

Madison Historic Preservation Commission

2019 ANNUAL REPORT

Prepared 12/19/2019 for:

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And the Madison Borough Council Members

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And the Madison Historic Preservation Commission members

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Christon Kellogg

John Solu

Carmine Toto

Karen Jeisi *(through June, 2019)*

David Luber, *alt. #1*

Jill Rhodes, *alt. #2*

Laurie Hagerich, *Recording Secretary*

Maureen Byrne, *Council Liaison 2019*



MADISON HISTORIC PRESERVATION COMMISSION
ANNUAL REPORT 2019

Prepared December 2019

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1.0 Executive Summary

At the end of 2019, the Madison Historic Preservation Commission is pleased to report a successful year of administering the following duties and responsibilities:

- (1)** To identify, record and maintain a system for survey and inventory of all buildings, sites, places, improvements and structures of historical or architectural significance based on the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (Standards and Guidelines for Identification); and to aid the public in understanding their worth, methods of preservation, techniques of gathering documentation and related matters.
- (2)** To make recommendations to the Planning Board on the historic preservation plan element of the Master Plan and on the implications for preservation of historic sites of any other Master Plan elements.
- (3)** To advise the Planning Board on the inclusion of historic sites and landmarks in the recommended capital improvement program.
- (4)** To participate in the Technical Coordinating Committee and advise the Planning Board and Zoning Board of Adjustment pursuant to N.J.S.A. 40:55D-110.
- (5)** To provide written reports pursuant to N.J.S.A. 40:55D-111 on the application of the Zoning Ordinance provisions concerning historic preservation.
- (6)** To carry out such other advisory, educational and informational functions as will promote historic preservation in the Borough.

Specific goals for 2019 included submitting an RFP for an attorney to review the ordinance, engaging in outreach projects highlighting Historic Preservation Month, and updating the Historic Sites & Districts map for the Open Space and Recreation Plan Update.

The members of the Madison Historic Preservation Commission (2019) are listed below. Terms are 4 years for Regular members; 2 years for Alternates.

Member	Role	Term expiration	Meetings attended
Janet Foster	Co-Chair, Regular - Class A	December 31, 2022	12
John Solu	Regular - Class C	December 31, 2021	10
Carmin Totò	Regular - Class C	December 31, 2020	11
John Forte,	Regular - Class C	December 31, 2020	4
Christon Kellogg,	Regular	December 31, 2020	11

Mary Ellen Lenahan	Co-Chair, Regular - Class C	December 31, 2019	11
Karen Jeisi / Vacant	Regular – Class B	December 31, 2019	6 ¹
David Luber	Alt #1	December 31, 2019	12
Jill Rhodes	Alt #2	December 31, 2020	10
Maureen Byrne	Council Liaison	December 31, 2019	2
Laurie Hagerich	Recording Secretary		

2.0 List of Historic Preservation Commission Accomplishments 2019

The Madison Historic Preservation Commission (HPC) had a very busy year with key application reviews and other activities undertaken in 2019. The Commission meets on the second Tuesday of the month. However, the review of the application for the redevelopment of the Madison Theater property on Lincoln Place necessitated the scheduling of additional special meetings on May 6, 2019 and May 28, 2019. Other changes to the regularly published meeting schedule include the cancelation of the February 12 meeting due to weather. The August 13, 2019 meeting was also canceled. In total, the HPC met 12 times in 2019.

2.1 Application Reviews

The largest and most time-consuming application reviewed in 2019 was that of the Madison Theater property at 14 Lincoln Place. This application was begun at the March 12, 2019 meeting and carried through 5 meetings to its resolution June 11, 2019. Resolution 3-2019, approved July 9, 2019, (Appendix 1) is the final product of this review. In addition to this project, the HPC reviewed applications for a further eight residential or commercial projects, including a reconsideration request of the Madison Theater property from Save the Madison Movie Theater organization.

2.2 Technical Coordinating Committee (TCC) Reviews

The Madison Historic Preservation Commission conducted seven reviews of residential plans, discussing the applications and submitting recommendations to the TCC. Where timing allowed,

¹ Karen Jeisi resigned from the commission in June 2019

this was conducted by the entire Commission at regularly scheduled meetings. However, some cases required a turnaround prior to the next regular meeting, necessitating review and submission by the TCC Review Subcommittee. HPC Members also attended TCC meetings when needed.

2.3 Sign and Façade Reviews

Six sign and facade submissions were reviewed. There were four new signs submitted for review and two awning changes in the Downtown Historic District.

2.4 OSRP Plan Update

The Open Space, Recreation and Historic Preservation Advisory Committee (OSRHP) working with The Land Conservancy of New Jersey, engaged in an update of the Open Spaces and Recreation Plan (OSRP) requiring content submissions from HPC. HPC member and liaison to OSRHP Jill Rhodes worked with the Commission co-chairs Janet Foster and Mary Ellen Lenahan to review and update the HPC related content for the report, and update the Historic Sites & Districts map so it more accurately reflects Madison's cultural resources.

2.5 Professional Trainings

The Madison Historic Preservation Commission members strive to stay on top of current topics and practices in historic preservation. HPC members attended the Association for Preservation Technology (APT) symposium on "Restoring Historic Theaters in the 21st Century" in February 2019. Members also attended the "Preservation in Practice: A Primer for Historic Preservation Commissions and Planners workshop" in March 2019 offered by the Mid-Atlantic Regional Center for the Humanities (MARCH) Continuing Education in Historic Preservation series.

3.0 Current Projects

3.1 HPC Ordinance review

The Historic Preservation Commission submitted an RFP through the Borough to review our Ordinance. An Ordinance Subcommittee has been formed to take questions and suggestions from

HPC members to present to the preservation specialist and municipal land use attorney engaged for this review. This activity will carry through into 2020.

3.2 Historic Preservation Recognition award

The Historic Preservation Commission was proud to recognize recently renovated projects of exemplar standing. In recognition of Historic Preservation Month, awards were presented at the close of 2018 to a residential renovation, as well as to a business renovation in the Downtown Historic District. The Commission continues to look for historically thoughtful residential and business renovations to bring recognition for quality local preservation projects.

4.0 Goals for 2020

The Historic Preservation Commission strives to move forward into 2020 continuing to meet our stated goals. We will focus on continued professional development for all Commission members with plans already in place to attend meetings in April 2020. We will continue to attend TCC meetings and bolster our communication with the Planning and Zoning Boards, sending a representative to the Board meetings with HPC-reviewed applications on the agenda.

Our most ambitious goal for 2020 is the aforementioned Ordinance review. We also wish to work on outreach within the Borough, educating and informing residents about the Commission, our activities, and the need for thoughtful preservation and the role this plays in the fabric and character of the town.

ACKNOWLEDGEMENTS

The Historic Preservation Commission would like to thank the Borough Administrator Ray Codey, CFO and Assistant Administrator Jim Burnet for supporting our work, as well as Administrative Official Fran Boardman for her administrative assistance to the Commission. We also thank Borough liaison Maureen Byrne and the rest of the Madison Borough Council for their continued support, as well as all HPC members for their service.

APPENDIX

RESOLUTION NO. 3 -2019

RESOLUTION OF THE BOROUGH OF MADISON HISTORIC PRESERVATION COMMISSION, APPROVING THE APPLICATION OF SAXUM REAL ESTATE GROUP FOR A CERTIFICATE OF HISTORIC REVIEW AS TO THE DEMOLITION AND NEW CONSTRUCTION OF THE MADISON LYONS THEATER, AND IMPOSING CERTAIN MANDATORY CONDITIONS.

WHEREAS, the Borough of Madison Historic Preservation Commission (hereinafter “HPC” or “Commission”) is an agency of the Borough of Madison (“Borough”) established by Ordinance #31-1993 of the Mayor and Council on October 13, 1993 in accordance with N.J.S.A. 40:55D-107 of the Municipal Land Use Law (“MLUL”).

WHEREAS, the HPC is comprised of volunteer members from the community with demonstrated interest in local history, culture and architecture; expertise in historic properties and historic matters; and special knowledge of historically and culturally significant properties situated in the Borough.

WHEREAS, the local ordinances governing the HPC are codified at Sections 1 through 15 of Chapter 112 of the Borough’s Code (“HPC’s Ordinances”).

WHEREAS, the HPC’s Ordinances have been adopted for the purposes of assisting in the implementation of the historic preservation element of the Borough’s Master Plan, providing guidance in achieving preservation of historic and cultural resources in designated historic districts and sites throughout the Borough, and advancing certain public purposes.

WHEREAS, the Madison Civic Commercial District (the “District”) is one of two designated historic districts within the Borough that is subject to oversight by the HPC through the Borough’s Historic Preservation Ordinances. The District has also been determined to be historically and culturally significant by the United States Department of the Interior and the New Jersey Commissioner of the Department of Environmental Protection through its listing on both the National Register and New Jersey Register of Historic Places.

WHEREAS, the Madison Civic and Commercial District includes 49 historical and culturally significant buildings and structures that the HPC, Planning Board, and Borough Council have designated as being worthy of protection and preservation under the regulations of the HPC. [See Ordinance No. #15-2008].

WHEREAS, the buildings and structures within the District *collectively* form the unique downtown area of the Borough, and represent the cultural heritage and development of the Borough as a community from the mid-1800s through the early 1940s.

WHEREAS, according to the National Register of Historic Places Nomination, and as reiterated in the Morris County Division of Planning and Preservation’s 2015 Cultural Resources Inventory Survey, most buildings in the District are constructed of masonry or have masonry facades; “[t]heir height ranges typically from two to three stories;” and the contributing resources

of the District “give the [D]istrict its prevailing character because of 1.) similar size, height, setback and materials; or 2.) differences in those same characteristics that make them compatible but pivotal.”

