

PRESERVING A PIECE OF NAVAL HISTORY FOR AN AMBITIOUS LEED PROJECT



Masonry Preservation and Enhancement Specialists

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Repair and enhance without changing the aesthetics.



Brooklyn Navy Yard Center

Location: Brooklyn, NY

Age: Built 1855-1857

Key Topics: Historic stabilization, LEED project, adaptive reuse, NDE,

CIF injection

Project Background:

- Building 92 is located on the grounds of the Brooklyn Navy Yard, one of the first five naval shipyards, developed into the nation's premiere industrial facility
- It was designed by Thomas U. Walter, who also designed the US Capitol Building's central dome
- Today the Navy Yard is home to the highest concentration of manufacturing and green business in New York City



Challenges Presented:

- As part of a \$16.5 million LEED project, the owners of building 92 wanted to convert the aging structure into a new museum complex and visitor center
- The historic four story building would be joined by a striking 23,500 sq. ft. glass extension
- To achieve this bold vision, and gain a Platinum LEED designation, the project team aimed to preserve the original 150 year old building in its entirety
- The masonry shell was in very bad condition, with project members expressing concerns over a possible collapse, particularly with 3 of the facades





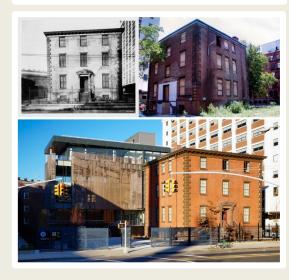
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Services and Solutions:

- Masonry Solutions began by evaluating the masonry shell to determine a safe method of rehabilitation, utilizing NDE to uncover detailed information on its underlying structural condition
- Masonry Solutions laboratory engineers developed a compatible injection material that was sympathetic to the host's particular characteristics
- MSI technicians utilized a low pressure CIF injection protocol and filled the cavities between the layers of bricks forming the exterior walls
- Injection presented a number of challenges, including the creation of an isolation barrier that would keep injection material from flowing into non-prescribed areas
- MSI technicians used a series of custom stainless steel installations in conjunction with a unique applicator to create this shelf, successfully isolating the intended injection area
- CIF Injection took place from the building interior and all ports were constructed between the walls' very thin mortar joints, both aspects requiring the utmost precision and care
- Further NDE confirmed all objectives were achieved, the facades were stabilized, and the project team was free to pursue their ambitious goals
- Building 92 was awarded with a coveted Platinum LEED designation shortly after the conclusion of project activities









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Masonry Solutions International has worked in the field of masonry preservation and enhancement for over 20 years. It has pioneered a number of advanced techniques, including compatible masonry injection and undercut fabric anchorage.