



PRESERVATION AND CONSERVATION ASSOCIATION

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A Sandblasting Primer

Sandblasting is a cleaning technique that can cause irreparable damage to most building materials, particularly brick.

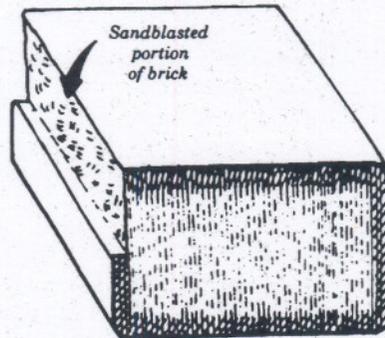
Sandblasting was originally developed to remove rust from cast iron. Unlike other surface cleaning methods that seek to dissolve dirt, paint, or other surface imperfections, sandblasting "cleans" by destroying the outer layer of the surface being treated. This method is ideally suited to cast iron; rust is significantly softer than iron so that damage to the underlying iron is minimal. It is not so ideally suited for cleaning softer building materials.

Sandblasting is often used inappropriately to clean brick masonry as well as other building materials such as wood, stone, stamped metal and terra cotta, all with damaging results.

Brick. To realize why this technique is so damaging to brickwork, one needs to understand how bricks are made. Bricks are somewhat like loaves of bread. Both are baked in ovens until they harden—and both form crusts during the baking process. The crust that develops on a brick is the portion that allows it to shed water. Sandblasting has the effect of destroying the crust, thus leaving the softer interior to withstand the weather. Once this crust has been destroyed, it can never be replaced. Coating techniques, such as building sealers, are ineffective in solving problems and they can actually accelerate the deterioration of the bricks.

Stone. Stone also forms a hardened "crust" when it is quarried and exposed to the weather. This crust is important in letting the stone repel water and sandblasting removes much of the crust. In addition, sandblasting erodes the characteristic tooling marks of "dressed" stone that are part of its appearance. Some stone, such as sandstone, is particularly vulnerable to the effects of sandblasting.

Wood. Building owners often resort to sandblasting as a cheap way to remove



paint from wooden buildings. This invariably results in areas of permanent damage, especially in corners and areas where paint is tightly adhered. Sandblasting erodes the softer annual growth rings, leaving irreparable cosmetic damage and numerous pockets for water to penetrate the wood.

Stamped Metal. At first glance, stamped metals may seem quite durable and relatively impervious to the damaging effects of sandblasting. Stamped metal is easily damaged, however, because it is a composite of two different metals. The underlying layer is usually rust-prone steel or iron which is coated with a rust-inhibiting metal such as zinc (galvanized coating) or lead and tin (terne-metal coating). Because these coating metals are softer than steel, sandblasting has the effect of removing them and leaving the rust-prone steel exposed to the elements. Once removed, there is no way to re-establish a comparable rust preventative coating.

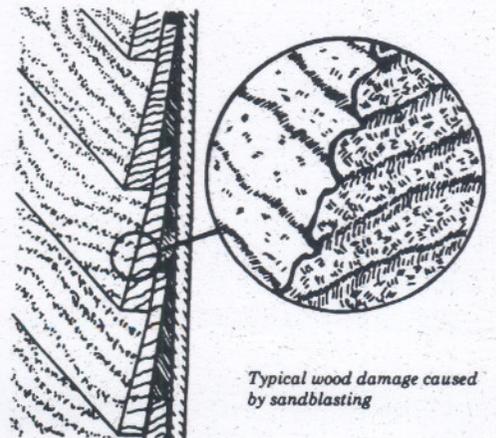
Terra Cotta. Terra cotta is a glazed ceramic material often used to imitate stone. Structurally, terra cotta building units are similar to ceramic household items, such as plates and cups. As one might imagine, sandblasting destroys the glazed surface of terra cotta, leaving the softer inner material to withstand the weather. The damage that sandblasting causes terra cotta is more obvious to owners and contractors, so this material is not sandblasted as frequently as others. On the other hand, terra cotta is frequent-

ly mistaken for stone and sandblasted.

Conclusion. Sandblasting is a technique that should not be used on building materials other than cast iron because blasting can erode almost any material. Sandblasting goes by many names, such as aggregate blasting, "feather" blasting and, when used in conjunction with water, water blasting. Each of these methods is destructive and each erodes the material that it purports to clean. The effects of sandblasting are not diminished by the substitution of other materials such as glass beads, sometimes referred to as "micro-balloons."

Alternate cleaning methods are readily available. Too often, owners ignore safe, obvious cleaning methods, such as use of water and detergent to remove dirt, and chemical strippers to remove paint.

PACA's library has extensive information on the proper way to remove dirt, paint and stains from masonry buildings. Included in this collection are numerous *Technical Briefs* prepared by the National Park Service, "#1: The Cleaning and Waterproof Coating of Masonry Buildings," "#2: Repointing Mortar Joints in Historic Brick Buildings," "#6: Dangers of Abrasive Cleaning to Historic Buildings," and *Keeping it Clean, Removing Exterior Dirt, Paint, Stains and Graffiti from Historic Masonry Buildings*.