WHEREAS, the Lyons Madison Theater (“Lyons Theater”) is located at 14 Lincoln Place, Block 2702, Lot 24, within the District, and it is also one of the properties listed in the National and State Registers of Historic Places as a contributing resource of historical and cultural significance worthy of protection.

WHEREAS, construction on the Lyons Theater was completed in 1925, and since its inception, the Lyons Theater has served as a motion picture theater open to the public, and a gathering place for local residents and visitors to the Borough alike.

WHEREAS, on or about January 17, 2019, the owner of the Lyons Theater, Saxum Real Estate Group (“Saxum”) filed an application with the Borough Planning Board to demolish and redevelop the Lyons Theater property (the “Application”).

WHEREAS, according to the Application, Saxum proposes to demolish the existing Lyons Theater building; and seeks from the Planning Board preliminary and final major site plan and bulk variance approvals to construct a multi-family residential apartment building with ground-floor retail including approximately 4,526 square feet of first floor retail space, one 90 to 100 seat theater, and related improvements.

WHEREAS, according to the Application, Saxum seeks a height variance to exceed the maximum permitted height in the District of three (3) stories (i.e. forty-five (45) feet), to four (4) stories (i.e. approximately forty-nine (49) feet).

WHEREAS, §112-5A of the HPC’s Ordinances, in relevant part, provides that the Planning Board shall refer to the HPC every application submitted to the Planning Board for development in historic districts, as designated on the Borough’s Zoning Map.

WHEREAS, §112-6A(1)-(3) of the HPC’s Ordinances requires all property owners and developers within the District to obtain a Certificate of Historic Review from the HPC before a permit is issued and before any work can commence for demolition, new construction, and/or a change in the exterior appearance of any building situated within an historic district.

WHEREAS, in accordance with §112-5A and §112-6A, the Application is subject to the HPC’s mandatory review for a determination as to the appropriateness of the proposed demolition and new construction of the Lyons Theater, and for the issuance of a Certificate of Historic Review setting forth various mandatory conditions, comments and recommendations.

WHEREAS, pursuant to §112-6A(1)-(2), §112-8C(2) and §112-8C(7) of the HPC’s Ordinances, the Borough has delegated to the HPC the authority to impose mandatory conditions on any applications for demolition and/or new construction of an historic site within the District.

WHEREAS, §112-6A(1) and (2) expressly provide, “the Commission’s report shall contain advice and recommendations for the applicant in regards to the appropriateness of the proposed action, and the report may contain mandatory conditions.”

WHEREAS, §112-8C(7) of the HPC’s Ordinances, in relevant part, further provides that all new construction on the site of a building demolished within the District is subject to mandatory review by the Commission, and that “[t]he new construction shall be in the character of the Madison Civic Commercial District, and all comments of the Commission in these circumstances are binding upon the applicant.”

WHEREAS, Paragraph two (2) at Section 112-7C(2) of the Borough’s HPC Ordinances, in relevant part, provides it is *not* the intent of the HPC Ordinances to discourage contemporary architectural expression, or to encourage new construction which emulates existing buildings of historic or architectural style but rather to preserve the integrity and authenticity of the District and to ensure the compatibility of new structures therein.

WHEREAS, §112-8B(1)-(10) of the Borough’s HPC Ordinances sets forth the relevant criteria the Commission considers in reviewing an application to demolish a building within the District, which includes:

- (1) The site’s historic, architectural, cultural and aesthetic significance in relation to the criteria of § **112-4B**, which in relevant part includes, (i) its character, interest or value as part of the development, heritage or cultural characteristics of the Borough, State or nation; (ii) its association with events that have made a significant contribution to the broad patterns of the Borough’s history; (iii) its unique location or singular physical characteristics that make a district or site an established or familiar visual feature; and (iv) whether it has yielded, or may be likely to yield, information important in prehistory or history.
- (2) The site’s current and potential use for those purposes currently permitted by the Zoning Ordinance or for the use proposed.
- (3) The site’s importance to the municipality and the extent to which its historical or architectural value is such that its removal would be detrimental to the public interest.
- (4) The extent to which the site is of such old, unusual or uncommon design, craftsmanship, texture or material that it could not be reproduced or could be reproduced only with great difficulty.
- (5) The extent to which its retention would increase property values, promote business, create positions, attract tourists, students, writers, historians, artists and artisans, attract new residents, encourage study and interest in American history, stimulate interest and study in architecture, educate citizens in American culture and heritage or make the municipality a more attractive and desirable place to live.
- (6) The probable impact of its removal upon the ambiance of the historic district.

- (7) The structural soundness and integrity of the building and the economic feasibility of restoring or rehabilitating the structure so as to comply with the requirements of the applicable building codes.
- (8) The compelling reasons for not retaining the structure or improvement at its present site, the proximity of the proposed new location and its accessibility to residents of the municipality and the probability of significant damage to the structure or improvement as a result of the relocation.
- (9) The compatibility, nature and character of the current and the proposed surrounding areas as they relate to the intent and purposes of this chapter and whether the proposed new location is visually compatible in accordance with the standards set forth herein.
- (10) A discussion with the applicant regarding applicant's consent to the removal and reuse of certain important features of the historic building or structure.

WHEREAS, §112-7 of the HPC's Ordinances sets forth the criteria the Commission is to consider in reviewing an application for development within the District, and instructs that all projects requiring a Certificate of Historic Review and all applications for development in the District shall be guided by the Secretary of the Interior's Standards for Rehabilitation of Historic Buildings.

WHEREAS, concerning the District, §112-7C of the HPC's Ordinances, in relevant part, provides that in "assessing change in the exterior appearance of any building . . . by addition, reconstruction, alteration or maintenance, the Commission's deliberations shall be guided by the Madison Design Guidelines for the Civic Commercial District, which are adopted as an appendix to this chapter and which are incorporated by referenced and shall be considered in conjunction with the Secretary of the Interior's Standards set forth above"

WHEREAS, the Madison Design Guidelines for the Civic Commercial District, in relevant part, generally provide:

- (1) Every reasonable effort shall be made to provide a compatible use for a property which requires minimal alteration of the building, structure, site, or its environment, or to use the property for its original intended purpose (i.e. commercial, institutional, residential).
- (2) The distinguishing original qualities or character of a building, structure, or site and its environment shall not be destroyed.
- (3) New construction within the historic district shall not be discouraged when such alterations, additions, or new buildings do not destroy significant historical, architectural or cultural material, and such design is compatible with the size, scale, color, material and character of the property, streetscape, and environment.

- (4) Every reasonable effort shall be made to protect and preserve archeological resources affected by or adjacent to any project.

WHEREAS, the Madison Design Guidelines for the Civic Commercial District expressly state: “[t]he design of any new structure in the historic district is important because it must be compatible with existing structures and must harmonize the visual characteristics of the streetscape[;]” “[t]he important elements to consider in new construction are scale, proportion, design quality and relationship to neighboring buildings;” and siting, size and scale, rhythm and directional emphasis, materials and building elements are to be considered.

WHEREAS, the HPC’s ordinances set forth the following public purposes to be advanced by the Commission: promoting the use of historic districts for the education, pleasure and welfare of the citizens of the Borough and its visitors; promoting civic pride in the Borough’s historic resources; fostering private reinvestment in the historic district and sites; balancing the purposes of historic preservation with the current needs of the district; encouraging and facilitating not only preservation, but also the continued use and reuse of such sites of historic, cultural, social and architectural significance; maintaining and promoting an appropriate and harmonious setting for existing historic resources within the Borough; recognizing and preserving historic resources in the Borough as an essential element of municipal character and identity which contributes to the reputation of the Borough as a place of beauty and architectural value; and encouraging appropriate alterations to historic sites and new construction which is in keeping with the character of the Borough’s historic districts and sites.

WHEREAS, public hearings as to Saxum’s proposed demolition, redesign and new construction of the Lyons Theater were held before this Commission on March 12, 2019; continued on April 9, 2019 and May 6, 2019, and brought to a conclusion on May 28, 2019.

WHEREAS, throughout the public hearings Saxum was represented by legal counsel, Peter J. Wolfson, Esq.

WHEREAS, during the course of the public hearings Save Madison Theater, Inc., (“Objector”) came forward and objected to the Application, was afforded a reasonable opportunity to be heard in opposition to the Application.

WHEREAS, throughout the public hearings, the Objector received regular notice of the hearings; was represented by legal counsel, Michele R. Donato, Esq.; and both Ms. Donato and the Objector’s members were given an opportunity to question Saxum’s witnesses.

WHEREAS, during the public hearings, Saxum’s principal, Anthony Rinaldi, testified as to the proposed new uses of the Lyons Theater site, including Saxum’s plan to create and allow for the operation of a 90 to 100 seat public theater within the proposed new structure.

WHEREAS, in support of the demolition aspect of the Application, Saxum submitted expert reports as to the structural integrity of the Lyons Theater, a slideshow presentation of photographs depicting the structural damage to the Lyons Theater, and in-person testimony of

Historic Preservation expert Robert J. Kornfeld, Jr A.I.A., and Structural Engineer Wayne A. Hostetler P.E.

WHEREAS, in support of the redesign and new construction aspect of the Application, Saxum presented drawings, material/ color samples, renderings/ revised renderings, slideshow presentations, and in-person testimony from Project Design Architect Jeffrey Gertler, A.I.A.

