \$25.00 for early registration (includes lunch) and \$30.00 at the door (lunch not guaranteed). Your flyer should already be in your mailbox!

**“WILLET’S POINT” – THE IRON  
TRIANGLE OF QUEENS, NY**

*Sunday, November 23, 11AM – 1PM*

**J**ust east of Shea Stadium is a sewer-less hardscrabble area of auto repair shops, junkyards and related businesses that has twice beaten back attempts at redevelopment. Located now between the new CitiField stadium and a booming Chinatown in Flushing, public and private interests are again trying to transform the area referred to as “Willetts Point”. Geographer Jack Eichenbaum will show us a neighborhood that had but one resident at the last census. We will wander streets that might make us think we left New York City far behind. While not heavy on heavy industry this tour is sure to pique the interest of any industrial archeologist! For baseball fans, this may also be your last chance to get a glimpse of Shea Stadium before it is demolished.

We’ll walk to the Iron Triangle from central Flushing in order to gain an understanding of the importance of its geographical setting. Meet outside St George’s Church (NW corner 39Av/Main St) one block north of the Main Street Station of the #7 subway line and the LIRR.

**CHAPTER BUSINESS  
CONGRATULATIONS  
MARY HABSTRITT!**

**I**n May, at the Society for Industrial Archeology annual general meeting in San Jose, CA, Mary Habstritt, RCSIA past-President and Chair of our Historic Preservation committee, was elected President of the SIA. Mary more than ably turned RCSIA into a thriving go-to organization for all things IA in NY and NJ. She is sure to do amazingly good things for the SIA as a whole. It might also prove good for us to have the President of the big leagues be one of our own. Congratulations, Mary!

**HISTORIC PRESERVATION  
COMMITTEE NEWS**

**Dam Preservation**

*By Mary Habstritt*

**T**he Lake Solitude Dam was built in 1909 to provide hydroelectric power to Taylor Iron and Steel Co. (TISCO). The Taylor family had operated a forge at the site since 1775. The company merged with William

Wharton Jr. and Co. of Philadelphia in 1912 and continued as the Taylor-Wharton Iron and Steel Co. until the 1970s when operations at the site ceased. The site is now owned by the Borough of High Bridge which purchased the property with the help of state funds.

The dam is on the South Branch of the Raritan River in the Borough in Hunterdon County, NJ. It consists of a 500-ft.-long earthen embankment, which had been part of an earlier dam, and a 175-ft.-long masonry and steel buttressed dam and spillway 40 ft. high.

The Dam Safety Section of the NJ Dept. of Environmental Protection has classified Lake Solitude Dam as a "high hazard dam" due to deterioration and has ordered it replaced or rehabilitated. As part of investigating what would be needed to do so, the dam was determined eligible for the National Register of Historic Places.

The determination was based on the dam's connection to TISCO, the second longest continually operating business in the United States. The company made significant contributions to the Industrial Revolution and technological advances in the 19th century, such as the first successful application of manganese steel. The dam expanded TISCO's hydropower and so contributed to its growth and development as well as that of the surrounding Borough. It is part of the Taylor-Wharton Historic District which also includes Solitude House (1725), which housed five generations of the Taylor family, and Union Forge. These structures are overseen by the High Bridge Union Forge Heritage Association.

The dam structure itself is a highly significant example of dam engineering. It is the only known extant example of a masonry dam with buttresses in NJ. It was also innovative for its time. Designed as a steel compression dam, it relies for its stability on a framework of steel I-beams encased in a concrete core. This is unusual since steel is known more for its tensile strength. The dam's masonry shell serves as a protective cover and is keyed into bedrock at the dam's base to prevent it from sliding. It represents the work of the master civil engineer, Frank Stone Tainter. Tainter was part of the engineering team that designed the Detroit-Windsor tunnel, the first vehicular tunnel between two nations and considered one of the great engineering marvels in modern history. He designed two other significant NJ dams – the one that created Carnegie Lake for Andrew Carnegie and Ravine Lake dam in Far Hills on the Blaisdell estate.

During the past year, there has been controversy about what the Borough should do about the dam. Environmental advocates have asked for it to be breached while the Union Forge Heritage Assn. has recommended rehabilitating it to supply hydropower to the Borough, a green idea in itself. RCSIA wrote a letter of support for the latter proposal, citing other successful

reactivations of hydropower plants and the opportunity to interpret not only the dam itself, but power generation and civil engineering.

#### Sources:

Lake Solitude Dam, NJ 00123: Phase 1 Inspection Report, National Dam Safety Program. Philadelphia: Philadelphia District, Corps of Engineers, Dept. of the Army, 1979.