Endangered Building List

As mentioned in the last newsletter, PACA has developed the first Champaign County Endangered Building List. The list is a way to sound the alarm and convince private property owners, University administrators, and city governments of the value of our architectural heritage and find the means to save and preserve these historic buildings. Neglect and development pressure have been instrumental in creating potential crisis situations for the eight properties.

Levi Wood House, Middle Fork Preserve, Champaign County Forest Preserve. Vacant for several years, now boarded, closed and the target of vandalism, the Wood House is one of the county's finest examples of residential Italianate architecture. Built c. 1870, the Wood House is exceptionally detailed on both its exterior and interior, with ornate plaster moldings, woodwork, and a marble fireplace. The Forest Preserve is allowing a year to find a use for this building. PACA is working with various dedicated individuals to investigate various reuse possibilities and to develop a preservation plan.

Vriner's Confectionery, 55 Main St., Champaign. Listed in the National Register of Historic Places, Vriner's is a historic downtown jewel, notable for its pristine late nineteenth century interior dating to 1908. Constructed in 1890, the building was first used for C.W. Gulick's tailoring and clothing store. In 1898, Gulick moved out and rented the space to Peter G. Vriner, who eventually purchased the building. A walk through the door is a virtual time warp, with pressed metal ceilings, marble and wood back-bar and soda fountain counter, wood booths, and blue and white ceramic tile floor. The building has been empty for

over a year, and suffers from roof leaks, basement water, and structural deficiencies, rendering its rental difficult. Until the building is properly repaired and a tenant occupies its exceptional historic interior, Vriner's is endangered.

201 N. Market Street, Champaign. Long-term vacancy and deterioration threaten one of Champaign's most pristine example of commercial Italianate architecture. Built c. 1880, the brick building features cast iron turned posts and fluted pilasters, round arched 4-light/4-light windows, and double entrance doors with a broad transom. Part of the ornate pressed metal ceiling remains on the interior. To make this piece of history complete, a limestone sidewalk is in front of the building. The building contributes substantially to Market Street, which maintains a great architectural character, and is likely eligible to the National Register. It's proper restoration and commercial use could be a great asset to the downtown.

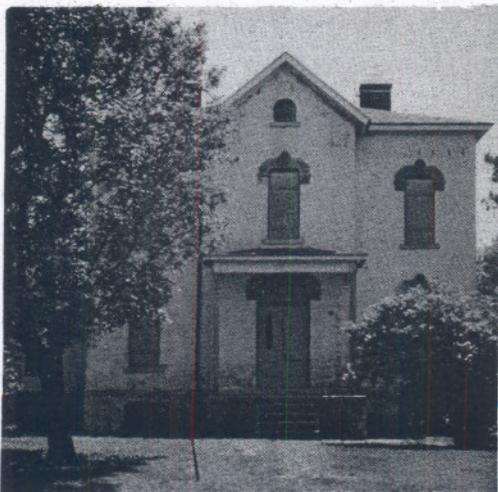
Jaques House, 207 W. Elm St., Urbana. This house is among the oldest in Urbana, probably dating to c. 1857. Historically, the house was home to Judge Edward Ater, and later prominent local attorney Francis Jaques. Architecturally, the house is a good example of the Italianate style, with pedimented hoodmolds over the windows, a low-pitched hip roof surmounted with a center platform (once a cupola), and a bracketed cornice under wide eaves. The Urbana Free Library is seeking to expand but is only looking at an addition to the west, thereby necessitating the moving or demolition of the Jaques House and the surrounding herb garden, overseen by the Champaign-Urbana Herb Society. While moving the house is better than the permanent choice of demolition, allowing the house to remain on its original site is best for its

preservation, particularly given Jaques' history with the library. In 1872, Jaques formed the Young Men's Library Association, a subscription library. Two years later, the city took over the association and created the Urbana Free Library. Jaques served as Library Treasurer until he became ill in 1894. His daughter Minnie became acting Treasurer, then was elected Treasurer two years later, holding the job for fifty years, and living in the Jaques House until her death in 1954. The library's involvement in community education should extend beyond books to preservation by example.

Ricker House, 612 W. Green St., Urbana. Home to Nathan Clifford Ricker, the first architect to receive an American degree in Architecture, this Queen Anne style house dates to around 1895. Ricker was a Professor of Architecture at the University, and designed six buildings on campus, including Altgeld Hall. His house has suffered from years of neglect, and has been offered for sale sporadically over the last several years, being only occasionally occupied. It's outbuilding was demolished last year, and the house's Queen Anne style porch is so substantially deteriorated that a life-safety code violation demolition notice is under consideration by the City of Urbana. The building's condition and its potential sale as a site, as opposed to the house's restoration, make this a seriously endangered property. The house could be renovated as a single family residence, B & B, office space, or combination thereof.