WHEREAS, the HPC retained independent consultant experts, Structural Design Engineer John McManus, and Architect John D.S. Hatch, F.A.I.A.

WHEREAS, Mr. McManus and his associate, John Deng P.E., inspected the Lyons Theater, analyzed the structural condition and integrity of the building, and prepared report dated February 11, 2019 (“McManus Report”).

WHEREAS, Mr. Hatch was specifically retained by the HPC as an expert in Historic Preservation. Mr. Hatch prepared an initial report dated March 5, 2019 (“Hatch Report I”), and a supplemental report dated April 29, 2019 (“Hatch Report II”).

WHEREAS, on May 28, 2019, the Objector submitted in-person testimony from Structural Engineer William Killeen PE; Historic Preservation expert Nancy L. Zerbe; and the Save Madison Theater group’s President Sandy Kolakowski.

WHEREAS, members of the public were given the opportunity to question each of the witnesses throughout the hearings, and during the hearings on April 29th and May 28th, members of the public were afforded the opportunity to provide public comment on the Application.

NOW, THEREFORE, BE IT RESOLVED, by the Borough of Madison Historic Preservation Commission that the Lyons Theater is historically and culturally significant as a “contributing” site within the Madison Civic and Commercial Historic District. Since its creation in 1925, the Lyons Theater *always* served as a public motion picture theater and gathering place for Borough residents and visitors.

NOW, THEREFORE, BE IT FURTHER RESOLVED, that in accordance with §112-6A(1)-(2) and §112-8B(1)-(10) of the HPC’s Ordinances, the Commission renders its decision as to Saxum Realty Group’s Application for a Certificate of Historic Review based upon the following facts and evidence revealed during the Commission’s hearings:

1. **Significance of Lyons Theater Site Location** - The Lyons Theater is located directly adjacent to the Madison Post Office and across Lincoln Place from the Delaware, Lackawanna, & Western Train Station (now the New Jersey Transit Station for Madison). Both the Post Office and NJ Transit Station sites are designated as “key contributing” structures of historical and cultural significance in the National Register of Historic Places Nomination for the District. The theater stands at the edge of one boundary of the District; to its east/southeast along Lincoln Place stand single-story

commercial buildings of mid-20th century construction that are not included in the historic district.

2. **Potential Effect of Relief Requested** - The HPC's Historic Preservation expert consultant John Hatch, FAIA, states in his report of March 5, 2019 that, "[t]he demolition of a contributing structure within the District is typically the most drastic and most damaging action that can be contemplated in any Historic District. By definition, it will have a negative impact on the character of the District." (See Hatch Report II at p.5).
3. **Cultural Significance** - As stated in Mr. Hatch's report, "over the course of its long life, the Theater has become a cultural touchpoint for the community. Clearly, many people have fond memories of seeing movies here; it has long played an important part in the cultural, civic, and commercial life of Madison." (See Hatch Report II at p.5).
4. **Architectural Significance** - In the District's nomination to the National Register of Historic Places, the Lyons Theater is described as a "Vernacular commercial" building. Likewise, Mr. Hatch explained in his report that the exterior of the Lyons Theater "has a relatively simple and utilitarian design, with only a few design flourishes, including the much altered and simplified marquee, some cast-stone detailing, the inset plaque, the pilasters and the central gable." (See Hatch Report II at p.4) "The sides and rear of the building are completely utilitarian with few windows and no design intention other than to provide the necessary openings for egress and loading." *Id.* Extensive alterations have been made to the exterior of the original structure, including the front façade, entryway, and theater marquee. *Id.* at p. 2-4. As further detailed in Mr. Hatch's report, "[t]he ground floor has a prominent main entrance surmounted by a marquee ... that has been altered from its original configuration" *Id.* at 2. "[T]he coffering is likely original, but the exterior has been simplified and covered by painted wood boards. The ground floor now has four (two on each side of the main entry) arched, infilled windows. This is also a departure from the original design." *Id.* at 2. "In addition, the front façade was significantly altered at some point, replacing the more elaborate storefront openings with infilled arch openings." *Id.* at 4. Therefore, the Lyons Theater structure is not considered to be architecturally significant in its present state. *Id.* at 5.
5. **Structural Integrity** - The HPC's Structural Design Engineer expert consultant John McManus concluded in a report submitted to the HPC that the structural system of the Lyons Theater "has significantly deteriorated due to neglect and the failure to perform required routine maintenance over the years. Virtually all structural components that make up the structure in its current condition would require extensive rebuilding, reinforcing or replacement." (See McManus Report at p. 5).
 - a. Saxum's Structural Engineer Wayne Hostetler, P.E., inspected the building on February 1, 2019 and also determined that the building is structurally compromised. (See Hostetler Report at p. 6). Mr. Hostetler testified as to the

details forming the basis of his opinions and conclusions during the public hearings.

- b. Concerning the general makeup of the Lyon's Theater's structural system, Mr. Hostetler explained that the low-pitched gable roof of the building is supported by steel-roof trusses, approximately seventeen feet apart from one another. Wood joists support the roof between the steel trusses; wood framing sits on top of the joists and trusses, and supports the roof shingling. The exterior masonry walls of the Lyons Theater include piers structurally supporting the steel roof trusses. The terra cotta tile infill between the walls forms the wall surface, and laterally stabilizes the building. The foundation to the theater is concrete.
- c. Mr. Hostetler testified that the wooden roof joists are overloaded and sagging significantly. To remedy this problem the steel trusses would require bracing and additional roof joists would have to be installed. The suspended plaster ceiling must be removed, and the damaged roof joists must be removed/replaced. The ceiling would then need to be re-installed and re-supported. Mr. Hostetler also explained that water infiltration possibly led to warped, sagging, or displaced interior floorboards.
- d. Regarding the foundation and walls, Mr. Hostetler testified that there are significant diagonal cracks throughout the exterior load bearing walls, indicative of foundation settlement at the pier locations which support the steel roof trusses. He also testified that significant cracks and spalling were found at the front foundation and foundation footings; and similar diagonal cracks were found throughout the interior load bearing walls, demonstrating foundation settlement. The front façade of the Lyons Theater building has pulled away from the structural portion of building's box frame, and would need to be anchored properly.
- e. In addition, the report prepared by Mr. McManus and John Deng, P.E., provides that the sloped portion of the slab-on-grade of the building "has significant settlement throughout[,]” and “large portions have sunken and/or heaved”; the roof wood joists have water damage, cracks and excessive deflections; and “[t]he roof structure (trusses, joists, etc.) as a whole is under designed based on current building codes and requirements.” (See McManus Report at pp.3-4)
- f. During the public hearings, Mr. McManus testified that although the steel trusses appear to be in good condition, the building had obviously been neglected for at least two decades, resulting in extensive water damage; the interior walls are pulling away from the concrete reinforced floor slabs; only the front section of the basement is in satisfactory condition; and the wood framing supporting the second floor mezzanine level was in poor condition. Mr. McManus explained that the Lyons Theater was not in danger of collapse.

However, he further opined to the Commission that “virtually, every component of the building is either under-designed or damaged enough where it would require extensive work or replacement.”

- g. Mr. Hatch also commented on the structure in his reports, explaining “[t]hose issues, ranging from separation of the brick face from the structural backing, structural cracks, and spalled brick, are serious and will need to be addressed if the building were once again to be occupied.” The Lyons Theater’s “rehabilitation or restoration would be expensive, but not impossible.” (See Hatch Report II, at p. 3).
6. **Current & Potential Uses** - As to this issue, Mr. Hatch opined that the “constraint facing the building in its current form is that it is not easy to rehabilitate/reconfigure for uses other than the original one.” However, Mr. Hatch further elaborated that a number of historic downtowns in New Jersey “have viable movie theaters, which tend to be niche theaters showing carefully curated selections in smaller venues.” (See Hatch Report II at p.6).
7. **Importance of the Lyons Theater to the Community and Whether Removal Would be Detrimental to the public interest** - Mr. Hatch opined that the Lyons Theater “is not an architecturally significant building in the Historic District.” However, he further opined that “it is a contributing building, and it has provided an important cultural, commercial and civic function for many years. Removing the building and leaving a vacant lot would be a clear detriment to the public interest.” “The goal should be to bring a viable use or uses back to this important site.” (See Hatch Report II at p.6).
8. **Potential to Promote & Attract Business and Visitors and Increase Property Values** - Mr. Hatch opined “[a] working movie theater brings visitors to a downtown, and, because it is an attractive and relatively rare feature, may even attract new residents. However, this is only the case if the movie theater is operational and well-maintained. An empty, deteriorating building, particularly at a prominent location near the train station, will diminish value and interest in the Borough of Madison.” (See Hatch Report II at p.7).
9. **Impact of Removal on the District** - As to the probable impact of the removal of the Lyons Theater upon the ambiance of the District, Mr. Hatch reported that “[i]f the Theater were demolished and left as a vacant lot, other, less architecturally interesting buildings outside the historic district boundaries along Lincoln Place and behind it would become more prominent or would be newly exposed to view and the street edge would be compromised.” However, Mr. Hatch also opined that “[a] new building does have the possibility, if well designed, of bringing further redevelopment to the section of town southeast of the district, which could benefit the entire downtown historic district financially and aesthetically.” (See Hatch Report II at p.7).

