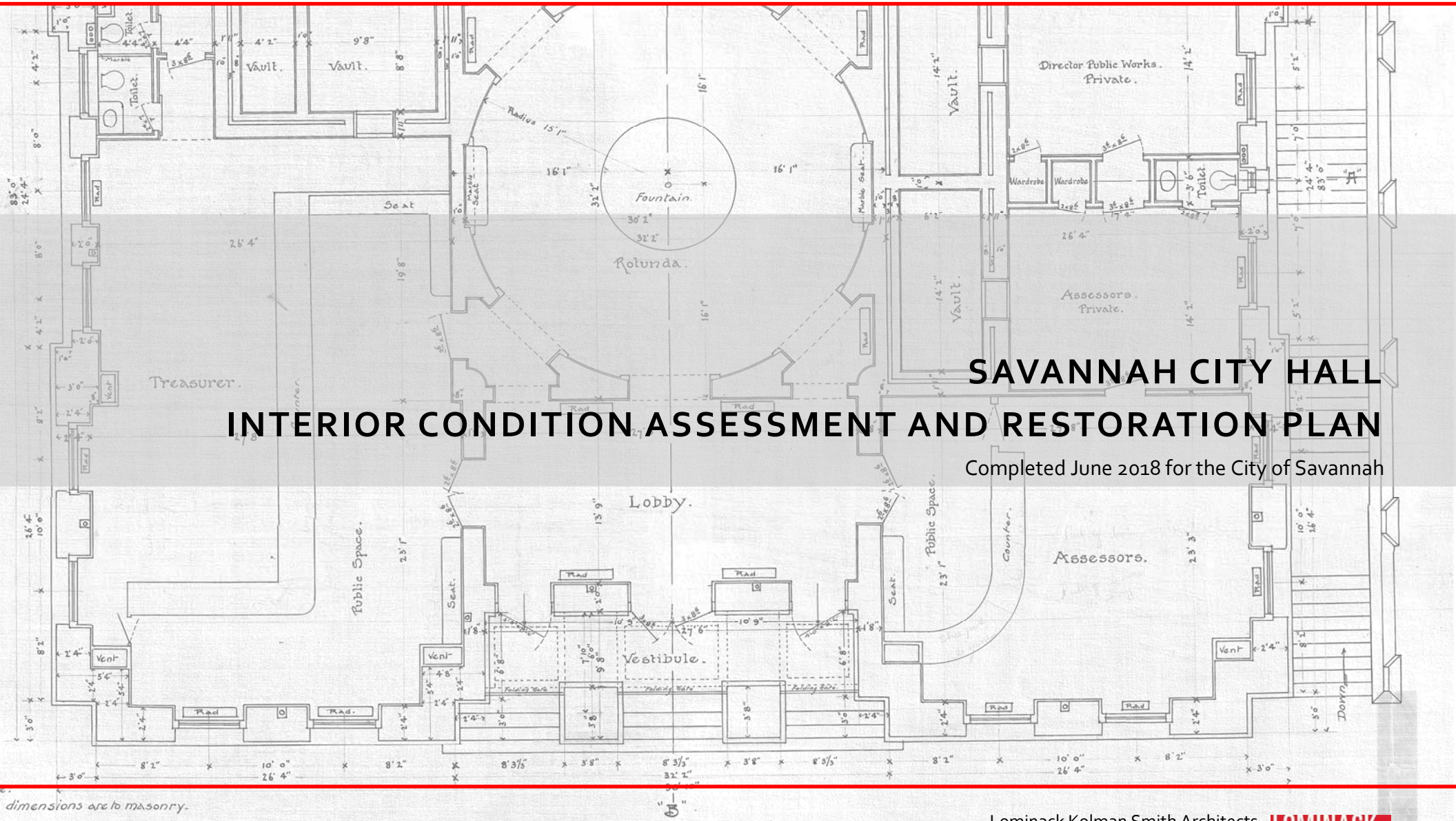
SAVANNAH CITY HALL

INTERIOR CONDITION ASSESSMENT AND RESTORATION PLAN

Completed June 2018 for the City of Savannah



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ACKNOWLEDGEMENTS

The Savannah City Hall Interior Condition Assessment and Restoration Plan would not have been possible without the help of many individuals who were generous of their time and expertise. All historic preservation work involves knowledge of principles and methods, but also the ability to weigh various outcomes, their short and long term effects, to find the best possible solutions. The list of thank you's below may be incomplete; but the project would not have been possible without the efforts of everyone listed.

A very special thank you to Greg Jacobs of Landmark Preservation, LLC who was more than generous of his time and talents. Jacobs' passion for his profession, love of buildings, knowledge of methods, and kindness throughout the creation of this report aided our work tremendously.

Many thanks to Luciana Spracher and Kelly Zacovic of the Municipal Records and Archives, who assisted in the visitation of the building on numerous occasions, allowing us to take photos and examine the building's organs and cavities. Their facilitation of these visits, willingness to provide archival material, and knowledge of the space was of great benefit to the report. Further, we wish to extend gratitude to all of the City maintenance and building staff who took time to share their knowledge and past experiences of City Hall with us as part of our investigative phase.

Many thanks to Matt Richardson and Sean Moxley from Garbutt Construction, and Ben Newkirk and Brian Newland from Dulohery Weeks Engineers who were strong project team members, providing important professional insight related to their areas of expertise.

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Gratitude is also extended to the committee of reviewers of this document, whom elevated the document to higher clarity and quality. Luciana Spracher from the City of Savannah, Ellen Harris from the Metropolitan Planning Commission, and Daniel Carey of the Historic Savannah Foundation, your guidance and edits were very much appreciated.

Lastly, thank you to the City of Savannah, the Historic Savannah Foundation, and the National Trust for Historic Preservation for the financial backing needed to make the project possible.

FIGURE LIST

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Spurred by the visible degradation of historic materials evidenced within the building's public spaces, the purpose of the Savannah City Hall Interior Condition Assessment and Restoration Plan is to provide a thorough assessment of Savannah City Hall's interior public spaces, identify issues and areas of concern related to its historical and architectural integrity, prioritize restoration needs identified based on level of severity, identify restoration solutions and the costs associated with their implementation, and develop a maintenance schedule for the building's continued use.

Designed by Hyman W. Witcover and built by the Savannah Contracting Company between 1904 and 1906, City Hall is one of Savannah's most iconic buildings, featuring a striking dome donned with gold leaf in 1987. As the seat of government for over 100 years, the building has been in consistent and steady use since its construction. No formal interior restoration of the building's interior has ever been initiated other than routine maintenance, work performed by City staff, and the integration of select modern mechanical, electrical, and security systems.

Included in the National Trust for Historic Preservation's publication *America's City Halls* and documented by the National Park Service as part of the Historic American Buildings Survey in 1981, Savannah City Hall has been continually recognized as a building of historic and architectural importance. While individual city staff persons and aldermen have taken interest in the building's history and condition in the past, no one has ever been assigned to advise changes to the building other than maintenance employees. Prompted by the increasing severity of deterioration in specific areas of the building, the Historic Savannah Foundation, in conjunction with the Director of the Municipal Records and Archives determined that it was time to act.

With the help of City Management Analyst Daphanie Williams, who composed the grant application, the City received a Cynthia Woods Mitchell grant for historic interior restoration from the National Trust for Historic Preservation in 2017 to perform this study. With matching funds from the City of Savannah and additional monetary support provided by the Historic Savannah Foundation, the assessment could be realized.

All restoration solutions outlined in this report were selected in accordance with the Secretary of the Interior's Standards for Restoration, included as Appendix A. The preeminent standards for restoration, these principles are widely recognized throughout the preservation profession. In total, 48 issues were identified; of these 11 were determined to be of top priority for restoration with a total of 9 in severe condition. When applicable, issues were linked to their specific location. Spaces within the scope of this project include the Lobby, Rotunda, Corridor, Stair, Council Chambers, and the Reception Room. Likewise, each issue was framed within a historic material or system category when applicable, to include tile, marble, woodwork, brass, lighting, plaster, paint, glass, or mechanical and electrical systems. In total, nine quotes were obtained to address all of the 48 items in need of restoration within the public interior spaces of Savannah City Hall.

Initial discussions determined that the building's 1906 date of finished construction could be used as the desired restoration period. As the project progressed, however, it became clear that a balance would need to be struck between the requirements of municipal operations in the twenty-first century and a respect for the building's historical and architectural importance.

As stated in the first of ten principles which make up the Secretary of the Interior's Standards for Restoration, part of building restoration is the retention of its intended use. The accommodations necessary for its continued use as the central seat of government therefore are critical.

The result was the development of a restoration plan which aims to restore the building to the restoration period of 1906 while considering elements necessary for the municipal operations of today.

Knowledge of the restoration period was gleaned from Hyman Witcover's original drawings; several black and white historic photographs, many of which were included in the Annual Municipal Report for 1905; as well as the extensive research included in the *Birth of City Hall* and *A Century of History*, documents compiled by the Research Library and Municipal Archives for City Hall's centennial. Included in the centennial documentation is an exhaustive timeline of newspaper articles, contracts, specifications, and other records which often describe the manufacturing, installation, appearance, and configuration of the building's historic elements (Figure 1).

At project outset, the building's interior dimensions and layout were verified. Performed during an initial site visit that provided entry to all spaces included in the project scope, the original plans and verified dimensions informed the creation of a new base drawing reflective of existing conditions.

PRETTY TINTS FOR
CITY HALL INTERIOR

Committee Decided on Them Today—To Buy Curtains and Rugs Soon.

The special committee of council on the new city hall held a meeting this afternoon and decided on the shades and colors for the walls of the building.

The walls will be colored a very pretty tint of light green, while the ceiling will be of a still lighter shade of the same color.

The rotunda, council chamber and the mayor's suite will be left a plain white, so that later they may be decorated with paintings illustrating scenes in Savannah's history.

The Shades and Rugs.

It was also decided to advertise for bids for furnishing the building with window shades and rugs. The advertisements will call for bids to be in by noon of Sept. 19.

Friday the committee will meet to select chairs for the building. The sum of $2,060 has been appropriated for this purpose. Samples of the chairs, according to specification for this amount, will be examined by the committee.

Fountain for Rotunda.

Other items to be looked after by the committee are a fountain to be placed in the rotunda and the pavement for the front of the building. The fountain will probably be selected of bronze. The architect is now getting information concerning fountains for the committee to examine.

Savannah Evening Press article from August 22, 1905.
Figure 1

METHODOLOGY

On July 28, 2017 an initial interior condition assessment of the public interior spaces within Savannah City Hall was performed (Figure 2). Attendees and informants included representatives from Lominack Kolman Smith, Garbutt Construction, Dulohery Weeks, and the City of Savannah. A second walk through was performed with local restoration consultant Greg Jacobs of Landmark Preservation LLC at a later date. At this time, issues of concern related to the historic and architectural integrity of the building's public spaces and associated historic materials were shared and discussed. Photographs and notes developed during the walk-through informed the creation of a spreadsheet itemizing issues categorized by severity, location and material. Each issue was then given an order of priority and a level of concern. Titled Appendix B, spreadsheets that summarize this information, organized by severity, space, and material, are included. Two solutions to each issue were provided whenever possible, as well as maintenance recommendations and quotes for the costs associated with the first solution identified.

METHODOLOGY

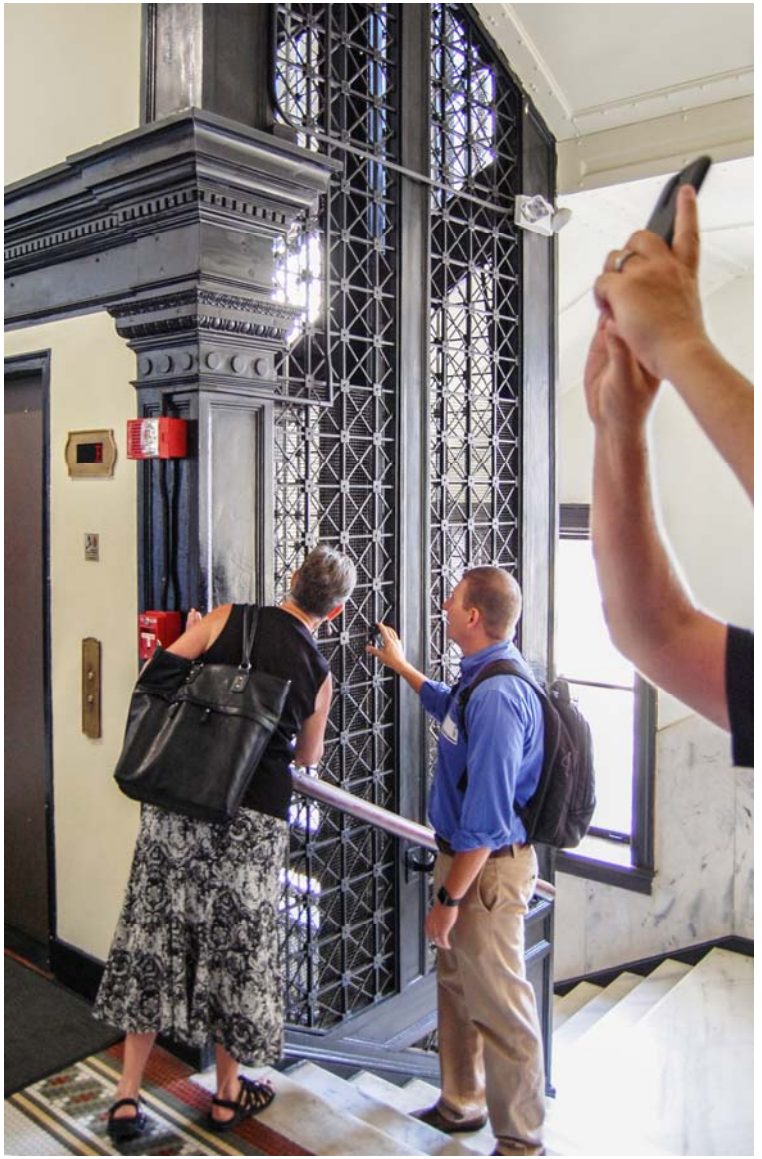
As the project evolved, additional walk throughs with specific tradespeople, engineers, and others determined to be experts in historic materials and methods were scheduled. Issue-specific tours allowed for the discussion of targeted solutions and in some cases the discovery of additional concerns. As a guide for these discussions, copies of Witcover's original drawings of the building were provided to contractors for greater understanding.

Larger issues related to the use of Savannah City Hall's public spaces or the interior as a whole were also considered, outlined in a general recommendations section at the end of this report. As part of this, the use of each space and any semi-permanent detached elements, such as exhibit cases, were considered.

The report is ordered based on natural movement through the building beginning with the Lobby, Rotunda, and Corridor followed by the second floor Council Chambers and Reception Room. Each individual space's condition is presented followed by a separate restoration section, ordered like the former. Both sections highlight the specific historic materials present in each space. Each page includes a scaled building plan in the upper right hand corner with the specific area of reference discussed on that page in red. As each material is addressed in the restoration plan, primary and secondary solutions are provided in addition to any maintenance concerns or recommendations, when applicable.

Verified building plans, a template for annual building inspection, a supplementary data sheet, a maintenance quick reference guide, and a conclusion section covering broader issues related to the building's continued preservation management has been included at the end of the document.

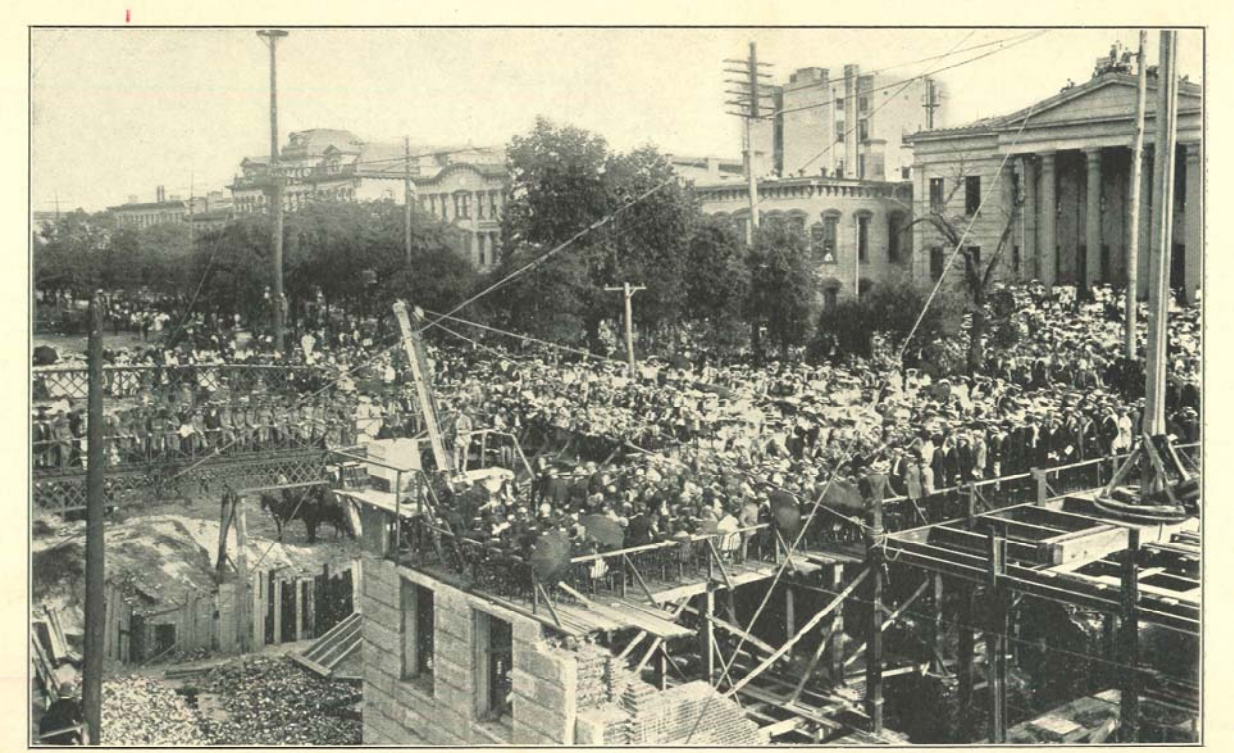
Throughout the text, photographs taken by the author as well as historical images provided by the City have been included to better illustrate the use of space and highlight areas of concern.



Members of the project team examining City Hall's second floor Corridor.
Figure 2

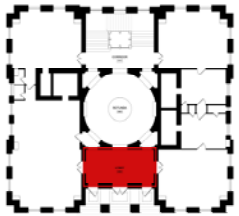
Since its doors opened in 1906, no comprehensive interior restoration efforts have ever been performed within Savannah's City Hall. Taking this into consideration, the building has aged remarkably well and the building's public spaces are in good condition when considered as a whole. With relatively few changes to the building's original plans, the majority of the historical and architectural integrity of the building's public spaces is still intact. There are, however, noticeable signs of wear, insensitive modern technological upgrades, and several historic materials in need of restoration in the short term in order to ensure the ultimate preservation of City Hall's historic interior.

Following is an overview of concerns organized by space and material, as evidenced when traveling naturally through the building.



Laying of Corner Stone of New City Hall on August 11, 1904.

Excerpt from Annual 1905 Report showing the corner stone ceremony at City Hall.
Figure 3

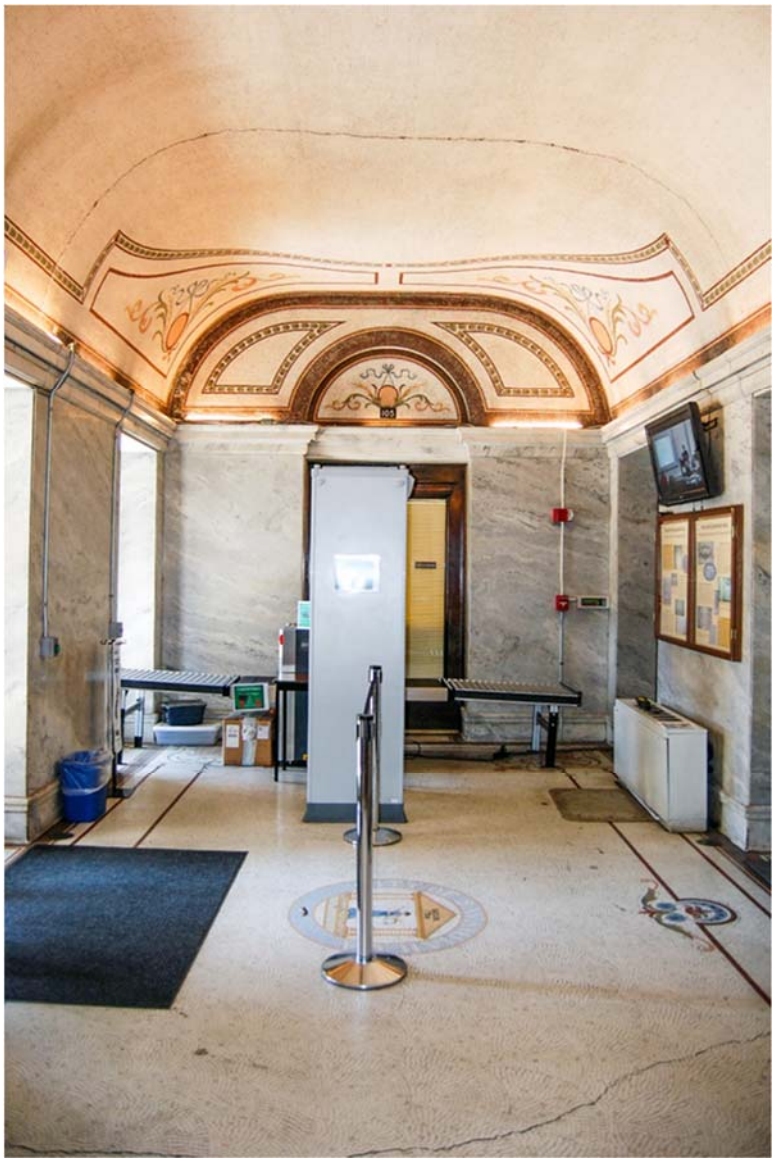


Materials: Marble, Mosaic Tile, Brass, Woodwork

Rooted in the nature of the space, the Lobby has seen the most use of all spaces surveyed. The floor and ceiling in this space is laid in historic square mosaic tile set in decorative patterns. Only a handful of tiles are missing from their original locations.

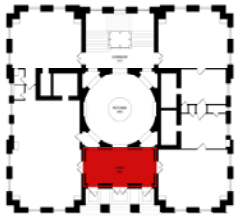
The most noticeable concern in this space are the cracks that run the full length of the space from north to south at both the floor and the ceiling, in addition to other smaller cracks that extend in the same direction (Figure 4). The cracks along the floor are also visible within the tiled portico floor, just outside the building's front door. The cracks are identifiable by prominent dark colored mortar joints which run along the crack line, which are missing grout. The surfaces at each crack location appear to remain flush with the floor, however, as deflection only appears to have occurred laterally.

It was noted in *The Birth of City Hall* that on May 18, 1904, "The great trouble in getting the foundations started has been in keeping the sand out of the way. As fast as one portion of it moved another shifts in its place. Even where the trenches for the foundation have been planked in on either side, the sand slips in and they have to be leveled out just before the cement is dumped in." On June 20, 1904 it was noted that, "The work on the foundation proved to be very difficult due to the repeated shifting of the sand." When examining the building's original architectural drawings, it was learned that the Lobby framing runs north to south, in the same direction the cracks have formed. Other elements of the space paired with original building plans provides some additional insight. Adhered to all wall surfaces in the space is sheet marble. As noted on interior elevations, "all slabs are to be in one piece, to be no joints." This provided a rigid framing to the space that allowed for little movement. As the building settled during and after initial construction, the only areas that could absorb the building's movement in this space were the floors and ceiling.



View of Lobby, looking west.
Figure 4

CONDITION ASSESSMENT:LOBBY

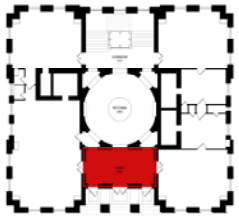


An additional issue related to the floor includes dirt that is carried in from Bay Street, which is not contained by floor rugs.

It should also be noted that while security equipment has been incorporated into the space, it has not been mounted in any fashion to the walls or floors. Due to the dirt build up on the floors and the relative permanency of the equipment, however, the fixtures have left surface stains on the floor. The size and presence of the equipment is also visually obtrusive and distracts from the appreciation of the architectural integrity of the space, which was originally an empty corridor.

The Lobby features floor to ceiling marble wall panels and trim, which have suffered the most user inflicted damage. Visible deterioration to the panels includes holes and stains from the installation of plaques and other wall hangings, some of which have been filled; residue from adhesives and tapes used to mount signage and other info; surface mounted conduit; and exposed wiring. It should be noted that the room's original radiators, as located on original plans, were removed and replaced in two locations by HVAC units of a similar size. In these locations, the equipment has been connected to the wall through the coring of circular sections in the historic marble wall panels to allow for the equipment's piping. While still operational, the existing units have exceeded their useful life. Additionally, a television has been mounted on the north wall, which required the drilling of holes into the marble. At the room's corners where marble panels meet, separation, chips, and cracks have occurred. Lastly, marble thresholds located at the doorways leading into the space have suffered from staining over time.

CONDITION ASSESSMENT:LOBBY

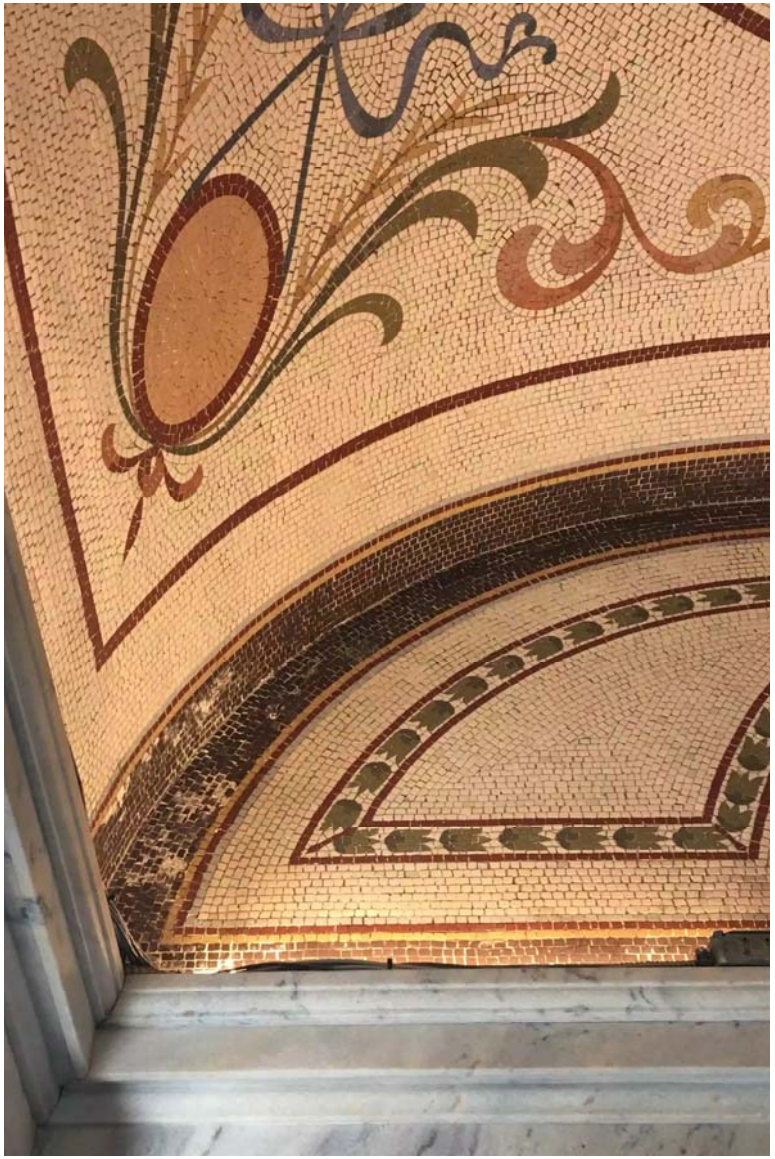


Currently, the Lobby is illuminated by fluorescent cove lights that are unoriginal to the space. These provide light in a hue and temperature inappropriate for this turn of the century space. Further, the fixtures installed are failing to remain hidden from view atop the space's marble cove molding.

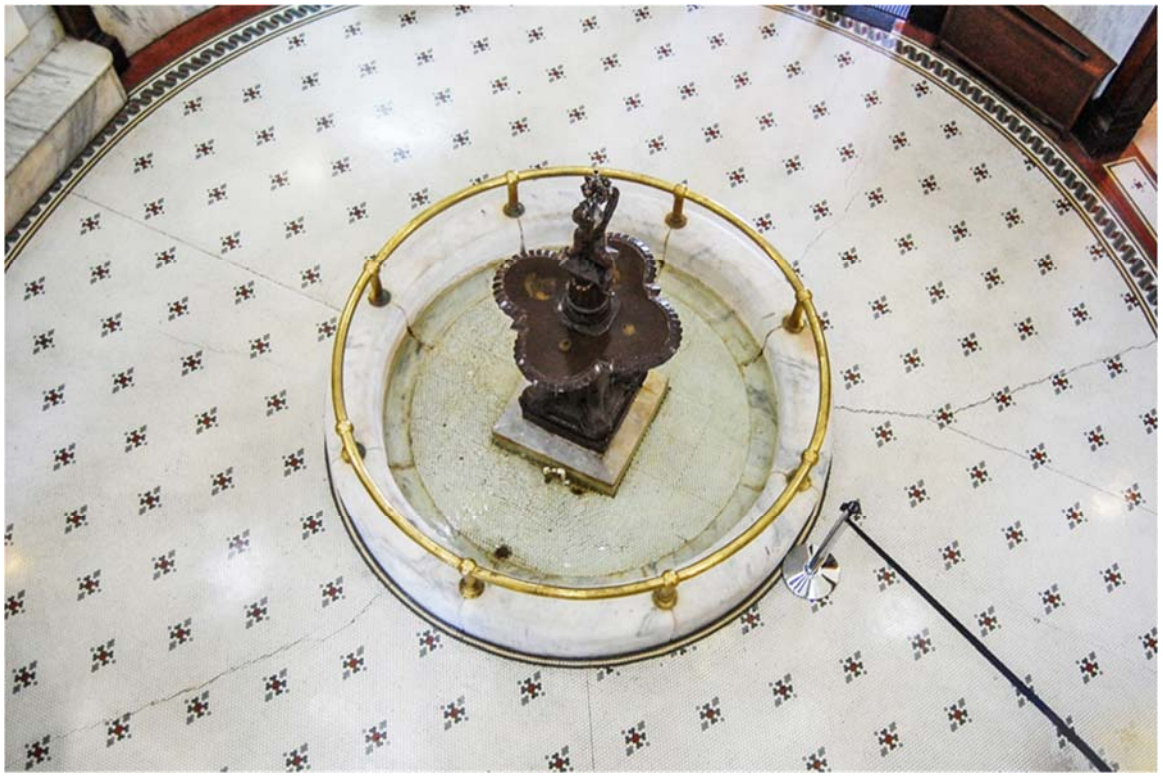
Additional deterioration has occurred at the ceiling level, where the southwest corner of the room's vaulted ceiling appears to be suffering from efflorescence, or surface salt build up, which is present on the ceiling's historic mosaic tile (Figure 5). No warping or bubbling has occurred.

The doors leading into this space on the building's front elevation are not original, however do feature original brass elements. Since their installation in 1996, however, their frequent use has meant some minor damage worth noting. The center doors appear to be wracked as they do not meet the jamb on the same plane at the top and bottom. It should be noted that only one out of the four doors that lead into the building is currently operational as the others remain locked at all times. Thus this door has suffered the most wear.

Within the space, the interior doors leading into neighboring spaces to the east and west feature double doors, both sets of which are missing one door knob from the original hardware set.



Efflorescence on mosaic tile in southwest corner of Lobby ceiling.
Figure 5



View of first floor Rotunda from second floor mezzanine
Figure 6

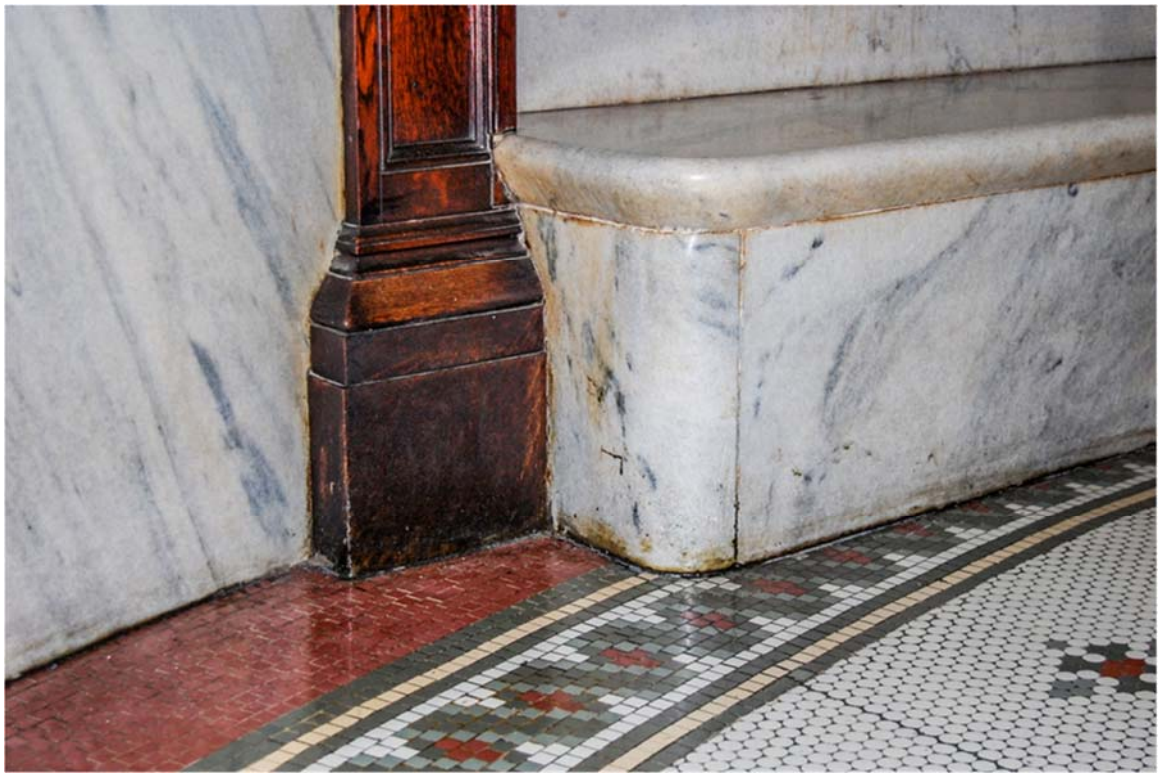
MATERIALS: MOSAIC FLOOR TILE, MARBLE, PLASTER, BRASS, WOODWORK

As the center of City Hall, the Rotunda space receives heavy traffic and serves as the main corridor connecting all the offices and private spaces on each floor (Figure 6).

Tile loss in northeast alcove on east wall of first floor Rotunda
Figure 7

First Floor

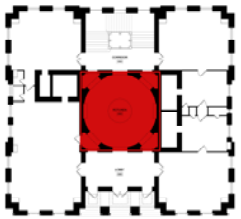
The flooring of this space is laid in polychrome penny round tile set in a decorative pattern around a central fountain. Similar to the Lobby, the flooring in the Rotunda is suffering from cracks which run east and west centered at the fountain (Figure 6). There is a very small amount of tile loss on the first floor; however, it should be noted that there is a significant section of missing tile along the eastern wall of the northeast alcove (Figure 7). Along the edges of the floor, where the tile meets the marble wall panels, the panels are stained where floor polishing equipment has brushed against the wall at the base of the marble. Additionally, the marble panels in this space show some discoloration, particularly at the edges (Figure 8). Likewise, the circular marble base of the foundation is showing discoloration, particularly at the seams where the brass handrail is connected to the marble base.



First floor Rotunda detail of wall panel and bench, mosaic floor tile, and engaged column woodwork intersection
Figure 8

Although the fountain is not in the scope of this project, it is worth noting some general concerns. The penny tile at the fountain's base is showing signs of staining. It was mentioned that the fountain has leaked in the past, which is believed to be tied to the plumbing system as evidenced in ceiling tile stains on the story directly below this location. The fountain is maintained by the City's Greenscapes Division.

The brass handrail is in good condition but is lightly tarnished (Figure 9). Other brass elements in this space include flush mount ceiling and wall mount sconce light fixtures, which show similar levels of tarnish.