President's Greenhouse, Urbana. Once located between Burrill and Wright streets north of Green Street, the greenhouse was produced from plans by Lord & Burnham c. 1898, with several later additions dating to 1899, 1909, and 1911. The "President's Greenhouse" is so named because it was north of the

Levi Wood House



Vriner's Confectionery



201 N. Market



President's House, then at the corner of Wright and Green streets and sited within an informal arboritum. The handsome structure, built at a cost of \$5,000, features a curving vaulted roof and curvilinear eastern section; the brick headhouse was added later. PACA has been concerned about the greenhouse since the mid/late 1980s, and is pleased that the University is finally showing interest in the historic structure. The University has arranged the disassembly and storage of the original parts of the greenhouse, and is seeking funding to reassemble the greenhouse and move the headhouse to the Hartley Gardens near the current President's House. While we applaud this effort, we are nevertheless concerned about the length of time the historic greenhouse could be stored, and exactly how active the University will be in seeking funding for this long overdue project

Illinois Central Switching Tower, Champaign. The two story red brick building with a red tile roof and wide eaves was occupied 24 hours per day, seven days per week since its construc-

tion in 1923. Closed in May, 1993, when the Illinois Central railroad moved the facility's functions to its south-suburban Homewood location. Since its closing, the tower has been subject to vandalism. The Switching Tower overlooks the intersection of the north-south Illinois Central tracks and the east-west Conrail tracks. The tower is in a good location for adaptive use, with the area from the Martin Luther King Subdivision to W. 4th St. on the east, Washington St. on the south, and the Illinois Central tracks to the west proposed for redevelopment with the City of Champaign and the Champaign Park District. Mayor Dannel McCollum has suggested the tower be used by a railroad enthusiasts' group or in conjunction with a bicycle path along the abandoned railroad right-of-way, suggestions which PACA applauds. A recent fire, however, caused extensive roof damage and may necessitate the demolition of this unusual structure.

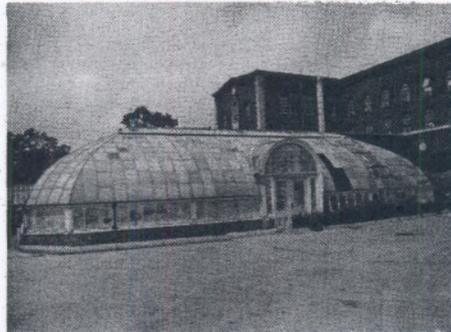
Pre-World War II Fraternity and Sorority Houses. The University of Illinois, Urbana-Champaign has the

greatest number of Greek Houses of any university in the country, numbering, at one time, eighty buildings. Historically, the Greek Houses provided much needed housing for University students in the pre-World War II era, in a time when few dormitories were constructed. Architecturally, the Greek Houses were typically stylistic, representing excellent examples of the Classical Revival, Spanish Eclectic, and Georgian Revival styles among others. As a group, these buildings are endangered due to their susceptibility to life-safety violations. Additionally, the maintenance of the buildings can be particularly burdensome to the fraternities and sororities. Two fraternity houses—Chi Psi at 912 S. Second Street and Tau Kappa Epsilon at 308 E. Armory—have been demolished within the last year, and other "Greek Houses" are in jeopardy. The preservation of this important aspect of campus life needs to be addressed, before other houses are replaced by all-too-common apartment buildings.

Jaques House



President's Greenhouse



Ricker House



Membership Application P.A.C.A.

MEMBERSHIP CATEGORY:

INDIVIDUAL

- Adult\$15.00
- Student (1/2 time or more)\$10.00
- Senior Citizen\$10.00
- Family\$20.00

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-\$75.00

ADDITIONAL CONTRIBUTION _____

- NEW MEMBERSHIP
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Contributions are tax deductible to the extent allowed by law.

Architreasure Winners

PACA would like to salute three great building sleuths—the 1994 winners of the *News-Gazette* and PACA sponsored Architreaasures Contest held in May during Historic Preservation Week. This year's contest involved correctly identifying building parts from area churches. As part of their "winnings," the following people will receive a year's complimentary membership in the Preservation Association. Congratulations to Connie Fairchild, Urbana; Daniel Bade, Champaign; and David Thompson, Urbana.

Fourth Central Illinois Prairie Conference

Prairie Remnants: Rekindling Our Natural Heritage is the theme for this year's Prairie Conference sponsored by Grand Prairie Friends, Millikin University and the Macon County Conservation District. The conference will be held Saturday and Sunday, September 17-18 at Millikin University, Decatur. Fran Harty, Illinois Department of Conservation and Mark Schwartz, Illinois Natural History Survey, will be the keynote speakers. Sessions will include Management Practices, Education/Database Networking, Historical/Cultural, Prairie Ecology, Prairie Fauna, and Prairie Flora; three workshops will also be presented. For more information contact: Ruth Green, 333-7091 or Grand Prairie Friends.

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Save the Date!

Fall House Tour

Sunday
October 9
1-5 p.m.

PACA Newsletter

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