Krugman, Mary Delaney. Lake Solitude Dam: History and Significance. Prepared for the Borough of High Bridge. Montclair, NJ: Mary Delaney Krugman Associates, 2004.

Tainter, F.S. "A Buttressed Masonry Dam Reinforced with Steel I-Beams." *Engineering News* 64 (24 November 1910): 564.

### WANT TO HELP HISTORIC PRESERVATION?

As you read above, Mary Habstritt is now President of the SIA and more than ever can use some help with her RCSIA preservation efforts. Member Craig Nunn has been helping with the efforts in NJ (Thanks, Craig!) but more help would be welcomed. Please contact Mary at [PreserveIA@aol.com](mailto:PreserveIA@aol.com) if you have some time to assist.

## TOUR REPORT

### THE STEAMER LILAC

August 23rd was a lovely Saturday that found about twenty of us on board the historic lighthouse tender *Lilac*. Our host, RCSIA member and President of the *Lilac* Preservation Project, Gerry Weinstein greeted us all on deck with an overview of the ship's history and of the project's great efforts to date to bring the *Lilac* to NY. He also spoke of their work on restoration and more than hinted at the amount of work before them – an awful lot! After the introduction we clambered down the narrow stairs to the bowels of the ship



*A view inside the wheel house. It is clearly in need of some volunteer painters!*

(Photo by Sandy Needham)



(Photo by Sandy Needham)



*Gerry's passion for the Lilac is evident as he regales chapter members with tales of her history, operation and restoration.*

where we learned about the joys and sorrows of steam power as we examined the two triple-expansion engines. We caught a glimpse of what life was like on board for the men who were stationed on the *Lilac* by visiting their quarters where their cots still hung. The vessel could be underway for days at a time and operated often in fairly harrowing weather conditions as the *Lilac* and her crew tended to the buoys that marked the navigation channels. The *Lilac* served in the Delaware River from the Bay to head of navigation in Trenton, NJ. By luck in our timing we were also treated to an art exhibit on board. The works included many subjects of New York City and IA interest.

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Just one good soul stayed on to help with the restoration work, working on paint removal until the start of the artists' reception had Gerry pulling the needle gun out of his hands. (Thanks!). As Gerry tells it, they need LOTS of hands on deck to bring the *Lilac* back to working condition. It would be amazing to see her steaming up the Hudson one day, with students, the interested public and RCSIA members on board! Please consider volunteering your time, talents, or treasure. If you lack talents your time would be appreciated as there are many much-needed tasks that can be quickly taught to even the least handy of us. For volunteer opportunities please contact Charlie Ritche, Executive



(Photo by Sandy Needham)

*View of the foredeck with the crane for lifting buoys.*

Director at [charlie@steamerlilac.org](mailto:charlie@steamerlilac.org) or 845-612-1950. Donations can be made via PayPal on the website, [www.steamerlilac.org](http://www.steamerlilac.org). Thanks to Gerry and the Board of the *Lilac* Preservation Project for a wonderful tour.

## OTHER IA EVENTS

### **SOCIETY FOR INDUSTRIAL ARCHEOLOGY FALL TOUR, CHATTANOOGA, TENNESSEE**

*October 16 – 19.*

The national Society for Industrial Archeology will be touring Chattanooga, Tennessee from October 16 – 19. As per the SIA website, “Chattanooga is named after a local Cherokee village. Following the Civil War, the city thrived as an industrial center (one of the “the Pittsburgh(s) of the South”) that centered on iron production and rail transportation; both have left their marks on the region’s landscape and identity. Following the contraction of heavy industry in the 1980s, the City re-invented itself with a diversified economy and an eventual designation as one of America’s most livable cities. Weather in October can only be described as wonderfully mild. The average temperature for the month is 60° (F), and the monthly rainfall average is just over three inches. As an added bonus, fall colors usually become prominent during mid-October. We look forward to seeing you in Chattanooga!”

To become a member of the SIA and sign up for the Chattanooga tour visit the SIA website at [www.siahq.org](http://www.siahq.org).

## OTHER IA NEWS

### THE BATTLE OF WATERLOO

Recent news headlines have indicated that the Waterloo Foundation for the Arts is suing the State of New Jersey, seeking court approval for the Foundation to remove all of the contents of Waterloo Village's buildings and to auction them off, reportedly to pay debts owed by the Foundation. The court has been encouraging the Foundation and the State to negotiate a settlement in this case. Reports imply that such a settlement may be at hand.