10. **Consent to Continue Theater Use** - Saxum's principal, Anthony Rinaldi, testified during the public hearings that if demolition was granted, Saxum will continue to operate a 90 to 100 seat public theater within a portion of the property. (See Transcript from HPC Hearing conducted on March 12, 2019 at pp. 17-19).
11. **Potential Avenues to Mitigate the Impact of Demolition & New Construction** – As to the demolition and any reconstruction of the Lyons Theater site, Mr. Hostetler agreed that the appropriate standards established by the United States Department of Interior “in their Temporary Protection Technical Notes” must be followed in order to protect the adjacent buildings within the District. Mr. Hatch confirmed in his report that demolition should only be approved if certain mandatory conditions are met, such as (i) approving demolition after full Land Use approvals have been granted and all building permits have been issued; (ii) requiring the developer/owner document the site through detailed measured drawings and photographs; (iii) preserving and reusing the important historic features of the building, including “the stone plaque in the central gable with the name of the building,” and the ticket booth; and (iv) installing permanent interpretive material, such as historic photos and the summary of the building's history in a publicly visible location on or within the new building. Mr. Hatch also supported the Applicant's proposal to incorporate a theater into the design of the new building. (See Hatch Report II at pp.8-9).
12. **Public Input** - During the course of the proceedings, members of the public voiced opposition to the demolition and reconstruction of the Lyons Theater. However, during the May 28th hearing, Objector's Principal and many members of the community discussed the importance of continuing the public theater use at the site.

NOW, THEREFORE, BE IT FURTHER RESOLVED, by the Borough of Madison Historic Preservation Commission that Saxum Real Estate Group's Application to demolish the Lyons Theater is appropriate given its poor structural condition, the many changes to the structure, and the lack of architectural significance attributed to the structure in its current state. This resolution shall serve as the Certificate of Historic Review, issued in accordance with the HPC's Ordinances approving demolition of the theater and requiring Saxum's complete compliance with certain mandatory conditions imposed on both the demolition of the Lyons Theater and on the proposed new construction of the replacement building and improvements at the site.

NOW, THEREFORE, BE IT FURTHER RESOLVED, by the Borough of Madison Historic Preservation Commission that in accordance with §112-6A(2) and §112-8C(7) of the HPC's Ordinances, the Commission does hereby find and conclude that with the exception of the size, mass and height of the new building, the new proposed improvements and redesigned replacement structure depicted in the most up-to-date renderings that Jeffrey Gertler presented to the Commission during the public hearing on May 28, 2019 are appropriate for a building within the District. However, any building above three stories (45 feet) in height would severely detract from the surrounding streetscape and the District as a whole. Accordingly, *except for the proposed size and height of the replacement building (four stories/above 45 feet)*, the Commission does hereby issue this Certificate of Historic Review approving the redesigned

replacement structure in the form submitted by Saxum to the Commission on May 28, 2019. The proposed new structure is subject to certain mandatory conditions regarding its size/height, materials, design, storefront arrangement, window size and materials, and other details reflected on the May 28th plans.

NOW, THEREFORE, BE IT FURTHER RESOLVED, by the Borough of Madison Historic Preservation Commission that certain mandatory conditions must be imposed on Saxum Real Estate Group and its successors-in-interest and/or title to mitigate the negative impacts associated with the loss of the Lyons Theater and any new construction of the replacement structure. (See Hatch Report II at pp.8-9).

NOW, THEREFORE, BE IT FURTHER RESOLVED, by the Borough of Madison Historic Preservation Commission that continuation of a public 90 to 100 seat boutique theater at the site is necessary, reasonable, and is in furtherance of the public interest to preserve the historical, cultural, and social significance of the Lyons Theater and the District as a whole.

NOW, THEREFORE, BE IT FURTHER RESOLVED, by the Borough of Madison Historic Preservation Commission in accordance with its delegated authority set forth at §112-6A(1)-(2), §112-8C(2) and §112-8C(7); the Commission does hereby impose upon on Saxum Real Estate Group and its successors-in-interest and/or title, the following mandatory conditions:

1. During the demolition and new construction phases, Saxum Real Estate Group and its successors-in-interest and/or title shall at all times comply with all applicable Federal, State and local laws and regulations.
2. During the demolition and new construction phases of the project, Saxum Real Estate Group and its successors-in-interest and/or title shall at all times comply with and abide by the United States Department of the Interior's Preservation Tech Notes, Temporary Protection, including those set forth at "Tech Note Number 3," "Protecting a Historic Structure During Adjacent Construction" particularly as affecting the adjacent "Key contributing" structures in the Historic District, namely, the Post Office and the NJTransit Railroad Station. A true and accurate copy of the United States Department of the Interior's Preservation Tech Notes, Temporary Protection Tech Note Number 3, "Protecting a Historic Structure During Adjacent Construction" is annexed hereto at Appendix 1 to this resolution and is incorporated herein by reference and simultaneously approved. Permits shall not be issued, and demolition and any new construction shall not commence until after Saxum Real Estate Group and/or its successors-in-interest and/or title present all necessary documentation to the Borough's Building Official for review and confirmation of Saxum's compliance with this mandatory condition.
3. Demolition shall not commence until after Saxum Real Estate Group and its successors-in-interest and/or title confer with authorized representatives from the United States General Services Administration and NJTransit as to the safe-keeping and protection of the United States Post Office and Madison Train Station buildings during the demolition and construction phases of the Lyons Theater property. At the

time Saxum applies for a demolition permit, it shall submit to the Borough Building Official written proof of consultation as to the safe-keeping and protection of the United States Post Office and Madison Train Station buildings for review and final approval prior to issuance of a demolition permit.

4. Demolition shall not commence until after all required State, County, and local land use approvals have been secured; all building and soil permits have been obtained; and Borough Officials are fully satisfied that the demolition and new construction is in full compliance with all applicable laws.
5. Demolition shall not commence until after Saxum has first completely documented the site through detailed measured drawings, photographs, and video recordings; which shall be submitted to the Commission's designated representative for review, safe-keeping, and confirmation of compliance. (See the Secretary of the Interior's Standard for Architecture Documentation at: https://www.nps.gov/history/local-law/arch_stnds_6.htm.)
6. Demolition shall not commence until after Saxum first safely removes and preserves the cast-stone Madison Lyons Theater plaque in the central gable of the building for re-use in the new building, the interior chandeliers for re-use, and the ticket booth for re-use or replication.
7. The Madison Lyons Theater cast-stone plaque shall be reused in any new replacement structure, and shall be installed in a place plainly visible to the public on the front façade of the building as depicted in the renderings of Jeffrey Gertler during the public hearing on May 28, 2019.
8. Permanent interpretive material, historic photos, and the summary of the building's history shall be installed on the new structure and shall be incorporated into the design of the new building within public view, as depicted in the renderings of Jeffrey Gertler during the public hearing on May 28, 2019. Specifications for the above-referenced interpretive materials shall be reviewed and approved by the HPC prior to its installation.
9. Continuation of a public theater at the site is necessary, reasonable, and is in furtherance of the public interest to preserve the historical, cultural, and social significance of the Lyons Theater and the District as a whole. A 90 to 100 seat theater shall continue in active operation on a portion of the Lyons Theater property. A 90 to 100 seat theater shall be included on the final design plans and within a portion of the replacement building/structure to ensure that the property can continue to be used as a theater for public access and entertainment. The site shall be promoted and marketed in a commercially reasonable manner for use as a public movie theater and Saxum shall use commercially reasonable efforts to secure a movie operator tenant.

10. All new construction on the site of the Lyons Theater property shall be in the character of the Madison Civic Commercial District such that the scale, mass, size and height of the replacement structure to be built at the Lyons Theater site shall be kept in line with the character of the Madison Civic Commercial District and shall not be larger than three stories (45 feet) in height as measured from “average grade” as per the Borough’s Zoning Ordinances and Building Department regulations.
11. In keeping with the character of the Madison Civic Commercial District, the exterior of the replacement building to be built on the Lyons Theater site shall be reddish brick on street-plan facade and all other sides, with light-colored brick for any upper recessed levels; commercial space entry from Lincoln Place, shall be centered more-or-less on the facade; storefronts with traditional articulation of bulkhead, large display windows, and transom window above; a closed canopy above the first floor level of the facade to protect passersby on the sidewalk from inclement weather; windows to apartments sized and with set-backs within the façade, all as shown on the May 28th plans presented to the Commission and always keeping the textures, colors, and materials of the new building in harmony with the character of the District.
12. An amended Certificate of Historic Review shall be required to be secured from the Historic Preservation Commission whenever any subsequent changes have been made to the building design plans related to the exterior of the replacement building and structures to be built at the site, unless the change is made in furtherance of the conditions set forth herein.
13. In accordance with §112-8C(8), following issuance of this Certificate of Historic Review, the Borough’s Construction Official, and/or his/her appointee, shall, inspect all work approved by this certificate and shall regularly report to the Commission the results of such inspections, listing all work inspected and reporting any work not in accordance with such certificate.

NOW, THEREFORE, BE IT FURTHER RESOLVED, by the Borough of Madison Historic Preservation Commission that all mandatory conditions set forth in this resolution shall be included on any demolition permit and shall be posted on site at the Lyons Theater property in a place of plain unobstructed view to the public during all phases of demolition and new construction.

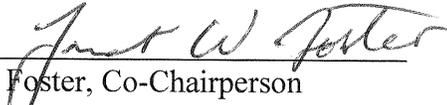
NOW, THEREFORE, BE IT FURTHER RESOLVED, by the Borough of Madison Historic Preservation Commission that this Certificate of Historic Review approving demolition and the design of the replacement structure to be constructed at the Lyons Theater property shall be valid for two years from the issuance of this resolution and shall thereafter automatically expire unless prior to the date of expiration, Saxum Real Estate Group and/or its authorized successors-in-interest and/or title apply for and secure an extension of time from the Commission.

