CHS NEWSLETTER

It is a pleasure to write this introduction to our second newsletter and witness its evolving design and content. We were delighted by the positive response to the first issue – keep those comments coming! I'll start with some Society news and then make a plea for your membership commitment.

We are now officially incorporated as the Construction History Society of America, which is to be a branch of the main Society based in Great Britain. We will enter into an affiliation agreement with CHS which will enable our members to share fully the benefits they provide. We are also drawing up bylaws in order that we can apply for 501c(3) tax-exempt status with the IRS.

A brochure has been printed. Please ask Harriett to send you some so that you can spread the word that we are in business. A website is "under construction".

Planning is underway for an inaugural event, probably in early November 2008. This will be held at Georgia Tech and, as soon as we have a date and outline program confirmed, we will be sure to let you know.

Now I need to ask those of you receiving this newsletter who have not sent in their membership applications to do so as soon as possible please. A vibrant and active membership is going to be essential if our Branch is going to survive and flourish.

Should you decide not to join us, then this will be the last newsletter you will receive and, of course, you will not be sent Construction History, the wonderful journal produced by the main Society. Note our review of the 2007 issue on page 9. Also on that page is the CHS Call for Papers. Start your abstracts - let's have a good showing from the US!

Finally, we enjoy hearing from you and receiving your contributions.

Brian Bowen, Professor of Practice,
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Student paleontologist in action—see *Pre-Historic Preservation: Saving a Cultural Icon*., page 2.

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PRE-HISTORIC PRESERVATION: SAVING A CULTURAL ICON

David Dubbelde, Ph.D.

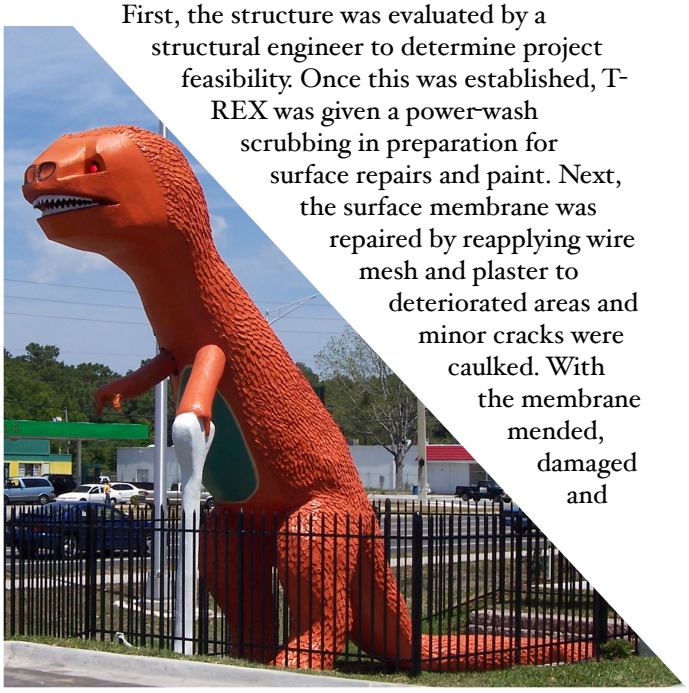
"Osprey Constructors", a name coined for University of North Florida (UNF) construction management majors, have utilized their knowledge in pre-historic proportion. Through their construction management expertise, a Jacksonville, Florida cultural icon was resurrected. The subject of this preservation effort was "T-REX", a concrete and steel Jurassic remnant of a now defunct 1960s "Gooney Golf" miniature course. Spared the wrecking ball, this atavistic monolith stands vigil over nostalgic memories to a Jacksonville era past.

Acquired by a local real estate developer, the property was converted to a retail center; T-REX, however, due to its location on the site escaped demolition. As a capstone class service learning project, a team of Osprey Constructors were tasked with restoring T-REX to its former prominence along Jacksonville's Beach Boulevard.

T-REX's anatomy consists of a no. 3 rebar skeleton draped with a narrow gauge wire mesh. The exterior membrane is a thin layer of cement plaster hand troweled into the mesh. To this membrane T-REX's scales and other detailing features were individually attached and fashioned using again cement plaster. The original construction for this project was performed by a Jacksonville swimming pool contractor, owed to the company's expertise in plaster craftsmanship. Ballast for the beast consists of concrete placed inside the skeleton approximately one-third up its height from the base. The prototypal structure had a working arm and electrically illuminated red eyes that glared fearsomely at passing traffic. Over time, however, T-REX's ferocity waned as the structure fell victim to neglect, graffiti, pollution, and the vicissitudes of Mother Nature.