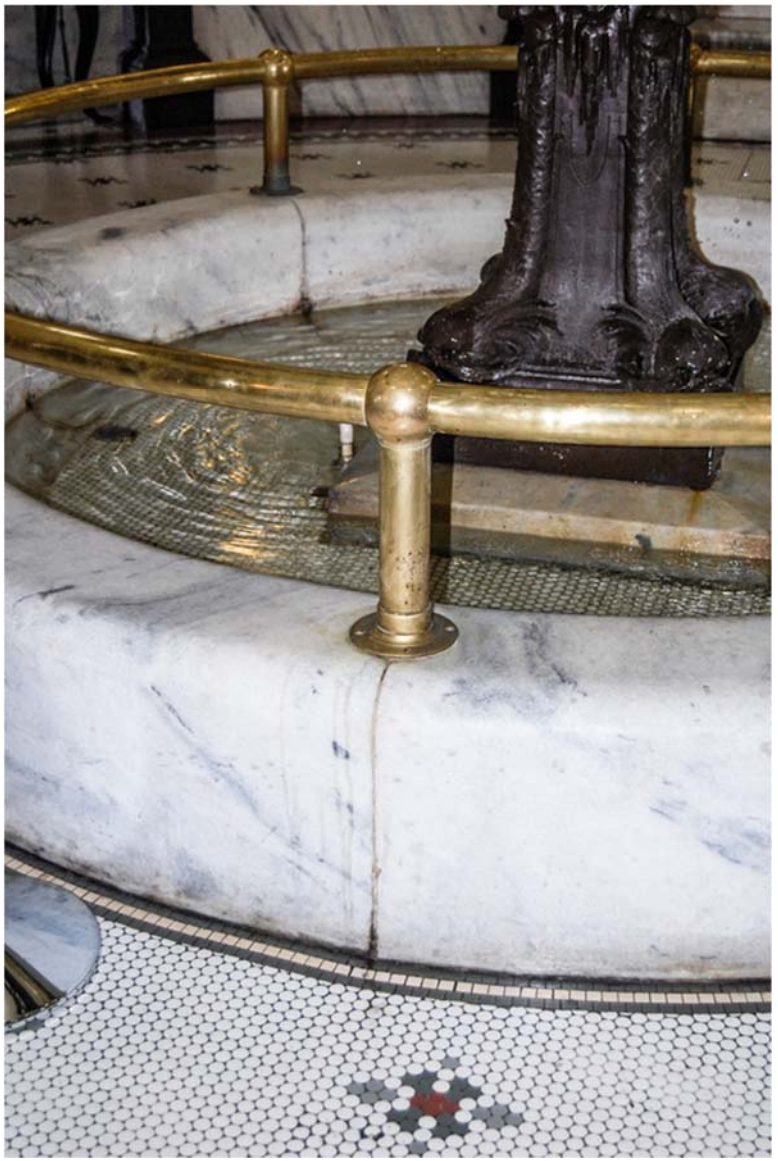


As evidenced in delaminating wood panels, gaps at panel seams, and surface chipping, the wood at the base of the Rotunda's door frames is worn and disintegrating where floor polishing equipment, passersby, and other elements have led to significant deterioration (Figure 8). The majority of the woodwork in the space is in fair condition overall, however the finish, which has failed and subsequently been reapplied over the years, has darkened with time and oxidization. It should also be noted that the door frame lintels significantly extend out from the plaster and subsequently collect dust, which is visible from the mezzanine floors above.

Numerous light fixtures in the Rotunda have replacement bulbs and globes, which explains why many of the fixtures emit light in varying colors, hues, and intensities. The first floor southwest alcove has an original brass circular ceiling fixtures with a par 38 halogen bulb, which is operational but incompatible for this original fixture. All of the alcoves contain an incompatible lay-in ceiling with modern track lighting. In an effort to provide easier access to the electrical and plumbing lines above, the lay-in ceilings are set lower than the original ceiling height as evidenced in the termination of the wall paint at the current ceiling height.

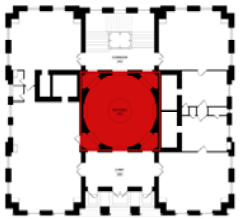
Single light switches are set within the alcoves, which serve to operate single wall sconces within the Rotunda, equating to the management of a series of switches in a variety of locations for one space. Finally, electrical panels set within the northeast and northwest alcoves has exceeded their useful life and are a visual obtrusion. While painted white to match the plaster, the panels are easily accessible to the public without the need for a key or code. Likewise, a fire extinguisher and an AED machine are adhered to the wall and trim of the northwest alcove.

The plaster in this space is in good condition with the greatest areas of damage evidenced in the corner alcoves which have been modified over the years as chases for exposed vertical pipes and wiring. The inadequacy of these systems has led to plaster staining from leaks, which are no longer active but remain a visual obtrusion. Further, plaster damage from the drilling of holes and the use of adhesives for signs and exhibits likewise present visual concern.



Detail of fountain edge showing intersection of mosaic floor tile, marble fountain base, and brass handrail *Figure 9*

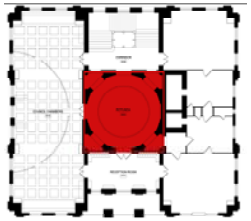
CONDITION ASSESSMENT:ROTUNDA



It should be noted that the traffic entering the space is not flowing as it did historically. With the incorporation of a security check point in the Lobby, a subsequent sign-in station encloses the southeasternmost alcove with a desk that was added in 1957 (A Century of History). Lastly, the central entrance into the space currently houses turn stiles to provide a controlled exit when leaving City Hall. All three entrances on this wall were historically open pass throughs.

There is also a concern for the temperature and humidity within the Rotunda as it is a large open space and there is no barrier between this space and the exterior doors in the Lobby, immediately adjacent to the south. It is difficult to keep these spaces cool during the warmer months and warm during the cooler months.

Additional concerns in this space include the exposure of the Chinese cobblestone exhibit, which currently sits within the Rotunda on a wooden base uncovered. Unlike the Bicentennial Time Capsule exhibit in the Lobby, which is covered with a glass box, this exhibit is more susceptible to deterioration, damage, or seizure.



Second Floor

The second floor of the Rotunda shows similar signs of wear as the first. This floor has similar cracks and a small number of cracked penny tiles. With less surface area than the first floor, these cracks are less significant. The floor suffers from similar dirt build up and staining, particularly at the edges and around HVAC equipment where waxing machines and excess cleaning build up has accumulated.

Likewise, this space features marble wall panels with similar staining, wear, and significant HVAC adaptation issues (Figure 10). The HVAC units replaced radiators that were original to the space and later masked by wooden box covers, leaving ghost stains on the marble wall panels beyond. Further, the condensation lines leading from the wall to the unit have corroded, staining nearby floor tiles. While still operational, these units have exceeded their useful life.

Heavy classical wood door moldings show similar signs of wear. Whereas the first floor has had greater deterioration at the bases of the door surrounds, the second floor surrounds have applied trim that is failing. The southernmost door frame has nails which need to be removed as they now stick out from the frame roughly 1 inch. Similarly, the door trim includes a heavy lintel that extends out from the plaster and collects dust. The second floor features a wood balustrade that frames a central circular mezzanine, a condition that is repeated on all subsequent floors to showcase the Rotunda above, all of which feature identical balusters. Solid wood, the second floor baluster, the only one to be included in this scope, is structurally sound and only shows wear in the form of surface scratches and a handful of missing trim pieces.

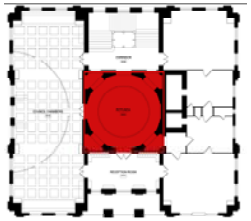
The wall and ceiling plaster is in good condition. Framed historic photographs of Savannah's mayors hang on the walls. Fire alarm systems and security cameras have been added to the space, adhered to the plaster.

Detail of HVAC connection on South wall in Second Floor Rotunda.
Figure 10

Electrical panels on west wall of southwest alcove in second floor of the Rotunda.
Figure 11

The greatest concern in this space is the collection of electrical panels and boxes that are surface mounted to the plaster walls in the southwest alcove (Figure 11). While painted white to match the plaster, these elements are currently exposed and accessible to passerby without the need for a key or code. Largely, the controls manage the electrical equipment supply to the Council Chambers beyond. There is a concern for the amount of panels and boxes in this alcove as well as their accessibility and exposure, as there is significant traffic in this area at the time of Council meetings.

CONDITION ASSESSMENT:ROTUNDA



There are identical brass light fixtures in this area to that of the first floor, which show similar signs of wear and tarnish. In this space, it was possible to remove one decorative sconce's mounting plate away from the wall as it was not secured. Visible beyond was cloth wiring, which is found throughout the building and is a significant fire hazard. This wiring proves difficult for City staff to maintain and repair. In 1979 City Hall was re-wired however, it is not known what the extent of this work was (A Century of History).

All doors that are connected to this space have original brass hardware featuring the City seal; all show minor wear and tarnish.

Ceiling of First Floor Corridor, looking west.
Figure 12

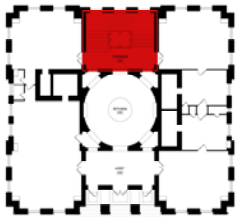
Materials: Mosaic Floor Tile, Marble, Plaster, Brass, and Woodwork

First Floor

The Corridor features similar penny floor tile as the Rotunda, however, the floor is largely in good condition with no missing tiles or cracks. Additionally, a floor rug situated in front of the elevator has helped reduce dirt in the space.

Marble wall panels throughout the Corridor show staining similar to those in the Rotunda spaces.

The plaster walls above the marble panels have suffered from minor drilling and adhesives from signs and exhibits. Room numbers, which are likely unoriginal, have been added above the entrances to the offices on the east and west sides of this space (Figure 12).



Featured in this space is original brass door hardware, which features the City seal, on doors leading into adjacent offices. Operational and in good condition, however the hardware is tarnished and worn, much like the hardware throughout the building. Additionally, there is a single decorative brass ceiling mounted light fixture that is in good condition, but is missing its glass globe and shows signs of tarnish.

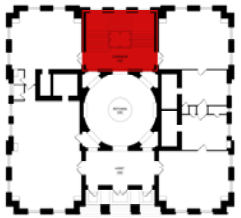
The woodwork throughout the space largely consists of original door trim, much of which is in fair condition. The finish, however, has failed and subsequently been reapplied over the years, darkening and oxidizing with time. Although unable to be seen, it is highly likely that the top of the prominent trim on the room's south wall has collected significant dust due to the door frame lintels significantly extending out from the plaster. At the edges of the wood stained pediment to the main entrance into the Rotunda, the woodwork shows paint atop the wood stain from the recoating of the adjacent wall. The door frame of the entrance leading into the Municipal Records and Archives is detaching from the plaster beyond, visible from above when standing on the stair (Figure 13). Surrounding the door's brass hardware, the wood stain of the double doors into the adjacent offices is showing signs of wear reflected in the ghost-like surrounds of the hardware, where the wood stain of the surrounding door is lighter. Additionally, the doors have some minor scratches and wear from general use, particularly at the edges where the doors meet the floor and each other at the centerline.

The ceiling in this space has a shallow chase that has been added along the south wall as well as covered electrical conduit running north to south, including lines for emergency signage and security cameras.

Additionally, an electric water fountain was installed in this space on the south wall of the elevator shaft, which was enclosed in 1941 (A Century of History). The enclosure of the elevator shaft as well as the addition of the water fountain on the south wall have altered the historic and architectural integrity of this face of the elevator. Also, some water staining of the adjacent marble stair tread has occurred just below the water fountain.

Detail of unsecured framing of entrance into the Municipal Records and Archives off the first floor Corridor on west wall. *Figure 13*

CONDITION ASSESSMENT:CORRIDOR



Second Floor

The second floor Corridor shows much of the same wear as that of the first, with all of the same historic materials found throughout. Differences in this space include a historic iron plumbing valve, in case of fire, just north of the easternmost door frame that extends out of the plaster wall in this location. The walls feature numerous portraits hung in frames and security cameras that have been added and are affixed to the plaster walls. Additionally, the space has an original brass ceiling fixture and door hardware which are tarnished and worn. Unlike the first floor, the ceiling in this location does not feature an added chase.

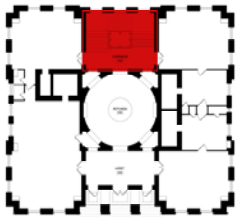
Detail of wood trim at side of Stair.
Figure 14

MATERIALS: MARBLE, PLASTER, BRASS, WOODWORK

The staircase is built of marble slab stair treads set within iron framing. The iron framing shows some signs of wear in chipped paint, scrapes, and scratches from use but is generally in good condition. Attached to the framing at the sides of the stair is rounded wood trim that has been painted black to look like the metal used in the elevator enclosure. In some locations this trim is delaminating and separating from the wall (Figure 14). The stair treads are overall in good condition; however, a couple slabs have cracks that run the length of the tread from nosing to nosing. While not confirmed, these cracks could date to the year the building was constructed as described in *The Birth of City Hall.* Marble wall panels follow the stair along its outer edges. Although minor, some discoloration has occurred along these marble elements from their consistent use, concentrated on the nosing of the stairs and the lower edges of the wall panels.

Location of missing paint on elevator column capital detail.
Figure 15

The staircase wraps around the historic elevator shaft framed with iron casing, which is partially enclosed with a wall system along its southern face. The wall system was added when the elevator car was first changed in 1941. Witcover's drawings show the original configuration and iron casing design for the south face of the elevator which is no longer in place. At each floor, the elevator opens onto the Corridor. In this location, the elevator is framed by engaged columns at its southern corners, which are made of both iron and wood painted to look like iron. The column capitals are missing paint in some areas (Figure 15). The original iron cage, which surrounds the north, east, and west sides of the elevator shaft, has a square and diamond lattice. Set on the inside, however, is a black wire mesh that prevents large objects from being dropped into the shaft. It is unoriginal to the space, collects heavy dust, and is difficult to clean. The paint on the exterior of the shaft has suffered some wear with minor scratches and paint marks from the repainting of the ceiling above in cream, visible at the top edge of the cage where it meets the ceiling of the stair. Affixed to the elevator cage are white emergency security light fixtures which are unoriginal to the space.



The staircase features original heavy handrails in wood attached to neighboring surfaces with iron hardware painted black. Solid wood that has been stained, the handrails are in good condition with minor scrapes and scratches. Although this area is outside of the scope of this project, the handrail leading to the basement, visible from this Corridor, is missing its spherical wooden detail at one end. Additional wood elements include the wood framing around the windows as well as historic benches that sit at stair landings (which are historic but not original to the building or this location). The window trim similarly has paint marks along its edges where the neighboring wall has been painted. The window trim shows some signs of general wear in the form of scratches and scrapes, and a loss of finish due to long term exposure. Iron security bars have been added to the interior lower sashes of the windows in some locations. Unoriginal to the space, they are poorly attached and visually obtrusive (Figure 16). The space's plaster walls, which begin where the marble wall panels end, are in good condition with the exception of where they meet the marble, where there are scrapes and scratches from passersby. The walls have been repainted on multiple occasions.

The entirety of the Stair has a paneled ceiling set in riveted flat framing. These panels are believed to be wood that was faux finished to look like metal. At the first floor, the ceiling has been painted cream to match the walls, whereas the upper floors retain a brown stained faux finish, which is believed to be the earlier of the two conditions. The ceiling shows some signs of wear, including some streaking and paint marks from the refinishing of neighboring walls.

Window at stair landing leading from first to second floor on north wall.
Figure 16

Materials: Parquet Floors, Woodwork, Furniture, Plaster, Brass

Council Chambers features unique wall-to-wall parquet flooring. The majority of the flooring has a two-tone multi-type lattice design with a decorative border. It shows signs of general wear in the form of scratches, sporadic puncture wounds, and loss of finish due to abrasion. Areas that have suffered the most wear are those that are most trafficked, including the path leading into and away from the gate into the alderman circle and the sections of floor in front of each bench seat (Figure 17). One area of concern is northwest of the council platform where the wood floor shows significant scratches from the moving of furniture (Figure 18).

Woodwork throughout the space consists of wainscoting with a chair rail, built-in benches, balusters, window and door frames, and engaged corner columns and capitals. The wall panels have surface abrasion in some locations, particularly along the west wall where HVAC units, AV equipment, and other modern elements have been added. In some locations, the HVAC units have been affixed to neighboring wall panels with fasteners.

The built-in benches at the north and south walls of the room were originally taller, as inferred on historic plans, and currently suffer some general wear in the form of minor surface scratches and discoloration, concentrated at the corners. Further, modern HVAC units have been placed atop the built-in benches along the north, west, and south walls, set on shallow trimmed wood bases in a contrasting wood stain. As shown on Witcover's plans, radiators were placed in these locations, set below the originally taller benches.

The pew style benches for audience members date to 1980 (A Century of History). These benches show signs of wear in the form of minor scratches and discoloration from general use. One bench that is set immediately to the right upon entering the central entrance interrupts the door swing and puts the bench and door in danger of increased deterioration as there is no door stop.

Council Chambers interior, looking south.
Figure 17

Detail of wood floor of Council Chambers along west wall, northwest of Council platform.
Figure 18

There is a section of missing baseboard immediately north of the council platform as well as an abandoned pipe near the room's most significant floor scratches, likely due to HVAC piping that was disconnected (Figure 18). Two unoriginal wood panels have been set into window sashes on the west elevation, above the location of two HVAC units, which appear to have been added at a later date to introduce outside air to the space. Since then, these vents have been covered on the interior with fixed wood panels, stained to match the interior wood panels; although the vents remain visible at the exterior (Figure 75). This is an insensitive retrofit and is visually obtrusive to the space's historic and architectural integrity.

Missing ionic scroll from engaged column capital in Council Chambers at southwest corner.
Figure 19

The most significant woodwork damage evident in Council Chambers is the loss of the room's Ionic column scrolls, which were set at the corners of the engaged columns just below the ceiling (Figure 19). On more than one occasion, these scrolls have fallen from the ceiling and crumbled on the floor. At the time of these events, it was discovered that the scrolls are made of a wood and glue composite material. One scroll is currently missing, however it is possible that multiple scrolls are in need of stabilization. The baluster and gate that surround the alderman chamber are in good condition and appear to be structurally sound. Surface wear is present however in scrapes and scratches.

Original desk converted for use as podium in Council Chambers.
Figure 20

The furniture inside the aldermen's chamber is original to the space and integral to the an understanding of the room's historic and architectural significance. While the original layout of the aldermen's seats has been reversed, to place them in-line with the Mayor, all of the desks that remain are original. Originally created by the Art Metal Construction Company, metal faux finished to appear as wood as originally detailed, the desks have proved durable and are in good condition. One desk however, has been modified for use as a podium. It is now set atop a custom base elevating the desk to podium height (Figure 20). Other furniture pieces are several wooden arm chairs and three tables. The three tables have original bases, but new tops, and are original to the building but not to the Council Chambers space.

The most noteworthy damage to this original furniture has been the adhesion of various notes, nametags, and other elements to the surface which has left adhesives and abrasions. Other surface wear such as scrapes, scratches, and discoloration is present but minor.

Detail of ceiling coffer plaster damage at southeast corner of Council Chambers.
Figure 21

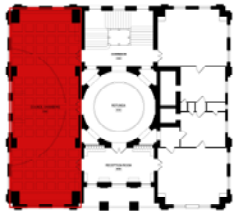
The plaster walls are in good condition with significant historic detailing and floral plaster reliefs found along panels set between the engaged columns. The area of greatest concern is in the southeast corner of the room, where the plaster ceiling has suffered from a continuing leak (Figure 21). This is the issue of greatest concern and the top restoration priority outlined in this report. The leak has started to penetrate the southwest corner of the room and a small portion of the central area between both corners along the room's east-west plane at the southernmost rows of coffers. The damage currently extends two rows of coffers. While the majority of this damage has presented on the ceiling, neighboring plaster walls display some indication of moisture damage. In the southeast corner, the coffered ceiling molding has been repaired with noticeable inconsistency as the molding does not appear to be true to its historic form. Further, the fact that this is an active leak means that any repairs that are made will shift and warp from continued moisture damage, and thus the ceiling will need continual repair. Relatively few other areas of concern with regard to the plaster ceiling exist with the exception of a chip in the molding present on a vertical member of the fourth coffer in from the south wall.

Additional elements of the space that are important to note when examining the ability to interpret the historic and architectural integrity of Council Chambers include the space's lighting, historic clock, AV and electrical systems, and window treatments.

The room's elaborate brass light fixtures are a significant historic component of the space and include wall mounted sconce fixtures, baluster mounted fixtures, and flush ceiling mounted fixtures. Of all of the fixtures, those attached to the balusters and the wall mounted sconce fixtures have suffered the most tarnish due to those fixtures being the most accessible to human handling and associated wear (Figure 22). One wall mounted sconce fixture, as shown on original plans, was previously located on the north end of the east wall and has been removed, the reason unknown. The flush ceiling mounted fixtures have suffered the least amount of wear, due to their small size and mounting out of reach. It should be noted that the wall mounted sconce fixtures were previously removed and reinstalled upside-down many years ago, as evidenced in historic photographs. Previously, the globes hung from the bottom of the fixtures, emphasizing their electric power source as opposed to gas which was more readily available at the time of construction. Council Chambers is also home to a large brass clock, which has been cleaned in the past but shows some signs of tarnish today. The clock's operating mechanism is currently undergoing maintenance.

The modern AV and electrical systems throughout the space are a significant concern as they are extremely obtrusive to the architectural integrity of the space as much of it is exposed or surface mounted. In addition to the needs of City Council, the City Attorney, and the City Manager, the local government channel has requirements for how the space functions, is illuminated, and carries sound. As a result, there have been several additions to include wall mounted cameras and speakers, two ceiling hung projectors and wall mounted projection screens, wall mounted televisions, eight ceiling and wall mounted spotlights, and a large freestanding AV hub which sits inside the Council balustrade. The earliest system in the space dates to the 1960s, which consists of electronic voting controls at each aldermen desk and an illuminated display panel on the north wall, all of which is still being used today.

Looking north in Council Chambers at City Council circle southern entrance. Figure 22



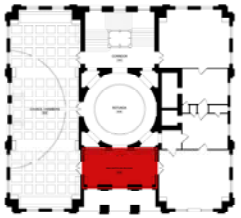
Lastly, the room's window treatments consist of heavy fabric valance curtains that are not original to the space and have rotted in various locations. Likely added during the 1970s, the curtains do not pose an immediate detriment to the space, however, are unoriginal and deteriorating.

Parquet floor detail in Reception Room.
Figure 23

Materials: Parquet Floors, Woodwork, Furniture, Plaster, Brass

The original parquet floors are one of the building's most unique features, but also one of its most deteriorated historic elements. Filling the entirety of the Reception Room and Council Chambers, the building's parquet floors were laid in a decorative star pattern set in squares. The Reception Room's floor is framed by a lattice detail border laid in multiple types of wood. The flooring has suffered significant deterioration from its use resulting in frequent puncture wounds, stains, and scrapes, which have removed and discolored the wood (Figure 23). Puncture marks range in size from 1/8 of an inch to 1 inch. In some locations this has led to the exposure of original nails which were used to secure the flooring. Unoriginal circular metal electrical covers roughly 4 inches in diameter have also been added to the floor. The areas of the floor that remain the most intact and show the least amount of wear are below a central table and entry rug by the northern entrance.

CONDITION ASSESSMENT:RECEPTION ROOM

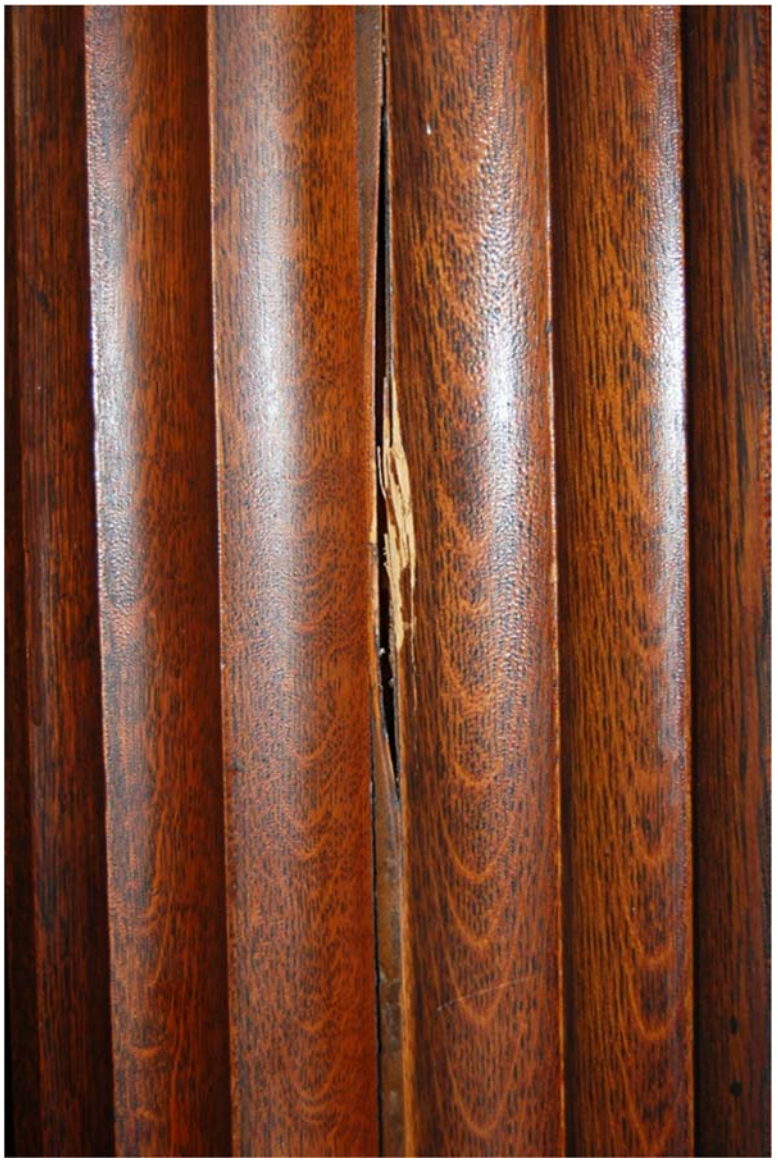


The Reception Room contains a significant amount of historic woodwork to include built-in benches and wooden lockers set within the northern wall of the space, pedimented door frames leading to neighboring spaces to the east and west, wall panels, and window frames. The most significant wear to these elements has occurred at the floor level, where the most traffic has occurred. Likewise, the corners of the built-in benches show signs of wear and discoloration of wood finish. The wall panels show signs of wear from general use but are overall in good condition, with the exception of minor scratches and adhesives that remain from taped signs. An original call button set in brass remains in one panel and is believed to be inoperable. The northernmost set of double doors into this space are worn on the vertical edges where the doors meet and the wood stain has "bubbled" in some areas. The pedimented entrance leading into the adjacent office to the east has columns that are splitting along the flutes (Figure 24). Within the pediments, there are nail holes and ghosts in the staining of the wood where signs were formerly placed. Additionally, the room's ceiling trim has deteriorated in various locations, particularly at the room's northeast corner.

The southwestern most window in this space has a modified lower sash that is shorter than the rest. As a result, a piece of wood has been placed below the sash to fill the gap, the reason for this change is unknown, however a vent added to introduce outside air into the space may have originally been placed where the panel is located, later replaced by the panel. A similar condition exists in Council Chambers. This retrofit, however, is incompatible with the historic and architectural integrity, the intent of the space and is visually obtrusive.

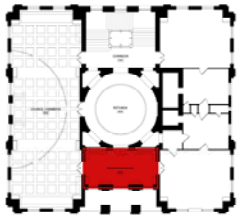
Set within all of the doors leading into the space are sheets of etched glass, some of which are believed to be original. Not every door contains the same style of etched glass, however, so it is unclear which style is original.

These doors also have original brass hardware featuring the City seal which show some general wear in the form of minor tarnish.



Detail of split fluting of column framing the eastern entrance to Reception Room. Figure 24

CONDITION ASSESSMENT:RECEPTION ROOM



The Reception Room's plaster walls and ceiling are in good condition. Two return air duct vents have been added along the north wall ceiling on either side of the room, which are unoriginal and have been abandoned in place. Likewise, there are inoperable controls for the unused system set below these vents on the wall. Additional HVAC controls have been added for the stand alone HVAC units that are mounted to the historic benches on the southern end of the room (Figure 25). Originally, radiators stood below the easternmost and westernmost windows in this space.

The room's plaster wall panels have molded classical frames set above sets of wood lockers below and the wood trim and ceiling above. These panels are in good condition with the exception of some paint chipping. The vaulted plaster ceiling retains its original form and is in good condition.

Located in this space is an original meeting table that was designed for the space. It has a classical metal base and stained wood table top, which has been resurfaced in recent years. Consequently, the table has good integrity.

Modern HVAC units mounted to historic benches on south wall of Reception Room. *Figure 25*

Understanding the balance necessary for the building's continued use, the date of 1906 was selected as the restoration period for Savannah City Hall's public interior spaces as rooted in the guidelines set forth in the *Secretary of the Interior's Standards for Restoration* (Appendix A). All recommendations in this plan aim to honor the materials and features from this period, to include the retention and preservation of original architectural elements whenever possible and the restoration of missing elements based on historical evidence. Other guidance was provided by the National Park Service's Preservation Briefs, General Services Administration Historic Preservation Technical Documents, and subcontractors who toured the space.

Of equal importance to the historic materials of City Hall's interior public spaces, is the building's layout and plan. Part of the building's original design intent is evidenced in the sizes, configurations, and intended methods of building use as shown on original plans, all of which contribute to its overall historic and architectural integrity. With its central Rotunda and connected circulation spaces, it is clear that City Hall's central axis is of great importance, providing a logic and rhythm to the building's layout. Areas along this axis are intended for public use and appreciation as evidenced in their architectural detail, careful proportion, and fine material selections and finishes.

Fortunately, the building's original drawings have been retained by the Municipal Records and Archives to include framing plans, floor plans, wiring plans, plumbing plans, furniture plans, iron work plans, elevator drawings, Lobby sections, and detail drawings. When comparing these drawings against existing conditions (Appendix D), it is evident that the areas included in the scope of this project have experienced relatively few changes since the building was constructed. Current conditions which are contrary to original conditions include:

- 3 out of 4 of the building's entrance doors remain locked at all times
- All of the building's original radiators have been removed and replaced with modern HVAC units
- The southeast alcove in the Rotunda has been partially enclosed with the installation of a security guard desk
- The original wall "tints" have been altered
- An original wall mail chute formerly located at all levels in the Corridors has been removed
- The original water fountain located in the second floor Corridor is no longer operational
- The City Council furniture layout has been altered and a Council platform installed to facilitate the switch to a council-manager form of government
- Ceiling fans in Council Chambers have been removed
- Olive green roller window shades throughout building were removed
- Stand alone benches have been added in the previously standing-room-only audience spaces of Council Chambers
- The height of built-in benches along the north and south walls of Council Chambers have been reduced
- There is a missing wall sconce light fixture in Council Chambers and fixtures have been lost in many Rotunda alcoves
- There are missing or enclosed air registers on engaged pilasters at the corners of Council Chambers

It is important to note that any future work should be reviewed according to current building, life safety, and fire codes. **A thorough understanding of applicable regulations and close coordination with code officials, building inspectors, and fire marshals can prevent the alteration of significant historic interiors as the building was constructed prior to the enactment of current codes. Further, proper vetting of craftsmen and tradespeople is essential to ensure the quality of workmanship, longevity of repair methods, and sensitivity to historic materials.** Historic preservation experience should be verified through review of project portfolio and reference verification whenever possible.

All tasks and products specified in this report have been verified by experts in the field as effective means and methods sensitive to historic materials. **All methods and products should always first be tested in a small, inconspicuous area first to examine effectiveness and sensitivity to the historic material in question.** In every instance, this testing, followed by a mock-up of the finished solution, should be completed and reviewed before the entirety of any space or totality of material is addressed. Further, products should be used according to manufacturer's recommendations, unless otherwise specified in this document.

The testing of products, solutions, means, and methods is best achieved through an initial investigative phase of restoration. This is the best approach to initiating restoration efforts in City Hall. This is elaborated in more detail at the conclusion of this document.

Organized by space, each issue identified is listed in **RED**, with a primary solution identified in **GREEN**, a secondary solution identified in **BROWN**, and maintenance recommendations in **BLUE**. All restoration recommendations are listed under room headings, found at the top of the page. Adjacent to each heading is a floor plan highlighting the space referenced on that page.

Exterior view of dome.
Figure 26

Serving as the first point of access to the building for visitors, the space serves as the face and first impression of City Hall to all who enter the building from Bay Street. It features some of the building's finest detailing and is a prime candidate for restoration.

Issue: Inappropriate Use of Space (Priority A, Severity 3).

Originally, the centerline of the Lobby was intended to receive the highest use, allowing visitors to pass over the City seal, which is laid in mosaic tile and is the centerpiece of the Lobby floor design, leading visitors through the central of three openings into the building's Rotunda space via the shortest path from the central entrance. Currently, however, traffic through the space is directed through the westernmost entrance, via the Rotunda's southwest alcove, to facilitate visitor passage through security equipment (Figure 27).

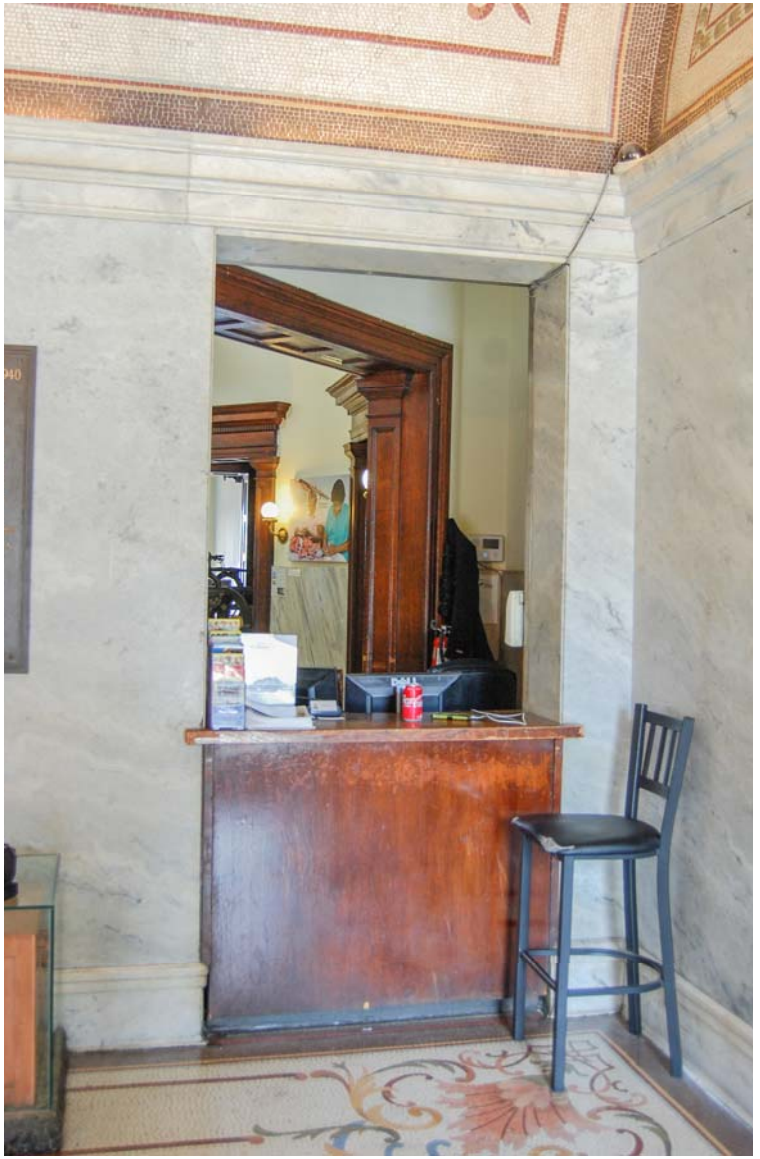
Interior of Lobby looking west, showing security equipment and television. Figure 27

Best Solution: Relocation of security equipment and desk.