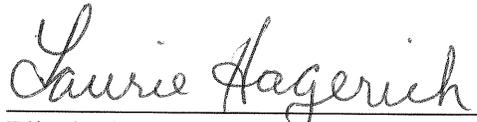
NOW, THEREFORE, BE IT FURTHER RESOLVED, by the Borough of Madison Historic Preservation Commission, that a representative of the Commission shall be made available to meet with and appear before the Borough of Madison Planning Board to further assist the Planning Board in its review of Saxum Real Estate Group's site plan and variance applications.

ADOPTED AND APPROVED:

DATED: July 9, 2019

ATTEST:


Janet Foster, Co-Chairperson


~~Elizabeth Osborne, RMC
Borough Municipal Clerk~~


Mary Ellen Lenahan, Co-Chairperson

Laurie Hagerich
Recording Secretary

CERTIFICATION

Laurie Hagerich, Recording Secretary
I, ~~Elizabeth Osborne, the Municipal Clerk of the Borough of Madison~~, County of Morris and State of New Jersey, do hereby certify the foregoing to be a true and correct copy of a resolution adopted by the Historic Preservation Commission of said Borough on the 9th day of July, 2019, at a regular meeting duly convened, of said Commission.


~~Elizabeth Osborne, RMC
Borough Municipal Clerk~~
Laurie Hagerich
Recording Secretary

APPENDIX



TEMPORARY PROTECTION

NUMBER 3

Protecting a Historic Structure during Adjacent Construction

Chad Randl
Technical Preservation Services
National Park Service

IDENTIFYING AND AVOIDING RISKS FROM ADJACENT CONSTRUCTION

Valued for their ability to convey the past through existing materials and features, historic buildings must also survive in an ever-changing present. That change is often characterized by new building construction and demolition activities on neighboring sites. Whether it is the modest renovation of an existing building or the demolition of an existing structure and construction of a new high rise, physical damage to an adjacent historic building may occur. It is important for both the historic property owner and those responsible for the neighboring work to give careful consideration to the potential risks. Early planning offers the opportunity to identify these risks and to determine successful ways to avoid them.

Problem

The forces that contribute to the deterioration of a historic building, from atmospheric pollutants to the footsteps of visitors, often take decades and even centuries to exact their toll. Demolition activities and new construction on neighboring sites, however, can cause immediate harm to the physical integrity of a historic structure. In the instant it takes an improperly planned excavation blast to crack the foundation of an adjacent historic structure, or for a

steel beam to be dropped from a construction crane onto its roof, significant damage may occur. Additionally, adjacent construction work can expose the neighboring historic building to concentrations of dust, vibration and fire hazards that would normally be experienced only over the course of many years.

These concerns are often overlooked when a project is undertaken next to historic resources. In some situations, the historic property manager may be unaware of the nature and extent of work at an neighboring site. In other cases, the new construction team is not familiar with the particularly fragile character of the neighboring historic structure or decides to repair any damage after the fact rather than avoiding it from the beginning.

Solution

Effective planning and protective measures initiated before construction takes place can prevent most of the damage that may occur to adjacent historic buildings. Depending upon the nature of the project, protective measures may be limited to documenting and monitoring the historic structure or may encompass a broader plan that includes encasing windows, indepen-

When historic structures are exposed to adjacent construction or demolition work, a protective plan including documentation, monitoring and specific safeguards should be implemented to prevent damage and loss of historic fabric.

dent review of excavation procedures and a range of other precautions. Cooperation between all parties can help to ensure that construction activity continues without interruption and that the neighboring historic building is preserved unharmed.

The information provided in this *Tech Note* can serve as a basis for discussions between the historic property manager and the developer of the adjacent site aimed at ensuring the protection of the historic building in a cost-effective manner. This guidance is also applicable where new construction is undertaken on the same site as the historic structure.

Although adjacent construction work often poses a more immediate threat than the incremental impacts of weather or pollution, the best defense for both situations is that buildings be in good condition. A well maintained structure with tight mortar joints, strong connections between interior and exterior walls, solid foundations and sound plaster is at less risk from neighboring activity than a neglected structure.

Providing adequate protection involves the following steps: 1. consultation between the historic building owner and development team to identify potential risks, negotiate changes and agree upon protective measures; 2. documentation of the condition of the historic building prior to adjacent work; 3. implementation of protective measures at both the construction site and the historic site; and 4. regular monitoring during construction to identify damage, to evaluate the efficacy of protective measures already in place, and to identify and implement additional corrective steps.

Consultation

Early consultation between the historic property owner and the developer of the neighboring construction site is the first and often most important step. Establishing such contact has many advantages. Consultation provides the foundation for a mutually beneficial relationship that is cooperative rather than adversarial. The process gives the historic site owner an opportunity to become familiar with the scope of the impending project and for the development team to understand the historic structure's vulnerabilities. Consultation permits all parties a chance to propose, discuss, and negotiate changes to the construction plan that reduces the risk of damaging adjacent historic

resources. The ultimate goal is to draft a protection plan acceptable to both parties.

Resolving concerns before construction is underway can save time and money, as well as the need to repair damaged historic fabric. It is crucial that such discussions take place during the paper stage of the project, before final decisions are made. If not, the developer may conclude that changes would be cost prohibitive and that it is preferable to repair damage after it takes place. Early consultation also provides information that can be used to assess whether the level of insurance coverage is sufficient to meet the specific project risks.

The owner of a historic property cannot in most cases compel the support and cooperation of the development team. If, after consultation has been attempted, the level of protection provided is not sufficient, the aid of local building officials should be sought. Local building officials, through the permitting process, can often insist that changes be made to development plans to ensure that adjacent properties are protected. Local building codes may also provide safeguards by establishing certain conditions such as maximum vibration levels.

Other parties can also participate in and contribute to the consultation

process. The support of neighborhood committees, local non-profit preservation organizations, independent engineers and the historic district commission (if applicable) may be enlisted to ensure that protection concerns are fully addressed. The developer will benefit from the assembly of a team, including or representing the general contractor, architect, structural engineer, construction manager, and subcontractors, who can be present at consultation meetings and play a continuing role in balancing protection efforts with development interests.

Preconstruction meetings should address several issues. Most important, the parties should reach an understanding about what steps will be taken to protect the historic structure (see figure 1). Responsibility for implementing the agreed upon protections should be established among the developer, the general contractor and relevant subcontractors, and the historic property owner. Such decisions should be listed in performance specifications that accompany agreements between the contractor and the developer. A walk-through of the historic building by the development team is also advisable. Finally, schedules for major work such as excavation, and requirements for materials delivery, site storage, and other use of the premises by the con-

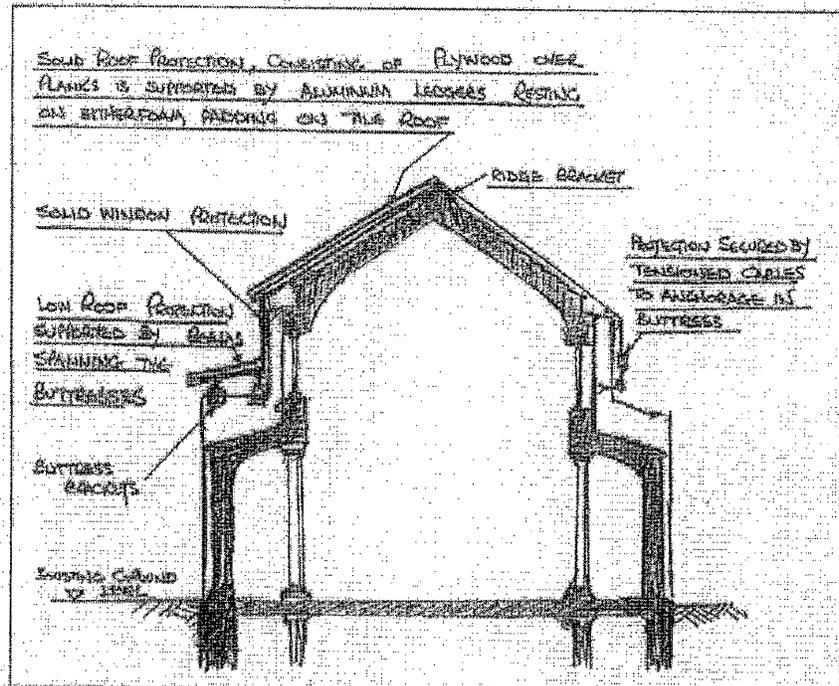


Figure 1. Before new construction was undertaken to the left of this church, a subcontractor was hired to design a protective system for the tile roof and clerestory windows. Drawing: Alan Shalters, Universal Builders Supply, Inc.

tractor should be discussed and arranged to minimize disruptions to the historic site.

Documentation

A crucial step following consultation with the developer is to document the existing condition of the historic structure. Such an investigation provides a "baseline" from which changes to the building during the adjacent construction can be identified, monitored and assessed. Like the consultation process, thorough documentation benefits both the historic property owner and the developer. For the former, it may be used to substantiate claims that damage occurred as a result of the neighboring construction work by illustrating the previously sound condition of the historic building. If the damage existed prior to construction work, the record can show that it was not caused by the developer's negligence. In the case of future litigation, the documentation record can serve as evidence along with the testimony of the professional who undertook the assessment.

Both parties should ensure that the documentation is objective and accurate. Joint surveys, in which both the developer and the historic property owner participate or sign off on noted conditions, are most likely to ensure that the resulting data are not in dispute. When the developer pays for the assessment, it is advisable that an independent professional be hired and that the survey results be accessible.