Under the direction of the author, Service Learning Director for the UNF construction management program, the student team selected a project manager who then delegated job responsibilities (estimating, scheduling, supervision, resource acquisition, etc.) among remaining team members. In collaboration with the developer and its on-site general contractor, the Osprey Constructors executed successfully their preservation plan.

The project scope encompassed the following. First, the structure was evaluated by a structural engineer to determine project feasibility. Once this was established, T-REX was given a power-wash scrubbing in preparation for surface repairs and paint. Next, the surface membrane was repaired by reapplying wire mesh and plaster to deteriorated areas and minor cracks were caulked. With the membrane mended, damaged and



missing scales were sculpted anew. The structure was then primed and painted, using colors that approximated the original scheme. Mechanically, its once moving arm was permanently immobilized and his eyes were returned to working condition with their ferocious red glare. The incorporation of landscaping, retaining walls, a perimeter fence, and a commemorative plaque completed the project. Through researching this icons history students located the individual that crafted T-REX originally. His guidance and instruction proved invaluable, since the students self-performed the majority of the work.

The result was a "win-win" for all. The students gained valuable knowledge/experience regarding preservation, past construction methods, the construction process, and accountability. The developer garnished positive community relations. Jacksonville retained an iconic vestige of its history and culture.

David completed his PhD in 2006 at Texas A&M and is Assistant Professor of Building Construction Management at University of Northern Florida

BOOK RECOMMENDATIONS

Anat Geva, Ph.D.

G.R.H. Wright. *Ancient Building Technology*. Leiden, Boston, Koln: Brill, 2000

These volumes are part of a scholarly series on *Technology and Change in History*, which focus on studies in ancient and medieval technology. **Volume 1—Historical Background** describes a chronology of historic background that triggered building technology from pre-historic times to Byzantine era (late antiquity). **Volume 2—Materials** is itself published in two volumes, *Tex*t and *Illustrations*. The books are arranged by construction materials, their physical nature and qualities, their provision and manufacture, their working and use in the building. For a more detailed review see *APT Bulletin: The Journal of Preservation Technology* Vol. XXXVII, 2006 (4): 61–62 and 56, respectively.

Gyula Sebestyen. *New Architecture and Technology*. Oxford: Architectural Press, 2003

This book focuses on the influence of technology on contemporary buildings and their design. It is organized in 9 chapters that include discussions on materials, systems, economy, sustainability, and aesthetics. Each chapter consists of an extensive bibliography.

Marsha E. Ackerman, Ph.D. *Cool Comfort: America's Romance with Air-Conditioning*. (Washington, DC: Smithsonian Institution Press, 2002)

This book illustrates 100 years of air conditioning in America. It describes not only the technology of cooling but also how it became embedded in the social perceptions and expectations of Americans, transforming the way we live. For a more detailed review see APT Bulletin: The Journal of Preservation Technology Vol. XXXIV, 2003 (1): 55–56.

Sara E. Wermiel. *The Fireproof Building: Technology and Public Safety in the Nineteenth-Century American City* (Baltimore, MD: The Johns Hopkins University Press, 2000)

The book traces the development of structural fire protection in America from the 1790s to the early twentieth century through the history of architecture, engineering, building codes, business and insurance practices, and American social life. For a more detailed review see APT Bulletin: Journal of Preservation Technology Vol. XXXIII, 2002 (1): 54–56

OFFICE OF HISTORY OF THE ARMY CORPS OF ENGINEERS

Paul K. Walker, Ph.D.

Today, the headquarters of the United States Army Corps of Engineers includes a nine-person Office of History. In addition to six historians, the staff includes a technical writer-editor, a museum curator, and a management services specialist. The agency's chief historian is the principal historical advisor to the Chief of Engineers, and along with chiefs of other Army historical offices advises the Chief of Military History on current issues affecting the Army's history and material culture.

The Army's historical program dates to a March 4, 1942, memo from President Franklin D. Roosevelt to the Director of the Bureau of the Budget. Concerned about preserving "an accurate and objective account of our present [World War II] experience," Roosevelt called on the Bureau's director to establish a committee to deal with the many records being generated by the war effort.

Acting quickly, the Secretary of War directed that historical officers be appointed and historical offices be established throughout the Army. Guidelines prescribed that the historians produce written narratives wherein "each material statement of fact should be supported by a specific citation of the evidence" with "facts and not opinions" being most important."

By March 1943 the Corps of Engineers had organized a historical section and initially hired five historians. In 1946, the section became an independent office reporting directly to the Chief of Engineers.