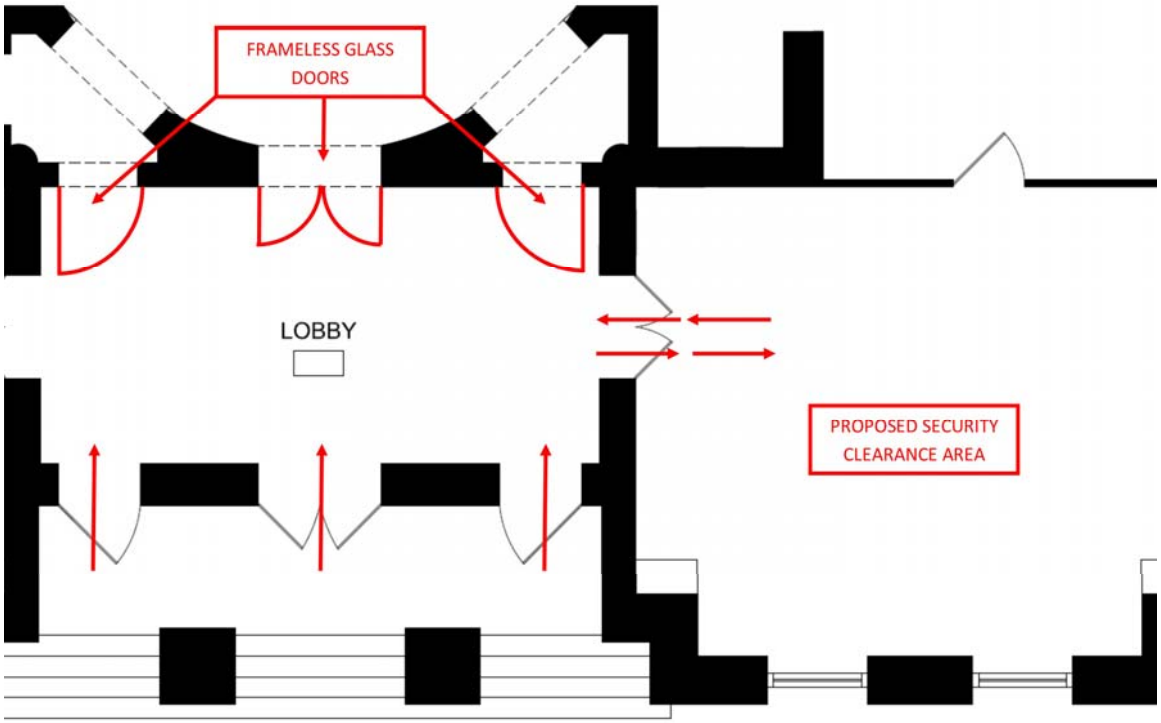
Relocation of the security equipment and desk would largely restore the room's emptiness as intended originally as well as provide for a quieting of the space. This would require the elimination of the desk in the southeast alcove of the Rotunda (Figure 28). This check point could be relocated with the security equipment, restoring this space's configuration as an empty passageway. Further, with the removal of these distractions, visitors are more likely to appreciate the space's architectural significance, historic materials, and detail.

The best solution for relocating the security equipment is to move the equipment and direct visitors through the Lobby and into a room to the east, formerly the Assessor's office (Figure 29). This space is easily accessed through double doors off of the Lobby. Once inside, there is enough space to perform the necessary security functions currently housed in the Lobby, which include metal detection, bag scanning, identification and sign-in. Visitors could then re-enter the Lobby before entering the Rotunda and beyond. While this does not restore the original intended traffic flow from the main entrance through the central Corridor, it provides the necessary security measures to the building while removing the equipment from the Lobby, an important restoration measure. Visitors, however, will need to be directed via ropes, personal guidance, or other free standing directional signage. No signage should be attached to any surfaces.

With the relocation of the security equipment, there is a greater concern for the Lobby's openness. It is thus proposed that secured frameless glass doors be installed in the three openings along the same plane between the Lobby and the Rotunda. While these doors could remain secured, they would need to have emergency exit hardware such as a panic bars, since these doors are a means of egress; allowing for exit from the Rotunda in the event of an emergency.



Security desk added to entrance alcove in Lobby.
Figure 28



Excerpt from existing plans showing potential first floor Lobby, Rotunda, and neighboring office space circulation. *Figure 29*

Another option would be for visitors to be issued a ticket once cleared by security in the neighboring office space that could be surrendered to an attendant or a turn stile machine at the central entrance from the Lobby into the Rotunda. Currently, there are turn stiles in this location, however, they are not original to the space and are visually obtrusive. Modern, plexiglass turn stiles are available, as seen in the ground floor renovation of the Chatham County Courthouse, which would provide less visual obtrusion.

In both applications, the use of glass is a good option to allow for the removal of security equipment and restoration of the space's emptiness, while providing minimal visual obtrusion as well as security, which has become a necessity in modern government buildings. Further, the doors would provide a full air lock, which can assist in providing positive indoor air pressure, improving the building's overall energy efficiency.

Issue: Missing Mosaic Tiles (Priority B, Severity 2).

Within the Lobby, a small number of mosaic tiles are missing, however, their absence is visually apparent. Subsequently, their restoration is an important component to this largely intact space. Set in a decorative pattern, original mosaic tiles are of varied sizes and colors.

Best Solution: Tile Replacement with Salvaged Tile.

It is preferred that tiles be utilized from areas within the space, salvaging original tiles that are currently hidden beneath the room's floor HVAC unit or the time capsule exhibit (Figure 30); if it is determined that these items or other items will remain in these current locations indefinitely. It can be assumed that the HVAC unit is more likely to remain in place as opposed to the time capsule, which is intended to be opened in 2076.

To avoid damage, grout around each tile to be salvaged should be removed first, best accomplished by an experienced tile installer using a hand tool or grout saw. Upon insertion of salvaged tile into areas with missing tile, new grout matching the composition and color of the existing grout should be used (Preservation Brief 40). All original patterns and associated colors should be maintained as part of this delicate work. This may prove problematic if salvaged tile is not of the appropriate color, which may be the case if border tile from beneath the HVAC unit is used, in which case reproduction tile should be used. See secondary solution below.

Time capsule exhibit in Lobby on north wall.
Figure 30

Secondary Solution: Tile Replacement with Reproduction Tile.

To avoid damage to the surrounding area, all grout around each tile should be removed first, best accomplished by an experienced tile installer using a hand tool or grout saw. Tile replacement requires matching the composition and color of the existing grout as well as the fabrication of custom reproduction tiles matching those in place in composition, size variety, thickness, finish, and color. This solution should only be performed if an approved source of replacement tiles has been identified as additional tiles may break during the process.

Notes:

1. *If the replacement tiles are thicker than the existing tile, it is important that the setting bed be adjusted according to the thickness of the new tiles.*
2. *In all tile repair or replacement work, all surfaces should be cleaned before and after work to ensure the removal of dirt and stains extant in the space.*

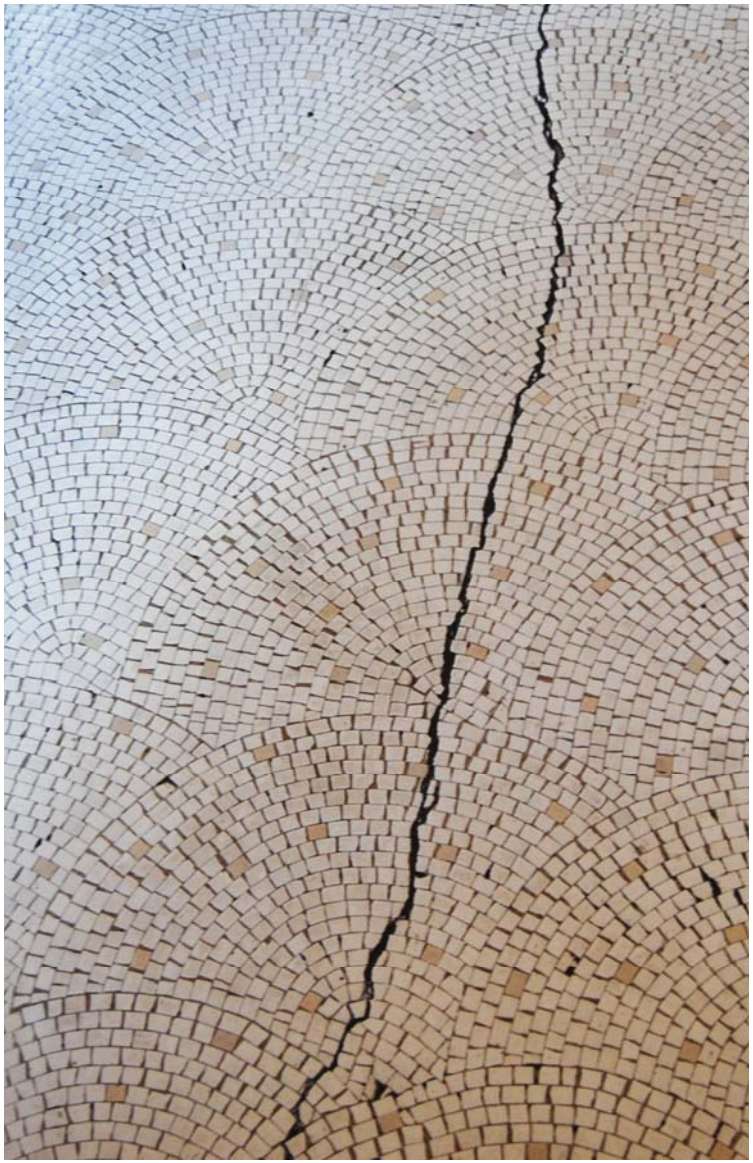
Issue: Cracking of Mosaic Tile along Ceiling and Floor (Priority A, Severity 2).

A preliminary structural consultation of the cracks in the floor and ceiling of the Lobby, and in the floor of the Rotunda, provided some insight in relation to how they may have formed (Figures 31 and 32). Believed to have been formed shortly after the building was constructed, the cracks could be the result of deflection in the floor framing due to concrete shrinkage perpendicular to the beams, if the tile was put down too soon after the floor was poured, for example. The cracks may also be due to crude reinforcement of a thin floor slab, which would have likewise led to deflection.

Best Solution: Perform structural analysis, remove tile around affected locations, and patch and install in-kind tiles in original pattern as closely as possible.

It is recommended that prior to undertaking any repair of the mosaic tile, a commissioned structural assessment is performed as outlined in the quote included as Appendix C.

In order to confirm with greater certainty the existence or absence of settling at City Hall, a structural evaluation of the building in its entirety is recommended. This would involve the development of a topographic map of the floor, showing any variations in elevation, an indication of settlement. Following, structural monitoring should be initiated. While both high-precision and low-precision crack monitoring is available, it is recommended that low-precision monitoring be performed. Rooted in discussions that followed an initial structural assessment with Bennett Preservation Engineering, it is believed that this will provide the information necessary to ensure that the building is not experiencing active settling that would be to the detriment of tile restoration efforts.



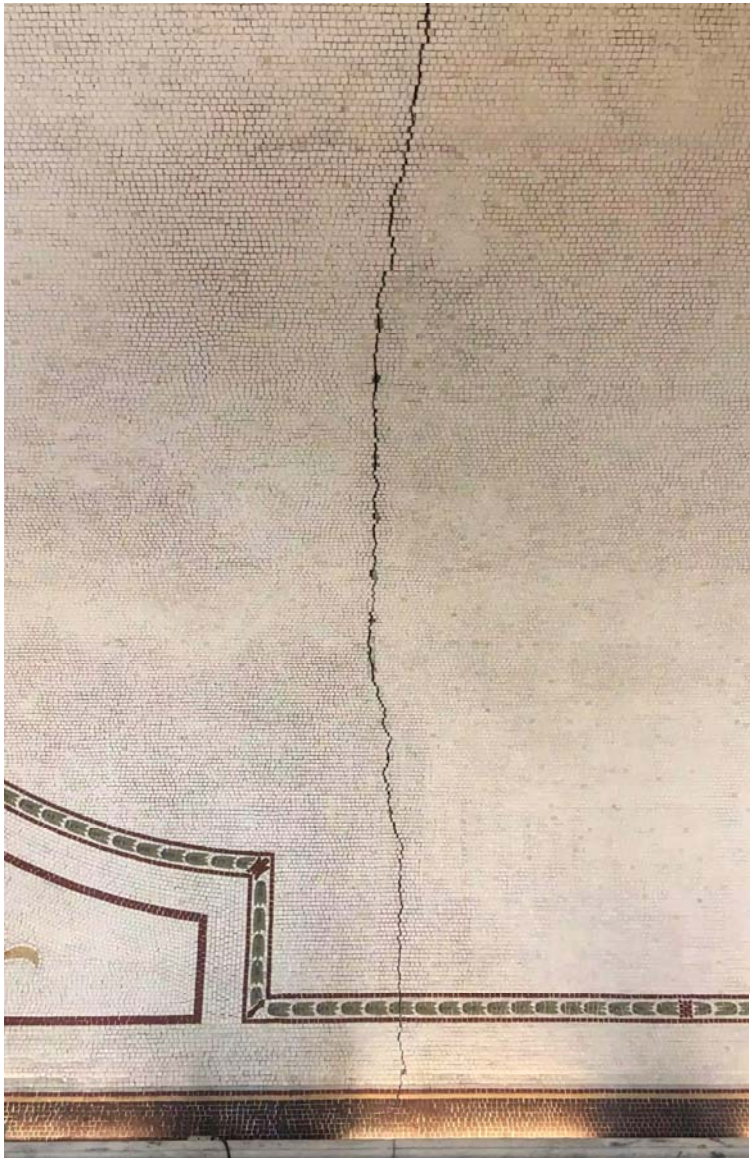
Crack in mosaic tile floor of Lobby.
Figure 31

Integral to the success of such monitoring is the maintained installation of gauges for the entirety of four seasons. Upon conclusion, if the gauge is in a different position than when it was installed, it is highly likely the building is actively settling.

Itemized quotes for both low and high precision monitoring have been included in Appendix C for the inclusion of a comprehensive list of options.

Since the original mosaic tiles vary in size, it is recommended that the salvaged or replica tiles be sized slightly larger than those that are removed. This will accommodate any floor area that was gained when the cracking occurred. All new grout should match the original in thickness. The composition, color, and texture of the existing grout should be matched. In-kind salvage tile should be used for the patch or custom reproduction tiles should be fabricated to match those extant in composition, size, thickness, finish, and color. This work should only be performed if a source of approved replacement tiles has been identified and verified with samples as additional tiles may break in the process.

To avoid damage, all grout around each tile should be removed first, best accomplished by an experienced tile installer using a hand tool or grout saw. Potential concerns with this method include differences in new tiles related to thickness, color, and setting bed which may lead to noticeable visual differences or leveling problems (Preservation Brief 40).



Crack in mosaic tile ceiling of Lobby.
Figure 32

Secondary Solution: Clean and Patch with Like Materials.

A secondary option is to clean the cracks and remove any excess mortar, grout, dirt, etc. Following, each crack should be patched with a flexible sealant. While the existing grout is dark in color, the width of the cracks in the space are highly visible due to the floor area gained from the cracking process and the contrast of the color of the grouted cracks with the light color of the majority of the mosaic tiles. Therefore, it is recommended that the patching material be color matched to the tile as opposed to the existing grout. A flexible sealant is recommended as opposed to new grout to allow for continued building movement, which could occur. A bonding agent may also be considered.

Note: If the replacement tiles are thicker than the existing tile, it is important that the setting bed be adjusted according to the thickness of the new tiles.

Issue: Voids and Seams in Marble Walls and Trim (Priority B, Severity 2).

Within the Lobby, where the room's marble wall panels meet at the corners, the edges of the panels have become deteriorated and some areas are missing larger pieces. This is likely due to the abrasive movement of people and cargo through the space (Figure 33). Other areas where voids have been added, which are currently less visible, include the areas behind the television or exhibit and centennial panels, where holes have been made for the attachment and wiring of these elements.

Best Solution: Fill voids and Seams in marble.

It is recommended that the voids that have been left in the marble be filled with grout. While a Dutchman repair, or the replacement of the wall panels are optional solutions, these do not present the best method for restoration. These options pose visual detriment, as a Dutchman repair, which would utilize new material, would be visibly different as replacement marble would not have the same patina, age, and pattern or marble strata. Below is the procedure recommended for grout infill.

1. Carefully remove dust and debris from cavity and fragments using a stiff fiber bristle brush.
2. Fill voids or seams with grout. Grout should match existing, historic mortar in color, texture, joint profile, and compressive strength as accurately as possible.
3. Follow manufacturer's specifications as written.
4. Faux finish the voids and seams to diminish their appearance, as needed.

Note: The use of molds may be necessary for the creation of historic trim profiles.

Marble separation at corner of wall panels in Lobby.
Figure 33

MAINTENANCE: PROHIBIT THE CREATION OF VOIDS AND USE OF ADHESIVES.

The drilling of new voids and the use of adhesives on historic surfaces throughout the building should be prohibited.

Short of installing clear polycarbonate corner guard plates, which would be visually obtrusive and potentially ineffective, there is little that can prevent detrimental traffic from altering the space. The corners of greatest concern are adjacent to the central entrance. The use of all entry doors as opposed to only one could potentially alleviate future problems.

Issue: Marble Staining and Efflorescence (Priority C, Severity 1).

Throughout City Hall, the building's interior marble wall panels have surface stains from traffic, which is first evidenced in the yellow discoloring visible in the Lobby (Figure 34). Included below are solutions for restoration that can be applied to the Lobby, Rotunda, and Corridor spaces to include the Rotunda fountain curb and the thresholds that lead into Council Chambers.

Best Solution: Clean and polish wall panels.

Marble stains are best cleaned using a poultice incorporating surfactants and detergents such as ProSoCo "Sure Klean Marble Poultice" or Diedrich "General Purpose Poultice."

Cleaning Procedure:

1. Carefully remove dust and debris from surface using a damp microfiber cloth.
2. Test cleaning products in an inconspicuous location to ensure their effectiveness and that no detriment will occur to the historic material.
3. Mix the liquid additive with a dry poultice, or fuller's earth, to a thick cream consistency to make smooth.
4. Wet the marble and apply a 1/4 inch thick layer of the poultice to stained areas using a stainless steel trowel or other non-ferrous implement.
5. Cover with a plastic membrane and allow to dwell approximately 8 to 24 hours.
6. Scrub all surfaces with non-metallic brushes to remove staining. Use a low pressure water rinse with a sponge or microfiber cloth. Let area dry before inspection. This process should be repeated for a second time or as needed for desired results.

Stained marble in Lobby wall panels.
Figure 34

For polishing, a combination of mineral water and marble polishing powder should be used. A finely ground buffing powder manufactured specifically for restorative type polishing such as Eastern Marble “#52-B Polishing Powder” or Eastern Marble “Italian Craftsman” polishing liquid or cream is recommended (Repolishing Marble, GSA).

Hard to remove stains can be tackled with thixotropic alkali materials such as ProSoCo “Sure Klean Liquid Marble Cleaner,” “Sure Klean 942 Limestone & Marble Cleaner,” or Diedrich “910PM Polished Marble.” Undiluted marble cleaner should be applied to the surface using a soft bristle synthetic (not natural) brush. Dwell time should extend 20 to 60 minutes and the stripper should not be allowed to dry out. Before rinsing, scrub for 5 to 10 minutes to loosen stubborn coatings and then rinse with water.

To protect neighboring surfaces, importantly glass, metal, and polished stone, it is recommended that these areas be masked with ProSoCo “Sure Klean Strippable Masking.”

Issue: Mosaic Tile Staining and Efflorescence (Priority C, Severity 1).

While minimal, efflorescence and tile staining in the Lobby exists and is visually apparent. Concentrated in the southwest corner, the efflorescence presents in a white powder-like fashion (Figure 35). Staining is also found on the floor tiles near the security equipment.

Best Solution: Clean with non-soap-based cleaner.

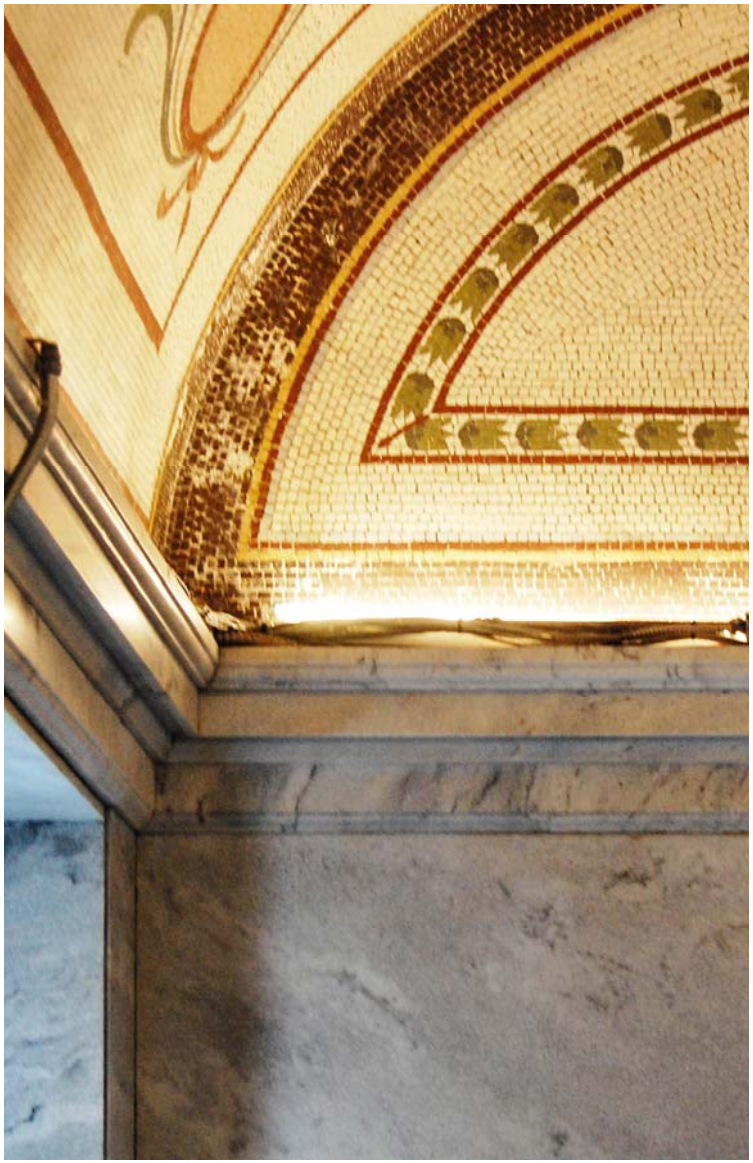
The best solution utilizes mild, soapless products. Abrasive cleaners, including powdered cleansers and even mildly abrasive creams, as well as mechanical equipment should not be used as these can damage and wear away the protective surface of tiles. Pre-wetting before cleaning, no matter the method, is recommended. Water saturates porous tile and prevents chemicals or other cleaning agents from penetrating into the tile body. Further, tiles should be rinsed thoroughly after cleaning.

For stubborn discoloration or stains: While not recommended for continuous use, acid-based cleaners can be used with caution when discoloration or staining cannot be removed with non-soap based cleaners. If used, any acid-based cleaner should be tested with caution and applied only to thoroughly wetted tile with excess water removed.

For oil stains, scuff marks, and soiling: Ammonia or a household spray can be used. If necessary, a solvent may be applied to pre-wet tiles but should not be left on surface for extended periods of time as it can cause discoloration. (Preservation Brief 40).

Maintenance: Clean floor monthly.

In an effort to maintain a standard of care and ensure the preservation of the mosaic floor, it should be cleaned using the methods outlined above monthly, at a minimum.



Detail of mosaic tile in Lobby showing efflorescence.
Figure 35

Issue: Appurtenances attached to marble walls (Priority C, Severity 1).

Throughout the building, televisions, exhibit panels, artwork, and signage have been attached or adhered to the building's marble wall panels (Figure 36). While a complete restoration would require the complete removal of all of these items, it is acknowledged that this may be unrealistic. Some items, however, have been identified as items of greatest priority for removal due to their obtrusiveness or lack of necessity.

Best Solution: complete removal of appurtenances from space.

Upon removal of these elements, the marble wall panels should be cleaned and the holes patched with grout and faux finished as outlined on pages 50-53.

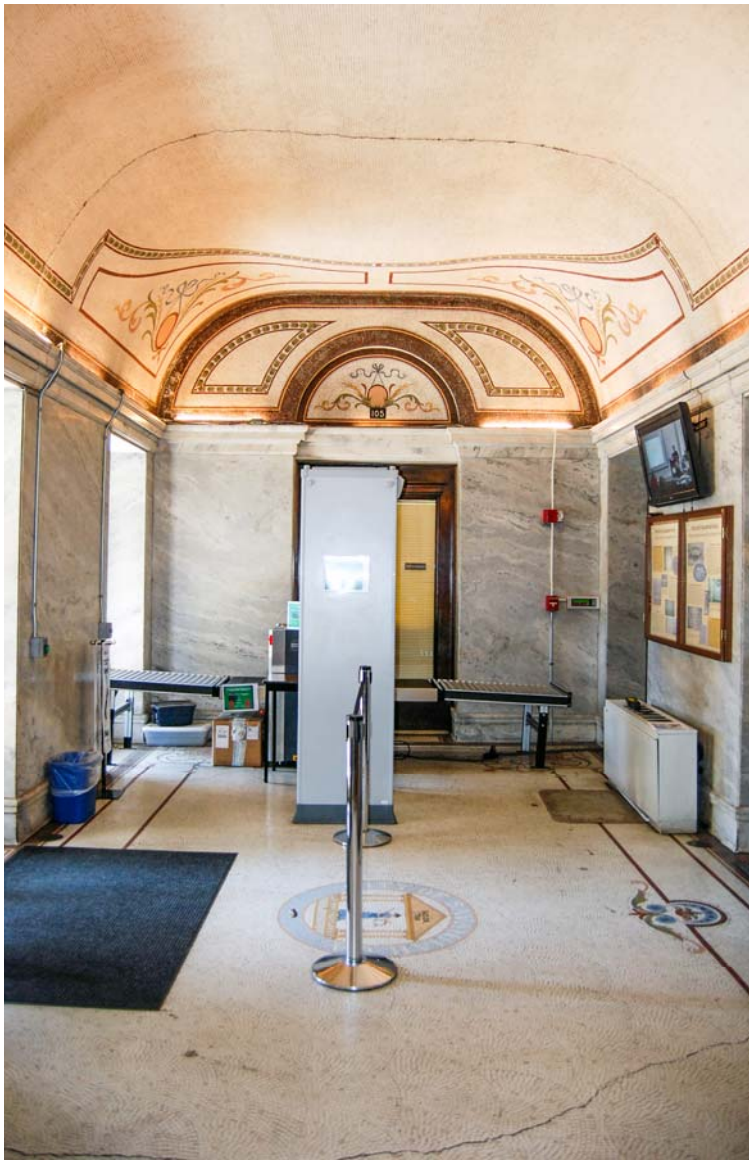
Secondary Solution: partial removal of appurtenances from space.

In the Lobby, the television is the most obvious and intrusive addition to the space's marble walls. Not only would this not have been present in 1906, it provides an active visual distraction and should be removed. The exhibit casework, centennial plaque, and time capsule are less of a concern as these items serve to facilitate the understanding and interpretation of the space, albeit they are not original items.

Upon removal of the television, the marble wall panels should be cleaned and the holes patched with grout and faux finished as outlined on pages 50-53.

Maintenance: Policy Change and Monitor periodically.

With the adoption of a work order review process, any additional appurtenances added to the space could be reviewed. The creation of new holes and use of adhesives should be prohibited.



View of Lobby interior looking west.
Figure 36

Issue: Main entrance doors to space are unoriginal, missing hardware, and racked (Priority B, Severity 2).

The three main entrance doors that separate the Lobby from Bay Street are unoriginal to the building. Designed in place of the original 250 pound oak doors, these replica doors were added in 1996, with the original brass fittings reused (A Century of History). However, these doors have aged significantly. The doors' brass rosettes were reused from the original doors, and there are additional rosettes in storage. On the exterior, the doors feature circular brass rungs and a pattern of brass rosettes, both of which are missing in some locations (Figure 37). Those that remain are tarnished.

In total, there are four doors along this wall, with the central entrance housing a double door. Of these, only one door at the center remains unlocked during business hours. This door has become racked and does not meet in the same plane at the top and the bottom adjacent to its neighboring door.

Best Solution: Adjust and plane door. Commission replacement hardware from cast with patina applied.

Due to the fact that the original doors do not remain, it is recommended that the replica doors be retained. The methods recommended for removing the warp from the main entrance door require removal, deconstruction, and reinstallation. As part of this process, the door's stiles and rails will be adjusted, planed, and leveled. This may require the use of heat, pressure, and sanding devices. Care should be taken to retain as much original material as possible. Any new wood stain applied should be made to match the color present on the other doors in the space currently unless part of a larger comprehensive wood stain restoration.

Front entrance door showing missing brass hardware.
Figure 37

Utilizing existing elements in-place, new casts for replacement brass hardware should be made, created to match and fit in place of the missing hardware. Fortunately, it is clear that the missing elements are repeated forms that match those that remain. It should be noted that the existing hardware in-place will differ in appearance in comparison to the newer, added elements. It is not recommended that all of the existing hardware be restored, however, as the restoration process makes the brass susceptible to deterioration, as restored brass requires consistent polishing maintenance post-restoration. Further, all polishing removes some brass. Alternatively, it is recommended that any new elements cast receive a manufacturer patina before installation to reduce the juxtaposed differences between new and old elements.

Secondary Solution: Adjust and plane door. Commission replacement hardware from cast and restore existing hardware.

There are no alternative methods recommended for door adjustment and restoration to those outlined above. A secondary solution to accommodate new hardware on the existing doors requires the restoration of the existing hardware, to decrease any noticeable differences between the new and old elements. Once restored, the historic brass elements will require consistent polishing attention in order to maintain its restored appearance. Even with restoration, a uniform appearance between new and old elements is unlikely. It is recommended that restoration be completed by a conservator.

Maintenance: Routine brass polishing.

While the breadth and type of polishing varies based on the solution selected above, the polishing of all of the building's brass must be performed routinely as outlined on pages 61-63. The polishing method for the entrance hardware will be best determined after a review of the condition, color, and finish of the brass post-restoration, utilizing a conservator.

Issue: Lighting is inappropriate for space (Priority C, Severity 1).

The Lobby's existing cove lights are individual fluorescent bulbs in tubes that have been placed along the room's marble crown molding (Figure 38). Intended to be hidden, these lights and their connections are visible in many locations due to their size and placement, with conduit running up from electrical connections. With the use of multiple tube bulbs, the light is not continuous within the space, with obvious breaks in the illumination between fixtures.

The solutions outlined below are also applicable to the Reception Room, located directly above the Lobby, which has the same vaulted ceiling and lighting concerns.

Best Solution: Replace existing cove lights with continuous LED cove lighting in an appropriate hue.

Modern LED cove lights are a good option for replacement of the existing fluorescent tubes as they are thinner, smaller in size, and can be set atop the top plane of the molding to illuminate light upwards. Generally made in a strip light format, LED cove lights provide a consistent glow with a significant life span. They require little to no maintenance and are easy to replace. It is recommended that the correlated color temperature (CCT) selected be between 2700 and 3000 Kelvin, to provide warm white illumination, as opposed to the white glow fluorescent lighting provides, as this would not have been available historically.

Image showing the cove lights in the lobby.
Figure 38

Issue: Missing brass door knobs on double doors (Priority A, Severity 1)

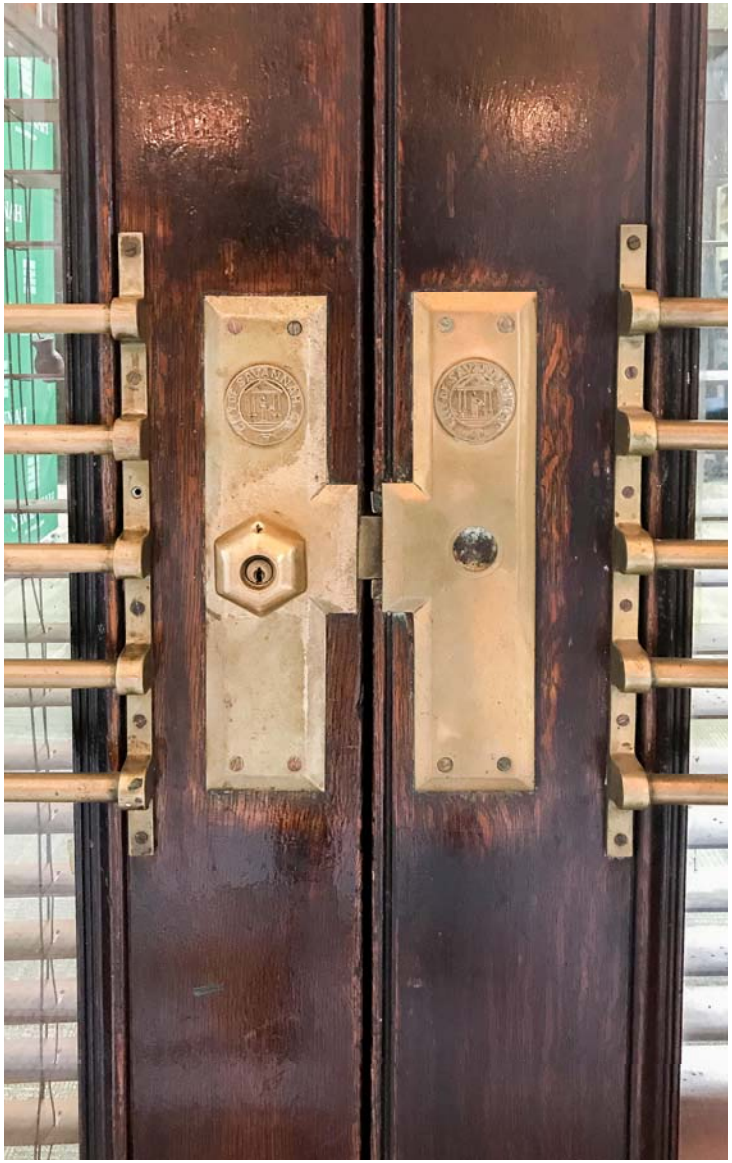
Both sets of double doors leading out from the lobby have one door knob missing from the original hardware set (Figure 39). This is the only location within the areas included within the project scope with this condition.

Best Solution: Replace missing door knobs with original knobs from a less conspicuous location.

The best solution is to replace the missing knobs with original knobs, currently in use in a separate location, as they are present throughout the building. The reuse of original material allows for the most wholistic and authentic appearance, as the majority of the door knobs in the building have aged to a similar patina. The selection of a less conspicuous, or public, location for removal is preferred. If desired, the location of the removed knobs could also receive a commissioned replacement, as outlined in the secondary solution below.

Secondary Solution: Replace missing door knobs with a replica cast from a mold of an existing fixture.

A secondary solution is to have a replica door knob commissioned from a mold of an existing knob, which would be placed in the location of the missing piece. Care should be taken to consider the existing patina of the brass and the appearance of a new element in conjunction with pieces which have aged. Due to the uniqueness of the hexagonal shape of the knob, it would not be possible to find a replacement without casting a mold from an existing knob. The doors in the lobby should receive original knobs from a less conspicuous, or public, location within the building. In these less public areas, the new replacement knobs should be installed to allow all doors within the building to have working hardware.



Double door hardware with missing knob in Lobby.
Figure 39

Issue: Tarnishing of brass door hardware and other elements (Priority C, Severity 1).

Throughout the building, historic brass door hardware featuring the City seal has been retained (Figures 39 and 40). One of the building's most valuable historic assets, these fixtures now have a patina from age. Also, a variety of maintenance and polishing solutions have been used in the past, leading to the build-up of cleaning agents on the surface of these elements. The restoration solutions provided can be applied to all spaces included in this scope, including Council Chambers, where a significant number of brass elements are located (Figure 41).

Original City Hall brass door hardware.
Figure 40

Best Solution: Surface cleaning only of brass elements.

It is recommended that all brass elements throughout the building receive a surface cleaning using the methods specified below. A full restoration is not recommended due to the significant maintenance, time, and energy that would be associated with retaining the finish of the restored pieces. Without continuous attention and care, restored brass is more susceptible to degradation as compared to brass which has been allowed to age and patina.

First, all dust should be removed using a clean soft brush nozzle attachment on a vacuum. A bristle brush or toothbrush can assist in raising dust from crevices. Second, all neighboring surfaces should be masked for protection to prevent the discoloration of neighboring surfaces.

Brass can be cleaned with mild soap (the most sensitive option), household ammonia, vinegar, or baking soda. Never mix ammonia with chlorine bleaches as a poisonous gas will be emitted. The most mild and highly recommended soap options are “Triton X-100” or “Vulpex,” which are both conservation approved, in a 3% solution in water. Any wet cleaning should employ deionized or distilled water only; rinsing is a very important step. If the dirt removed is greasy, “Vulpex” used in mineral spirits, in a 3% solution, is a good option; followed by a rinse with straight mineral spirits. It is especially important to remove old polish residues, which appear usually as dark green, gray, or white deposits in cracks.

Calcareous, or lime or hard water deposits, may respond to a 10% solution of regular “Calgon” sodium hexametaphosphate in distilled or deionized water. The solution should be allowed to soak into the crust followed by removal by scrubbing with stiff brushes. Following, the brass should be rinsed thoroughly in distilled water (Ford Benson Research Center).