For some 40 years the Waterloo Foundation for the Arts has operated as a nonprofit, 501(c)(3), tax exempt organization, maintaining its collection for the educational benefit of the public. During those years, in addition to enjoying tax exemption, the Foundation has received many donations of objects that were related to Waterloo's history or dated from the village's period of historical significance. Donors of these objects are indicating that they understood that their donated items would be a permanent part of Waterloo's collection, for the benefit and enjoyment of the public in perpetuity. How can these objects and the rest of the collection now be considered a commodity that can be sold off to pay the Foundation's debts?

Besides the issue of Public Trust, removal of Waterloo Village's collection would have a major negative impact on the ability to provide public historic interpretation at

the village in the near future or perhaps in the foreseeable future. After being stripped of all of their contents will the empty buildings at Waterloo ever reopen for the public's educational experience and enjoyment?

It is recognized that there are parts of the Waterloo collection that are not historically accurate to the site and its period, but many objects are appropriate and readily lend themselves to interpretation of the village as a Morris Canal town. The most obvious examples are the Smith Store and the blacksmith shop. The store is the most intact, most interpretable Morris Canal store remaining along the entire 102-mile alignment of the Canal. The loss of the store's contents would have an incalculable negative impact on Waterloo and on the overall Morris Canal National and New Jersey Register Historic Site. Similarly, the blacksmith shop with its intact contents illustrates what once was a commonplace facility along the canal's alignment. Waterloo's blacksmith shop is a one of a kind survival along the Morris Canal's alignment.

Beyond the primary canal-related structures and collection, other building contents and articles demonstrating life and crafts of the canal period abound at Waterloo and are essential for public interpretation of a Morris Canal town. What will survive at the village at the end of this court case or out of court settlement? At this time the answer is not known. However, it is imperative to retain the appropriate parts of the collection for the village's future viability! If the collection goes on the auction

## SMITH-CONNET GRIST MILL DOUBLE TURBINE

The clearing of brush and deadfalls from the Smith-Connet Grist Mill site in Mendham Township, NJ., has revealed the housing for an unusual double turbine. The rotor bases are of unequal size, with the first (closest to the penstock) at 27 inches and the second (shown in photo) at 24 inches.

When it was built in the 18th century, the grist mill was likely powered by a waterwheel located in a wheel-pit measuring approximately 8.5 feet x 30 feet. The mill was listed as a flouring mill in an 1890 inventory of utilized water power with a head of 30 feet.

Nothing is known about the design or manufacturer. Anyone with information or insight is invited to contact the Mendham Township Historic Preservation Committee through either of the contacts below:

[briley@commonhealth.com](mailto:briley@commonhealth.com) or [macgraphics1@verizon.net](mailto:macgraphics1@verizon.net).



*ABOVE: The cast iron top of the turbine housing at the Smith-Connet Grist Mill site has been broken, likely in the removal of the rotors in a scrap drive. The housing held a pair of inline turbines. The single penstock is visible in the lower left of the top photo.*



*RIGHT: With the sheet iron stripped away, the base for the second turbine is visible. One of the exit pipes leading to the tailrace is shown in the bottom center.*

block, the Canal Society of New Jersey will find itself using its limited resources trying to buy back New Jersey's history – an outrageous and grim picture indeed!

Finally, Percy Leach and Louis Gualandi had the remarkable vision to save Waterloo Village from oblivion and preserve it as a world class site, for residents of our State and tourists across this country and the world! Many hundreds of thousands of people have experienced the magic of this site, truly a gift from Leach and Guilandi. Will their legacy be shattered by stripping away the historical vestiges at their cherished village? Such an occurrence is unconscionable and must not be allowed to occur.

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## UPCOMING EVENTS

- October 11** Lake Solitude Dam, High Bridge, NJ  
**October 16-19** National SIA Fall Tour:  
Chattanooga, TN  
**October 26** RCSIA Annual Symposium at Drew  
**November 23** Willets Point, Queens, NY

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### Roebing Chapter SIA Officers

President	Lynn Rakos
Vice President	Tolga Morawski
Treasurer	Kevin Pegram
Secretary	Aron Eisenpress

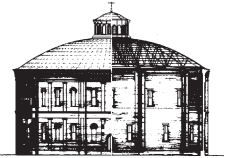
The Roebing Chapter official telephone number is the cell phone of the President: (917) 515-4154, or contact the Roebing Chapter by E-mail: [RCSIAprez@aol.com](mailto:RCSIAprez@aol.com).

Membership is \$10.00 per year, payable to RCSIA, c/o Aron Eisenpress, 235 West End Avenue, Apt. 14-C, New York, NY 10023.

A downloadable chapter membership form and general information about the SIA are available at [www.siahq.org](http://www.siahq.org).

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**AN OFFICIAL CHAPTER OF THE  
SOCIETY FOR INDUSTRIAL  
ARCHEOLOGY**



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