For the next 30 years the office was dedicated primarily to producing volumes in the Army's U.S. Army in World War II series, known as the "green books" for the color of their covers. The Corps published several volumes in the series, including The Corps of Engineers: Construction in the United States. In the mid-1960s, and most especially in preparation for the nation's bicentennial in 1976, the Corps began to produce histories of its field offices and monographs covering the Corps' history from its origins in the Revolutionary War.

Since that time the Office of History's mission has expanded significantly as the office moved into the Washington headquarters and became more closely integrated with the agency's central operations. The office is charged with documenting and interpreting the Corps' past and present activities in combat engineering, military construction, civil works, research and development, and work for other agencies. The aim is to provide relevant context and insight to decision makers and create and sustain historical knowledge and awareness among the workforce, the Army, the Corps' customers and partners, and the general public.

Current projects include histories of the Corps' response to Hurricane Katrina, operations in Iraq and Afghanistan, a centennial history of Panama Canal construction (pictured below), and a biography of former Chief of Engineers, Andrew A. Humphreys. Recent publications include: The U.S. Army Corps of Engineers: A History; Building for Peace: U.S. Army Engineers in Europe, 1945-1991; and Capital Engineers: The U.S. Army Corps of Engineers in the Development of Washington, D.C., 1790-2004. The last book received the National Association of Government Communicators second place Blue Pencil Award for best paperback publication in 2007.

The Office of History maintains extensive research and artifact collections. The research collection

includes documents related to construction of NASA and ICBM facilities and the Pentagon. The artifact collection includes art work, uniforms, and small equipment. Access is available by appointment. Send an e-mail request to ceho@usace.army.mil. The Office of History also maintains a website www.usace.army.mil/history, where historical vignettes, electronic versions of publications, biographies of Chiefs of Engineers, a brief Corps history, and much additional historical information can be found.

Paul K. Walker is the chief historian, U.S. Army Corps of Engineers. He received a B.A. from George Washington University and a Ph.D. from the University of North Carolina, Chapel Hill . He has been an Army historian since 1978. His publications include The Corps Responds: A History of the Susquehanna Engineer District and Tropical Storm Agnes (1978) and Engineers of Independence: A Documentary History of the Army Engineers in the American Revolution, 1775–1783 (1981). He has also published articles on canal construction in the United States, Revolutionary War engineering, and the early history of Baltimore City.

RECENT BOOKS OF NOTE

Jeff Byles. *Rubble—Unearthing the History of Demolition*., 2005
A very entertaining look at a largely ignored part of construction history and especially the characters who have peopled this sector over the centuries.

Carl R. Lounsbury. *The Courthouses of Early Virginia—an Architectural History*, 2005
Surveys the history of courthouses from 1650 to 1800. Includes a useful chapter on the public building process.

Donna J. Rilling. *Making Houses, Crafting Capitalism—Building in Philadelphia 1790–1850, 2001*
Opens a window on urban development in the city over this period. As Philadelphia land holding conventions largely followed those of contemporaneous London, i.e., leaseholds, a similar pattern of housing development ensued, providing opportunities for speculators, including many master carpenters.

Cecil Elliott. *The American Architect from the Colonial Era to the Present Day*, 2003
Traces the development of the architectural profession including training, standards of practice, management methods and other aspects of operation.

Michael Tutton & Elizabeth Hirst, editors. *Windows—History, Repair and Conservation*., 2007
Written and edited in part by our own Michael Tutton (Secretary of CHS UK), it focuses largely on British history and restoration practice, but will still have relevance in the US.

International Journal of Architectural Heritage. Published by Taylor & Francis, Philadelphia. Our own John Ochsendorf is a member of the editorial board. See on-line sample copy at www.informaworld.com/smpp/title-content=t741771160.

Office of History, U.S. Army Corps of Engineers. *Capital Engineers: The U.S. Army Corps of Engineers in the Development of Washington, D.C., 1790–2004*, 2007
This text should complement the recent book by Scott Berg, Grand Avenues, being the story of Pierre L'Enfant and the planning of Washington.

CONSERVATION LIGHTING

Gersil N. Kay, IESNA

Lighting is essential to see or do anything, and should be considered early on for successful architectural planning. Good illumination enhances all design and increases productivity, safety, and personal comfort. It is possible to create sophisticated and affordable lighting within the increasing energy conservation restrictions if the most energy efficient technology best suited for the particular application is chosen. One size does not fit all.