Secondary Solution: Brass polishing and coating.

Historically, the brass in City Hall may have been polished to a bright finish. Altering the brass' surface to achieve this finish today, however, may reduce the historical value of the object. Dark and stable surfaces should be considered to have a patina. Only as a secondary option is polishing recommended. Old lacquers must be removed prior to polishing. Lacquer removal is best done with acetone, preferably by immersion by a conservator. Acetone is a volatile solvent that should never be used in a poorly ventilated area. Polishing with a mild abrasive is the only safe method conservators can recommend for most historic metal artifacts. Copper and its alloys are soft metals. Commercially available "dips" may contain undesirable components such as hydrochloric or sulfuric acid, which act too quickly and remove more metal than simple polishing does.

Some commercial paste polishes are abrasive and can lead to scratching. Light polishing should be carried out using a jeweler's cloth containing rouge such as "Birk Cloth" or "Hagerty Glove." Below are museum-proven, safe polishing methods.

Polishing Method 1: A fine calcium carbonate, chalk, or whiting, worked into a slurry or runny paste with equal amounts of ethanol (denatured alcohol, ethyl alcohol) and distilled water. The paste should be rubbed across the surface, working a small area at a time, with cotton balls or clean cotton rags. Detail areas can be polished with q-tips, using the paste, or with cotton wadding at the end of a sharpened bamboo skewer. It may not be desirable to clean every crevice, as this decreases the overall contrast of the detailing. It is important that all residual polish is removed with distilled water. Drying can be accelerated by adding ethanol to the rinse water, or by wiping the object with ethanol.

Historic brass lamp in Council Chambers.
Figure 41

Polishing Method 2: If the brass does not respond to Method 1, the oxidation layers present on the object may be too thick. Although more abrasive, "Autosol" is recommended in this instance. A general purpose polish, a test should be performed to determine the degree of polish you wish to achieve on a small inconspicuous part of the object. A clean rag should be used to buff the polish. The surface must be rinsed with mineral spirits after polishing, removing any polish residue. This polish contains less ammonia than other commercial brands. Ammonia causes long term damage to valuable copper alloy objects.

Polishing exposes fresh, reactive metal to the atmosphere and further oxidation. To mitigate the need for frequent polishing, it is recommended that polished objects be coated. Repeated polishing inevitably wears away the metal surface if done frequently. Coating typically utilizes a a wax or lacquer. Waxing is preferred.

Waxing: The best coating for brass is wax. Wax provides a flexible coat that is easily applied and can be renewed. It can be used on top of original patinas and lacquers. All surfaces must still be cleaned first. "Renaissance" wax or other "microcrystalline" waxes are recommended as they are inert and will not yellow over time. When applied to a degreased surface with a clean cloth, they should then be buffed with a rag or bristle brush. A shoe polish brush works well for this task. For greater adhesion, waxes can be diluted in mineral spirits or a lacquer thinner. Brush the wax on, let the solvent evaporate and then buff with a rag or soft brush.

Lacquering: It is recommended that a solvent such as acetone or tri-chloroethane be used for proper cleaning. On large surface areas, a spray-applied lacquer will achieve the most even and durable finish. A conservator is recommended for this task. Poorly applied lacquers can cause more corrosion if small areas are left exposed. For small areas, a brush can be used to apply the lacquer. "Incralac" is recommended, which is formulated for use on copper and copper alloys. This is soluble in the solvents xylene and toluene, and must be used in well-ventilated areas. It is imperative that the brass be scrupulously cleaned first and gloves should always be worn after the artifact has been polished. Just prior to applying the lacquer, the object should be given a final degreasing with acetone. Lacquer will give a shiny luster to the metal (Ford Benson Research Center).

MAINTENANCE: VARIES BASED ON SOLUTION.

Surface cleaning, if begun, should be performed weekly at a minimum or monthly at the very least. Polishing and coating requires significantly more time and attention in the continued maintenance of these finishes, requiring a skilled tradesperson or conservator.

Arguably the most important space in Savannah City Hall, the building's central Rotunda and associated mezzanines at every floor provide numerous vantage points to appreciate the building's many architectural details. Appropriately, the space is filled with high quality historic materials and details. Outside the scope of this project, the brass fountain centerpiece featuring the City seal is an important element to the space's historical integrity and ought to be considered an element in the building's overall restoration.

Issue: Damage to wood trim (Priority A, Severity 3).

Throughout the building, particularly in the Rotunda spaces, wood trim has suffered from significant deterioration (Figure 42). Concentrated at the edges, floor buffers, cleaning chemicals, human traffic, and general dirt build up has led to the degradation of the wood, which now has a jagged edge at the floor level. Other areas worth noting include door framing on the east wall of the second floor Rotunda, where a section of trim was loose and has been removed and stored in the Archives. Further, the second floor mezzanine Rotunda baluster shows signs of wear with some sections of wood loose in the framing set between the posts at its base. The solution provided can be applied to all spaces containing woodwork.

Best Solution: Repair or replace in-kind.

Assess the amount of deteriorated woodwork with the potential to be repaired in place and replace in-kind, only as absolutely necessary. Repairs should utilize original pieces, when available, or the same species of wood, millwork profile specifications, and finish to match the existing. Whole pieces of wood should be replaced when there is damage, such as the missing base pieces of the mezzanine or the bases of the engaged pilasters. Dutchman repair is not recommended. During assessment, the stability of all woodwork should be examined. Following, all repaired or replaced woodwork should receive the same finish treatment as specified on the page 66.

Detail of base wood door frame in Rotunda.
Figure 42

MAINTENANCE: ADOPT PRESERVATION FRIENDLY CLEANING POLICIES.

To clean the building's various woodwork, all surfaces have to first be made dust free using a cotton cloth and vacuum with a clean soft brush attachment. Next, the solubility of the finish should be tested by applying mineral spirits such as V.M. & P. Naphtha or Stoddard solvent with a cotton swab to an inconspicuous location. If it does not soften the finish, this should be used to clean the piece, followed by a clean cloth wipe. The use of floor buffers should be prohibited.

Issue: Inconsistency and failure of wood finish (Priority C, Severity 1).

Stained woodwork throughout the building has suffered from deterioration in varying degrees. As a result, the restoration measures outlined vary. While some sections of woodwork will require replacement as specified on page 64, others can be retained and only require stripping and refinishing. While the original finish of the building's woodwork is not known, all of the woodwork in the building has received multiple layers of staining. Believed to be the original finish, the interior of the alderman lockers located on the second floor Reception Room show a much lighter stain.

Failure of the finish that appears as bubbling, otherwise known as 'alligatoring,' has occurred due to the several layers of shellac applied directly atop one another and aging (Figure 43). Environmental factors such as exposure to direct sunlight and varying temperatures could also have had an impact on the finish failure. The solutions below are applicable to all woodwork within the project scope.

Best Solution: Analysis to confirm original finish, refinish woodwork to match original finish.

A finish analysis should be completed using samples from inconspicuous locations in order to determine the original woodwork finish. Assess the amount of deteriorated woodwork with the potential to be repaired in-place and replace in-kind, only as absolutely necessary. Repairs should utilize the same species of wood, millwork profile specifications, and finish to match as specified in detail on page 64. To refinish, all woodwork should first be cleaned to remove any standing dust or debris, then stripped and lightly sanded. The woodwork should then be refinished using a matching amber shellac and finished using a butcher's wax or paste to seal.

Detail of stain on wood door frame in Rotunda.
Figure 43

MAINTENANCE: ADOPT PRESERVATION FRIENDLY CLEANING POLICIES.

Any failure of wood finish should be continually monitored as part of an annual building inspection (Appendix E).

Issue: Missing penny tiles (Priority B, Severity 2).

Within the Rotunda, a small number of the room's original penny tiles are missing. Tiles appear to only be missing within the space's first floor northeast alcove, possibly due to the placement of a heavy exhibit or some other detriment (Figure 44). The space does not appear to have any structural deficiency.

Best Solution: Tile Replacement with reproduction tile.

In this instance, tile replacement is easily achieved as the tiles in this space are still manufactured today. Important considerations include identifying a cream color match as well as the careful removal of severed tiles and flush installation of new penny tiles to fill the void. If the replacement tiles are thicker than the existing tile, it is important that the setting bed be adjusted according to the thickness of the new tiles. The composition and color of the existing grout should likewise be matched.

Missing penny tile in northeast alcove of Rotunda.
Figure 44

Issue: Cracks in penny tile (Priority B, Severity 2).

Within the first and second floor Rotunda spaces, several major cracks are visible (Figure 45). All of these run out from the center of each space, extending to the neighboring walls. A proposal for structural consultation regarding the building's continued movement and solutions for preventing additional cracking can be found in Appendix D.

Best Solution: Perform structural analysis, remove tile around affected locations, patch and install in-kind tiles in original pattern as closely as possible.

It is recommended that prior to undertaking any repair of the penny tile, a commissioned structural assessment is performed to better understand any possibilities of continued deflection or movement since an initial investigative consultation proved inconclusive.
The penny tile used in this space is still in production, thus it is recommended that the tilework surrounding the affected locations be removed, reset, replaced if broken, and laid in the original pattern as closely as possible. Important considerations include matching the original tile colors, sizes, and thickness as well as the color of the grout.

It is recommended that a color-matched flexible grout be used, to assist in the accommodation of potential building movement in the future. If the replacement tiles are thicker than the existing tile, it is important that the setting bed be adjusted according to the thickness of the new tiles. This work should only be performed if a source of approved replacement tiles has been identified and verified with samples as additional tiles may break in the process.

Floor cracks at the first floor level of the Rotunda.
Figure 45

MAINTENANCE: CLEAN FLOOR MONTHLY.

Regular cleaning can assist in monitoring of any issues with loose or missing tiles as they arise. Cleaning with warm water is recommended. Regular maintenance in the form of dry or damp mopping will reduce grit. Tile cleaning is best performed with a non-soap-based household floor cleaner as outlined on Page 54 (Preservation Brief 40).

Issue: Tarnishing of brass fountain handrail, hardware and light fixtures (Priority C, Severity 1).

Throughout the building, historic brass light fixtures have been retained (Figure 46). One of the building's most valuable historic assets, these fixtures now have a patina from age. A variety of maintenance and polishing solutions have been used over time, leading to the build-up of cleaning agents on the surface of these elements. The restoration solutions provided can be applied to all spaces included in this scope.

Best Solution: Surface cleaning only.

Surface cleaning as a stand alone practice is recommended as the best option for preservation of the building's many historic brass light fixtures. Methods outlined for brass cleaning on page 47 are applicable here.

Secondary Solution: Brass polishing and coating.

A secondary option for the building's brass fixtures is polishing and coating. While not the primary recommendation for the restoration of these elements, there are specific methods that should be applied if polishing and coating is performed, as outlined on page 62.

Maintenance: Varies based on solution.

Surface cleaning, if begun, should be performed weekly at a minimum or monthly at the very least. Polishing and coating requires significantly more time and attention in the continued maintenance of these finishes, requiring a skilled tradesperson or conservator.

View of Rotunda brass light fixtures with glass globes.
Figure 46

Issue: Multiple paint layers (Priority C, Severity 1).

Throughout the building, there are areas where multiple paint layers have been evidenced. Therefore, the paint layer visible throughout the building may not be the original color intended. This is applicable to both wall and ceiling areas. The restoration solutions provided can be applied to all spaces included in this scope.

Best Solution: Perform a paint analysis to identify original paint color, color match, and repaint.

Evidenced on the section of plaster wall currently hidden above the drop ceiling in the Rotunda alcoves, there have been multiple paint colors used in this location (Figure 47). From a Savannah Evening Press article dated August 22, 1905, "The walls will be colored a very pretty tint of light green, while the ceiling will be of a still lighter shade of the same color. The rotunda, council chamber and the mayor's suite will be left a plain white.." (Figure 1). The original paint colors should be identified through paint analysis, performed in an inconspicuous location. Typically this consists of 1 inch square scrape test in succession until all layers of paint have been identified. As part of this analysis, any wear, dirt, or other staining should be considered as part of the overall patina of any colors found. Once an original color has been identified, a fresh coat of paint in the original color should be applied to the area examined. This method should be repeated in all painted areas within the scope.

Detail of multiple paint colors above drop ceiling in Rotunda alcove corner. Figure 47

Issue: Water Damage to plaster in alcoves (Priority A, Severity 3).

One of the most visible areas of soiling or staining within the public interior spaces of City Hall are the stains associated with previous water intrusion from associated pipes, which were added to the Rotunda alcoves. Present on the neighboring plaster walls, this is evidenced in the discolored streak lines running vertically from the corners of the drop ceiling above (Figure 48).

Best Solution: Confirm inactivity, clean and repaint walls as needed.

First, it should be confirmed that none of the leaks that produced the stains on the walls in the alcoves, specifically the southwest alcove, are currently active. This should consist of the removal of ceiling tiles for a more thorough analysis. Further, all adjacent plaster walls should be examined to ensure stability. Next, an assessment of the consistency of the wall plane should be evaluated so as to determine whether or not the stains have led to any warping of the flat plaster. If inconsistency is significant, or noticeable to the human eye, than the plaster should be repaired to restore an even plane. If stable, any surface stains should be removed with a mild sanding followed by the application of an oil based stain blocker primer and two coats of high-hiding paint. The paint color used should match the original color of the space, as determined through paint analysis as outlined on the previous page.

Maintenance: Monitor periodically.

The area previously soiled should continue to be monitored for recurring stain appearance or future water damage as part of an annual building inspection (Appendix E).

Detail of water damage in Rotunda alcove corner.
Figure 48

Issue: Lighting incompatibility in replacement parts (Priority B, Severity 2).

Throughout the Rotunda, the room's many hanging electric light globes and brass hardware are not uniform in detail, material, or light temperature and hue (Figure 49). Fortunately, however these inconsistences are not found in the majority of the fixtures. Therefore, it is possible to examine the majority of the existing fixtures to determine the original elements and configuration of all the fixtures.

Best Solution: Commission custom replacement elements.

To start, one original and intact fixture should be documented, with all parts and pieces numbered and dimensioned with an associated schedule of the number of parts and their material and finish. Following, an inventory of missing and incompatible elements on fixtures throughout the space should be developed with each fixture lettered based on location. Through the loan of original elements from an intact fixture, replacement elements needed should be commissioned and reinstalled in-kind. Included in this inventory of replacement items should be the bulbs themselves, so that a consistent and uniform temperature and hue of light is achieved throughout the space. With improvements in LED lighting technology, the appropriate hue and temperature can be achieved while enhancing energy efficiency. The recommended correlated color temperature (CCT) is between 2700 and 3000 Kelvin, to provide warm white illumination, similar to what would have been available historically.

Maintenance: Monitor periodically.

Continued monitoring of the light fixtures, their configuration, temperature, and hue should be examined as part of an annual building inspection (Appendix E).

Original brass globe light fixture that has been altered.
Figure 49

Issue: Insertion of drop ceilings in alcoves (Priority B, Severity 3).

Throughout the Rotunda, every corner alcove has received some alteration to include the removal of an original plaster ceiling and installation of drop ceiling tiles unoriginal to the space. As part of this, historic light fixtures in these areas have largely been removed or hidden.

Best Solution: Remove drop ceiling, confirm extant historic fixture, restore plaster with restored light fixture at center, and install hatch, if needed.

It is recommended that all of the Rotunda alcoves in the building that contain drop ceilings be restored to their original flat plaster finish at its original height (Figure 47). Although missing its glass globe, the southwest alcove retains its historic light fixture (Figure 50). An examination of the areas above the other alcove drop ceilings could determine whether other historic fixtures remain hidden above these ceilings. Other areas within the building where drop ceilings are installed have been confirmed to cover original fixtures. When present, these fixtures should be reinstalled in a restored plaster ceiling. When absent, these fixtures should be recreated, from a cast of an original fixture.

Within each restored alcove's flat plaster ceiling, a metal hatch can be installed as necessary to access electrical, plumbing, and other equipment, which is what is believed to have necessitated the installation of a drop ceiling. As part of this, City staff who perform maintenance on these systems should be consulted. Plaster composition, texture and color should be determined by paint analysis, the procedure for which is outlined on page 72. All historic light fixtures should be reinstalled in their original locations. Incompatible track lighting currently installed to drop ceilings should be removed.

Original light fixture missing its globe, surrounded by replacement drop ceiling tiles in Rotunda alcove. *Figure 50*

Secondary Solution: Install monochrome ceiling panels in place of acoustical tiles.

While not the best solution, a more visually appealing and uniform look could be achieved through the replacement of the acoustical ceiling tiles (ACT) with a monochrome tile in metal or high-density plastic, color matched to the room's neighboring plaster. All historic light fixtures should be reinstalled in their original locations. Incompatible track lighting currently installed to drop ceilings should be removed.

Issue: Electrical deficiencies and concerns (Priority A, Severity 3).

Discovered behind a loose wall mounted sconce on the second floor and confirmed by City staff, City Hall is cloth wired. This is a significant hazard, specifically related to fire safety. Other concerns include a collection of electrical panel boxes set in the southwest Rotunda alcove on the second floor which serve to house the controls for Council Chambers (Figure 51). Additionally, there are several individual light switches set in the alcoves on both floors, each associated with single fixtures.

Best Solution: Evaluate wiring, consolidate and conceal electrical panels, and consolidate switches.

Due to the extensiveness of the building's original cloth wiring, which extends to areas outside of the scope of this project, it is recommended that an evaluation be performed to address the stability, safety, longevity, and effectiveness of the wiring. Also, it is recommended that the electrical panels associated with Council Chambers be consolidated and replaced, to be concealed in a locked shallow closet painted to match the neighboring walls. Further, the individual light switches in the Rotunda alcoves should be consolidated and localized in the new closet.

Some of the many electrical panels in the southwest alcove of the Rotunda. Figure 51

Issue: Regulation of temperature and humidity (Priority B, Severity 2).

Within the building's circulatory spaces, specifically the first floor and the Rotunda, City staff have struggled to keep the building cool during the hottest months and warm during the coldest months (Figure 52). While this is not attributable to one issue or element, there are some measures that could assist in its regulation. The solution outlined below should apply to all spaces included in the scope of this report.

Best Solution: Replace outdated HVAC systems and install barrier between Rotunda and Bay Street.

It has been determined that all of the building's HVAC systems have exceeded their useful life and are due for replacement. It is recommended that the Rotunda's two chilled water (CHW) units be replaced with variable refrigerant flow (VRF) systems.

Further, it is recommended that a barrier be installed to minimize the flow of hot and cold air from Bay Street into the Rotunda. Frameless glass doors sized to fit each of the three door openings leading from the Lobby to the Rotunda are recommended as part of a larger plan which also incorporates the removal of the security desk in the southeast alcove as outlined on page 42-44. This will provide a barrier and create an "air lock" vestibule in the Lobby, reducing air infiltration into the Rotunda and beyond when an exterior door is open. Utilizing glass provides a barrier while remaining minimally visually obtrusive. Further, this allows for more than one, if not all, of the building's entrance doors along the Lobby's south wall to be operational during business hours as greater control of traffic inside the building can occur on the interior.

As part of HVAC upgrades, lighting changes, window restoration, or the addition of frameless glass or other elements must be considered to appropriately size systems for optimal efficiency.

View of Rotunda looking down from the third floor.
Figure 52

MAINTENANCE: PERIODIC RECOMMISSIONING OF MECHANICAL SYSTEMS AND THE COMPLETION OF AN ENERGY AUDIT.

Integral to maintained efficiency within the building will be the assessment and recommissioning of mechanical systems based on manufacturer recommendations and overall efficiency and life span. Regular maintenance and recommissioning will ensure optimal building performance.

Further, an energy audit could assist in providing a greater understanding of deficiencies to the space, providing for a more informed assessment for evaluation of solutions to address issues. It is recommended that an independent auditor, who does not have financial interests in the results, such as those associated with energy products, be utilized to provide an unbiased analysis. Tasks would include inventorying existing insulation as well as the R-value of elements associated with the building envelope. A blower door test or infrared thermography may provide useful data related to infiltration, lack of insulation, and thermal bridging as well. Recommendations and cost estimates should be provided in a final audit report. In addition to system upgrades, operational changes may be prescribed, which may range from something as simple as regular cleaning and maintenance of mechanical equipment to installing controls that cycle equipment on and off for maximum performance.

If changes are made as a result of an energy audit, it will be important to retest the performance of the building to ensure upgrades are performing as expected (Preservation Brief 3).

Issue: Adhesion of exhibits to wall plaster (Priority C, Severity 1).

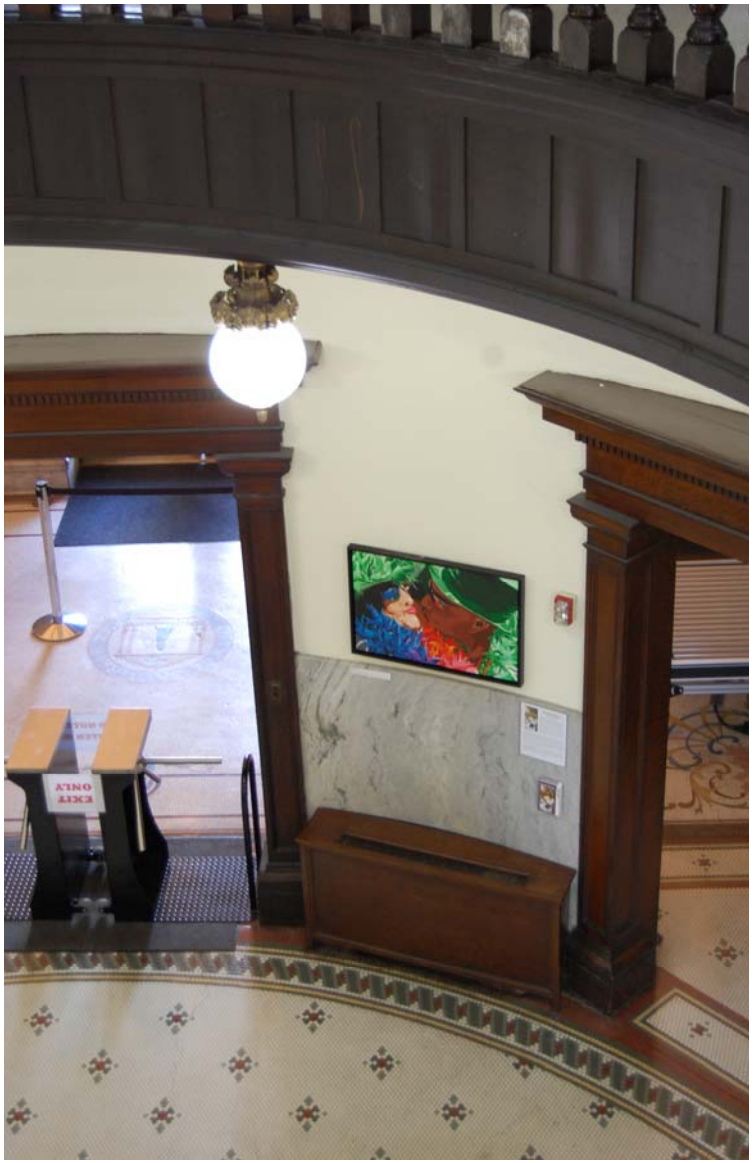
Throughout the Rotunda, exhibits have been periodically attached to the room's plaster walls (Figure 53).

Best solution: Reuse existing holes and use reversible adhesives.

It is recommended that the holes used to hang the current, and likely previous exhibits, continue to be used for subsequent wall mounted displays. If at all possible, no new holes should be made. Reversible adhesives can be used for exhibits placed in the space in the future. Reversibility can be achieved through the use of 3M strips so as not to damage neighboring walls. This works well for exhibit description cards but is less effective for larger, hanging exhibits which need greater support.

Maintenance: Policy change.

The use of traditional adhesives that will cause damage to the building's interior plaster walls should be prohibited. A review of the use of space annually should occur as part of an annual building inspection (Appendix E).



View of Rotunda looking down from the second floor.
Figure 53

Issue: Exposure of cobblestone exhibit (Priority C, Severity 1).

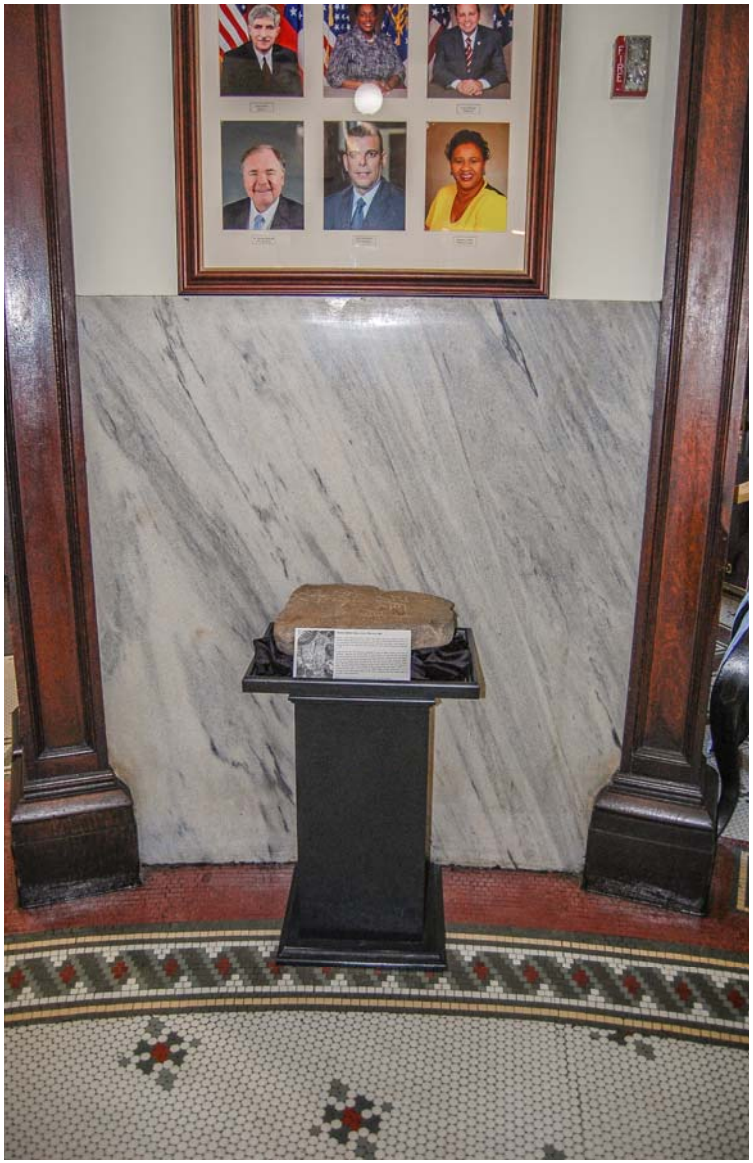
Displayed on a table in an open-air setting, the Chinese cobblestone exhibit has, for all intents and purposes, become a permanent exhibit in the City Hall Rotunda (Figure 54). A true restoration would call for its removal as it is unoriginal to the space. If retained, however, the solutions for its retention and preservation outlined below should be followed.

Best Solution: Place exhibit in plexiglass exhibit case.

Leaving artifacts open to visitor manipulation and dust collection can slowly lead to decay. Additionally, artifacts that are left open in public spaces are subject to damage and unauthorized removal. To ensure the cobblestone's protection and preservation, a case should be used to provide for greater protection and security. A case similar to the one currently in the Lobby housing the time capsule would be appropriate.

Secondary Solution: Remove from Lobby.

The cobblestone could be relocated to a more secure location since it is not integral to the historic and architectural integrity of City Hall. Since the City currently has no other exhibition space in as close proximity to the stone's origin, River Street, this is not the best solution.

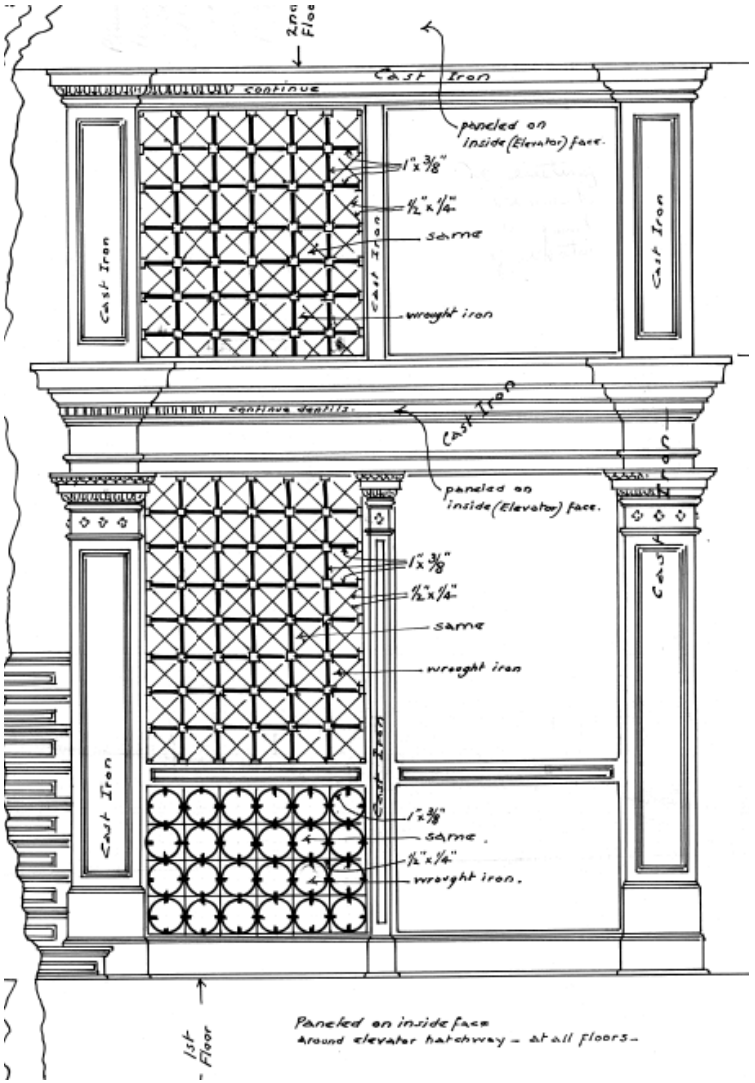


Chinese cobblestone found on River Street that is now housed in the Rotunda. *Figure 54*

Spanning the central portion of the rear of the building to provide circulation to each floor via an elevator and stairs, this area has similar fine finishes to those present in the Rotunda. Originally home to a mail chute and marble water fountain, the mail chute has been removed. While the water fountain remains in place, it is not operable. Heavily trafficked, the materials in the building's Corridor spaces are showing their age and use. Further, there have been several modern accommodations made to the space, many of which were done insensitively.

Issue: South elevation elevator shaft enclosure (Priority A, Severity 2).

The wall system currently in place on the south elevation of the elevator shaft includes an enclosure that was added when the elevator car was first replaced in 1941 (A Century of History). This is repeated on all floor levels. The original elevator entrance was located to the right of center along the elevator box's south face (Figure 55). The current elevator car opens in the center. The installation of the wall system removed the original iron casing which had a similar but unique design to the sides and north elevations of the elevator, which was applied to both the upper and lower portions, and are currently enclosed. This change also removed a central iron column. Currently, a modern water fountain is attached to the southwestern cast iron column and the wall system at the base of the elevator cage.



Excerpt from the 1905 Annual Report detailing south wall of elevator shaft. *Figure 55*

Best Solution: Removal of modern drinking fountain, wall system, and recreation of iron elevator casing.

In order to address the removal of unoriginal elements and restore the elevator shaft, the water fountain must be removed (Figure 56). Care should be taken during removal, specifically in relation to the cage's original cast iron column. Once the fountain is removed, the cast iron should be inspected for damage or detriment. Likewise, the wall system on both the upper and lower portions should be removed followed by the installation of a replica cage as outlined in the original drawings (Figure 55).

The upper portion should replicate the iron casing that was originally installed. The lower portion will be a modified design, to accommodate the modern elevator that has been installed, with the replica cage elements filling the plastered areas. The central iron column will not be recreated due to the elevator entrance now being located in the center. A consultation from the elevator manufacturer may be required.

Detail of elevator entrance on the first floor in its current configuration. *Figure 56*

Issue: Unoriginal secondary mesh installed behind historic iron framing on elevator shaft (Priority C, Severity 1).

Unoriginal to the space, a small gauge square wire mesh has been inserted within the elevator shaft and attached to the inside face of the exterior iron framing (Figure 57). This hinders the historic and architectural integrity of the elevator, which has been significantly altered on the south face for the conversion from historic to modern elevator car use. The applied wire mesh collects significant dust and is not routinely cleaned.

Best Solution: Removal of wire mesh.

Wire mesh should be removed from the interior of the elevator shaft. This should be done carefully as not to damage surrounding historic elements.

Maintenance: Regular cleaning of exterior elevator grills.

Superficial dust can often be vacuumed whereas dirt can be washed off well, painted and caulked cast iron with low-pressure water. Non-ionic detergents may be used for the removal of heavy or tenacious dirt or stains, only after they have been tested to determine they will not have an adverse effect. Thick grease deposits and residue can be removed by hand scraping. Water and detergents or non-caustic degreasing agents can be used to clean off residue. Before re-painting, all oil and grease must be removed so that new coatings will adhere properly (Preservation Brief 27).

Detail of wire mesh attached to elevator shaft.
Figure 57

Issue: Wood Trim scrapes and scratches (Priority C, Severity 1).

Throughout the Corridor, there are several wood elements, including door and window frames, stair balusters, and bench seating; all of which shows signs of use and wear in the fading of stain and minor scratches and scrapes.

Best Solution: Repair in place.

All woodwork within the Corridor spaces should be retained as it is in good condition. As such, it is recommended that the space's wood elements be restored in-place as outlined on Page 64. It is preferred that elements be retained when scraped or scratched, versus replaced, if deficiencies can be remedied. Restoration prioritizes the retention of historic material over replacement.

Issue: Removal of original mail chute and inoperable water fountain original to space (Priority C, Severity 1).

As noted on the original drawings, the Corridor originally housed a mail chute on every floor at the south wall which carried mail from all floors to a central location for later retrieval (Figure 58). No physical evidence remains of the mail chute's size and material. Further, no historic images have been found of these areas. On the second floor, a marble water fountain opposes the mail chute on the south wall and is likewise shown on the original plans. The fountain remains but is not operational.

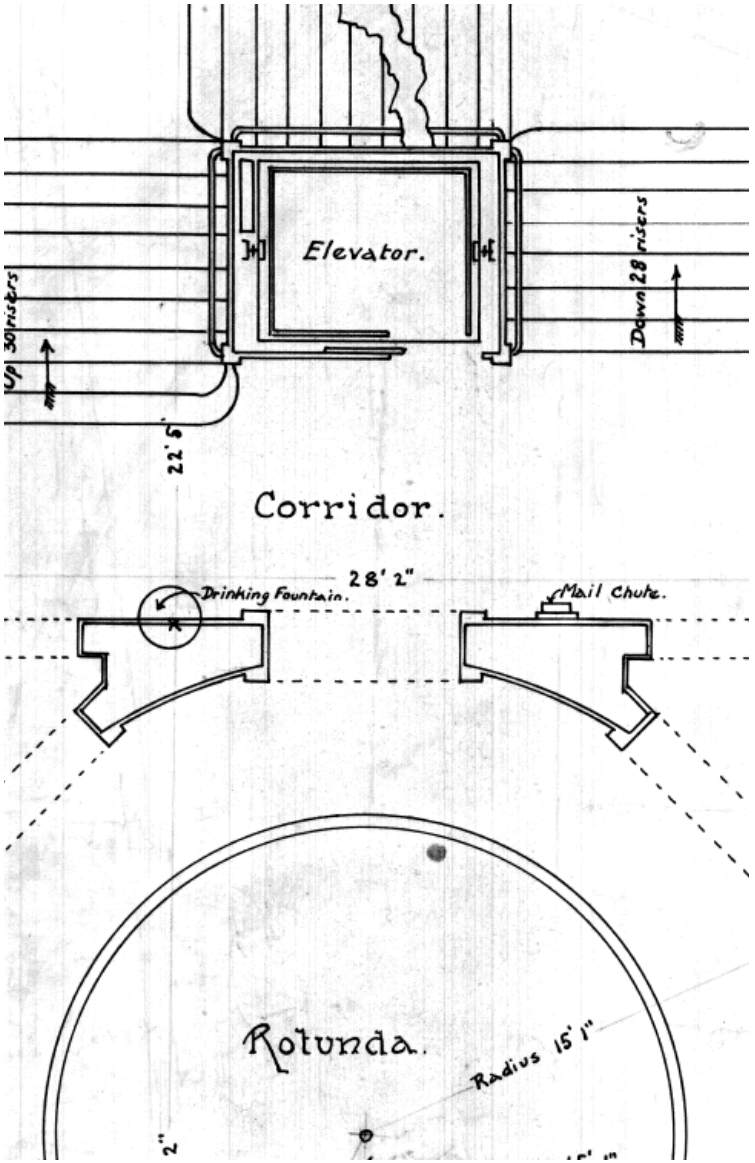
Best Solution: Include mail chute in interpretive dialogue and retain water fountain for interpretation.