Information obtained through documentation can also be used in formulating a protection plan for the historic building. By characterizing existing damage and exposing potential weaknesses, the documentation process identifies areas of the structure that may require additional protection as well as appropriate locations for monitoring equipment. Features that should receive particular attention during visual inspections would also be highlighted. Although a formal building condition survey including analysis, repair proposals and cost estimates is not necessary, the property owner may find that the disruptive period during adjacent work provides an opportune time for a thorough survey program.

Documentation of existing conditions should take the form of written descriptions, 35mm color photographs and/or a videotape recording. Photographs should show both the interior and exterior of the building, with

close-up images of cracks, staining, indications of settlement or other fragile conditions. A complete interior and exterior crack survey should be undertaken to identify and characterize existing cracks (see figure 2). Their locations can then be plotted on a drawing of each wall or ceiling surface. While identifying every hairline crack may be impractical in a large building or one that exhibits a great deal of preexisting damage, the more thorough the documented record, the better. The condition of features such as arches, chimney stacks and parapet walls determined by the engineer to be particularly susceptible to distress should also be recorded even when no damage is apparent.

Common Risks and Protective Measures

Each instance of new construction or demolition next to an existing historic structure will involve varying risks to that structure. The proximity of the historic site to the project and the scope of the project are two of the most significant variables. Construction of a high rise building with deep foundations is more likely to affect a neighboring structure than the rehabilitation of a nearby rowhouse. However, the converse may be true if the rowhouse is

directly adjacent to and sharing a wall with the historic structure. Other factors influencing the degree of likely impact include the age, construction type and structural integrity of the historic building, as well as the depth and makeup of its foundation and its surrounding soil types.

Owners should also anticipate the effect increased dust, vibration and fire risk will have upon interior architectural features and furnishings. For the most sensitive objects, such as chandeliers, paintings and glassware, temporary removal to an off-site location may be the safest course. Those features that cannot be easily removed, including plaster ceiling medallions and cornices, can be cushioned and buttressed by padded wood supports. Additional information concerning the safeguarding of interior features can be found in the preceding *Tech Note* in this series, "Temporary Protection, Number 2. Specifying Temporary Protection of Historic Interiors During Construction and Repair."

The remainder of this section addresses some of the more common dangers to historic structures when new construction or demolition activities occur nearby. The description of each potential impact is accompanied by suggested approaches for reducing or eliminating those risks.

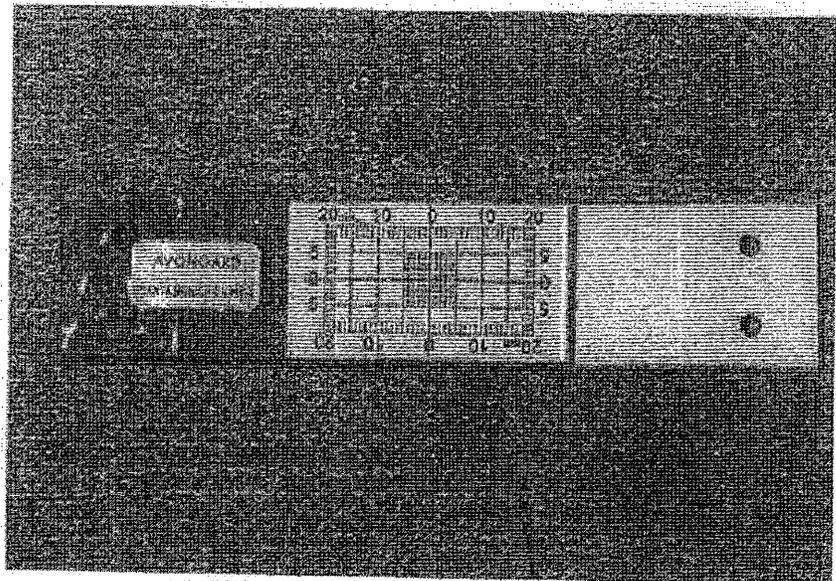


Figure 2. With advanced notice of adjacent construction activity, a crack monitor can be used to determine whether existing cracks in the historic building are stable or still experiencing movement. Compared with measurements taken during the monitoring phase, such information can help determine if subsequent movement resulted from work on the neighboring site. Photo: Avongard Products U.S.A., Ltd.

Vibration

Demolition and new foundation work are common sources of vibrations that can affect adjacent structures. The tools and methods used in demolition, such as impact hammers, wrecking balls, pavement breakers and implosion blasting, produce vibrations that may be transmitted to the historic structure. Similarly, techniques used to prepare new foundations (pile driving and blasting) create potentially dangerous vibrations. Vibrations may also be caused by increased truck traffic accompanying new construction or demolition work. In all cases, the force of the vibrations reaching the adjacent historic structure depends upon the activity generating the vibrations, the distance between the source and the existing structure, and the type of soil or pavement found between the two.

Historic structures may be particularly vulnerable to the effects of vibrations generated at an adjacent site. Deferred maintenance and past alterations may have produced structural weak points that are susceptible to damage. Historic finishes, such as plaster walls and ceilings, lack the flexibility to accommodate abnormal movement, while shallow foundations (common in historic buildings) may lack the rigidity to resist vibration induced movement.

Mitigating the effects of vibrations should begin during the consultation process when acceptable levels can be set and alternative processes explored. Hand demolition is an appropriate substitute when conventional demolition activities may cause excessive vibrations. If pile driving is likely to damage adjacent structures, the contractor may be able to employ non-displacement piles that are inserted in bored holes rather than driven. Lower vibration levels can also be achieved by "jacking-in" or pressing the piles into the ground. Locating delivery entry and exit points farther from the historic site may reduce vibrations caused by increased vehicular traffic. Once construction is under way, continual crack and vibration monitoring provides an effective warning system, indicating that established safe thresholds have been crossed.

Movement

Excavation and foundation work can also cause ground displacement and movement of an adjacent historic

building. New construction almost invariably calls for digging a foundation that is much deeper than the foundations of neighboring historic buildings. This is especially true for projects that include underground parking facilities. A historic structure, with a shallow masonry or stone foundation and wall footings, may experience corresponding displacement that can result in major structural damage.

Efforts to control movement should begin during the consultation phase. Whether the developer's engineer selects underpinning or strengthened excavation walls with tie backs as the means to resist movement of the adjacent structure, the historic building team should retain its own engineer to review the plans (*see figure 3*). The consulting engineer should ensure that the selected approach addresses the unique characteristics and vulnerabilities of the historic structure and that even incidental movement is restricted.

Water

A well functioning water drainage system is essential to the protection of any historic structure. This system can easily be rendered ineffective by neighboring construction or demolition work. Debris originating at the construction site often finds its way to the gutters, downspouts and drains of an

adjacent building. Drainage mechanisms may also become inoperable when excavation workers inadvertently seal off or collapse old pipes running from neighboring buildings. If blocked pipes cannot remove water from both above and below the surface of an historic site, excessive moisture levels or flooding may result.

Regular visual inspections (part of the monitoring program described later) are one of the best means of thwarting increased moisture levels. The inspection procedure should include checking gutters, valleys and exposed drains for any obstructions. Also, indications of dampness or water damage in the basement and where gutters and downspouts meet other building surfaces should be noted.

Construction site runoff from cement mixing and cleaning and dust suppression activities should not flow toward the historic property. Although placing screens and wire cages over exposed areas of the drainage system may provide some protection from obstructions, such installations need to be inspected just as frequently. Low-pressure water washes can occasionally be used to flush the system of dirt and debris. To reduce the possibility that drainpipes will be blocked at the adjacent construction site, all concealed pipes should be traced from their origins at the historic structure and the

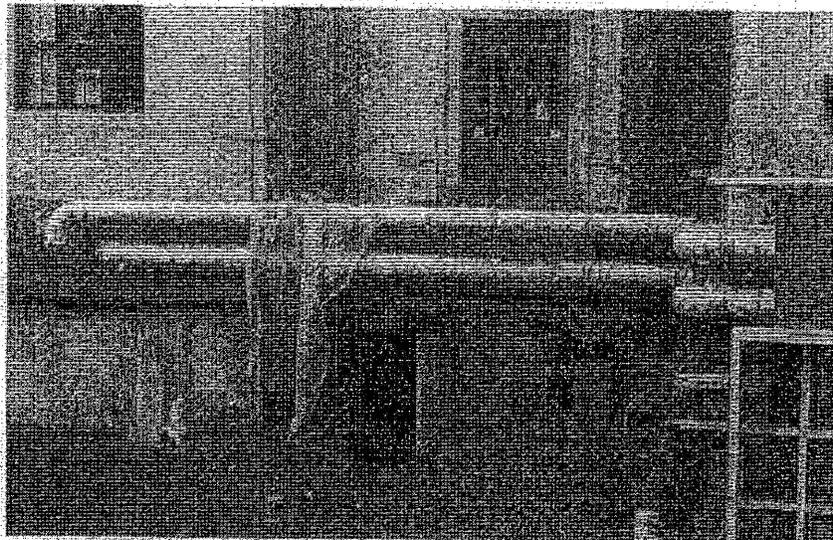


Figure 3. Concrete pier underpinning to an existing building may be necessary when adjacent construction occurs. In this example, pits are hand dug beneath the foundation of the historic building to provide space for wood forms. After concrete is poured into the forms, the space between the top of the pier and the bottom of the original foundation is packed with a quicksetting grout. The historic building owner should retain an independent engineer to ensure that the underpinning plan adequately protects the historic structure. Photo: Professor Arpad Horvath, Department of Civil and Environmental Engineering, University of California, Berkeley.

information passed on to the appropriate contractors. Final landscaping and grading patterns on adjacent construction sites should be examined to ensure that rainwater is not routed towards the historic building.

