

Guy R. Munsch

Reevaluating Success

The First Bank of the United States

As the nation prepared for the celebration of the Bicentennial in 1976, every effort was made to ensure that the city of

Philadelphia and, in particular, Independence National Historical Park would be prepared to meet the expectations of millions of visitors. To that end, improvements and much needed preservation initiatives were completed at the park between 1974-76, including the conservation of the marble façade of the First Bank of the United States. That campaign, now almost a quarter of a century in passing, offers a unique barometer of the effectiveness of a range of treatment strategies and techniques over an extended period of time.

Written documentation at the time of the treatments and subsequent periodic reports provide an important record chronicling the alarming condition of the marble prior to treatment, as well as the rationale behind the techniques and materials used on the façade during the intervention. Nothing written is as informative as the surface of the stone as it exists today. Stone decay which has been, for the most part, stabilized for all these years, affords invaluable information on weathering and the effects of remedial and preventative treatments. Today, as these treatments begin to fail, deterioration conditions are again reappearing, now joined by new conditions that are as much a function of the treatments, as any natural

By combining the rendering capabilities of an architectural CAD program with GIS database analysis and photographic images, the digitized survey can be interpreted visually and quantitatively. Screen capture by the author.

decay properties attributed to the stone and the environment.

Architectural conservators are increasingly faced with the prospect of working with buildings and sites that have previously been treated; the difficult questions in formulating a preservation plan become doubly so when one needs to account for physical properties of the original stone and of the previously treated materials. The sheer volume of information to be described and interpreted before recommendations, testing programs, and the development of a conservation strategy, can become overwhelming without the use of computer applications to manage critical information and to enhance visual and materials analysis.

Two key areas in the study of the First Bank have benefited from these technologies. First is the execution of a complete Conditions Assessment Survey of the façade to document the stone's condition and treatments at a given point in time and to allow precise monitoring of critical areas. Scaled, rectified 35mm photographs were taken of all surfaces of the façade, portico, and columns. Deterioration conditions for the marble and for the treatments in evidence were defined and recorded with a predetermined graphic lexicon of lines, symbols, and colors. This information was then transferred into a computer rendering program (AutoCAD® Release 14); the conditions were separated on different layers for the purpose of adapting the final drawings for specific analytical questions. Recently, GIS applications (AutoCAD® Map Release 2) have been tested which allow each stone or architectural element to be assigned to a database table enabling the researcher to query specific deterioration condition relationships while re-imaging the drawing.

The second focus has been on developing visual models of material and environmental conditions at the First Bank and their relationships to the weathering of the façade. Imaging and three-dimensional modeling programs (Photoshop 4.0®, 3D Studio Max®, and Macromedia Director®) can illustrate some of the processes of weathering and the effects of various interventions in a more accessible format. These new forms of visual analysis create an opportunity to more fully understand the history and future of a building or site and the integral role which an effective preservation plan can play in its future. This project can be viewed on the Web: <www.dolphin.upenn.edu/~guy2/index.html>.

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