Due to the lack of evidence that remains regarding the original size, material, and appearance of the mail chute, it is not recommended to be reinstalled. Understanding that the building is, however, routinely open to visitors for historical interpretation, it is recommended that the mail chute become a part of these discussions for a more comprehensive historical interpretation.

The marble water fountain should remain and likewise be included as part of the building's historical interpretation. Restoration of the fountain's operability is not recommended due to the extensive and possibly invasive work needed to examine and repair the plumbing associated with the fountain.

Maintenance: Regular cleaning of fountain marble.

Important for the retention and interpretation of the water fountain is periodic cleaning of the marble. This is particularly important as a rust stain currently surrounds the fountain drain. Marble cleaning procedures are outlined on page 52.



Detail of second floor plan as originally drawn by Hyman Witcover
Figure 58

Savannah City Hall's circulatory stair likewise retains many of the fine finishes found in the rest of the building. Prominent woodwork and high quality materials used for the construction of the elevator and stairs are important components of the space's architectural integrity as well as the original brass gasoliers, which remain throughout.

Issue: Inappropriate painting of ceiling above stair (Priority B, Severity 1).

The ceiling of the stair is laid in a riveted pattern. In an effort to emphasize this metallic aesthetic, these panels have been faux finished to look like copper. In the section connecting the first and second story, however, this area has been painted cream to match the neighboring plaster walls (Figure 59). Likewise, on additional floors the wall's recent coats of paint have scathed the edges of the brown faux finish of the panels.

Best Solution: Perform paint analysis and restore.

Since it is not possible to know if either of these finishes were the original finish, it is recommended that a paint analysis be performed to determine the original color and finish. Methods for this analysis are outlined on page 72. Once confirmed, the stair ceiling should be repainted with color and finish to match the first layer found, with care taken to create clean edges against neighboring surfaces.

Contrasting faux finish and cream colored paint on Stair ceiling.
Figure 59

Issue: Cracks in marble stair treads (Priority B, Severity 2).

Several marble stair treads have been identified as cracked. Those that are severed have broken completely, with cracks running along the shortest plane (Figure 60). As noted in City records from 1905, upon completion of the stairs, approximately ten percent of the marble stairs in the building "were not properly fitted into place." At this time, the architect specified that cracks be filled with a composition "fixed to resemble marble." No further historic documentation was found to see if this imperfection was ever remedied.

Best Solution: install stainless steel pins, replace crack filler to blend, match to color and finish of marble.

First, elements should be carefully removed to provide access to the marble treads from underneath. Stainless steel pins should be used to repair the cracked areas to stabilize the marble. Pins should be imbedded into the marble slabs using a setting epoxy, positioned at appropriate intervals to ensure soundness. Previous patching material and failed mortar at the cracks, as well as any holes and seams should be carefully removed so as to not damage surrounding sound material. Following, the cracks and seams should be brushed and vacuumed of all loose debris and dirt. Cracks should then be filled using an epoxy and polyester filler, colored to match adjacent marble. Lastly, the tread and filler should be honed or polished to match the marble's finish.

Maintenance: Monitor crack number and size.

Annual building inspection, as recommended in this report, should include a review of the stairs to ensure there has been no change in the number and size of cracks and that repairs have been successful (Appendix E).

Detail of cracked marble stair tread.
Figure 60

Issue: Missing and loose wood trim (Priority B, Severity 2).

Specific locations where the wood trim is missing or loose include the door frame to the Municipal Records and Archives, which has separated from the wall, and a portion of stair baseboard which is delaminating from the plaster.

Best Solution: Reattach or replace wood trim in-kind.

Locations of missing and loose wood trim should be evaluated. Loose trim should be properly reattached in its original location. Missing trim should be replaced with milled woodwork in-kind to match in profile, wood species, finish or paint color. Original building plans can be referenced for trim profile and dimension confirmation.

Issue: Missing gas shades on historic brass gasolier lamps (Priority C, Severity 2).

Throughout the building's Corridor historic gasolier lamps adorn the space's plaster walls, all of which are missing their original gas shades (Figure 61).

Best Solution: Research and install replacement shades.

With no remaining shades in storage and no historic photographs of the area in question, initial research into similar period fixtures has shown that these lamps, which were originally combination electric and gas fixtures, had glass shades to shield the gas flame emitted at the center. It is recommended that period appropriate shades be installed, informed by historic research of similar fixtures from the same era.

Maintenance: Annual inspection.

A check for missing pieces and damage is recommended as part of an annual building inspection (Appendix E).

Original gasolier in City Hall stair with missing glass globe.
Figure 61

Issue: Paint edging overlap on historic materials (Priority C, Severity 1).

Within the Corridor, multiple paint campaigns have left marks on the edges of historic, unpainted elements throughout the space to include light fixtures, ceiling framing, and woodwork (Figure 62).

Best Solution: Strip and clean as specified.

An examination of all edges of painted areas should be performed to determine areas in need of cleaning and edging. When areas have been identified as having inappropriate paint markings, the paint should be gently removed from historic materials. The use of normal paint strippers is prohibited. Recommended products include “10101 Safest Stripper Paint and Varnish Remover” by 3M and ProSoCo “Enviro Klean Safety Peel 1.” These products have low or no VOCs. It should be noted, however, that methylene chloride-free products will require longer dwell times on surfaces than required for products that contain methylene chloride. Cornstarch or fumed silica such as Camuel Cabot brand “Cab-o-sil” may be needed to thicken chemicals so that they adhere to vertical surfaces or ceilings (Chemically Removing Paint from Wood Features, GSA). Specifications for alternative cleaners should be reviewed to ensure compatibility with the specific material to be cleaned.

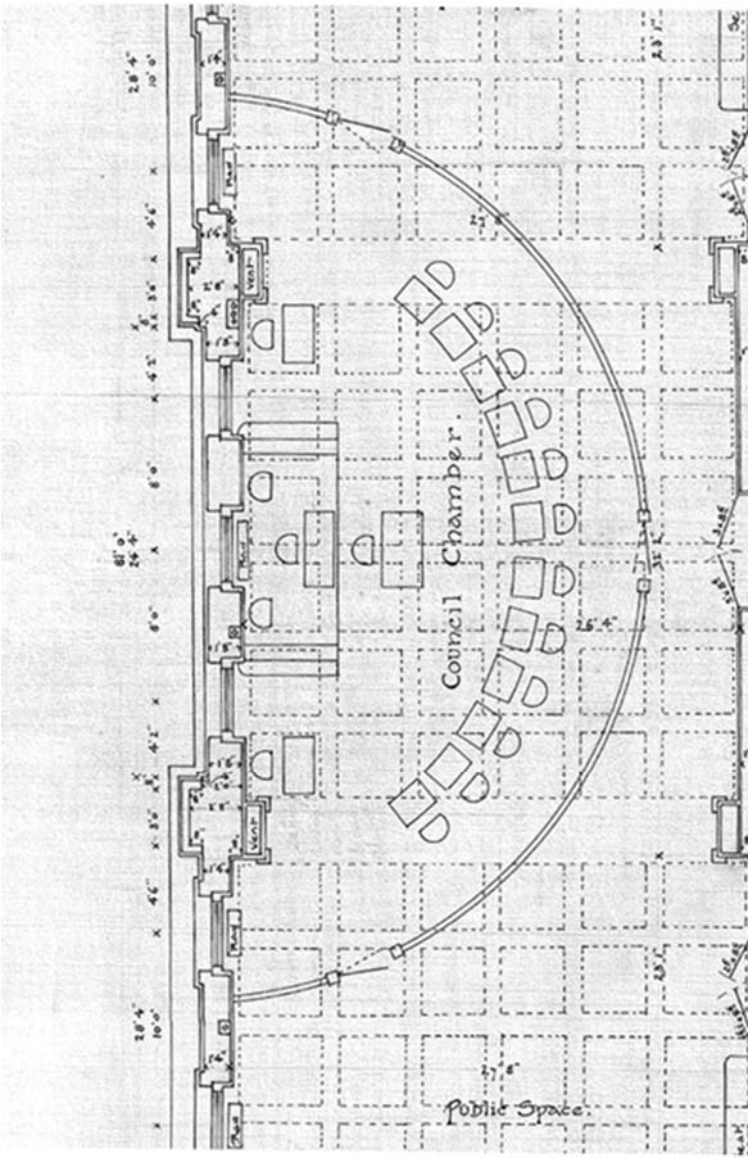
Paint edging overlap onto stair ceiling between the second and third floor. Figure 62

Running the length of the building from north to south along the building's west flank, Council Chambers is perhaps the most important and prominent space within City Hall. While the space is used infrequently, the time the space is spent in-use is intensive with an influx of visitors, staff, and aldermen. Denoting its importance, the space is filled with high quality historic materials and fine detailing, elevating its historic and architectural integrity.

The most significant and lasting change that has occurred within the space has been the result of the City's conversion to the council-manager form of government, which resulted in the reorganization of the semicircular chamber portion of the room to situate the alderman and Mayor facing east toward the audience, whereas council members previously faced the Mayor, looking west (Figure 63).

While this conversion altered the original furniture plan proposed for the room, it is unlikely to ever be restored due to the success and support for the council-manager form of government. As such, this report is not recommending the restoration of the original furniture configuration of the chamber.

Other changes evidenced at the time of this report to the original Council Chambers design include the removal of the room's original ceiling fans, the removal of a single wall sconce on the east wall, a change in height to the built-in wood benches along the north and south walls, the incorporation of modern HVAC units in place of the original radiators, the addition of stand alone pew style benches where there was empty space for a standing audience, and the loss of air registers on engaged pilasters, which have a smooth plaster finish today.



Excerpt from original second floor plan for Council Chambers by H.W. Witcover, Library of Congress. *Figure 63*

Issue: Active water intrusion in ceiling at south elevation (Priority A, Severity 3).

For many months there has been a persistent leak at the room's southeast corner, which has grown and expanded westward (Figure 64). In an effort to find the source of the leak, an inspection was performed. On the exterior, there was no evidence found on the neighboring portico or window sills and no mortar has been lost. It was determined that the roof of the building's central portico has an elevated roof decking, evidenced in the adjustment of neighboring window sills on the fourth floor to accommodate this change. This recent roof repair likely means the leak does not originate in this location.

One theory is that there is a condensation line from an HVAC unit on the third floor that is not properly connected, which is leaking to the ceiling below. No immediate signs of such an issue were apparent upon examination of the third floor offices above Council Chambers, however interior wall and floor cavities could not be examined. It should be noted that the leak has persisted in winter months when the AC is not running.

Another theory is that a roof drain line, all of which are located in the crawl space at the top of the building, extending from the south to the north façade, is not connected as intended and is leaking.

Best Solution: Identify origin of leak, resolve, and restore plaster according to historic configuration.

Due to the difficulty in identifying the origin of the leak, it is recommended that forensic methods such as infrared scanning and thermal imaging be used to identify the origin of the leak from above and below. It is also recommended that the building's crawl spaces be thoroughly examined. The internal column shafts located at the corners of Council Chambers, which run through the building on all floors should also be examined. A camera scope could prove useful to examine the shafts for possible abandoned water lines, which could also be the source of the leak.

Water damage located on south ceiling.
Figure 64

Once the source of the leak is determined and resolved, the final stage is plaster repair. Integral to this repair will be the formulation of replacement plaster with the same make-up as the original. It is recommended that a sample of the original plaster be analyzed by a professional laboratory to determine its composition and matched accordingly. A good patch of this area will involve an examination of the lath substrate and the possible removal of the associated ceiling coffer where the leak is located. This is an urgent repair as the room's failing plaster is falling and the leak is active, with ceiling plaster in need of continual repair (Figure 65). As part of restoration, all areas in close proximity should also be examined for damage and repair including neighboring walls and furniture. Likewise, during repair work, all neighboring areas and materials should be covered for protection to prevent additional damage.

Any concealing of water stains on plaster should use a white pigment shellac-based primer sealer to seal, prime, and block out existing stains to prohibit them from bleeding through the new finish layers of paint. Recommended shellac products include Kilz Masterchem and Zinnser Rustoleum. All surfaces must be dry, with all surface deposits or loose paint removed using a stiff fiber bristle brush. Any cracks or holes must be filled prior to the commencement of work. The surface should first be wiped with a clean, damp cloth. Following, the shellac should be applied over the stained area using a brush, roller, or airless sprayer. Wait a minimum of 45 minutes between coats. The shellac surface should then be painted with a high-hiding paint (GSA Concealing Water Stains on Plaster Surfaces).

Maintenance: Routine examination and use of moisture meter.

The area addressed should be examined every one to three days post-repair to validate its success for a minimum of two weeks. Following, the space should be examined once every week for two months. Once determined successfully restored, periodic examinations should be incorporated as part of an annual building inspection (Appendix E). In the short term, examination is critical before Council meetings and other events that occur in the space.

Water damage located on south ceiling.
Figure 65

Issue: Missing column capital scrolls (Priority A, Severity 3).

Several of the Ionic column capital scrolls have become unattached, fallen, and subsequently been destroyed as they have delaminated from the column face (Figure 66). While weight, stability, and adhesion likely played a role in their detachment, fluctuating temperatures and humidity associated with the room's infrequent, yet intensive use may have also played a role.

Best Solution: Commission the creation of a cast or mold of existing elements in-place for the creation of new scrolls.

First, all column capital elements in the space should be examined for stability and anchoring by a conservator. Loose or unstable elements should be addressed at this time. Through the creation of a mold from an intact column capital, replacement scrolls should be cast for areas with missing scrolls. Replacement scrolls should be made from in kind materials. Material composition should be identified from the lab analysis of column capital fragments salvaged by the Director of the Municipal Records and Archives. Once cast, these elements should be attached at logical seams for optimal seamlessness and stained to match existing columns. Due to the delamination of the original scrolls, further anchoring methods should be examined during reinstallation. Any added anchoring systems must be completely hidden behind replica elements, invisible upon completion.

Maintenance: Frequent examination.

The area addressed should be examined every one to three days post-repair to validate its success for a minimum of two weeks. Following, the space should be examined once a week for two months. Annual examinations should be part of an annual building inspection (Appendix E).

Missing column capital in Council Chambers.
Figure 66

Issue: Visibility of audio-visual equipment (Priority B, Severity 2).

While not original to the space, the use of audio-visual equipment and projection screens have become essential to Council meeting execution in the twenty-first century. Further, the use of corded voting devices, microphones, and other equipment are actively visible and in use.

Best Solution: Upgrade systems to utilize wireless technologies, hide necessary wiring whenever possible, and reduce size and number of equipment elements.

The electronic systems should be updated to utilize wireless technologies whenever possible in order to remove the current visually obtrusive, bulky technology. Wiring and other equipment elements should be hidden or sensitively placed in order to maintain the architectural visual quality of the space. Outlined in Appendix C, there are several upgrades which can assist in adapting the space, such as adding "air media" for wireless video connectivity and replacing the existing equipment rack (Figure 67) with a credenza style rack in wood, stained to match the existing wood elements in the space.

Maintenance: Periodic examination.

Periodic examination of the usefulness and efficiency of equipment in Council Chambers with regards to new technologies, clarity, and ease of use is important. Equally important in this governmental and historic space is the preservation of the room's historic and architectural integrity. Frequent examinations must be performed as part of an annual building inspection (Appendix E).

AV systems box currently housed in Council Chambers.
Figure 67

Issue: Deterioration, deep scratches, missing fragments, and loss of finish of parquet floors (Priority B, Severity 2).

While not as severe as the degradation in the Reception Room, the parquet floors in Council Chambers have suffered deterioration from use, with some areas significantly scratched (Figure 68).

Best Solution: Screen sand, repair or replace parquet flooring in-kind, and refinish.

Depending on the condition, various steps can be taken to restore missing and deteriorated pieces and refinish the parquet flooring in this space. Upon repair of the deteriorated portions, the parquet floor in its entirety should be lightly sanded and refinished. The preferred method of sanding is referred to as "screening" and involves a drum sander and light buffer pads. This will remove old wax and lightly buff the floor without diminishing the overall depth. Prior, all nails should be examined to ensure that they are set below the surface, using a manual nail set.

All replacement material should be stained to match the original design as closely as possible in color and texture as tested in a small inconspicuous location.

Missing Sections: Dutchman repair is recommended in areas where sections of flooring are missing or in areas where the floor is determined to be damaged beyond repair. First, select the piece to be replaced from the design or cut a cavity in the wood slightly larger than the damaged area. Shapes that are cut should be geometric and easy to reproduce, such as a diamond or trapezoid, to diminish the visibility of the replacement section (as opposed to the removal of a square or circle). Next, the edges of the cavity should be beveled. Following, a plug should be fabricated to match the surface cavity bevel before matching the wood stock.

Parquet flooring in Council Chambers showing scratches and scrapes.
Figure 68

Before cutting, it should be ensured that the wood grain direction matches that of the reference area. Next, the plug should be glued into the cavity. Glue should be allowed to dry before being planed, sanded, and refinished to match the surrounding floor. All replacement wood should be as close a match as possible to the same species, saw, and grain used originally. Any minute voids unable to be filled with a Dutchman repair should be filled with a linseed oil glazing putty tinted to match. The use of 'plastic wood' is prohibited (Wisconsin Historical Society).

Maintenance: Regular cleaning, refinishing, and periodic examination.

Cleaning of the building's parquet floors should be performed weekly to remove dirt, dust, and debris as well as catch any surface grit and grime that may need attention. To begin, the floor should be vacuumed with a soft floor nozzle, carpet attachments and brush rolls can damage the finish. Any grit and grime that remains stuck to the floor should be addressed with a damp cloth, a small amount of wood floor cleaner such as Bona PowerPlus Hardwood Floor Deep Cleaner, and a vigorous rub. Floor cleaners should have a neutral pH level of around 7. Lastly, the floor should be mopped using a microfiber mop which has a positive electric charge to capture negative ion ephemera. Minwax's Hardwood Floor Cleaner is recommended for mopping to loosen and emulsify grease and dirt. A minimal amount of cleaning solution and water should be used as standing water and overly wet mops can shoot moisture between boards and lead to long term damage. Never use strong vinegar or baking soda solutions, glow enhancers, acrylic polishes, heavy duty floor cleaning equipment, or steam cleaning as these can severely damage parquet floors.

Depending on wear, floors should be refinished every fifteen years.

Issue: Damage to historic furniture (Priority B, Severity 2).

Included in original building plans drawn by H.W. Witcover, much of the furniture in Council Chambers is original (Figures 69 and 70). All of the original desks have metal bases faux finished to look like wood and stained wood table tops. The original table bases are painted black but were originally shades of green with a stained tiger maple wood top. While all of the tables currently in use have replacement tops, two of the three original table tops are in storage. The podium was originally a desk. While the desk top is original, it now sits on an extended base in wood.

The use of metal bases has contributed to the durability of the furniture; however scratches, scrapes, adhesives, and other general wear need to be addressed.

Best Solution: Restore furniture to ensure integrity and condition.

It is recommended that all of the building's original furniture be restored. Recent efforts by the Savannah Technical College have shown the complexities associated with matching the original wood stain of the furniture as the finished table top of the restored piece does not accurately match what is believed to be the original stain or the stain of the furniture extant in the space. Utilizing a professional conservator and the building's original furniture plans, an agreed upon finish should be selected, respectively, for the restoration of all of the original tables, chairs, and desks. If at all possible, the furniture's coatings should be retained and minimally altered as opposed to stripped and refinished, as some degradation occurs every time a piece is refinished (Smithsonian). It should be noted, however, that finishes that have been added can be removed. Shellac is alcohol soluble and stains are oil soluble. Solvents such as mineral spirits, can assist in identifying the original finish layer. All furniture to be restored should be cataloged, inventoried, and photographed prior to restoration.

If the missing table top is replicated, tiger maple wood should be used to match the existing table tops.

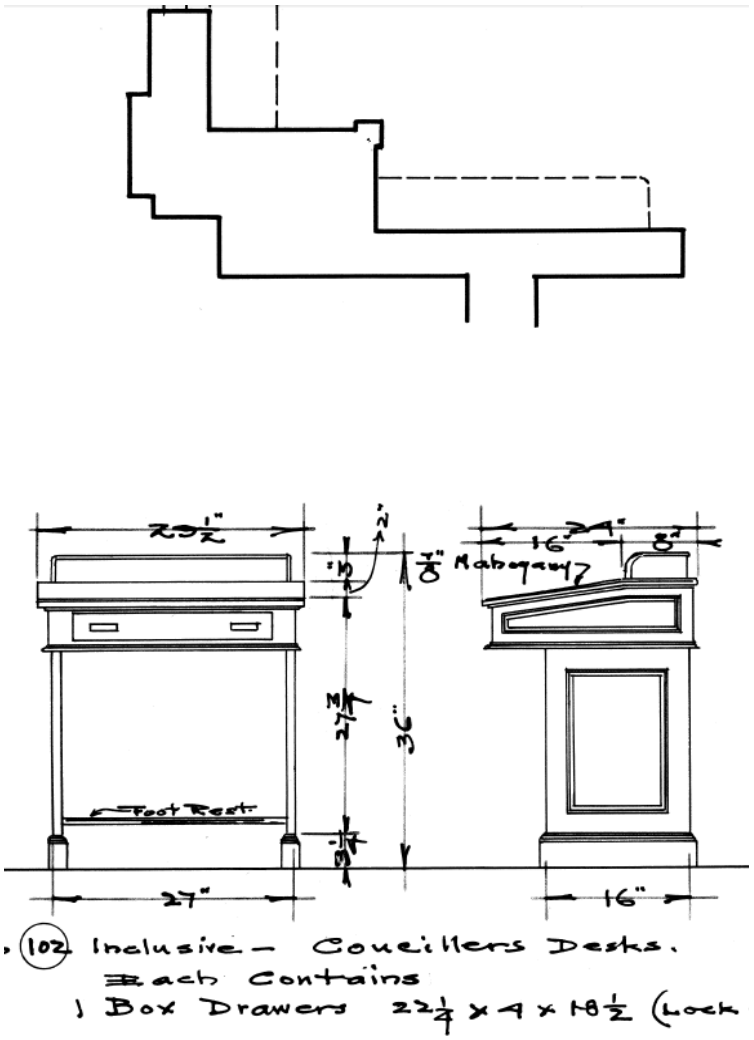
Original furniture utilized in Council Chambers.
Figure 69

Maintenance: Prohibit adhesives and clean and wax wood furniture.

After restoration, the use of adhesives on the podium and desks must be prohibited. All furniture should be cleaned periodically. First, all surfaces should be made dust free through the use of a clean soft cotton cloth or a vacuum with a clean soft brush attachment. Next, the solubility of the finish should be tested by applying mineral spirits such as V.M. & P. Naphtha or Stoddard solvent with a cotton swab to a small inconspicuous location. If the mineral spirits soften the finish, do not attempt to clean the piece. If it does not, proceed to wipe the surface with a cotton cloth dampened with mineral spirits. Also, a soft bristle brush dipped in mineral spirits can be helpful in cleaning hard-to-reach places around carving and intricate decoration. Finish by wiping the surface with a clean cloth and allow to dry for several hours (National Park Service).

If a second cleaning is required to remove stubborn dirt, try wiping lightly with a clean cotton cloth dampened with a weak solution of mild soap, such as Ivory Flakes, shavings from Ivory bar soap, or Orvus paste or liquid, and warm water, wrung out well. Do not use Ivory Dishwashing Liquid. Follow this with a thorough wiping with a cloth dampened slightly in water and then clean completely dry with another clean cotton cloth. Never use detergents because they leave a film that is difficult to remove and may permanently damage some finishes. Water should be used sparingly when cleaning veneered or inlaid furniture. If the finish is worn or cracked, use mineral spirits rather than water. The above cleaning methods will remove the protective wax coating, so re-wax when the wood has completely dried.

Oil based cleaners should not be used as anywhere the wood finish is missing will be susceptible to oil intrusion which can oxidize and change the color of the wood. Wax is recommended as a protective coating. Solid waxes, such as a paste wax is recommended. A paste wax without silicone is preferred such as Staples, Butchers, or Johnson. Most liquid and aerosol polishes contain silicones which can be harmful to finishes.



Excerpt from original furniture plans.
Figure 70

Waxes formulated with weaker organic solvents such as turpentine or mineral spirits are recommended. Stronger solvents such as xylene and toluene should be avoided. First, test the wax in an inconspicuous location to determine if the wax softens the finish. If it does not, apply the wax sparingly as too much can result in a sticky surface that will attract dust and dirt. Apply with a clean cotton cloth in a circular motion and then rubbing along the grain. Let dry for 30 to 60 minutes and then buff the wax out using a clean cloth. It is preferable to apply two thin coats rather than one single thick coat. On carved or irregular surfaces, wax should be applied using a small soft brush, such as a toothbrush. After drying, it should be buffed with a soft fiber brush such as a shoe brush (National Park Service).

Due to the room's current rate of use waxing is recommended annually.

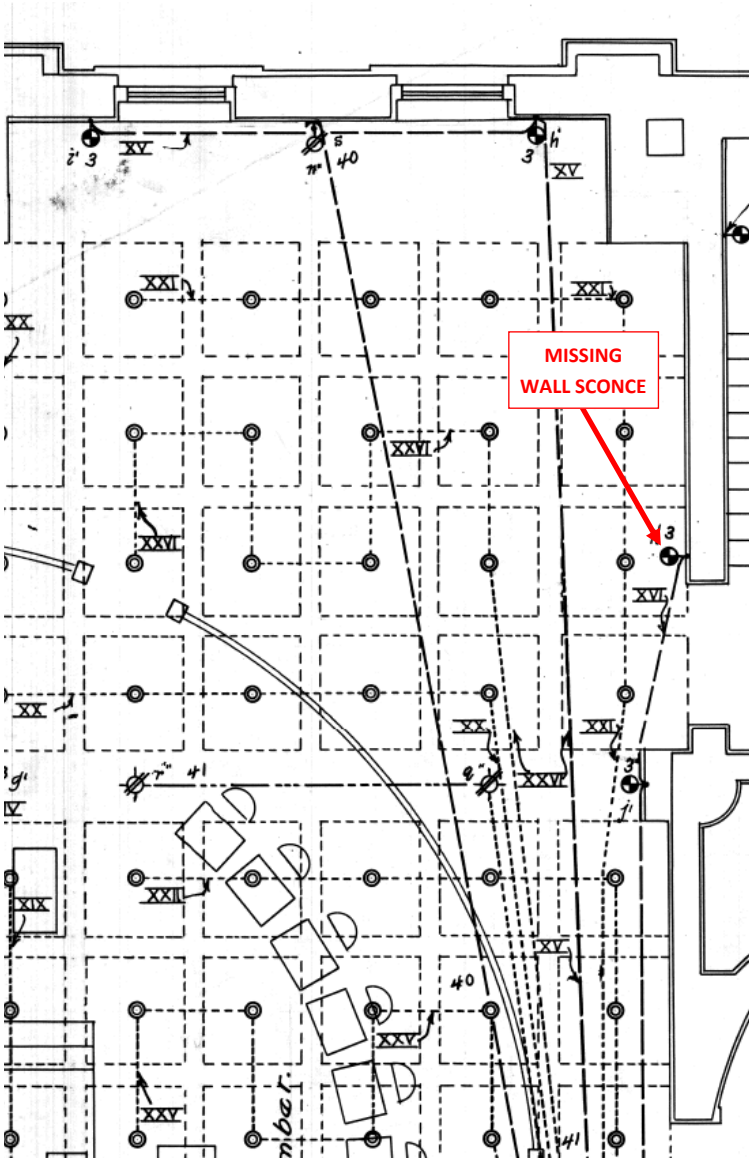
Further, all original furniture should be monitored for future wear, scratches, and the improper use of adhesives as part of an annual building inspection (Appendix E).

Issue: Brass clock and light fixture restoration, incorrect lighting installation, and lack of utilization (Priority B, Severity 2).

All of the room's original brass fixtures are suffering from minimal tarnish and wear. An examination of the original second floor electrical plan revealed that there is one wall sconce on the east wall that is currently missing (Figure 71). This is evidenced in the presence of an outlet connected by conduit, painted to match neighboring walls, but is covered by a circular plate in this location. The wall sconces that remain in Council Chambers, were removed at one time and reinstalled upside-down (Figure 72). Further, when the room is in use the space's wall sconces are often left off, the reason unknown.

Best Solution: Surface clean existing fixtures, replicate missing fixture, restore and reinstall existing fixtures based on historic photographs, and utilize fixtures as intended.

It is recommended that all of the brass elements in Council Chambers be cleaned following the methods previously outlined for brass on page 61. Utilizing one intact fixture for the creation of a mold, it is recommended that the room's missing sconce be recreated in brass to match the existing sconces; to be installed in its original location, hung correctly, and utilized. Brass lamps mounted to the room's baluster should be cleaned in place. Extant wall sconces should be removed, cleaned, and reinstalled to their original placement with unified glass globes undermounted. Lastly, all of the room's lighting should be utilized when the room is in use, as intended.



Original second floor wiring plan excerpt showing Council Chambers.
Figure 71

1905 view looking Southeast in Council Chambers in original configuration showing the open area for public standing and viewing, ceiling fans which have since been removed, portraits hung along the east wall, alderman desks facing West, and wall sconces mounted in their original configuration. *Figure 72*

Secondary Solution: Polish and coat fixtures in-place, replicate missing fixture, restore and reinstall existing fixtures based on historic photographs, and utilize fixtures as intended.

Similar to the primary solution above. Secondary cleaning options include the polishing and coating of the brass elements within Council Chambers as opposed to the preferable surface cleaning. The methods outlined on page 62-63 are applicable here.

MAINTENANCE: VARIES BASED ON SOLUTION.

Surface cleaning, if begun, should be performed weekly. Polishing and coating requires significantly more time and attention in the continued maintenance of these finishes, which should be addressed at a minimum monthly. This is best performed by a skilled tradesperson or conservator.

Issue: Woodwork deterioration, holes, and missing pieces (Priority A, Severity 3).

The room's most abundant historic material, the space's columns, crown molding, window and door framing, baseboards, built-in benches, and Chamber baluster are all made of wood. The wood elements accessible to manipulation by visitors have suffered the most wear, in particular the Chamber baluster and its doors (Figure 73). Other areas of concern include the room's window trim and baseboards adjacent to HVAC units that have been altered and worn, holes from screws which have been left on columns, and a section of missing baseboard located in the northwest corner of the room (Figure 18). The wood restoration solutions outlined below can be applied to the woodwork in both the Council Chambers and the Reception Room.

Best Solution: Fill holes with epoxy and faux grain, sand and restore etched areas whenever possible, and create missing baseboard in-kind, stained to match.

First, all surfaces should be cleaned in preparation for restoration. All holes within the columns or other areas should be filled and faux grained to match as outlined on page 87. Likewise, all woodwork that has scratches and scrapes should be stripped, lightly sanded, and refinished to match followed by the application of a butcher's wax or paste for sealing. It is possible that the deepest scrapes and scratches will remain as light sanding may not address all issues. However, a heavier sanding is not recommended as it will further compromise the thickness of the wood. Any missing elements should be replaced in-kind and stained to match.

Detail of Council Chambers swinging door deterioration.
Figure 73

Stained marble threshold in Council Chambers. Figure 74

Issue: Stained marble thresholds (Priority C, Severity 1).

Transitioning from the parquet flooring in Council Chambers to the penny tile floor of the Corridor and Rotunda spaces, marble thresholds are located within the jambs of the room's wood doors. Due to the heavy traffic this space receives, these thresholds have become discolored and stained (Figure 74).

Best Solution: Clean and polish thresholds.

Thresholds should be cleaned and polished as outlined for stained marble restoration on pages 52-53.

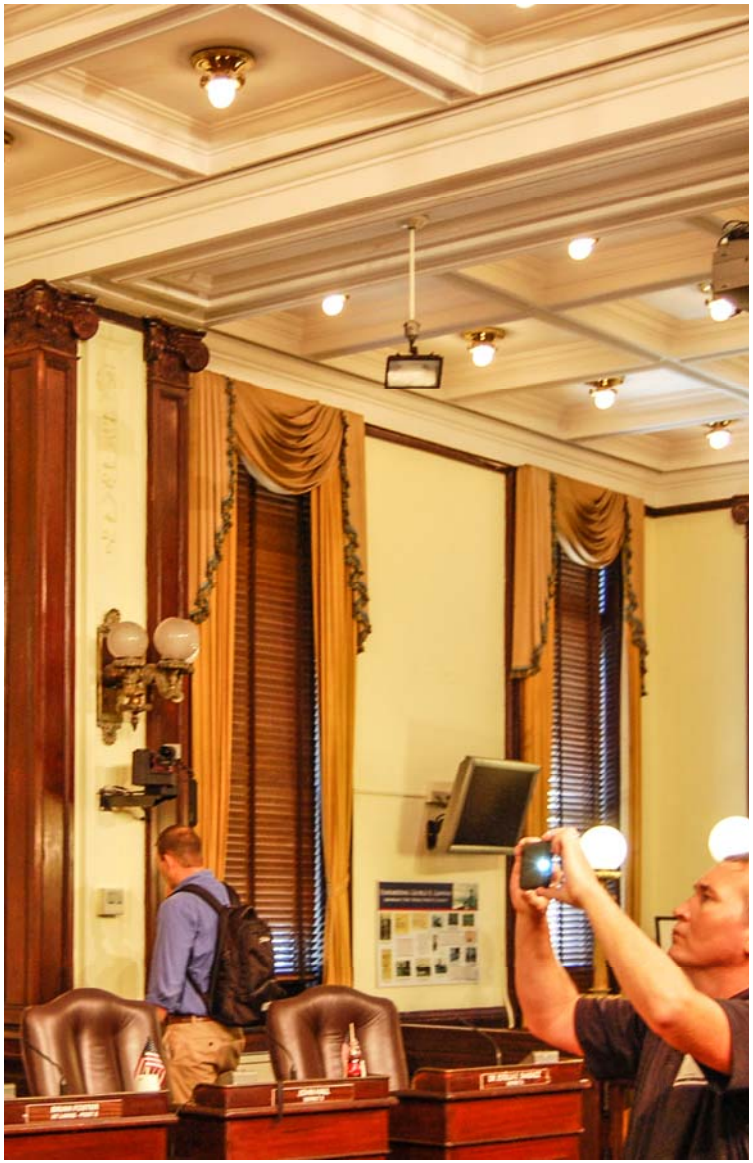
Issue: Installation of window curtains and blinds unoriginal to space (Priority B, Severity 2).

Reportedly added to the space for the filming of a movie in the 1970s, the curtains in Council Chambers are unoriginal to the space and conflict with the building's restoration period (Figure 75). Further, they are now deteriorated, rotting, and in need of replacement.

Best Solution: Removal of curtains and blinds, and restoration of roller shades.

Documentation from 1905 shows the windows in City Hall were originally fitted with roller blinds in an olive green shade (Birth of City Hall). While none of these remain, this color is specifically outlined in bid documents from this time. The photographs included in the 1905 Annual Report, which show the windows unobstructed in Council Chambers, were actually taken prior to the building's opening. To restore the intended configuration, the extant curtains and all associated appurtenances should be removed. Following, all related surfaces should be examined, repaired, and cleaned as needed. Wood restoration methods as outlined in this report on page 66 should be utilized in regards to interior window trim elements.

The restoration of roller blinds in Council Chambers is an important component to the space's overall historical integrity. The roller shades selected should be an olive green shade, as originally specified, as well as UV stable to avoid fading and discoloration. Shades should not have fascia boards or chains. Rather, shade operation can be set to be controlled electronically for greater accommodation of the room's continued use.



Extant curtains in Council Chambers.
Figure 75

MAINTENANCE: ROUTINE EXAMINATION AND CLEANING.

Roller shades should be checked annually as part of a building inspection for operability and condition, identifying any areas of fading, discoloration, scratches, scrapes, holes, or other issues (Appendix E). Shades should be repaired and replaced whenever necessary.

Issue: Window energy efficiency (Priority B, Severity 2).

When considering their over 110 year life span, the windows in City Hall are in very good condition. It should be noted, however, that the glass within the wood frames is not original after being replaced with tempered glass in 1985 (A Century of History). This is a testament to their durability to withstand alteration.

In addition to the aesthetic pitfalls, the replacement of historic windows can lead to other internal problems, such as moisture concerns. Historic wood windows allow internal environments to breathe. Replacement windows in alternate materials have the ability to alter the environment of historic interiors, which can often lead to trapped moisture and other issues. With proper restoration and continued maintenance, there is no reason why this longevity cannot continue. Integral to the fabric and authenticity of City Hall, any work completed with the intention of restoring City Hall should include the restoration of the existing windows.