In some cases, the lack of water beneath an historic structure can lead to damage. Buildings located in areas with a high water table were often constructed upon timber piles. When groundwater or storm water is removed from a neighboring site during foundation excavations (a process known as "dewatering"), the groundwater level beneath the historic site may also drop. Previously submerged timber piles that are exposed to air can quickly begin to undergo dryrot. If there is reason to suspect that the structure was built on such a foundation, the property manager should work with the neighboring construction team to maintain the existing water table. This can be done using watertight excavation support systems such as slurry walls which ensure that most of the water pumped out of the construction site does not come from adjacent properties. Dewatering of soft clay ground may also result in settlement of a neighboring building, as ground water pressure is reduced and the soil consolidates.

Fire and Security Concerns

The heightened possibility of fire accompanies many demolition and new construction activities. Temporary heating devices, torches, sparks, molten metal and undersized electrical utility panels are some of the most common sources of fire at construction sites. Additionally, the improper storage of fuels, cloth rags and brushes also presents opportunities for fire to ignite and spread. The *Tech Note*, "Specifying Temporary Protection of Historic Interiors during Construction and Repair," provides detailed information on reducing the likelihood of fire in situations involving work near historic structures.

The security of a historic building can be threatened when adjacent construction provides opportunities for illegal entry. Newly constructed floor levels at the building site may make the neighboring historic structure's ledges, windows and rooftops accessible to trespassers. Window openings on the historic building should be fastened and all doors from the roof to the interior should be locked. Where a historic structure is protected by an intruder

alarm system, that system should be upgraded to protect rooms that are rendered accessible from the outside. In cases where the historic structure does not directly abut new construction or demolition activity, attention should still be paid to the possibility that incidents of vandalism and theft will carry over to the historic site.

Physical Impact

Construction or demolition can cause direct physical damage to neighboring historic features and materials. Cranes, hoists and workers on upper floors of a construction site can drop building supplies and tools onto an adjacent historic structure. Misdirected debris chutes and backing vehicles may also leave their mark.

Generally, to counter these occurrences, protective barriers are placed over any area of the historic structure deemed at risk. If the new construction will rise above the historic building, plywood sheets should be placed over the roof to distribute the force of dropped materials (see figure 4). Plywood covers should also be placed over decorative roof embellishments such as finials and balustrades. Alternately, horizontal netting can be rigged to shield vulnerable rooftop features.

Facades that are directly exposed to adjacent construction sites should receive close attention. To avoid dam-

age, windows should be covered with plywood. Layers of cushioning materials can be placed between the plywood covering and particularly fragile windows, such as stained glass. If entire wall surfaces are vulnerable, scaffolding should be erected against the facade and debris netting placed on the outside of the scaffolding. Plastic sheeting can provide added protection in areas where acidic cleaning solutions may splash onto historic facades, windows and other surfaces.

The best means of protecting a historic structure from physical impact, however, is often to have adequate horizontal and vertical netting and barriers in place at the construction site. When adjacent buildings are adequately considered in the construction site netting and scaffolding plans, protective measures at the historic site can be less intrusive, and the likelihood of damage reduced even further.

Additional Dangers

Other byproducts of new construction and demolition, such as dirt and dust, can also pose threats to an adjacent historic structure. Dust suppression measures including the installation of fabric enclosure systems should first be employed at the building site (see figure 5). Despite these efforts, historic building owners will undoubtedly have to deal with raised levels of dust infiltration. Accordingly, vulnerable interi-

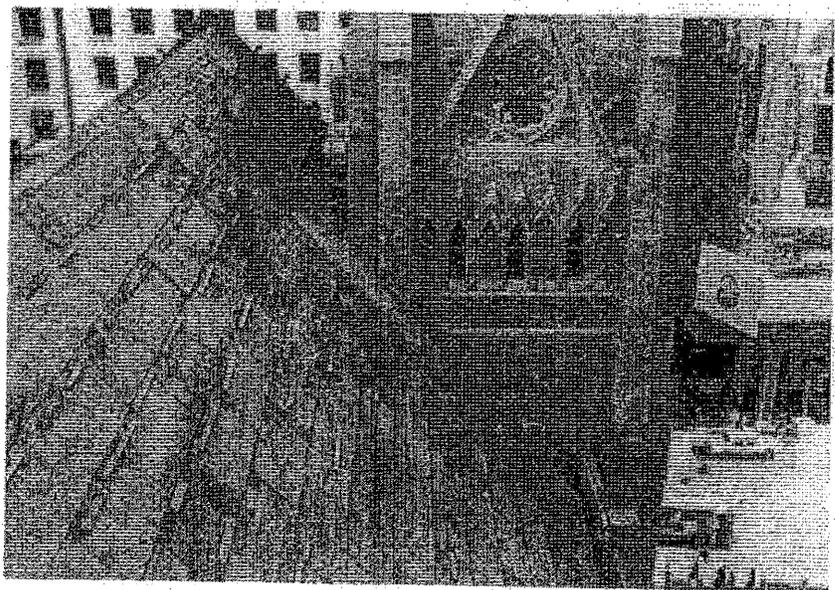


Figure 4. Dropped equipment, tools, and materials all present risks when new construction rises above neighboring historic structures. In this case, the historic slate roof was completely covered with sheets of exterior grade plywood. Photo: National Park Service files.

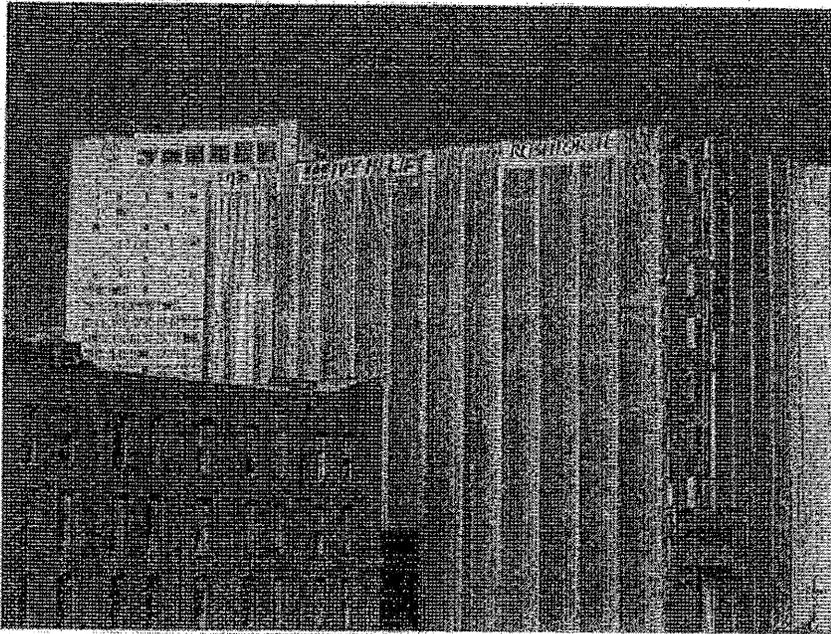


Figure 5. The historic building on the left is partially protected from debris and dust generated by the renovation of the structure to the right. Such temporary enclosure systems consist of a polyethylene or other fabric shell stretched between an aluminum frame. Photo: Walton Technology, Inc.

or objects and artifacts should be covered or temporarily moved to another location. Windows can be taped shut or temporarily sealed with clear polyethylene sheets. Additional mats or carpets near entrances can help reduce the amount of dirt tracked inside. An accelerated maintenance program that includes thorough and frequent cleaning and HVAC filter replacement, is an effective means of addressing the degraded environment surrounding a construction site. To lessen the chance of airborne asbestos infiltration, the exhaust from sealed work areas must be properly filtered and vented away from historic buildings.

The owner of a historic property should anticipate the increased rodent and pest presence that accompanies major demolition activity. Newly opened holes in old foundations are easy escape routes that should be promptly sealed. The construction or demolition site rodent control plan should include provisions for protecting adjacent historic resources. Concurrently, the historic property owner should consider securing a contract with an independent extermination company. Plans should include both preventive measures to reduce conditions favorable to infestation as well as a system of eradication such as rodenticide and traps.

Monitoring

A monitoring program should be established during the consultation and documentation phases and continued until adjacent work is finished. It is undertaken to detect, gauge, record and interpret structural movement, the effects of vibration and other changes to the historic building that result from neighboring construction or demolition work. Data collected during the monitoring program can serve as a baseline for any subsequent movement or changes to site drainage patterns that arise within the first years after construction is completed. Ultimately, monitoring shows the degree to which steps taken to protect an historic structure from adjacent construction are sufficient and successful.

Because of liability concerns, those responsible for a new development will often arrange to monitor an adjacent structure. As with a documentation program, the historic property owner may want to hire an independent engineer to review both the monitoring process and the measurements that result.

The extent of the monitoring program and the tools used will depend upon the scope of the adjacent activity. A basic plan to address concerns over vibration levels may include a single seismograph placed on the structure's

basement floor. More comprehensive measurements can be obtained by locating sensors at several points throughout the structure and the ground immediately adjacent to the historic building foundation (see figure 6).

Whether acceptable vibration levels are mandated by law or left to the discretion of a project engineer, thresholds should take into account surrounding soils, the makeup and condition of the adjacent foundation and the particular vulnerabilities of the historic resource. Construction projects that involve major excavation work next to historic structures should include a program of test blasting before work begins. Testing various charges, delays and blast design configurations will aid in developing a controlled program that limits blast induced damage to a neighboring property.