Glass fibre optics retrofitted into Victorian wall sconce on 100' atrium. This replicates the color and light level of the original gas fixture

Fugitive organic materials (anything that once grew) that are components of historic structures and their contents are vulnerable to the infrared and ultraviolet rays emitted by conventional lighting. Accelerated disintegration occurs when carefully conserved objects are put back into harmful environments where condensation/humidity/mold and ill-chosen illumination are present.

It is not necessary to become an engineer or electrician to recognize practical lighting procedures and then request them from purveyors. It is prudent to be aware of existing problems and all available source/systems, like miniaturized functional glass fiber optics,

1. Except for original decorative lighting fixtures, lighting hardware and wiring should be concealed wherever possible.

2. Glare should always be eliminated and light sources baffled.

3. Use realistic light levels for the period: There should be at least two light levels, one lower (ambient) to move around safely in the space; the higher (directional) for task, display or architectural features. Additional light levels may be needed for maintenance, storage, office, corridors, conservation labs, food service, facades and landscaping, etc.

4. Employ the correct color of light for the historical period: Candle- or gas-lit interiors had a different color palette from those later spaces using more modern sources. Surroundings and furnishings are affected by the color of the light. Reds and yellows are better under lower Kelvin temperatures. Blues and greens appear muddy under anything below 3200K. The color of "white" light ranges from yellow to bluish.

5. *Allow sufficient dissipation of heat from light sources. Never stuff the light sources into tight spots where they can't breathe. The life will be shortened, surroundings areas will blacken, or worse case, fire may start if near flammable materials.*

6. If the public is allowed into the building, provide effective emergency lighting and alternate power generation.

7. If fugitive organic materials are involved, what level of conservation lighting is needed?

8. Include correct styles of lighting apparatus: For example, even in an eclectic décor, Art Deco uplights look strange in a Victorian setting.

9. *Always make provision for ready access for maintenance.*

10. Have suitable specialists available to repair penetrations made in decorative features.

Incorrect style of chandelier in Art Deco building

11. Specify stocking the proper type/size/shape/color of bulb/lamp for relamping.
12. Employ only professional installers familiar with fishing through walls, floors and ceilings carefully. Volunteers for other than this highly technical work may be used.
13. *Design to include enough components to do the job required. Anything else is a waste of money.*
14. In retrofitting decorative antique lighting fixtures, unobtrusive miniaturized floods or spots may be added with glass fibre optics
15. Always investigate financial "carrots" of grants and rebates for energy conservation.

Bad installation of mechanical and electrical in a Victorian church

Gersil N. Kay, AIA, is the founder of Building Conservation International. She served as the U.S. Chair of Professional Education for ICOMOS (International Council of Monuments and Sites) in 1990, and was the first recipient of the President of the United States' Award for Excellence in Historic Preservation. She currently serves as Conservation Systems Engineer on the Executive Board of the Philadelphia section of IESNA (Illuminating Engineering Society of North America). Ms. Kay also heads Conservation Lighting International and is a member of the AIA Historic Resources Committee.

PRESERVATION TEXTS ISSUED SINCE 2000

Mark Fram. *Well Preserved: The Ontario Heritage Foundation's Manual of Principles and Practice for Architectural Conservation*, 2003

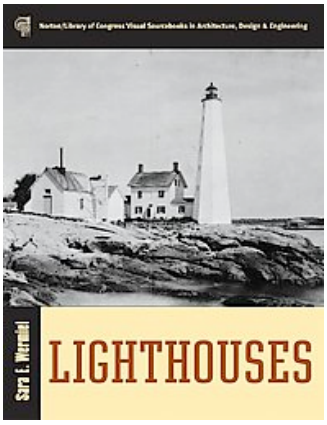
Valeria Caldelli. *The Leaning Tower—the Restoration of the Century*, 2005

Federal Highway Administration, U.S. Department of Transportation. *Covered Bridge Manual*, 2005

Sara Wermeil. *Lighthouses*, 2006

George H. Yetter. *Williamsburg Before and After—The Rebirth of Virginia's Colonial Capital*, 2001

Contact John at dumsick@silman.com



CALL FOR PAPERS

The **Society for the History of Technology** will hold its annual meeting in Lisbon, October 11 through 14, 2008 to continue the celebration of the 50th anniversary of the founding of the Society.

The meeting's theme is "SHOT@50: Looking Beyond." To that end, the Program Committee seeks papers or sessions for the 2008 meeting that concern the history of technology as it may or ought to be practiced in the future. The Committee welcomes proposals for individual papers or sessions, as well as works-in-progress from researchers of all stripes (including graduate students, chaired professors, and independent scholars). It welcomes proposals from those new to SHOT, regardless of discipline. The committee will also consider alternative venues for presenting one's scholarship, such as poster sessions, short (8-minute) quick sessions, author-meets-critics panels, discussion of pre-circulated papers, and others.