Included within the quotes, both the best and secondary solutions below have been priced (Appendix C).

Best Solution: Wood window frame restoration, installation of weather stripping and UV film on window glass.

Of greatest priority is the restoration of the existing wood frames which show signs of deterioration and in some instances have been altered. Below is a step-by-step outline for window sash restoration. All tasks listed on the following page should be performed as part of any complete window restoration.

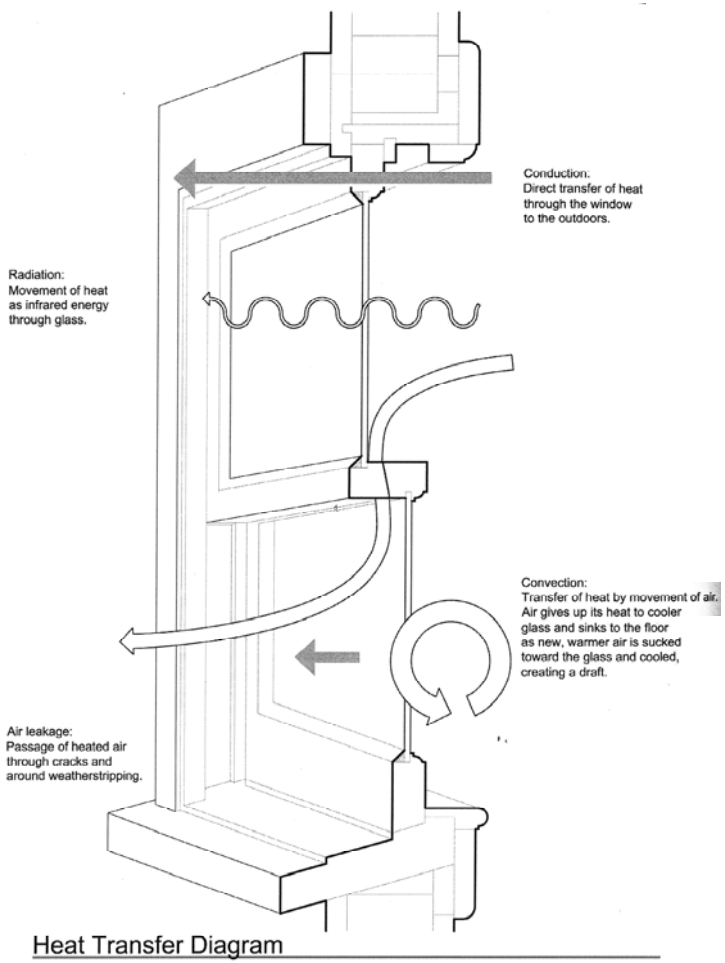


Diagram excerpt from The Window Sash Bible regarding window heat loss. Figure 76

1. Remove sash or sashes
2. Secure window opening against weather or intrusion
3. Remove hardware from sashes and frame
4. Remove glass and set aside for reinstallation
5. Strip paint from sashes, channels, stops, and sill
6. Repair sashes, frame, and sill as needed
7. Sand deteriorated wood to bright substrate
8. Condition putty rebates with boiled linseed oil mixture or oil-based primer
9. Back-bed, reinstall glass, and glaze
10. Weatherstrip sashes with bronze weatherstripping at jambs, sills, and meeting rails
11. Clean and lubricate or replace hardware
12. Prime with oil primer and finish with two coats of paint (exterior) and stain (interior)
13. Install new sash cords, chains, balances, or adjusters
14. Clean glass
15. Reinstall sashes and stops
16. Adjust to work smoothly

(The Window Sash Bible)

Additional wood repair, when necessary, should follow the recommendations outlined on Page 64. It should be noted that bronze, in particular, is recommended for weather-stripping as it provides an excellent seal that will keep air, water, and bugs out. Further, it is extremely effective and durable enough to last multiple generations.

Exterior view of Council Chamber windows.
Figure 77

Lastly, a UV film is recommended to be applied to the interior of the window glass. This will help provide increased insulation performance, improve comfort during cold months, reject heat and improve energy savings in the summer months, as well as block harmful UV rays to reduce the fading of interior historic elements. Clear and imperceptible once installed, 3M's Thinsulate Window Film is recommended.

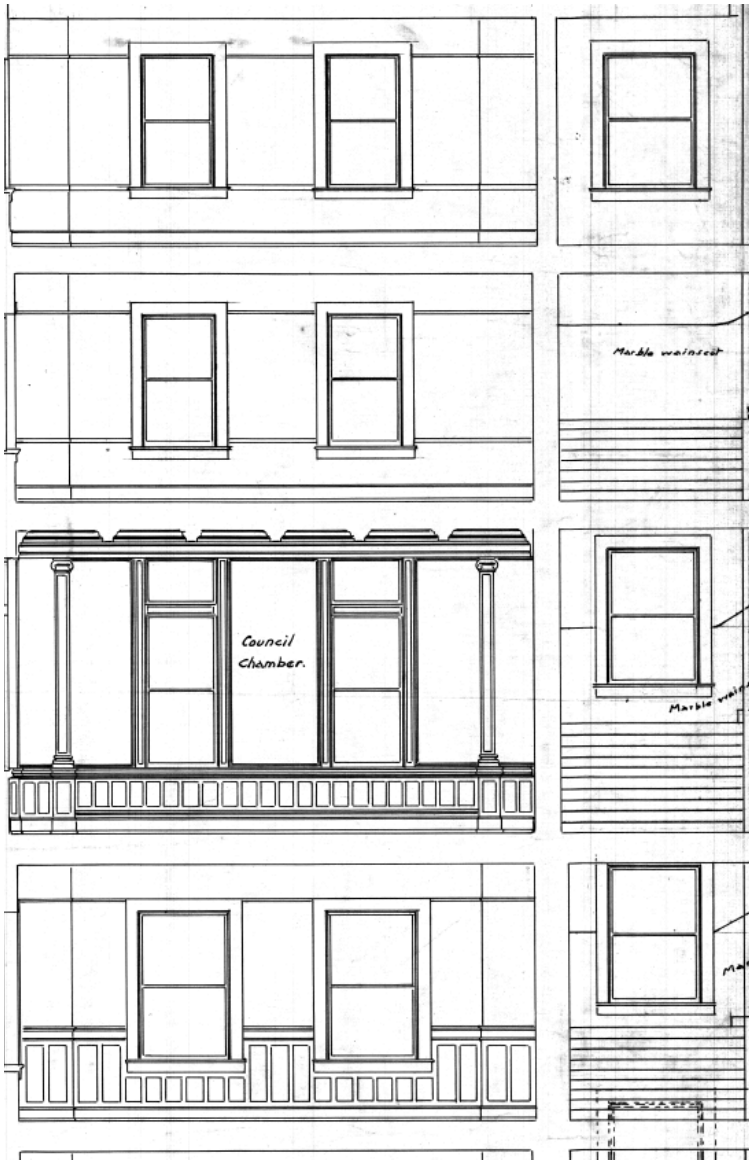
Unoriginal to the space, the installation of both the weather stripping and UV film are both reversible solutions that can vastly improve the existing window's energy importance.

Secondary Solution: Install museum grade interior storm windows.

A secondary solution that has the potential for even greater energy savings involves the installation of an interior storm window within the jambs and casing of the existing windows. Available in a museum grade quality glass finish, the Indow brand interior storm is recommended.

In order to accommodate the large size of the building's many windows, it is necessary that two interior storm windows be installed utilizing a meeting bar or divider rail on the interior. Set between the two interior storm windows, this will allow for the same performance while accommodating the large openings. It is essential, however, that the interior storm meeting rail be placed in alignment with the window meeting rail for diminished aesthetic obtrusiveness.

Using a compression tube around its edges, this will provide an interior seal shown to reduce energy costs related to heating, ventilating, and air condition use up to twenty percent (U.S. Department of Energy). Indows have 94 percent of the insulative value of standard double-pane windows.



Excerpt from original building plans by Hyman Witcover, building section looking north. *Figure 78*

Further, Indow has been shown to dampen noise by up to 10 decibels, which equates to a fifty percent noise reduction. When selecting the museum grade option, Indows can also block 98 percent of ultraviolet radiation, providing protection for City Hall's historic interior materials and artifacts. This is highly recommended to aid the retention of City Hall's historic interiors as well as the longevity of restoration work performed.

Maintenance: Annual window assessment.

A window assessment of the interior and exterior of all windows at City Hall is recommended for completion as part of the building's annual inspection as outlined in Appendix E. Inspection should include a test of operability and the condition of the sash and hardware, missing or loose elements, stain consistency and finish, moisture damage, cracking, warping, etc. There is no better tool for maintaining the longevity of the building's windows than periodic inspection of their condition, operability, and use; addressing issues as they arise to prevent prolonged damage, detriment, and cost.

Issue: Loss of original ceiling fans and temperature and humidity concerns (Priority B, Severity 2).

Throughout City Hall, uniform ceiling fans were hung from the ceiling, several to a room. This included the Council Chambers which historically had four fans (Figure 72). Set along the engaging framing running east to west between engaged pilasters, the locations in the ceiling where the fans were originally hung have since been replaced with four stage lights.

With the infrequent use of Council Chambers, the space experiences a drastic fluctuation in conditions twice a month with otherwise static conditions. During these times, the space is filled with people and the air conditioning use is high. This fluctuation has an effect on the space.

Further, while there are artifacts kept in this space, it is not known whether the proper temperature and humidity of the space is appropriate to the type and material of the artifacts.

Best Solution: Installation of replica fans, new HVAC equipment, and programable thermostat.

According to historic photographs, Council Chambers originally had four ceiling fans that hung where the room's stage lights are currently mounted, along the room's two dividing ceiling beams that run east to west (Figures 72 and 79). The stage lights should be removed as they are unoriginal to the space, and replaced with fans of a similar aesthetic to the originals. Both the removal of the lights and the installation and use of the fans should be considered in overall temperature and condition calculations.

General recommendations provided by the American Association of Museums state that archival spaces should work to maintain a temperature of seventy (70) degrees Fahrenheit and fifty (50) percent relative humidity.

1962 photograph of Council Chambers showing original ceiling fans.
Figure 79

Further assistance in the regulation of the space's temperature is achievable with the installation of new HVAC equipment to replace the existing equipment, which has exceeded its useful life, and a programable thermostat which could regulate daytime versus evening temperatures, for example. Further, thermostats that adjust based on occupancy loads are available which would greatly aid in the infrequent but intensive use this space receives.

If these conditions cannot be achieved, historical artifacts should be removed and relocated to a temperature regulated space.

Maintenance: Monitor the room's temperature and humidity.

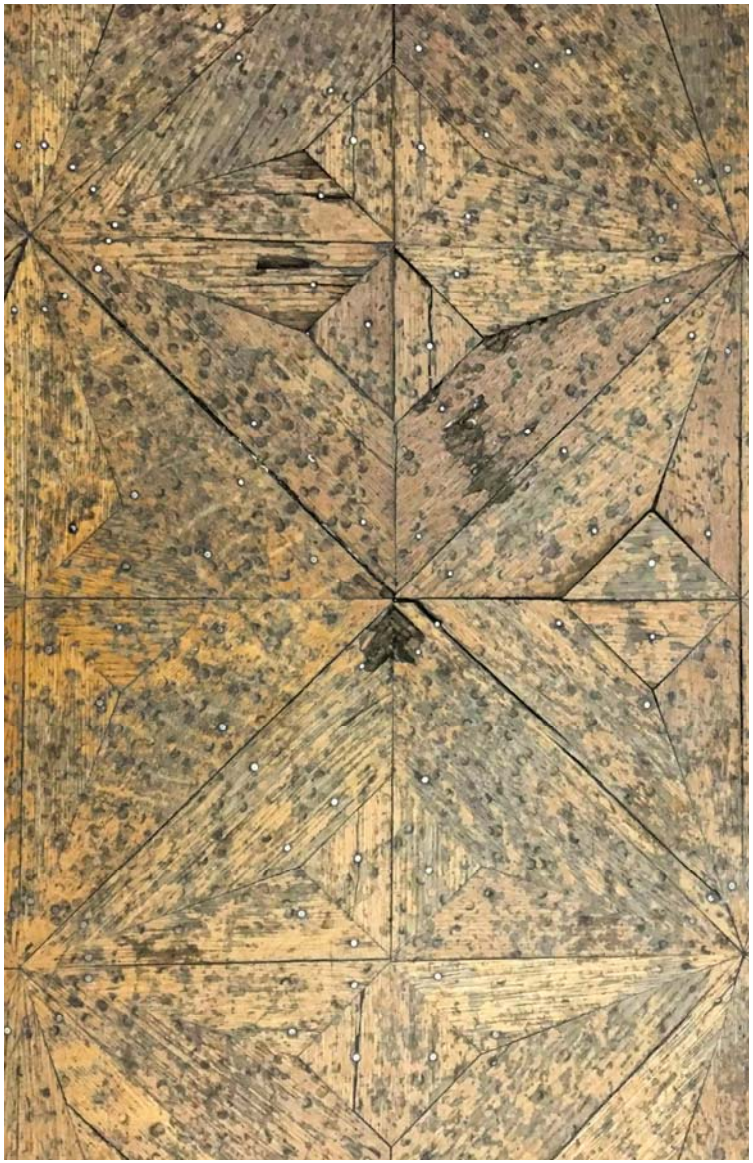
If the replica ceiling fans are installed, they should be routinely cleaned, in order to keep dust down. If a programmable thermostat is installed, an initial examination in the days after installation for proper programming should be performed to ensure that the thermostat is functioning correctly and the temperatures selected are appropriate for the preservation of the room's artifacts and historic materials.

Issue: deteriorated parquet flooring (Priority A, Severity 3).

Like Council Chambers, there is exquisite parquet flooring that is indicative of the period and integral to the significance of the Reception Room. As a result, its integrity and condition is a significant priority when considering the overall restoration and preservation of City Hall. Currently the parquet flooring is severely deteriorated, having missing sections, wear and loss of finish (Figure 80). The most significant deterioration is suspected to have been caused by a plastic mat placed under rolling office chairs when the room was used as an office space. These mats are typically used on carpet and have caused circular indentations and loss of finish.

Best Solution: Screen sand, repair or replace parquet flooring in-kind, and refinish.

Depending on the condition of the specific area, numerous steps can be taken to restore missing and deteriorated pieces and refinish the parquet flooring in this space. Likewise applicable within the Council Chamber, the methods outlined on pages 97-98 should be followed to ensure best practices for restoration and maintenance. It is possible that the indentations and scratches will remain as light sanding may not address all issues. However, a heavier sanding is not recommended as it will further compromise the thickness of the flooring.



Detail of deteriorated parquet flooring in Reception Room.
Figure 80

Issue: Column Splitting on entrance surrounds (Priority C, Severity 2).

Within the Reception Room, there are two large pedimented openings that lead into neighboring spaces, the Mayor's office and Council Chambers (Figure 81). Characterized by large paired fluted columns in wood stained to match the space's other wood elements, the columns have cracked in some areas along the flutes possibly due to temperature and humidity changes in the space over time. The solution outlined below is applicable to all woodwork areas within the scope that have minor holes or depressions, including those along the engaged columns within Council Chambers.

Best Solution: Fill holes and gaps with wood epoxy and faux finish.

The fluted columns that support the deep pedimented entrance surrounds, located at both the east and west entrances, are eight separate pieces bonded together. By filling the split
areas of the column with wood epoxy followed by the faux graining of the epoxy, the repairs can be completed with the columns in place. No replacement of material is needed.

Maintenance: Periodic examination.

Periodic examination of the space's column repairs should be made as part of an implemented preservation maintenance plan to ensure that no further splitting occurs.

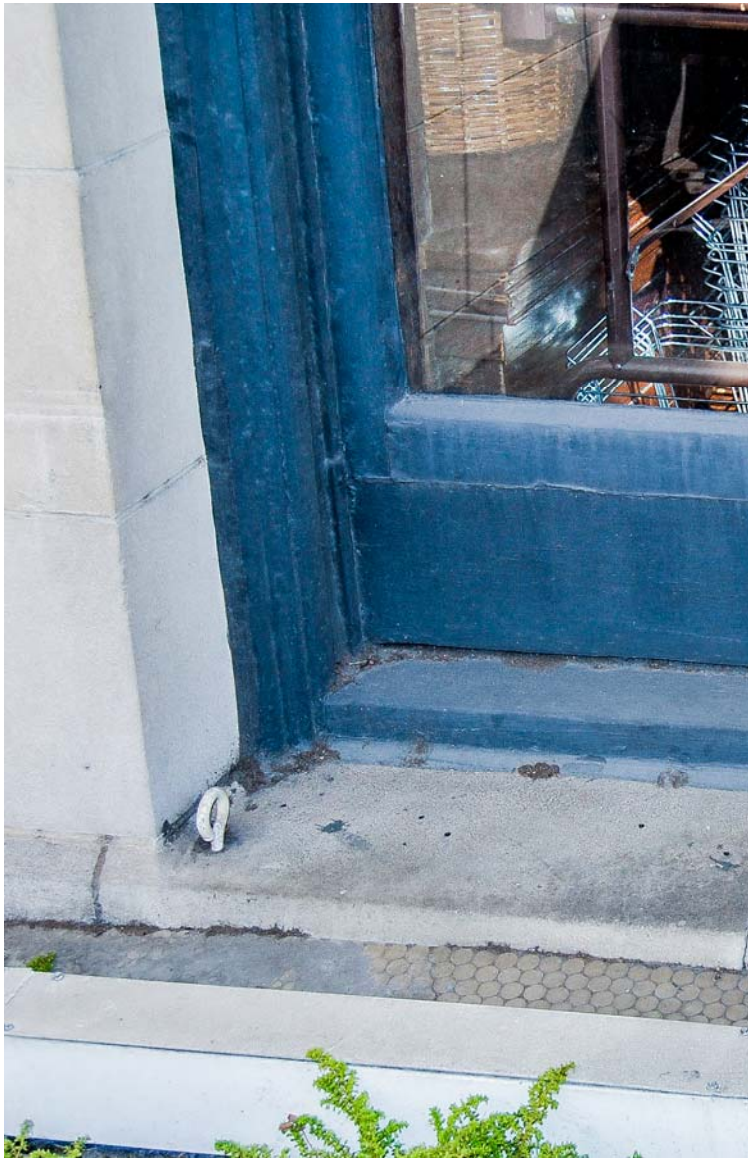
Pedimented entrance inside Reception Room leading to Mayor's Office. Figure 81

Issue: altered window sash (Priority A, Severity 2).

The southwestern most window sash in the Reception Room is shorter than the rest in the space due to a now abandoned direct outdoor air vent being placed at the bottom of the window. The vent has since been removed. Subsequently, a piece of wood sized to fit has been put in its place, since the bottom sash was never restored (Figure 80). This condition occurs not only in the Reception Room but also on two windows in Council Chambers (Figures 77 and 82).

Best Solution: Build and install new window sash sized appropriately using existing elements.

Utilizing the existing sash currently in this location, a new window sash should be created and installed in its place, sized appropriately. New window stiles and glass should be fabricated and installed, using materials in-kind to match. Reuse of the existing rails is recommended. Care should be taken to match the wood dimensions, type, and stain to match the other two intact windows in this space.



Detail of exterior of bottom window sash that has been modified on the south wall of the Reception Room. Figure 82

Issue: "Alligatoring" of wood stain and exposed nails in door frame (Priority B, Severity 2).

Leading into the Reception Room, the main entrance doors have experienced some "alligatoring" or a bubbling of the wood stain that is rough to the touch. This is attributed to several layers of shellac and its aging. Further, the frames of these doors previously contained elements attached by nails, these remain and are a hazard.

Best Solution: Strip, lightly sand, and stain doors to remove imperfections and remove nails, patch holes, and faux grain to match.

These restoration measures are likewise applied to elements in the Council Chambers, the methods for which should follow the same process as outlined on page 64 and 66.

Issue: Abandoned HVAC controls and vents remain in space (Priority C, Severity 1).

Within the Reception Room ceiling, there are vents that remain from an abandoned, unused duct air system as well as wall controls that remain attached to neighboring plaster walls (Figure 83).

Best Solution: Confirm abandonment, remove elements, and patch in-kind to match.

At the outset, it is recommended that a determination of the building's plans for future HVAC systems and upgrades is made to ensure that no plans include the reuse of this abandoned system. Once it is determined that the system will remain abandoned, the vents and associated controls should be removed and the plaster areas patched in-kind to match neighboring walls in color, finish, and texture. Color should be determined as part of any paint analysis performed in this space as outlined on page 72.

Abandoned air intake vent in Reception Room ceiling.
Figure 83

Issue: Inconsistent glass pattern used in door panels (Priority C, Severity 1).

Throughout the second floor, in Council Chambers and the Reception Room, etched glass is present in the space's many wood doors as center panels. Multiple patterns of etched glass, exist (Figure 84). It is believed that the building would have originally used one pattern of etched glass for all locations.

Best Solution: Determine which glass pattern is used most often throughout building and replace other panels to match.

It is believed that a correlation between the number of panels associated with each pattern of etched glass and the original glass can be made. Upon performing an inventory, the panels that are most prevalent should be retained. Those that differ should be removed and replaced with etched glass to match the majority to create a uniform look throughout these spaces. Panels should not be removed until a replica manufacturer or architectural salvage option is identified and confirmed to have the correct size and pattern of glass. Only identical matches are acceptable.

This solution is applicable to both the glass panels in the doors of the Reception Room and Council Chambers.

Doors leading from Council Chambers to the Reception Room, each of which has a different type of etched glass. Figure 84

GENERAL RECOMMENDATIONS

Provided below are recommendations that are applicable to the restoration of the public interior spaces as a whole and are important considerations for preservation planning prior to the commencement of work.

- **Educational opportunities for maintenance staff.** Acknowledging that many of the practices outlined in this report are likely new or challenging to those performing the building's on-going maintenance, it is imperative that any staff undertaking tasks without prior experience receive training from experts. Avenues recommended for the facilitation of training include partnerships with Savannah Technical College's Historic Preservation Department as well as the identification of local conservation experts, such as those used at the Isiah Davenport House. Likewise important is understanding which tasks can only be performed by outside conservators or consultants.
- **Qualifications based selection process.** Behind every quality restoration project is a qualified restoration team. Imperative to the success of any restoration work performed at City Hall will be the selection of qualified tradespeople who showcase past restoration project successes and strong references that have been verified. It is therefore strongly recommended that all contractors hired be selected through a qualifications based selection process that is scored, followed by negotiations with the highest scored applicant. If a final agreement is unable to be reached, the negotiation process should begin with the second highest scored applicant. Applicants without historic preservation experience should be dismissed.
- A **preliminary investigative phase** is recommended prior to the completion of any restoration work to allow for deeper examination of the issues presented and the testing of products and methods. This will allow for greater clarity and the refinement of the scope and budget at project outset.
- **Contractor to provide a finish report.** Upon completion of the preliminary investigative phase, the contractor should provide a detailed finish report outlining the specific means and methods used to clean and repair materials, including brand names, colors, and finishes. This report should likewise be reviewed again at the end of the project to evaluate project success.
- **Consolidation of work.** It is highly recommended that tasks be married whenever possible for consistency of craftsmanship and economy of budget, reducing the amount of total time a space may need to vacated in order for restoration to occur. All woodwork and brass restoration completed in the rotunda, for example, should be performed at one time on all levels. This will allow for the economization of costs and labor associated with scaffolding use. The greater the number of phases during restoration, the more opportunities arise for detriment to the building's historic and architectural integrity.

- **Consistency of methods and finishes.** The use of conservators, craftsmen, and tradespeople for work on specific material types should be as consistent as possible as every person will work differently, which could be reflected in the final finish of phased restorations. All woodwork restoration, for example, should be completed at the same time. As evidenced within the interior of the reception room council lockers, the original wood stain may have originally been much lighter. In a space such as the rotunda, woodwork on multiple floors is viewed together from many vantage points. Consistency of finish throughout this space, for example, is essential.
- **Annual building inspection.** A successful maintenance program is key to the long-term preservation of historic buildings and should be performed over the course of several days covering the entirety of the interior and exterior of City Hall. Regular inspections and accurate record-keeping are essential. Biannual inspections, occurring ideally in the spring and fall, can include the identification of major and minor problems as well as the documentation of conditions and restoration progress. Based on guidance from City staff, an annual inspection was suggested for immediate adoption, as currently no periodic building inspections occur. An Annual Building Inspection Form and Supplementary Data Sheet have been included as Appendix E.
- **Records and documentation.** When issues are identified, it is important that they are documented. Further, any time work is performed in City Hall a record should be kept. Painting records, for example, are important for selecting compatible touch-up and subsequent repainting. The location of the work and the type, manufacturer, and color of the paint should always be noted (Preservation Brief 27). Records should indicate the date a problem is first noted, when it was corrected, and the treatment method. Blank base plans and elevations, included with each log, may also prove useful for noting the locations of issues. The most accurate way to keep and maintain records such as these is through the use of a Computerized Maintenance Management System (CMMS), such as Hippo.
- **Consult historical research whenever applicable.** The City is fortunate to have both *The Birth of City Hall* and *A Century of History,* two documents which provide significant historical research and background information. The most exhaustive compilation of information available regarding City Hall at the time of its construction, these documents describe areas and details throughout the building, including areas outside of the scope of this report. As the scope expands, relying on extant historical research is imperative for the restoration of the entire building.

After a through examination of Savannah's City Hall, it is clear that the building's interior public spaces have seen considerable wear and are in need of restoration.

All elements of this report serve to work together to inform future restoration efforts. All restoration and maintenance solutions selected were identified based on need, priority, and the period of restoration; guided by the Secretary of the Interior's Standards for Restoration (Appendix A). Additional insight was provided from technical Preservation Briefs and on-site inspections from trade and other restoration experts. Whether addressing restoration related to a specific historic material or by individual room or space, a comprehensive list of issues and concerns and their associated solution(s) and maintenance recommendations are outlined in Appendix B. All spaces identified in Appendix B are keyed to a building plan, included as Appendix D. Lastly, each line item in Appendix B has an associated quote for cost and service which has been included as Appendix C.

In addition to adopting the restoration measures outlined in this report, several overarching historic preservation policies should be implemented to facilitate and manage the building's continued preservation long-term.

With international fame for its history and architecture, the City of Savannah is an important steward of numerous historic buildings, cemeteries, squares, and monuments. The incorporation of staff devoted to historic preservation efforts could serve to ensure the implementation of restoration efforts at City Hall but also manage similar and related projects involving other municipal historic resources. **The successful restoration of City Hall should be managed by a historic preservation staff person that has a planning and advisory role who would work directly with a separate historic preservation staff person from the City's facilities management and maintenance division.** These roles are best described as preservation planning and preservation trades positions. They could potentially fall within the City's new Arts, Culture and Historical Resources Department as well as the Real Estate Services Department. Both positions currently do not exist. **With the City's on-going restructuring efforts, however, a significant opportunity exists for the integration of such positions, the transition and restoration of interior space, and the incorporation of a larger restoration capital campaign.**

Acknowledging that the appointment of these staff positions will take time and that there is active alteration of the building occurring routinely, oversight of these changes as well as the building's restoration moving forward is imperative due to the potential loss of historical and architectural integrity. **It is recommended that an internal advisory committee be appointed to review the 3-1-1 work requests that are generated for alterations to City Hall, with representatives from the Arts, Culture and Historical Resources Department, the Real Estate Services Department, Facilities Maintenance Division, and the Sustainability office.** The City's Preservation Officer, who's office is housed at the Savannah Chatham County Metropolitan Planning Commission, as well as the CEO of Historic Savannah Foundation should likewise serve as liaisons and topical experts as needed for guidance. A similar committee exists in Charleston, known as the Design Review Committee (DRC). The DRC exists to review changes which may affect the visual quality of City property to include the interior and exterior of buildings, in particular "the original materials which make up our historic City. All work involving the removal, installation or repair to our historic building materials, such as brick, mortar, plaster, etc...should be reviewed by DRC."

Lastly, the City's Historic Preservation Advisory Council, made up of volunteers with historic preservation backgrounds and interest, could also play an advisory role in restoration efforts.

It is highly recommended that the interior public spaces of City Hall receive restoration in the short term, particularly those items which have been given an "A" rating in priority. **As more time passes, the breadth and costs associated with the restoration of the spaces included in this scope will grow as their deterioration increases and condition declines.** While much of the building's historic fabric remains intact, this is not guaranteed in the long term. Further, it should be noted that all of the quotes provided in this document are based on current market rates for material and labor and are subject to change.

While the restoration of these public spaces are of the utmost priority, it should be noted that the entirety of the building is ripe for restoration. A brief tour of a handful of secondary spaces, showed that the deterioration and condition of the public spaces is representative of the building as a whole.

CONCLUSION

Historic buildings are reminders of a city's culture and complexity, assisting to maintain a city's sense of permanency and heritage. As the seat of central government, Savannah's City Hall remains at the physical and metaphorical heart of the city. **With uninterrupted operation since 1906, City Hall's state of preservation can be attributed to this maintained activity as there is no better means of preservation than continued use.** It is therefore of the greatest importance that City Hall continue to remain in use. **A tenant of restoration, the most appropriate use for a building is its intended use; therefore, City Hall's historic and architectural integrity is best maintained if it continues to serve as the seat of central government.** This not only addresses the practical and emotional aspects of preservation but also provides an economy of reuse, capitalizing on space already fiscally and physically managed by the City.

With the potential to transform City Hall to showcase historic preservation, honoring the very practice that made Savannah the city that it is today, the Savannah City Hall Interior Condition Assessment and Restoration Plan could not be more timely. City Hall's existing condition, paired with the City's recent restructuring efforts, present a great opportunity for the beginning of a restoration campaign for City Hall. Understanding that the historic materials and conditions found in the public interior spaces of City Hall are repeated and found throughout the building, this report is adaptable for addressing interior restoration efforts throughout the building. Using this document as a guide, the City is now poised to adopt this project with confidence and clarity.

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A. Secretary of the Interior's Standards for Restoration

1. A property will be used as it was historically or be given a new use that interprets the property and its restoration period.
2. Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces and spatial relationships that characterize the period will not be undertaken.
3. Each property will be recognized as a physical record of its time, place and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection and properly documented for future research.
4. Materials, features, spaces and finishes that characterize other historical periods will be documented prior to their alteration or removal.
5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.
6. Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials.
7. Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.
8. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
9. Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
10. Designs that were never executed historically will not be constructed.

B. List of Concerns by Material, Location, and Severity

Data gathered throughout this process was organized into a spreadsheet format by material, location, and severity of concern. All issues were given an order of priority, with A being the first or highest priority, B being of moderate priority, or C being of the least priority. Issues were also given a level of concern identified as severity, with 1 being low, 2 being moderate, and 3 being high. Solutions were listed for each item, to include a best solution, secondary solution if applicable, and long term maintenance advisement if applicable.

LIST OF CONCERNS BY MATERIAL

ISSUES OF CONCERN LISTED BY MATERIAL									
	Issue	Location	Order of Priority (A first, B second, C third)	Level of Concern (Severity: 1 low, 2 moderate, 3 high)	Best Solution (1)	Secondary Solution (2)	Maintenance (3)	Source	Page
Tile									
	Missing Tiles	Lobby	B	2	Tile Replacement with Salvaged Tile	Tile Replacement with Reproduction Tile	n/a	Landmark Preservation	45
	Cracking of Mosaic Tile Along Ceiling and Floor	Lobby	A	2	Perform Structural Assessment, Remove Tile Around Affected Locations, Patch and Install In-Kind Tiles in Original Pattern as Closely as Possible	Clean and Patch with Like Materials	n/a	Landmark Preservation, Bennett Preservation Engineering PC	47
	Tile Staining and Efflorescence	Lobby	C	1	Clean with Non-Soap-Based Cleaner	n/a	Clean Floor Monthly	Landmark Preservation	54
	Missing Penny Tiles	Rotunda	B	2	Tile Replacement with Reproduction Tile	n/a	n/a	Landmark Preservation	68
	Cracks in Penny Tile	Rotunda	B	2	Perform Structural Assessment, Remove Tile Around Affected Locations, Patch and Install In-Kind Tiles in Original Pattern as Closely as Possible	n/a	Clean Floor Monthly	Landmark Preservation, Bennett Preservation Engineering PC	69
Marble									
	Voids and Seams in Marble Walls and Trim	Lobby	B	2	Fill Voids and Seams in Marble	n/a	Prohibit the Creation of Voids and Use of Adhesives	Landmark Preservation	50
	Staining and Efflorescence	Lobby	B	2	Clean and Polish Wall Panels	n/a	n/a	Landmark Preservation	52
	Appurtenances Attached to Marble Walls	Lobby	C	1	Partial Removal of Appurtenances from Space	Complete Removal of Appurtenances from Space	Policy Change and Periodic Monitoring	n/a	80
	Removal of original mail chute and inoperable water fountain original to space	Corridor	C	1	Include mail chute in interpretive dialogue and retain water fountain for interpretation.	n/a	Regular cleaning of fountain marble	Landmark Preservation	86
	Cracks in Marble Stair Treads	Stair	B	2	Install Stainless Steel Pins, Replace Crack Filler to Blend, and Match to Color and Finish of Marble	n/a	Monitor Crack Number and Size	Landmark Preservation	88
	Stained Marble Thresholds	Council Chambers	C	1	Clean and Polish	n/a	n/a	Landmark Preservation	106
Woodwork									
	Main Entrance Doors to Space are Unoriginal, Missing Hardware, and Racked	Lobby	B	2	Adjust and plane door. Commission Replacement Hardware from Cast with Patina Applied	Adjust and plane door. Commission Replacement Hardware from Cast and Restore Existing Hardware	Routine Brass Polishing	Landmark Preservation	56
	Damage to Wood Trim	Rotunda	A	3	Repair or Replace In-Kind	n/a	Adopt Preservation Friendly Floor Cleaning Policies	Landmark Preservation	64
	Inconsistency and Failure of Wood Finish	Rotunda	C	1	Analysis to Confirm Original Finish, Refinish Woodwork to Match Original Finish	n/a	Adopt Preservation Friendly Cleaning Policies	Landmark Preservation	66
	Wood Trim Scrapes and Scratches	Corridor	C	1	Repair in Place	n/a	n/a	Landmark Preservation	85
	Missing and Loose Wood Trim	Stair	B	2	Reattach or Replace Wood Trim In-Kind	n/a	n/a	Landmark Preservation	89
	Missing Column Capital Scrolls	Council Chambers	A	3	Commission the Creation of a Cast or Mold of Existing Elements In-Place for the Creation of New Scrolls	n/a	Frequent Examination	Landmark Preservation	95
	Deterioration, Deep Scratches, Missing Fragments, and Loss of Finish	Council Chambers	B	2	Screen Sand, Repair or Replace Parquet Flooring In-Kind, and Refinish	n/a	Periodic examination	Landmark Preservation	97
	Damage to Historic Furniture	Council Chambers	B	2	Restore funriture to ensure integrity and condition.	n/a	Prohibit Adhesives, clean and wax wood furniture	Landmark Preservation	99