Structural movement as described in the preceding section is detected and recorded using a number of different tools. Electronic monitors that feed precise movement measurements to laptop computers can be placed across existing cracks (see figure 7). When budgets are tight or a large number of cracks are involved, inexpensive tell-tales made from two sheets of overlaid plastic with a grid can be used to track changes.

Optical survey instruments provide another means of detecting vertical and lateral movement within a historic building. Control points are established and marked by targets or reflectors on the historic structure facade and interior walls before adjacent construction begins. The location of each of these markers is precisely measured at regular intervals. Engineers then use the resulting information to determine whether the markers have shifted from their original positions and, if so, the rate and direction of movement.

A program of visual inspections undertaken by a qualified conservator or engineer is an important adjunct to technical monitoring procedures. Inspectors should look for newly opened cracks, other signs of settlement and movement, and evidence of increased dampness or water infiltration. Additionally, visual inspections should ensure that temporary protective coverings are secure, that dust and dirt are not accumulating in the historic building, and that fire and hazardous material protection provisions are being upheld. A checklist can be drawn up during the consulting and documentation phases for use during

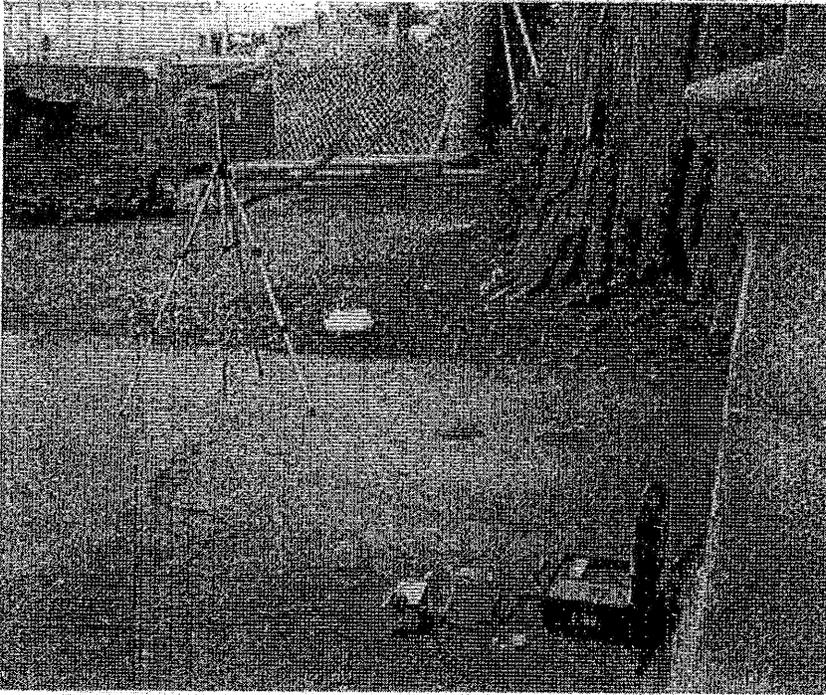


Figure 6. A seismograph records vibrations transmitted at the ground level of an historic building. The instrument is wired to a light and siren designed to warn the excavation crew that vibration levels are approaching preset limits. Additional sensors are often installed in the basement and on sensitive features such as stained glass windows. Photo: Wilson, Ihrig & Associates, Inc.

each visual inspection. Such a systematic written record may also prove useful if disputes arise over the timing of and responsibility for damage.

Conclusion

Protecting a historic building from adjacent construction or demolition activity requires thoughtful planning and cooperation between the developer and the historic property owner. Thorough pre-construction documentation of the historic structure ensures a common understanding of present conditions and suggests appropriate damage prevention measures that can be taken at both the historic site and the construction site. A routine program of visual inspection and vibration and movement monitoring helps insure early detection of the effects neighboring construction work is having on the historic building. Early consideration of these issues, before damage takes place or worsens, can allow for the adoption of safeguards that protect the developer's schedule and budget and the physical integrity of the historic structure.

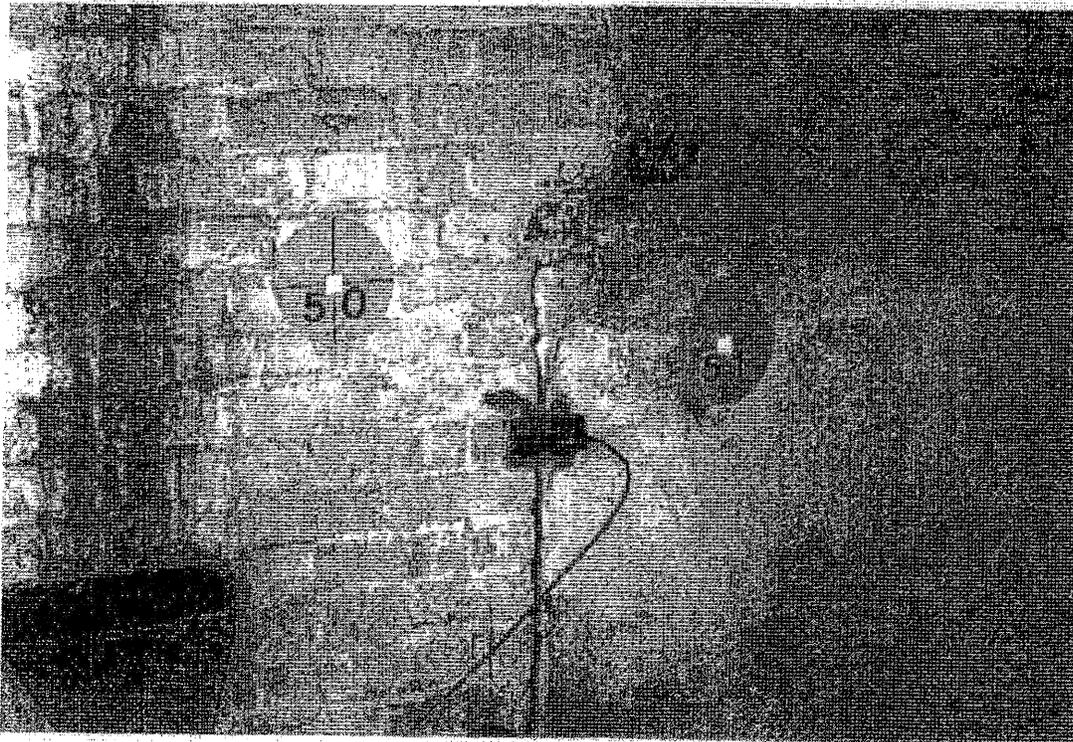


Figure 7. Electronic crack monitor and survey targets are shown installed on an existing wall. The crack monitor feeds movement data to a laptop computer. The targets are aligned and measured with optical survey equipment to determine the degree and direction of movement. Photo: McMullan and Associates, Inc.

Checklist for Historic Property Owner and Historic Site

- Consult with developer, and other parties to determine extent of work and identify necessary protective measures
- Conduct survey of existing conditions, including 35 mm photographs, crack inventory and description of other damage
- Include historic building in construction site fire plan
- Secure windows and rooftop doors that are made accessible by new construction
- Remove particularly fragile interior objects and furnishings from site
- Install temporary supports beneath fragile features that are not moved
- Place plywood coverings on openings that face construction area
- If adjacent construction rises above historic site, protect roof with plywood covering, encase rooftop embellishments
- If construction is directly adjacent, cover historic facade to protect against mortar and acidic cleaning solution
- Install temporary floor coverings at entrance and seal windows facing construction site to limit dust infiltration
- Remove dust from interior surfaces on accelerated schedule
- Clean HVAC system & filters on accelerated schedule
- Clear obstructions from gutters and drainage system regularly
- Establish monitoring program, including:
 - 1) Seismographs to ensure that effects of blasting, pile driving and other work are at acceptable levels
 - 2) Crack monitors and optical survey methods to detect movement
 - 3) Schedule of regular visual inspection

Checklist for Development Team and Construction Site

- Consult with historic property owner and other relevant parties to identify necessary protective measures
- Review and sign off on pre-construction condition survey of adjacent property
- Arrange delivery locations and times to limit disruption and possible damage to neighboring historic structure
- Explore excavation and demolition methods that produce low vibration levels
- Limit movement of adjacent building with sufficient underpinning or reinforced excavation walls
- Reduce changes to adjacent ground water level during dewatering
- Ensure water runoff is not directed toward historic structure
- Install appropriate debris nets to prevent dropped materials from impacting historic building
- Direct debris chutes away from historic structure
- Install fabric enclosure system to reduce spread of construction dust
- Include adjacent historic building fire plan and ensure fuels, rags and brushes are stored appropriately and not directly adjacent to historic site
- If asbestos or lead remediation is involved, ensure exhaust from sealed building is filtered and vented away from historic site and that lead chips are gathered and removed
- Include adjacent historic structure in rodent control program and seal openings in demolished foundation
- Participate in monitoring program at historic site to ensure that vibration levels or indications of movement are within established thresholds

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PRESERVATION TECH NOTES are designed to provide practical information on traditional practices and innovative techniques for successfully maintaining and preserving cultural resources. All techniques and practices described herein conform to established National Park Service policies, procedures and standards. This Tech Note was prepared pursuant to the National Historic Preservation Act which direct the Secretary of the Interior to develop and make available to government agencies and individuals information concerning professional methods and techniques for the preservation of historic properties.

Comments on the usefulness of this information are welcomed and should be addressed to PRESERVATION TECH NOTES, Technical Preservation Services, NC200, National Center for Cultural Resources, National Park Service, 1849 C Street, NW, Washington, DC 20240.

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