Submission guidelines are found on their website at www.historyoftechnology.org/pdfs/howtoget.pdf.

The deadline for submission is *March 14, 2008*.

Following the success of the two prior congresses in Madrid (2003) and in Cambridge (2006), the Organising Committee and the Berlin-Brandenburg Construction History Group are delighted to invite submissions to the Third International Congress on Construction History, which will be held in May 2009 at the Brandenburg University of Technology Cottbus.

Authors wishing to present a paper in the course of the congress may submit an abstract until *1st of April 2008*.

For all information please visit the congress website www.ch2009.de. We will be pleased to welcome the friends of construction history in 2009 in Germany and hope for large attendance, lively discussions and a successful congress.

On behalf of the Organising Committee: Werner Lorenz
Volker Wetzk

CONGRESS ON CONSTRUCTION HISTORY IN COTTBUS, GERMANY 20-24 May, 2009

We are compiling a list of any courses being taught that touch on any aspect of construction history, other than history or architectural design. If you are involved in, or are aware of, any such course, would you please bring it to the attention of Dr. Anat Geva (anatgeva@archone.tamu.edu).

Thank you!

CALENDAR OF EVENTS

February 9th, 2008
The Duomo of Santa Maria del Fiore: The Legacy of its Construction—College of Architecture, Georgia Tech, Atlanta, Georgia: www.coa.gatech.edu/symposium

April 28–29th, 2008
8th Historic Bridges Conference—Ohio State University, Columbus, Ohio: adeli@osu.edu

May 28–31st, 2008
11th US Icomos International Symposium: Developing a comprehensive approach to US participation in the Global Heritage Community—Washington, D.C.: www.icomos.org/usicomos/

September 11–14th, 2008
Preserving the Historic Road—Albuquerque, New Mexico: www.historicroads.org

November tba, 2008
Construction History Society of America Inaugural Meeting, Georgia Tech, Atlanta, Georgia: hgroves3@mail.gatech.edu

May 20–24th, 2009
Third International Congress of the Construction History Society, Cottbus, Germany: www.ch2009.de

CONSTRUCTION HISTORY, JOURNAL OF THE CONSTRUCTION HISTORY SOCIETY

Volume 22 (2007) has been published and distributed to members in good standing of the main Society during 2007. Highlights are listed below.

Palladian and Practical: Country House Technology at Holkham Hall, Christine Hiskey

A History of Structural Hollow Clay Tile in the United States, Jeremy C. Wells

Guastavino's Vault Construction Revisited, Michael Ramage

Ove Arup and Box Frame Construction, Graham Harris

'You assemble a Lorry, but you build a House', Noisy-le-Sec and the French Debate on Industrialized Building 1944–49, Nicholas Bullock

When you sign up for membership in the American branch for 2008, you will receive Volume 23 and be eligible to purchase back copies.

Also received is the CHS Newsletter No. 79 with short articles, e.g., *Scottish Mudmasons in Russia 1784–1803*, and in-depth book reviews. American members will also qualify to receive these quarterly newsletters in addition to our own Branch versions.

WHO WE ARE

The Society is dedicated to the study of the history and evolution of all aspects of the built environment—its creation, maintenance and management. It is a forum for scholars and professionals in the field to share, meet and exchange ideas and research. Membership is open to a wide range of construction related disciplines involved in the planning, development, design and construction of buildings and engineering infrastructure, in addition to those concerned with their operation and preservation. Members share a passion for examining how our existing structures were planned, designed and built, with the purpose of using this knowledge to better preserve what we have and to guide us in determining future directions.

The US branch of the Construction History Society is a distinct entity catering to the historical studies and interests of its members here in America. Membership in the US branch includes full benefits in CHS at large, including receipt of the Society's Journal and newsletter and links to scholars in the field worldwide.

THANKS TO GEORGIA TECH COLLEGE OF ARCHITECTURE

We are indebted to and grateful for the financial support we are receiving from the College of Architecture at Georgia Tech. Their support will carry us for a few more months, but beyond that we will be on our own. Please help us lay our own sound financial footing by joining CHS now.

This is your newsletter and the only vehicle we have to keep in touch with one another.
So please use this to let us know:

- ★ your interests in construction history, your current research, précis of recent lectures, etc.
- ★ books, texts & articles that your fellow readers should know about
- ★ names and e-addresses of colleagues and friends that we can include on our mailing list
- ★ if you are willing to write a brief article for us.

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