ISSUES OF CONCERN LISTED BY MATERIAL									
	Issue	Location	Order of Priority (A first, B second, C third)	Level of Concern (Severity: 1 low, 2 moderate, 3 high)	Best Solution (1)	Secondary Solution (2)	Maintenance (3)	Source	Page
	Woodwork Deterioration, Holes, and Missing Pieces	Council Chambers	A	3	Fill Holes with Epoxy and Faux Grain, Sand and Restore Etched Areas Whenever Possible, and Create Missing Baseboard In-Kind to Match	n/a	n/a	Landmark Preservation	105
	Installation of Window Curtains and Blinds Unoriginal to Space	Council Chambers	B	2	Removal of curtains and blinds, and restoration of roller shades		Routine Examination and Cleaning	n/a	107
	Deteriorated Parquet Flooring	Reception Room, Council Chambers	A	3	Lightly Sand, Repair or Replace Parquet Flooring In-Kind, and Refinish	n/a	Periodic Examination	Landmark Preservation	115
	Column Splitting on Entrance Surrounds	Reception Room	C	2	Fill Holes and Gaps with Wood Epoxy and Faux Finish	n/a	Periodic Examination	Landmark Preservation	116
	Altered Window Sash	Reception Room	A	2	Build and Install New Window Sash Sized Appropriately Using Existing Elements	n/a	n/a	Landmark Preservation	117
	"Alligatoring" of Wood Stain and Exposed Nails in Door Frame	Reception Room	B	2	Strip, Lightly Sand, and Stain Doors to Remove Imperfections and Remove Nails, Patch Holes, and Faux Grain to Match	n/a	n/a	Landmark Preservation	118
Brass									
	Missing Brass Door Knobs on Double Doors	Lobby	A	1	Replace Missing Door Knobs with Original Knobs From a Less Conspicuous Location	Replace Missing Door Knobs with a Replica Cast from a Mold of an Existing Fixture	n/a	n/a	59
	Tarnishing of Brass Door Hardware and Other Elements	Lobby	C	1	Surface Cleaning Only of Brass Elements	Brass Polishing and Coating	Varies Based on Solution	Landmark Preservation	60
	Tarnishing of Brass Hand Rail, Hardware, and Light Fixtures	Rotunda	C	1	Surface Cleaning Only	Brass Polishing and Coating	Varies Based on Solution	Landmark Preservation	71
	Missing Gas Shades on Historic Gasolier Lamps	Stair	C	2	Research and Install Replacement Shades	n/a	Annual Inspection	Landmark Preservation	90
	Brass Clock and Light Fixture Restoration, Incorrect Lighting Installation, and Lack of Utilization	Council Chambers	B	2	Surface Clean Existing Fixtures, Replicate Missing Fixture, Restore and Reinstall Existing Fixtures Based on Historic Photographs, and Utilize Fixtures As Intended	Polish and Coat Fixtures In-Place, Replicate Missing Fixture, Restore and Reinstall Existing Fixtures Based on Historic Photographs, and Utilize Fixtures As Intended	Periodic examination	Landmark Preservation	102
Lighting									
	Lighting is Inappropriate for Space	Lobby	C	1	Replace Existing Cove Lights with Continuous LED Cove Lighting in an Appropriate Hue	n/a	n/a	C.S. Hurd	58
	Lighting Incompatibility in Replacement Parts	Rotunda	B	2	Commission Custom Replacement Elements	n/a	Monitor Periodically	Landmark Preservation	74
Plaster									
	Multiple Paint Layers	Rotunda	C	1	Perform a Paint Analysis to Identify Original Paint Color, Color Match, and Repaint	n/a	n/a	Landmark Preservation	72
	Water Damage to Plaster in Alcoves	Rotunda	A	3	Confirm Inactivity & Clean and Repaint Walls as Needed	n/a	Monitor Periodically	Landmark Preservation	73

ISSUES OF CONCERN LISTED BY MATERIAL

Issue	Location	Order of Priority (A first, B second, C third)	Level of Concern (Severity: 1 low, 2 moderate, 3 high)	Best Solution (1)	Secondary Solution (2)	Maintenance (3)	Source	Page
Insertion of Drop Ceilings in Alcoves	Rotunda	B	3	Remove Drop Ceiling, Confirm Extant Historic Fixture, Restore Plaster with Restored Light Fixture at Center, and Install Hatch, If Needed.	Install Monochrome Ceiling Panels in Place of Acoustical Tiles	n/a	Landmark Preservation	75
Adhesion of Exhibits to Wall Plaster	Rotunda	C	1	Reuse Existing Holes and Use Reversible Adhesives	n/a	Policy Change	n/a	80
Active Water Intrusion in Ceiling at South Elevation	Council Chambers	A	3	Identify Origin of Leak, Resolve, and Restore Plaster According to Historic Configuration	n/a	Routine Examination and Use of Moisture Meter	Landmark Preservation	93
Paint								
Inappropriate Painting of Ceiling Above Stair	Stair	B	1	Perform Paint Analysis and Restore	n/a	n/a	Landmark Preservation	87
Edging Overlap on Historic Materials	Stair	C	1	Strip and Clean as Specified	n/a	n/a	Landmark Preservation	91
Mechanical & Electrical								
Electrical Deficiencies and Concerns	Rotunda	A	3	Evaluate Wiring, Consolidate and Conceal Electrical Panels, and Consolidate Switches	n/a	n/a	C.S. Hurd	77
Visibility of Audio-Visual Equipment	Council Chambers	B	2	Upgrade systems to Utilize Wireless Technologies, Hide Wiring Whenever Possible, and Reduce Size and Number of Equipment Elements	n/a	Periodic Examination	C.S. Hurd	96
Loss of original fans, Temperature and Humidity Concerns	Council Chambers	B	2	Installation of Replica Fans, new HVAC equipment, and a Programable Thermostat		Monitor the Room's Temperature and Humidity	n/a	113
Abandoned HVAC Controls and Vents Remain in Space	Reception Room	C	1	Confirm Abandonment, Remove Elements, and Patch In-Kind to Match	n/a	n/a	n/a	119
Glass								
Inconsistent Glass Pattern Used in Door Panels	Reception Room	C	1	Determine Which Glass Pattern Is Used Most Often Throughout Building and Replace Other Panels to Match	n/a	n/a	Landmark Preservation	120
Windows								
Window Energy Efficency	Council Chambers, Reception Room, Stairs	B	2	Wood window frame restoration, installation of weather stripping and UV film on window glass	Install museum grade interior storm windows	Annual Window Assessment	Landmark Preservation, Indow	109
n/a								
Inappropriate Use of Space	Rotunda	A	3	Relocation of Security Equipment and Desk	n/a	n/a	n/a	42
Regulation of Temperature and Humidity	Rotunda	B	2	Replace Outdated HVAC Systems and Install Barrier Between Rotunda and Bay Street	n/a	Perform an Energy Audit	Mock Mechanical	78
Exposure of Cobblestone Exhibit	Rotunda	C	1	Place Exhibit in Plexiglass Exhibit Case	Remove from Lobby	n/a	n/a	81
South Elevation Elevator Shaft Enclosure	Corridor	A	2	Removal of Modern Fountain, Wall System, and Recreation of Iron Elevator Casing	n/a	n/a	Landmark Preservation	82
Unoriginal Secondary Mesh Installed Behind Iron Framing on Elevator Shaft	Corridor	C	1	Removal of Wire Mesh	Leave Secondary Mesh in Place and Routinely Clean	Regular Cleaning of Exterior Elevator Grills	Landmark Preservation	84

LIST OF CONCERNS BY LOCATION

ISSUES OF CONCERN LISTED BY LOCATION

	Material	Issue	Order of Priority (A first, B second, C third)	Level of Concern (Severity: 1 low, 2 moderate, 3 high)	Best Solution (1)	Secondary Solution (2)	Maintenance (3)	Source	Page
Lobby									
	n/a	Inappropriate Use of Space	A	3	Relocation of Security Equipment and Desk	n/a	n/a	n/a	42
	Mosaic Tile	Missing Mosaic Tiles	B	2	Tile Replacement with Salvaged Tile	Tile Replacement with Reproduction Tile	n/a	Landmark Preservation	45
	Mosaic Tile	Cracking of Mosaic Tile Along Ceiling and Floor	A	2	Perform Structural Assessment, Remove Tile Around Affected Locations, Patch and Install In-Kind Tiles in Original Pattern as Closely as Possible	Clean and Patch with Like Materials	n/a	Landmark Preservation, Bennett Preservation Engineering PC	47
	Marble	Voids and Seams in Marble Walls and Trim	B	2	Fill Voids and Seams in Marble	n/a	Prohibit the Creation of Voids and Use of Adhesives	Landmark Preservation	50
	Marble	Marble Staining and Efflorescence	C	1	Clean and Polish Wall Panels	n/a	n/a	Landmark Preservation	52
	Mosaic Tile	Tile Staining and Efflorescence	C	1	Clean with Non-Soap-Based Cleaner	n/a	Clean Floor Monthly	Landmark Preservation	54
	Marble	Appurtenances Attached to Marble Walls	C	1	Complete Removal of Appurtenances from Space	Partial Removal of Appurtenances from Space	Policy Change and Periodic Monitoring	n/a	55
	Woodwork	Main Entrance Doors to Space are Unoriginal, Missing Hardware, and Racked	B	2	Adjust and plane door. Commission Replacement Hardware from Cast with Patina Applied	Adjust and plane door. Commission Replacement Hardware from Cast and Restore Existing Hardware	Routine Brass Polishing	Landmark Preservation	56
	Lighting	Lighting is Inappropriate for Space	C	1	Replace Existing Cove Lights with Continuous LED Cove Lighting in an Appropriate Hue	n/a	n/a	C.S. Hurd	58
	Brass	Missing Brass Door Knobs on Double Doors	A	1	Replace Missing Door Knobs with Original Knobs From a Less Conspicuous Location	Replace Missing Door Knobs with a Replica Cast from a Mold of an Existing Fixture	n/a	n/a	59
	Brass	Tarnishing of Brass Door Hardware and Other Elements	C	1	Surface Cleaning Only of Brass Elements	Brass Polishing and Coating	Varies Based on Solution	Landmark Preservation	60
Rotunda									
	Woodwork	Damage to Wood Trim	A	3	Repair or Replace In-Kind	n/a	Adopt Preservation Friendly Floor Cleaning Policies	Landmark Preservation	64
	Woodwork	Inconsistency and Failure of Wood Finish	C	1	Analysis to Confirm Original Finish, Refinish Woodwork to Match Original Finish	n/a	Adopt Preservation Friendly Cleaning Policies	Landmark Preservation	66
	Tile	Missing Penny Tiles	B	2	Tile Replacement with Reproduction Tile	n/a	n/a	Landmark Preservation	68
	Tile	Cracks in Penny Tile	B	2	Perform Structural Assessment, Remove Tile Around Affected Locations, Patch and Install In-Kind Tiles in Original Pattern as Closely as Possible	n/a	Clean Floor Monthly	Landmark Preservation, Bennett Preservation Engineering PC	69
	Brass	Tarnishing of Brass Hand Rail, Hardware, and Light Fixtures	C	1	Surface Cleaning Only	Brass Polishing and Coating	Varies Based on Solution	Landmark Preservation	71
	Plaster	Multiple Paint Layers	C	1	Perform a Paint Analysis to Identify Original Paint Color, Color Match, and Repaint	n/a	n/a	Landmark Preservation	72
	Plaster	Water Damage to Plaster in Alcoves	A	3	Confirm Inactivity & Clean and Repaint Walls as Needed	n/a	Monitor Periodically	Landmark Preservation	73
	Lighting	Lighting Incompatibility in Replacement Parts	B	2	Commission Custom Replacement Elements	n/a	Monitor Periodically	Landmark Preservation	74
	Plaster	Insertion of Drop Ceilings in Alcoves	B	3	Remove Drop Ceiling, Confirm Extant Historic Fixture, Restore Plaster with Restored Light Fixture at Center, and Install Hatch, If Needed.	Install Monochrome Ceiling Panels in Place of Acoustical Tiles	n/a	Landmark Preservation	75

ISSUES OF CONCERN LISTED BY LOCATION

	Material	Issue	Order of Priority (A first, B second, C third)	Level of Concern (Severity: 1 low, 2 moderate, 3 high)	Best Solution (1)	Secondary Solution (2)	Maintenance (3)	Source	Page
	Electrical	Electrical Deficiencies and Concerns	A	3	Evaluate Wiring, Consolidate and Conceal Electrical Panels, and Consolidate Switches	n/a	n/a	C.S. Hurd	77
	n/a	Regulation of Temperature and Humidity	B	2	Replace Outdated HVAC Systems and Install Barrier Between Rotunda and Bay Street	n/a	Perform an Energy Audit	Mock Mechanical	78
	Plaster	Adhesion of Exhibits to Wall Plaster	C	1	Reuse Existing Holes and Use Reversible Adhesives	n/a	Policy Change	n/a	80
	n/a	Exposure of Cobblestone Exhibit	C	1	Place Exhibit in Plexiglass Exhibit Case	Remove from Lobby	n/a	n/a	81
Corridor									
	n/a	South Elevation Elevator Shaft Enclosure	A	2	Removal of Modern Fountain, Wall System, and Recreation of Iron Elevator Casing	n/a	n/a	Landmark Preservation	82
	n/a	Unoriginal Secondary Mesh Installed Behind Iron Framing on Elevator Shaft	C	1	Removal of Wire Mesh	n/a	Regular Cleaning of Exterior Elevator Grills	Landmark Preservation	84
	Woodwork	Wood Trim Scrapes and Scratches	C	1	Repair in Place	n/a	n/a	Landmark Preservation	85
	Marble	Removal of original mail chute and inoperable water fountain original to space	C	1	Include mail chute in interpretive dialogue and retain water fountain for interpretation.	n/a	Regular cleaning of fountain marble	Landmark Preservaiton	86
Stair									
	Paint	Inappropriate Painting of Ceiling Above Stair	B	1	Perform Paint Analysis and Restore	n/a	n/a	Landmark Preservation	87
	Marble	Cracks in Marble Stair Treads	B	2	Install Stainless Steel Pins, Replace Crack Filler to Blend, and Match to Color and Finish of Marble	n/a	Monitor Crack Number and Size	Landmark Preservation	88
	Woodwork	Missing and Loose Wood Trim	B	2	Reattach or Replace Wood Trim In-Kind	n/a	n/a	Landmark Preservation	89
	Brass	Missing Gas Shades on Historic Gasolier Lamps	C	2	Research and Install Replacement Shades	n/a	Annual Inspection	Landmark Preservation	90
	Paint	Paint Edging Overlap on Historic Materials	C	1	Strip and Clean as Specified	n/a	n/a	Landmark Preservation	91
Council Chambers									
	Plaster	Active Water Intrusion in Ceiling at South Elevation	A	3	Identify Origin of Leak, Resolve, and Restore Plaster According to Historic Configuration	n/a	Routine Examination and Use of Moisture Meter	Landmark Preservation	93
	Woodwork	Missing Column Capital Scrolls	A	3	Commission the Creation of a Cast or Mold of Existing Elements In-Place for the Creation of New Scrolls	n/a	Frequent Examination	Landmark Preservation	95
	Electrical	Visibility of Audio-Visual Equipment	B	2	Upgrade systems to Utilize Wireless Technologies, Hide Wiring Whenever Possible, and Reduce Size and Number of Equipment Elements	n/a	Periodic Examination	C.S. Hurd	96
	Parquet Floors	Deterioration, Deep Scratches, Missing Fragments, and Loss of Finish	B	2	Screen Sand, Repair or Replace Parquet Flooring In-Kind, and Refinish	n/a	Regular Cleaning, Refinishing and Periodic Examination	Landmark Preservation	97
	Furnishings	Damage to Historic Furniture	B	2	Restore furniture to ensure integrity and condition	n/a	Prohibit Adhesives, clean and wax furniture	Landmark Preservation	99

ISSUES OF CONCERN LISTED BY LOCATION

	Material	Issue	Order of Priority (A first, B second, C third)	Level of Concern (Severity: 1 low, 2 moderate, 3 high)	Best Solution (1)	Secondary Solution (2)	Maintenance (3)	Source	Page
	Brass	Brass Clock and Light Fixture Restoration, Incorrect Lighting Installation, and Lack of Utilization	B	2	Surface Clean Existing Fixtures, Replicate Missing Fixture, Restore and Reinstall Existing Fixtures Based on Historic Photographs, and Utilize Fixtures As Intended	Polish and Coat Fixtures In-Place, Replicate Missing Fixture, Restore and Reinstall Existing Fixtures Based on Historic Photographs, and Utilize Fixtures As Intended	Varies Based on Solution	Landmark Preservation	102
	Woodwork	Woodwork Deterioration, Holes, and Missing Pieces	A	3	Fill Holes with Epoxy and Faux Grain, Sand and Restore Etched Areas Whenever Possible, and Create Missing Baseboard In-Kind to Match	n/a	n/a	Landmark Preservation	105
	Marble	Stained Marble Thresholds	C	1	Clean and Polish Thresholds	n/a	n/a	Landmark Preservation	106
	Furnishings	Installation of Window Curtains and Blinds Unoriginal to Space	B	2	Removal of curtains and blinds, and restoration of roller shades	n/a	Routine Examination and Cleaning	n/a	107
	Windows	Window Energy Efficiency	B	2	Wood window frame restoration, installation of weather stripping and UV film on window glass.	Install museum grade interior storm windows.	Annual Window Assessment	Landmark Preservation; Indow	109
	Mechanical	Loss of original ceiling fans, Temperature and Humidity Concerns	B	2	Installation of Replica Fans, new HVAC equipment, and a Programable Thermostat	n/a	Monitor the Room's Temperature and Humidity	n/a	113
Reception Room									
	Parquet Floors	Deteriorated Parquet Flooring	A	3	Screen Sand, Repair or Replace Parquet Flooring In-Kind, and Refinish	n/a	Periodic Examination	Landmark Preservation	115
	Woodwork	Column Splitting on Entrance Surrounds	C	2	Fill Holes and Gaps with Wood Epoxy and Faux Finish	n/a	Periodic Examination	Landmark Preservation	116
	Woodwork	Altered Window Sash	A	2	Build and Install New Window Sash Sized Appropriately Using Existing Elements	n/a	n/a	Landmark Preservation	117
	Woodwork	"Alligatoring" of Wood Stain and Exposed Nails in Door Frame	B	2	Strip, Lightly Sand, and Stain Doors to Remove Imperfections and Remove Nails, Patch Holes, and Faux Grain to Match	n/a	n/a	Landmark Preservation	118
	Mechanical	Abandoned HVAC Controls and Vents Remain in Space	C	1	Confirm Abandonment, Remove Elements, and Patch In-Kind to Match	n/a	n/a	n/a	119
	Glass	Inconsistent Glass Pattern Used in Door Panels	C	1	Determine Which Glass Pattern Is Used Most Often Throughout Building and Replace Other Panels to Match	n/a	n/a	Landmark Preservation	120

LIST OF CONCERNS BY SEVERITY

ISSUES OF CONCERN LISTED BY SEVERITY

	Material	Issue	Location	Order of Priority (A first, B second, C third)	Level of Concern (Severity: 1 low, 2 moderate, 3 high)	Best Solution (1)	Secondary Solution (2)	Maintenance (3)	Source	Page
	Woodwork	Damage to Wood Trim	Rotunda	A	3	Repair or Replace In-Kind	n/a	Adopt Preservation Friendly Floor Cleaning Policies	Landmark Preservation	64
	Woodwork	Missing Column Capital Scrolls	Council Chambers	A	3	Commission the Creation of a Cast or Mold of Existing Elements In-Place for the Creation of New Scrolls	n/a	Frequent Examination	Landmark Preservation	95
	Woodwork	Woodwork Deterioration, Holes, and Missing Pieces	Council Chambers	A	3	Fill Holes with Epoxy and Faux Grain, Sand and Restore Etched Areas Whenever Possible, and Create Missing Baseboard In-Kind to Match	n/a	n/a	Landmark Preservation	105
	Parquet Floors	Deteriorated Parquet Flooring	Reception Room	A	3	Screen Sand, Repair or Replace Parquet Flooring In-Kind, and Refinish	n/a	Periodic Examination	Landmark Preservation	115
	Plaster	Water Damage to Plaster in Alcoves	Rotunda	A	3	Confirm Inactivity & Clean and Repaint Walls as Needed	n/a	Monitor Periodically	Landmark Preservation	73
	Plaster	Active Water Intrusion in Ceiling at South Elevation	Council Chambers	A	3	Identify Origin of Leak, Resolve, and Restore Plaster According to Historic Configuration	n/a	Routine Examination and Use of Moisture Meter	Landmark Preservation	93
	Electrical	Electrical Deficiencies and Concerns	Rotunda	A	3	Evaluate Wiring, Consolidate and Conceal Electrical Panels, and Consolidate Switches	n/a	n/a	C.S. Hurd	77
	n/a	Inappropriate Use of Space	Lobby	A	3	Relocation of Security Equipment and Desk	n/a	n/a	n/a	42
	Plaster	Insertion of Drop Ceilings in Alcoves	Rotunda	B	3	Remove Drop Ceiling, Confirm Extant Historic Fixture, Restore Plaster with Restored Light Fixture at Center, and Install Hatch, If Needed.	Install Monochrome Ceiling Panels in Place of Acoustical Tiles	n/a	Landmark Preservation	75
	Mosaic Tile	Cracking of Mosaic Tile Along Ceiling and Floor	Lobby	A	2	Perform Structural Assessment, Remove Tile Around Affected Locations, Patch and Install In-Kind Tiles in Original Pattern as Closely as Possible	Clean and Patch with Like Materials	n/a	Landmark Preservation, Bennett Preservation Engineering PC	47
	Woodwork	Altered Window Sash	Reception Room	A	2	Build and Install New Window Sash Sized Appropriately Using Existing Elements	n/a	n/a	Landmark Preservation	117
	n/a	South Elevation Elevator Shaft Enclosure	Corridor	A	2	Removal of Modern Fountain, Wall System, and Recreation of Iron Elevator Casing	n/a	n/a	Landmark Preservation	82
	Tile	Cracks in Penny Tile	Rotunda	B	2	Perform Structural Assessment, Remove Tile Around Affected Locations, Patch and Install In-Kind Tiles in Original Pattern as Closely as Possible	n/a	Clean Floor Monthly	Landmark Preservation, Bennett Preservation Engineering PC	69
	Parquet Floors	Deterioration, Deep Scratches, Missing Fragments, and Loss of Finish	Council Chambers	B	2	Lightly Sand, Repair or Replace Parquet Flooring In-Kind, and Refinish	n/a	Periodic examination	Landmark Preservation	97
	Furnishings	Damage to Historic Furniture	Council Chambers	B	2	Restore furniture to ensure integrity and condition.		Prohibit Adhesives, clean and wax wood furniture	Landmark Preservation	99
	Mosaic Tile	Missing Tiles	Lobby	B	2	Tile Replacement with Salvaged Tile	Tile Replacement with Reproduction Tile	n/a	Landmark Preservation	45
	Tile	Missing Penny Tiles	Rotunda	B	2	Tile Replacement with Reproduction Tile	n/a	n/a	Landmark Preservation	68
	Marble	Voids and Seams in Marble Walls and Trim	Lobby	B	2	Fill Voids and Seams in Marble	n/a	Prohibit the Creation of Voids and Use of Adhesives	Landmark Preservation	50
	Marble	Cracks in Marble Stair Treads	Stair	B	2	Install Stainless Steel Pins, Replace Crack Filler to Blend, and Match to Color and Finish of Marble	n/a	Monitor Crack Number and Size	Landmark Preservation	88
	Woodwork	Main Entrance Doors to Space are Unoriginal, Missing Hardware, and Racked	Lobby	B	2	Adjust and plane door. Commission Replacement Hardware from Cast with Patina Applied	Adjust and plane door. Commission Replacement Hardware from Cast and Restore Existing Hardware	Routine Brass Polishing	Landmark Preservation	56
	Woodwork	Missing and Loose Wood Trim	Stair	B	2	Reattach or Replace Wood Trim In-Kind	n/a	n/a	Landmark Preservation	89

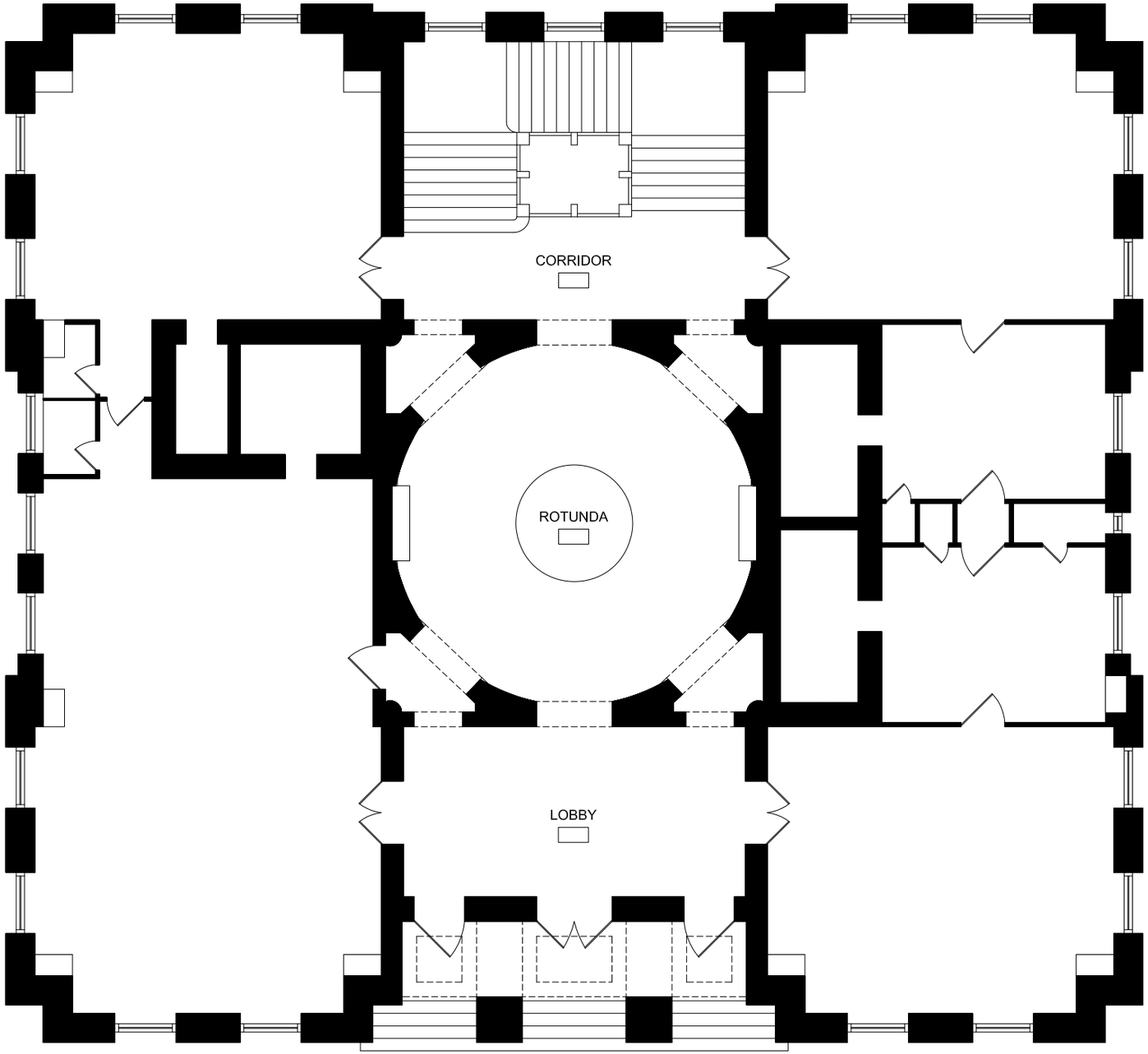
ISSUES OF CONCERN LISTED BY SEVERITY

	Material	Issue	Location	Order of Priority (A first, B second, C third)	Level of Concern (Severity: 1 low, 2 moderate, 3 high)	Best Solution (1)	Secondary Solution (2)	Maintenance (3)	Source	Page
	Furnishings	Installation of Window Curtains and Blinds Unoriginal to Space	Council Chambers	B	2	Removal of curtains and blinds, and restoration of roller shades.		Routine Examination and Cleaning	n/a	107
	Woodwork	"Alligatoring" of Wood Stain and Exposed Nails in Door Frame	Reception Room	B	2	Strip, Lightly Sand, and Stain Doors to Remove Imperfections and Remove Nails, Patch Holes, and Faux Grain to Match	n/a	n/a	Landmark Preservation	118
	Brass	Brass Clock and Light Fixture Restoration, Incorrect Lighting Installation, and Lack of Utilization	Council Chambers	B	2	Surface Clean Existing Fixtures, Replicate Missing Fixture, Restore and Reinstall Existing Fixtures Based on Historic Photographs, and Utilize Fixtures As Intended	Polish and Coat Fixtures In-Place, Replicate Missing Fixture, Restore and Reinstall Existing Fixtures Based on Historic Photographs, and Utilize Fixtures As Intended	Periodic examination	Landmark Preservation	102
	Lighting	Lighting Incompatibility in Replacement Parts	Rotunda	B	2	Commission Custom Replacement Elements	n/a	Monitor Periodically	Landmark Preservation	74
	Electrical	Visibility of Audio-Visual Equipment	Council Chambers	B	2	Upgrade systems to Utilize Wireless Technologies, Hide Wiring Whenever Possible, and Reduce Size and Number of Equipment Elements	n/a	Periodic Examination	C.S. Hurd	96
	Mechanical	Loss of original ceiling fans, temperature and humidity concerns	Council Chambers	B	2	Installation of Replica Fans, new HVAC equipment, and a Programable Thermostat		Monitor the Room's Temperature and Humidity	n/a	113
	n/a	Regulation of Temperature and Humidity	Rotunda	B	2	Replace Outdated HVAC Systems and Install Barrier Between Rotunda and Bay Street	n/a	Perform an Energy Audit	Mock Mechanical	78
	Windows	Window Energy Efficiency	Council Chambers, Reception Room, Stair	B	2	Wood window frame restoration, installation of weather stripping and UV film on window glass	Install museum grade interior storm windows.	Annual Window Assessment	Landmark Preservation, Indow	109
	Brass	Missing Gas Shades on Historic Gasolier Lamps	Stair	C	2	Research and Install Replacement Shades	n/a	Annual Inspection	Landmark Preservation	90
	Woodwork	Column Splitting on Entrance Surrounds	Reception Room	C	2	Fill Holes and Gaps with Wood Epoxy and Faux Finish	n/a	Periodic Examination	Landmark Preservation	116
	Brass	Missing Brass Door Knobs on Double Doors	Lobby	A	1	Replace Missing Door Knobs with Original Knobs From a Less Conspicuous Location	Replace Missing Door Knobs with a Replica Cast from a Mold of an Existing Fixture	n/a	n/a	59
	Paint	Inappropriate Painting of Ceiling Above Stair	Stair	B	1	Perform Paint Analysis and Restore	n/a	n/a	Landmark Preservation	87
	Marble	Removal of Original Mail Chute and Inoperable Water Fountain Original to Space	Corridor	C	1	Include mail chute in interpretive dialogue and retain water fountain for interpretation	n/a	Regular cleaning of fountain marble	Landmark Preservation	86
	Marble	Appurtenances Attached to Marble Walls	Lobby	C	1	Partial Removal of Appurtenances from Space	Complete Removal of Appurtenances from Space	Policy Change and Periodic Monitoring	n/a	55
	Paint	Edging Overlap on Historic Materials	Stair	C	1	Strip and Clean as Specified	n/a	n/a	Landmark Preservation	91
	Mosaic Tile	Tile Staining and Efflorescence	Lobby	C	1	Clean with Non-Soap-Based Cleaner	n/a	Clean Floor Monthly	Landmark Preservation	54
	Marble	Staining and Efflorescence	Lobby	C	1	Clean and Polish Wall Panels	n/a	n/a	Landmark Preservation	52
	Woodwork	Inconsistency and Failure of Wood Finish	Rotunda	C	1	Analysis to Confirm Original Finish, Refinish Woodwork to Match Original Finish	n/a	Adopt Preservation Friendly Cleaning Policies	Landmark Preservation	66
	Woodwork	Wood Trim Scrapes and Scratches	Corridor	C	1	Repair in Place	n/a	n/a	Landmark Preservation	85
	Brass	Tarnishing of Brass Door Hardware and Other Elements	Lobby	C	1	Surface Cleaning Only of Brass Elements	Brass Polishing and Coating	Varies Based on Solution	Landmark Preservation	60
	Lighting	Lighting is Inappropriate for Space	Lobby	C	1	Replace Existing Cove Lights with Continuous LED Cove Lighting in an Appropriate Hue	n/a	n/a	C.S. Hurd	58
	Marble	Stained Marble Thresholds	Council Chambers	C	1	Clean and Polish	n/a	n/a	Landmark Preservation	106

ISSUES OF CONCERN LISTED BY SEVERITY										
	Material	Issue	Location	Order of Priority (A first, B second, C third)	Level of Concern (Severity: 1 low, 2 moderate, 3 high)	Best Solution (1)	Secondary Solution (2)	Maintenance (3)	Source	Page
	Brass	Tarnishing of Brass Hand Rail, Hardware, and Light Fixtures	Rotunda	C	1	Surface Cleaning Only	Brass Polishing and Coating	Varies Based on Solution	Landmark Preservation	71
	Plaster	Multiple Paint Layers	Rotunda	C	1	Perform a Paint Analysis to Identify Original Paint Color, Color Match, and Repaint	n/a	n/a	Landmark Preservation	72
	Plaster	Adhesion of Exhibits to Wall Plaster	Rotunda	C	1	Reuse Existing Holes and Use Reversible Adhesives	n/a	Policy Change	n/a	80
	Mechanical	Abandoned HVAC Controls and Vents Remain in Space	Reception Room	C	1	Confirm Abandonment, Remove Elements, and Patch In-Kind to Match	n/a	n/a	n/a	119
	Glass	Inconsistent Glass Pattern Used in Door Panels	Reception Room	C	1	Determine Which Glass Pattern Is Used Most Often Throughout Building and Replace Other Panels to Match	n/a	n/a	Landmark Preservation	120
	n/a	Exposure of Cobblestone Exhibit	Rotunda	C	1	Place Exhibit in Plexiglass Exhibit Case	Remove from Lobby	n/a	n/a	81
	n/a	Unoriginal Secondary Mesh Installed Behind Iron Framing on Elevator Shaft	Corridor	C	1	Removal of Wire Mesh		Regular Cleaning of Exterior Elevator Grills	Landmark Preservation	84

C. Building Plans

At the project outset, an in-field examination of all spaces under study was performed. Interior dimensions were verified against original plans and then transferred into AutoCAD to produce a plan reflective of existing conditions for reference in this report.



1 FIRST FLOOR PLAN

0 2'-8" 5'-4" 10'-8"

LOMINACK KOLMAN SMITH
Architects
Post Office Box 1587
Savannah, Georgia, 31402
(912) 232-5561

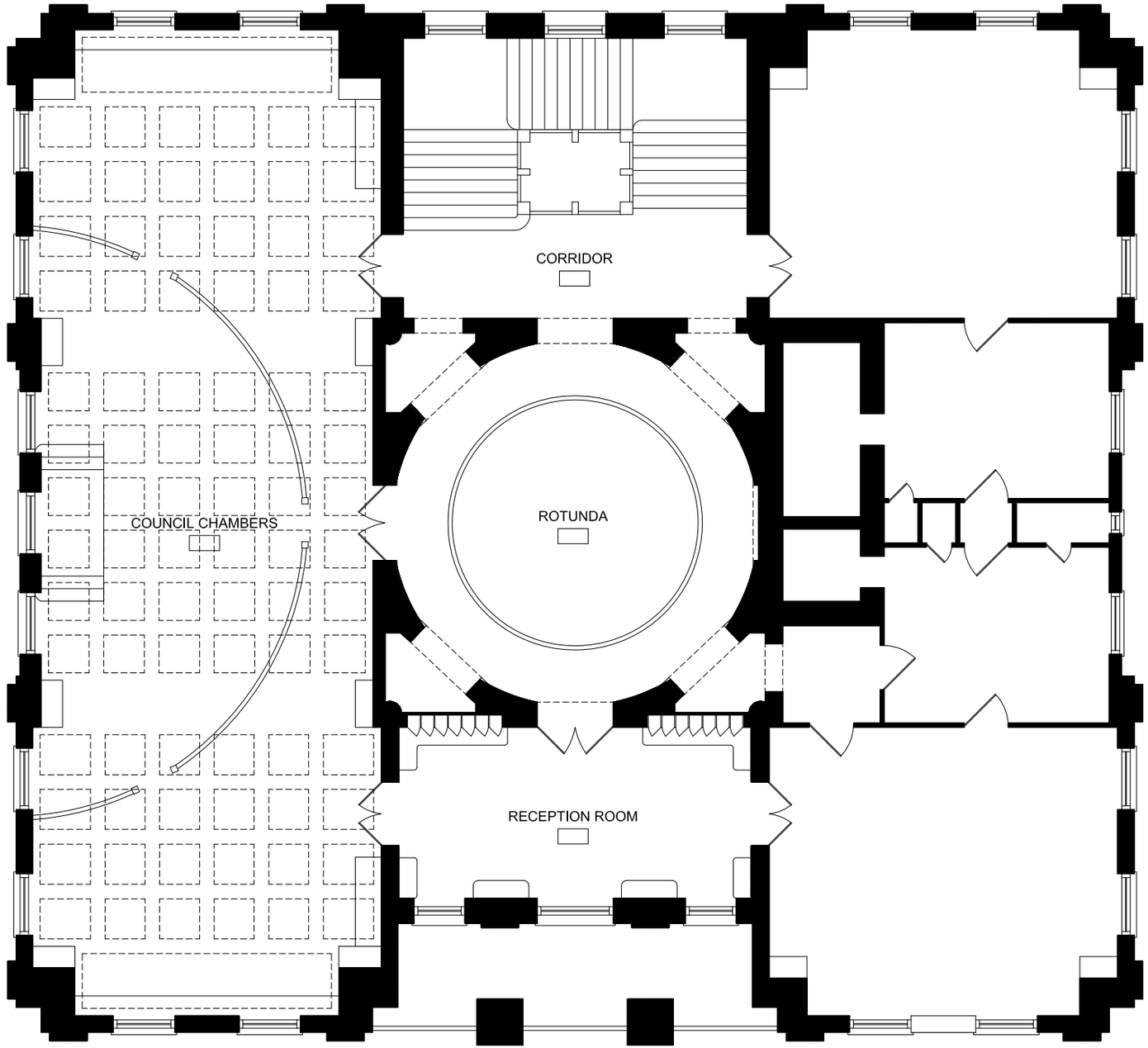
consultants:

revision	date	description

Savannah City Hall
Assessment & Restoration Plan
2 E Bay Street, Savannah

date:	7.24.2017
job number:	1716
drawn by:	AN
checked by:	RJF

SHEET:
A1
OF:



1 SECOND FLOOR PLAN

0 2'-8" 5'-4" 10'-8"

LOMINACK KOLMAN SMITH
Architects
Post Office Box 1587
Savannah, Georgia, 31402
(912) 232-5561

consultants:

revision	date	description

Savannah City Hall
Assessment & Restoration Plan
2 E Bay Street, Savannah

date:	7.24.2017
job number:	1716
drawn by:	AN
checked by:	RJF

SHEET:
A2
OF:

D. Quotes for Services

The budget estimates provided below and in the following detailed quotes are representative of an extensive review of the existing conditions observed during numerous site visits to City Hall, and conversations held between LKSA, City Hall staff, and representatives from the following companies.

Sources for quotes were provided by:

Landmark Preservation
Contact: Greg Jacobs, Managing Partner
PO Box 6804
Savannah, GA 31412
(912) 547-6911
Greg@landmarkpreservationllc.com

C.S. Hurd
Contact: Scott Dukes
480 Edsel Drive, Suite 100
Richmond Hill, GA 31324
(912) 756-5881
sduke@cshurd.com

Coastal Companies (3M Distributor)
Contact: Dennis J. Fusco
9 Hunter Road, Suite F
Hilton Head Island, SC 29926
(843) 341-6789 x224
dfusco@coastalfilms.com

Mock Plumbing & Mechanical
Contact: Andrew Booker, HVAC Estimator
PO Box 22456
Savannah, GA 31403
(912) 232-1104
andrewb@mocksavannah.com

Stage Front
6 Southern Oaks Drive
Savannah, GA 31405
Contact: Cary Shoob, Systems Consultant
(912) 721-5707
Cary.Shoob@StafeFront.net

Indow
Contact: Nancy Dinh
2267 N. Interstate Avenue
Portland, OR 97227
(503) 470-7136
Nancy@indowwindows.com

LANDMARK
PRESERVATION

January 26, 2018

Lominack Kolman Smith Architects
Attn: Rebecca Fenwick
301 West Broughton Street, Suite 301
Savannah, GA 31401

RE: Savannah City Hall Restoration Costs

Dear Ms. Fenwick,

Per your request, Landmark Preservation LLC (Landmark) has produced the attached budgets for the restoration of the lobby, rotunda (1st and 2nd floors), stair hall/corridors (1st and 2nd floors), reception room, and council chambers in Savannah's City Hall. The figures represent extensive review of existing conditions as observed during numerous, thorough site investigation visits, as well as a complete review of the means and methods detailed within your overall assessment.

The budget is separated by room and detailed by restoration task. For the sake estimating, each line item includes the materials, labor, and equipment required to complete the task, plus an ample percentage for contractor overhead and profit. The restoration estimate also includes a contingency line for each room to capture any additional or indirect costs that may be associated with the performance of the scope of work.

Landmark thanks you for the opportunity to be a part of your assessment efforts. Please do not hesitate to contact me if you have any questions whatsoever or would simply like to discuss any aspect of our proposed budget.

Sincerely,

Greg Jacobs – Managing Partner

P. O. Box 8604, Savannah, GA 31412 (912) 547-6911 greg@landmarkpreservationllc.com

CITY HALL RESTORATION BUDGET

The following budgets are to serve as estimates only based on the conditions and means and methods described in this report. Actual cost may vary depending on the timing of commencement, phasing, scope of work, etc., particularly as it pertains to general conditions costs. Line items below include a reasonable factor for contractor overhead and profit.

LOBBY		**$154,008.00**
General Conditions	$ 8,960.00	
Scaffolding	$ 3,150.00	
Structural Engineer Assessment	$26,000.00	
15% Contingency	$20,088.00	
Brass Door Hardware Replacement	$13,560.00	
Entry Door Repair & Refinishing	$ 5,900.00	
Brass Door Hardware Cleaning	$ 1,050.00	
Marble Repair	$ 5,250.00	
Marble Cleaning	$14,750.00	
Mosaic Repairs/Selective Re-Grouting	$31,400.00	
Mosaic Cleaning	$23,900.00	

ROTUNDA (FLOORS ONE AND TWO)		**$367,829.80**
General Conditions	$11,880.00	
Scaffolding	$27,200.00	
Structural Engineer Assessment	$26,000.00	
15% Contingency	$47,977.80	
Historic Paint Analysis (Walls)	$ 1,300.00	
Polishing Brass @ Fountain	$ 690.00	
Brass Door Hardware Replacement	$13,560.00	
Selective Door Glass Replacement	$ 4,550.00	
Brass Door Hardware Cleaning	$ 1,970.00	
Millwork Repair	$16,750.00	
Millwork Stripping & Refinishing	$53,800.00	
Plaster Wall Repair	$ 9,850.00	
Plaster Ceilings in Alcoves	$12,175.00	
Plaster Wall and Ceiling Painting	$22,450.00	
Marble Repair	$ 8,010.00	
Marble Cleaning	$36,050.00	
Tile Repairs/Selective Re-Grouting	$21,650.00	
Tile Cleaning	$21,150.00	
Fountain Marble Curb Cleaning	$ 2,490.00	
Electrical – Fixture Lower Escutcheon Replication	$ 1,547.00	
Fixture Allowance for Alcoves	$10,400.00	
Brass Electrical Fixture Cleaning	$ 9,880.00	
Electrical Fixture Globe Allowance	$ 6,500.00	

CORRIDORS (FLOORS ONE AND TWO)		**$287,088.30**
General Conditions	$11,880.00	
Scaffolding	$10,950.00	
15% Contingency	$37,446.30	
Historic Paint Analysis (Walls, Stair, Elevator)	$ 5,200.00	
South Elevator Wall Panel Removal	$ 2,240.00	
South Elevator Iron Panel Fabrication and Installation	$31,865.00	
Millwork Repair & Refinishing	$12,500.00	
Handrail Stripping & Refinishing	$ 3,450.00	
Plaster Wall and Ceiling Repair	$ 7,050.00	
Plaster Wall and Ceiling Painting	$14,750.00	
Stripping of Underside of Stairs (Where Required)	$ 8,350.00	
Painting (Decorative Finish, Where Required)	$ 7,700.00	
Painting of Staircase Metal	$ 8,350.00	
Painting of Elevator Metal	$14,750.00	
Marble Repair	$ 8,010.00	
Marble Cleaning	$36,050.00	
Tile Repairs/Selective Re-Grouting	$21,650.00	
Tile Cleaning	$21,150.00	
Marble Stair Slab Repairs	$11,215.00	
Electrical – Fixture Lower Escutcheon Replication	$ 2,327.00	
Brass Electrical Fixture Cleaning	$ 3,705.00	
Electrical Fixture Globe Allowance	$ 6,500.00	

COUNCIL CHAMBERS		**$424,971.66**
General Conditions	$16,590.00	
Scaffolding	$ 7,700.00	
15% Contingency	$65,338.41	
Forensic Inspection for Water Intrusion	$13,000.00	
Historic Paint Analysis (Walls, Ceiling)	$ 5,200.00	
Window Repairs	$10,650.00	
Selective Door Glass Replacement	$ 4,550.00	
Brass Door Hardware Cleaning	$ 1,970.00	
Millwork Repair and Refinishing	$80,100.00	
Plaster Wall & Ceiling Repair	$ 9,610.00	
Plaster Wall & Ceiling Painting	$35,400.00	
Flooring Repairs	$12,450.00	
Flooring Refinishing	$26,000.00	
Marble Threshold Cleaning	$ 820.00	
Furniture Repair & Refinishing	$55,100.00	
Touch-Up of Faux Graining on Furniture	$ 6,500.00	
Reconstruction of North & South Built-in Benches	$19,350.00	
Re-hang Wall Sconces	$ 5,200.00	
Replication of Missing Wall Sconce	$10,000.00	
Brass Electrical Fixture Cleaning	$42,770.00	

Electrical Fixture Globe Allowance	$ 6,500.00	

RECEPTION ROOM		**$93,092.13**
General Conditions	$12,880.00	
Scaffolding	$ 2,500.00	
15% Contingency	$12,562.13	
Historic Paint Analysis (Walls, Ceiling)	$ 1,300.00	
Window Repairs	$ 1,570.00	
Brass Door Hardware Cleaning	$ 1,050.00	
Door Repairs	$ 1,570.00	
Selective Door Glass Replacement	$ 4,550.00	
Millwork Repair & Refinishing	$23,300.00	
Plaster Wall & Ceiling Repair	$ 3,410.00	
Plaster Wall & Ceiling Painting	$ 3,930.00	
Flooring Repairs	$17,050.00	
Flooring Refinishing	$ 5,330.00	

BUDGET TOTAL	**$1,326,989.89**

LANDMARK
PRESERVATION

April 19, 2018

Lominack Kolman Smith Architects
Attn: Rebecca Fenwick
301 West Broughton Street, Suite 301
Savannah, GA 31401

RE: Savannah City Hall Restoration Window Restoration

Based on our observations, discussions, and investigations, Landmark Preservation LLC (Landmark) will perform the scope of work described below to repair deficient windows in Savannah's City Hall. The scope of work will address a total of seventeen, double-hung sash window openings. This includes three in the second-floor Reception Room, eleven (with transoms) in the City Council Chambers, and three in the stairwell.

The subject windows are unquestionably in serviceable condition, although they exhibit varying amounts of deterioration that will require proper repair. Deficiencies include isolated rot, failed glazing, failing exterior finish, worn interior finish, broken/missing hardware, etc. Furthermore, the windows lack adequate weather stripping, making them susceptible to unwanted air migration. Landmark will restore the windows based on the following recommended means and methods:

- Provide and employ protection for surfaces and areas adjacent to work area as required.
- Provide and employ an 80' articulated man-lift as required to safely access the exterior of the windows.
- Provide and employ scaffolding to safely access the interior of the windows, where possible. All scaffolding will meet or exceed OSHA standards for safety to both workers and pedestrians.
- Remove all lower sashes and deteriorated upper sashes (and transoms, where applicable) and transport to workshop in Savannah for repair, where required.
- Install temporary protection over window openings as needed to prevent weather intrusion. Temporary protection will consist of Plexiglass with painted, simulated meeting rails.
- Hand-scrape all exterior wood surfaces to remove failing paint finishes.
- All failed glazing will be removed.
- Any broken glass will be removed and replaced in kind (double-strength).
- Repair all rot found in sashes, sills, frames, transoms, etc. using wood consolidant and two-part epoxy wood filler where required (West System or equivalent). Rotten areas will be

excavated to remove loose materials. A consolidant will be applied to remaining soft material to re-establish material stability. Voids will then be filled with a two-part wood epoxy filler as needed.

- Severely rotten wood members will be repaired with a wood Dutchmen or replaced where needed using in-kind materials to match existing historic wood species and grain quality as accurately as possible.
- Window jambs will be fitted with bronze 'T-profile' weather stripping. Meeting rails and sills will be fitted with spring-bronze weather stripping.
- All exterior wood surfaces will be sanded to achieve paint-ready finish.
- All bare wood will be consolidated with alkyd resin prior to priming.
- New glazing putty will be installed where required to ensure soundness.
- Removed sashes will be re-installed into repaired openings. New sash chain will be installed where required to ensure proper weighting and operation of lower sashes. All upper sashes are to be fixed in place and sealed with a flexible sealant to alleviate air migration.
- All exterior wood surfaces will be primed with an alkyd-based primer and finished with will two coats of Sherwin Williams DTM acrylic to match existing color and sheen.
- Existing historic sash locks will be cleaned and repaired where required to ensure proper function. Missing locks will be replaced with sympathetic, unlacquered brass replacements.

Landmark will complete the scope of work described above for a firm-fixed fee of $48,875.00 inclusive of all required materials, labor, and equipment, except as otherwise noted. The firm-fixed fee above includes the cost of the man-lift rental for one month in the amount of $5,200.00.

Exclusions:

- Owner to provide an on-site source of electricity and water.
- Owner to provide access to a restroom facility.

Landmark Preservation, LLC performs all work within the guidelines established by the Department of the Interior Standards for Historic Preservation and subscribes to the Code of Ethics of the American Institutes for the Conservation of Historic Works.

April 19, 2017

Greg Jacobs, Managing Partner — Date

Accepted: — Date:

3M COASTAL COMPANIES
Bringing You Sun & Safety Naturally

- *Coastal Applied Systems, LLC*
- *Coastal Installations, Inc.*
- *Coastal Alliance, LLC*

April 18, 2018

Ms. Rebecca Fenwick, Historic Preservation Specialist
Lominack Kolman Smith Architects
301 W. Broughton Street, Suite 301
Savannah, GA 31401

Re: Bid Proposal – Clear Solar Energy Savings Window Film
Savannah City Hall Restoration Project

Coastal Installations Inc. agrees to furnish and install Window Film Laminate as specified below. The film will be fitted and bonded securely to the interior surface of the glass becoming an integral part of the window system. **This proposal provides the following:**

Furnish and Install 3M Sun Control Thinsulate 75 Window Film Laminate on the proposed exterior vertical windows as referenced below:

All installations are performed by 3M Master Installers, in uniform, with photo ID badges, licensed, bonded and insured. Commercial protocol is strictly followed and a working foreman will be on site to oversee the process.

All pricing includes tax, labor, materials and interior window cleaning. The installation is priced for Monday through Friday, normal working hours. The installation time frame for completion is three (3) working days.

All equipment needed for a professional and safely completed film installation project.

Coastal Installations Inc. and 3M warranty for fifteen (15) years after date of installation, the film will maintain its solar properties without cracking, crazing or peeling of the film.

Working Estimate Only – Labor and Materials

3M Thinsulate 75

Council Chambers – eleven (11) double hung windows with top transoms
Stairwell – three (3)) double hung windows
Reception Room – three (3) double hung windows

Bid Proposal $9,200.00 to $9,800.00

9 Hunter Road, Suite F • Hilton Head Island, SC 29926
Office: 843.341.6789 Toll Free: 800.952.2725 Fax: 843.342.6781

These films are designed exclusively for commercial use.
** NOTE: We require free and clear access to said windows – no removal or dismantling of anything.
** NOTE: We require a dust / dirt free working environment.

Payment to be made as follows: 25% deposit
We take Visa and MasterCard or Checks payable to
Coastal Installations Inc.
Balance due upon completion

Acceptance of Proposal – The above prices, specification and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Please contact our office if you require a W9 and/or Certificates of Insurance prior to signing the contract.

Request W9: Yes / No Please circle and initial _____

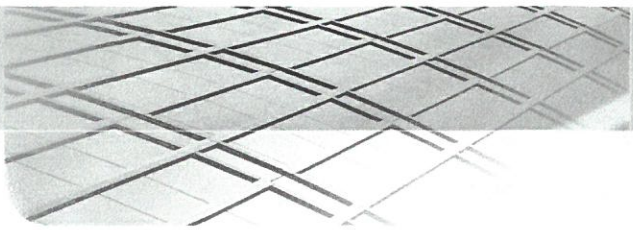
Request Certificate of Insurance Yes / No Please circle and initial _____

Company Name
Representative Signature: _____ Date of Acceptance: _____

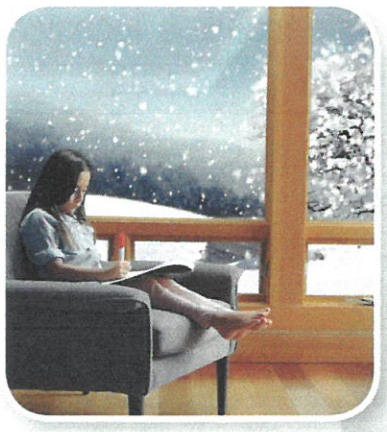
Coastal Installations Inc
Authorized Signature: Danny Lowe Date: 04-18-18

After acceptance, the customer, as signed above, hereby agrees to pay a finance charge of 1.5% per month (18% annually) on this account after 30 days from the date of any payment and also agrees to all costs of collection including reasonable attorneys' fees on the unpaid balance of this proposal if referred for collection or suit.

All material is guaranteed to be as specified. All work to be completed in professional manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements are contingent upon strikes, accidents or delays beyond our control. Owner(s) are required to carry fire, tornado, and all other necessary insurance.



Climate Controlled



Benefits

- Helps provide increased insulation performance, much like upgrading single pane to double pane, and double pane to triple pane windows
- Helps improve comfort during cold winter months
- Heat rejection helps provide comfort and energy savings in summer months
- High visible light transmission film with a neutral appearance that helps maintain the buildings existing appearance
- Helps extend the life of furnishings by significantly reducing harmful UV rays, the largest cause of fading
- Comprehensive warranty from 3M

Visible Light Transmission	★★★★
Winter Insulation	★★★★
Year Round Comfort	★★★★

In comparison to other 3M Window Films

Best ★★★★ Better ★★★ Good ★★ Fair ★

Valued Associations & Alliances

RECOMMENDED SKIN CANCER FOUNDATION · LEED · ENERGY STAR PARTNER · IWFA INTERNATIONAL WINDOW FILM ASSOCIATION · CLINTON FOUNDATION · CLINTON CLIMATE INITIATIVE · EWFA EUROPEAN WINDOW FILM ASSOCIATION · 3M

Climate Control

3M™ Thinsulate™ 75 Case Study

Historic Minnesota Governor's Residence

Climate Zone 6

1,000 sq ft Installation of Thinsulate 75

Customer Issues:

- Historic property, could not change the look of the building
- Single pane windows, caused cold, drafty areas
- Meet state energy savings goals

Product Performance & Technical Data

Glass Type (All 1/4")		Visible Light			Total Solar Energy Rejected	Solar Heat Gain Coefficient	U Value	Heat Loss Reduction	Heat Gain Reduction	UV Light Rejected	Glare Reduction	Visible Light to Solar Heat Gain Ratio
		Reflected (interior)	Reflected (exterior)	Transmitted								
Clear	Base	9%	9%	89%	18%	0.82	1.03	N/A	N/A	N/A	N/A	1.1
	Filmed	13%	15%	75%	48%	0.52	0.62	40%	37%	99.9%	16%	1.4
Tinted	Base	6%	6%	53%	37%	0.63	1.03	N/A	N/A	N/A	N/A	0.8
	Filmed	11%	8%	45%	60%	0.4	0.62	40%	37%	99.9%	15%	1.1
Double Clear	Base	15%	15%	79%	30%	0.70	0.47	N/A	N/A	N/A	N/A	1.1
	Filmed	18%	20%	68%	49%	0.51	0.34	28%	27%	99.9%	14%	1.3
Double Tinted	Base	13%	8%	47%	49%	0.51	0.47	N/A	N/A	N/A	N/A	0.9
	Filmed	16%	10%	40%	63%	0.37	0.34	28%	27%	99.9%	15%	1.1

LEED Certification

Window films may be used towards the following LEED credits:

- SS-8
- EA-1
- MR 1.1-1.2
- MR 5.1-5.2
- EQ-7.1
- EQ-7.2
- EQ-8.1-8.2
- ID

Warranty, Limited Remedy, and Disclaimer:
Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application User is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application. Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. **3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE.** If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability:
Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

3M

3M Renewable Energy Division
Window Films
3M Center, Building 235-2S-27
St. Paul, MN 55144-1000

Please recycle.

3M™ Thinsulate™ Window Film
Climate Control 75

Climate Controlled

Benefits

- Provides increased insulation performance, much like upgrading single pane to double pane, and double pane to triple pane windows
- Helps improve comfort during cold winter months
- Heat rejection helps provide comfort and energy savings in summer months
- High visible light transmission film with a neutral appearance that maintains the building's existing appearance
- Helps extend the life of furnishings by significantly reducing harmful UV rays, the largest cause of fading
- Comprehensive warranty from 3M

RECOMMENDED SKIN CANCER FOUNDATION

The Skin Cancer Foundation recommends this 3M Window Film product as an effective UV protectant.

ENERGY STAR PARTNER

3M

3M™ Thinsulate™ Window Film Climate Control 75

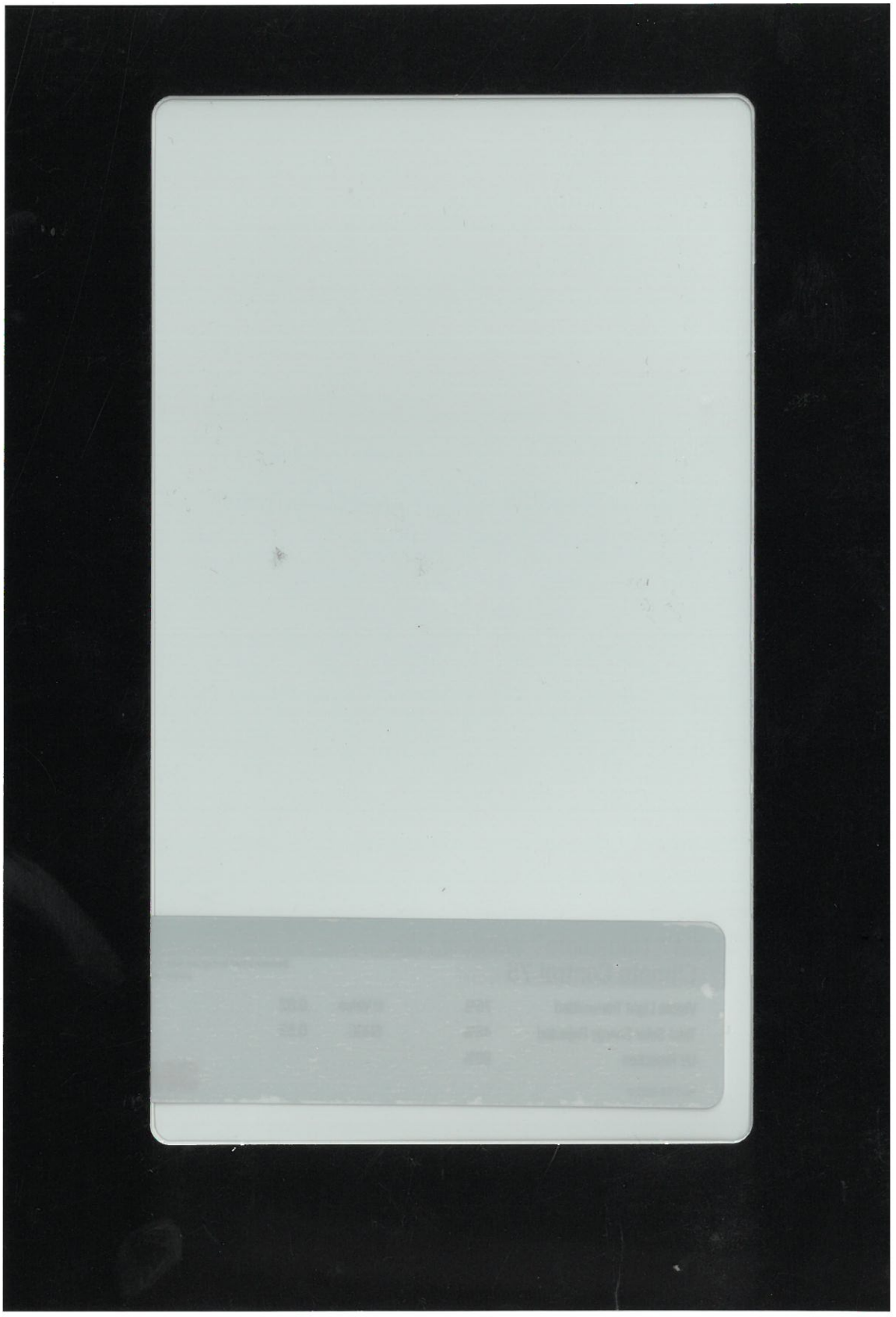
Product Performance & Technical Data

Glass Type (All 1/4")		Visible Light			Total Solar Energy Rejected	Solar Heat Gain Coefficient	U Value	Heat Loss Reduction	Heat Gain Reduction	UV Light Rejected	Glare Reduction	Visible Light to Solar Heat Gain Ratio
		Reflected (interior)	Reflected (exterior)	Transmitted								
Clear	Base (Filmed)	9% (13%)	9% (15%)	89% (75%)	18% (48%)	0.82 (0.52)	1.03 (0.62)	N/A (40%)	N/A (37%)	N/A (99.9%)	N/A (16%)	1.1 (1.4)
Tinted	Base (Filmed)	6% (11%)	6% (8%)	53% (45%)	37% (60%)	0.63 (0.4)	1.03 (0.62)	N/A (40%)	N/A (37%)	N/A (99.9%)	N/A (15%)	0.8 (1.1)
Double Clear	Base (Filmed)	15% (18%)	15% (20%)	79% (68%)	30% (49%)	0.70 (0.51)	0.47 (0.34)	N/A (28%)	N/A (27%)	N/A (99.9%)	N/A (14%)	1.1 (1.3)
Double Tinted	Base (Filmed)	13% (16%)	8% (10%)	47% (40%)	49% (63%)	0.51 (0.37)	0.47 (0.34)	N/A (28%)	N/A (27%)	N/A (99.9%)	N/A (15%)	0.9 (1.1)

LEED Certification

Window films may be used towards the following LEED credits:

- SS-8
- MR 1.1-1.2
- MR 5.1-5.2
- EQ-8.1-8.2
- EA-1
- EQ-7.1
- EQ-7.2
- ID



Warranty and Limited Remedy:
3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. **3M MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS, INCLUDING ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If the 3M product does not conform to this warranty, the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability:
Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted.

3M Renewable Energy Division
Window Films
3M Center, Building 235-2S-27
St. Paul, MN 55144-1000
3M.com/windowfilm

Indow Estimate Package

Prepared On 09/09/2016 8:36am

Dealer

Indow.
Nancy Dinh
503-470-7136
nancy@indowwindows.com

2267 N. Interstate Avenue
Portland, OR 97227

Job Site

2 E Bay St
Savannah, GA 31401

Type: Commercial
Project Name: Savannah City Hall

Customer

Rebecca Fenwick
912-232-5561
rebecca@lksarchitects.com

Savannah, GA 31401

ROOM	LOCATION	WIDTH	HEIGHT	PRODUCT	PRODUCT TYPE	TUBING	∟	PRICE
CouncilChamb	Bottom	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Top	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Bottom	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Top	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Bottom	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Top	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Bottom	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Top	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Bottom	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Top	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Bottom	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Top	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Bottom	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Top	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Bottom	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Top	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Bottom	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Top	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Bottom	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Top	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Bottom	44	66	T3 Insert	Museum	Brown	no	$727.00
CouncilChamb	Top	44	66	T3 Insert	Museum	Brown	no	$727.00
Reception	Top	44	70	T3 Insert	Standard	Brown	no	$514.00
Reception	Bottom	44	70	T3 Insert	Standard	Brown	no	$514.00
Reception	Top	44	70	T3 Insert	Standard	Brown	no	$514.00
Reception	Bottom	44	70	T3 Insert	Standard	Brown	no	$514.00
Reception	Top	44	70	T3 Insert	Standard	Brown	no	$514.00
Reception	Bottom	44	70	T3 Insert	Standard	Brown	no	$514.00
Aluminum Cut Fee					Qty 14			$350.00
Brown Mullion / LF					Qty 56			$672.00
Stair		59	80	T3 Insert	Standard	Brown	no	$787.00
Stair		59	80	T3 Insert	Standard	Brown	no	$787.00
Stair		59	80	T3 Insert	Standard	Brown	no	$787.00
Aluminum Cut Fee					Qty 3			$75.00
Brown Mullion / LF					Qty 15			$180.00

Windows	31	**Subtotal**	$22716.00
Products	119	**Volume Discount**	$-2271.60
		Total (USD)	$20444.40

This estimate is exclusively for Indow products. This estimate is valid for 21 days and is subject to review at signing due to delays or material price increases beyond our control.

Georgia Blind Company®, A Division of CDM Atlanta, Inc.
120 Howell Road
Tyrone, Georgia 30290

Phone:770-487-6041
770-487-5336
Fax: 770-487-3762

16 April 2018

Bid

Project:	unknown
Section 124940:	Roller Shades • Model: SWFcontract by Springs Window Fashions • Hardware: no pocket or fascia • Fabric: to be determined o Openness Factor: to be determined o Color: to be determined • Operation: Motorized; no controllers, 3 switches
Scope:	Furnish and install, per quantity and sizes provided; 14 units
Cost:	$12393
Addenda:	n/a
Delivery:	Allow 4 weeks
Terms:	Net 30 with approved credit Minimum acceptable D & B composite credit appraisal score 2 General contractor shall provide copy of project payment bond Proposal valid for 60 days State and local option sales taxes included FOB job site Bond not included, but is available for an additional 3%; minimums apply Review of post bid addenda or amendments billed at $0 each Davis Bacon wage rates have been allowed Electronic Employment Verification (EEV) number: 172390 Experience Modification Rate (EMR) = 1

Thank you,

Michael J. Lennon

Bennett PRESERVATION ENGINEERING PC

STRUCTURAL ENGINEERING FOR EXISTING STRUCTURES
Seismic Retrofit • Historic Preservation • National Historic Landmarks

Date: **Monday, March 26, 2018**

To: **Rebecca Fenwick**
Lominack Kolman Smith Architects
E: rebecca@lksarchitects.com

From: **Amanda Brown**

cc: **Craig M. Bennett, Jr., PE**
Taylor Frost
John Bennett, SE, PE
Bennett Preservation Engineering PC

Subject: **Savannah City Hall Investigation & Report – Proposal and Contract**

Number of sheets: 7

My filename: s:\jobs\active\2018\18-005 savannah city hall\correspondence\proposals and contracts\2018-03-26 savannah city hall investigation proposal.docx

Structural Evaluation of Overall Building Behavior

Dear Ms. Fenwick:

We appreciate your asking Bennett Preservation Engineering to present a proposal for structural engineering services for the Savannah City Hall in Savannah, Georgia. Based on your conversations with Mr. Bennett and myself, it is our understanding that you would like us to present a fee proposal for an evaluation of overall building behavior followed by a report of our findings, conclusions and recommendations. We would expect to examine all available drawings of the building, to examine all known cracks in the building and to map the settlement of the floors. From this information we would make conclusions about the cause of the cracking, and if appropriate, make recommendations for remedial work. We believe that undertaking interior finish work if there are known structural issues, might be more appropriate if completed after any structural issues are addressed.

Proposed Scope of Work for Structural Investigation and Report:

- 3-day site visit by the Bennett Preservation Engineering team to:
    - Meet with the building's representative for security and coordination prior to starting the investigation;
    - Conduct onsite evaluation and mapping of the cracks in the building;
    - Perform level surveying of horizontal surfaces and contour plotting of floor levels;
    - Meet with the building's representative after the investigation for a brief review of findings.
- A report outlining our findings, conclusions and recommendations regarding overall building behavior and cracking. You can expect the report to include:
    - Photographic documentation;
    - Contour plotting of levels to understand current structural deformation and settlement of the floor systems.

We have made an estimate of our hours for this project and propose completing this scope of work for a fixed fee of $18,440.

The following table was used to develop the professional fee for this project. This does not commit Bennett Preservation Engineering to spending the exact number of hours associated with each task or each person listed. Bennett Preservation Engineering reserves the right to redistribute the hours within the tasks and between tasks. We realize that some tasks may take more hours and some tasks may take fewer hours.

INVESTIGATION AND REPORT	**Professional Time**	**# Hours Principal Engineer**	**#Hours Project Manager**	**Expenses**
	Travel Time	4	4	--
	Meeting Prior to Investigation	1.5	1.5	--
	Onsite Investigation	16	16	--
	Meeting After Investigation	1.5	1.5	--
	Hotel (2 nights)	--	--	$800
	Food	--	--	$320
	Mileage (1 trip)	--	--	$130
	Report Writing	6	24	--
	Elevation Mapping	2	16	--
	Conference Calls	2	2	--
	Management	2	4	--
	Total Professional Hours	35	69	$1,250
	Subtotal	$7,875	$9,315	$1,250
	Total Professional Fee		**$18,440**	

With the approval of this proposal, Bennett Preservation Engineering is capable of starting this project in the very near future. Should additional work be required beyond this scope of work, we are happy to provide an addendum to this proposal based on an agreed upon fixed fee or we can work hourly per our standard hourly rates.

Should you wish to discuss anything in the proposal, please do not hesitate to call our office. If this proposal is acceptable, we have attached a short form contract for the work for you to sign and return.

Sincerely,

Amanda Brown
Architectural Preservationist
Bennett Preservation Engineering PC

An Agreement for the Provision of Limited Professional Services

Prepared by the Council of American Structural Engineers

Structural Engineer (SE):
Bennett Preservation Engineering PC
PO Box 684
Charleston SC 29402
Phone: (843) 577-8850
Email: cbennett@bennettpe.com

Client:
Rebecca Fenwick
Lominack Kolman Smith Architects
E: rebecca@lksarchitects.com

Date: *March 26, 2018*

Bennett Preservation Engineering PC Job Number: *18-005*

Project Name and Location: *Savannah City Hall Investigation & Report, Savannah, GA*

Scope of Services: *Provide engineering services for the Scope of Work as described in the attached proposal. Services may be continued beyond this phase by mutual agreement of the parties.*

Fee Arrangement:
Fee arrangement for the structural investigation and report is a fixed fee of $18,440.

Retainer Amount: *(none)* _____

Special Conditions: *(none)* _____

Offered by (SE):

March 26, 2018
(signature) (date)

Craig M. Bennett, Jr., President
(printed name/title)
For Bennett Preservation Engineering PC

The terms and conditions following this form are part of this agreement.

Accepted by (Client):

_____
(signature) (date)

_____
(printed name/title)

_____
(for)

CASE - Council of American Structural Engineers
1015 Fifteenth Street, N.W., Suite 802, Washington, D.C. 20005 202-347-7474

HOURLY RATE SCHEDULE

July 1, 2016

Bennett Preservation Engineering PC provides engineering services on a time and materials basis as follows:

A. For employees of Bennett Preservation Engineering PC

Principals, Engineering	225
Registered Specialty Engineers	175
Registered Engineers	150
Architectural Conservators/Project Managers	150
Preservationists/Project Managers	135
Engineers (Masters, Not Registered)	125
Preservationists (Masters)	120
Preservationists (Bachelors)	85
Clerical/Word processing	50

B. For services of consultants including but not limited to architectural, structural, civil, mechanical, electrical, and surveying, a multiple of 1.10 times the amount billed to Bennett Preservation Engineering PC.

C. For reimbursable expenses such as postage, telecommunications, reproduction, photography, printing, travel, etc., a multiple of 1.10 times the actual invoice.

D. For principals, minimum billable time for advising not involving engineering, is two hours at $275/hr.

E. For principals, minimum billable time for litigation research/meetings, litigation document (plans, estimates, and specifications) preparation, is two hours at $350/hr.

F. For principals, minimum billable time for mediations, depositions and court appearances is two hours at $400/hr.

G. Unless other arrangements are made, billing shall be upon completion of services or every thirty days. Payment is due upon receipt with late charges of 1.5% applied for each month after the first 30 days.

H. This rate schedule is subject to change.

Bennett Preservation Engineering PC
17 Lockwood Drive, Suite 500
Charleston, SC 29401

Date:	**Monday, March 26, 2018**
To:	**Rebecca Fenwick** Lominack Kolman Smith Architects E: rebecca@lksarchitects.com
From:	**Amanda Brown**
cc:	**Craig M. Bennett, Jr., PE** **Taylor Frost** **John Bennett, SE, PE** Bennett Preservation Engineering PC
Subject:	**Savannah City Hall Monitoring – Proposal and Contract**
Number of sheets:	8
My filename:	s:\jobs\active\2018\18-005 savannah city hall\correspondence\proposals and contracts\2018-03-26 savannah city hall monitoring proposal.docx

Structural Monitoring

Dear Ms. Fenwick:

We appreciate your asking Bennett Preservation Engineering to present a proposal for structural engineering services for the Savannah City Hall in Savannah, Georgia. Based on your conversations with Mr. Bennett and myself, it is our understanding that you would like us to present a fee proposal for providing, installing and maintaining either a two-part low-precision monitoring system or a three-part high-precision monitoring system that would provide:

- **High-Precision System Only**: The high-precision electronic crack monitoring system will take measurements of the width of the crack in the tile vault over the entry vestibule every hour and will record those measurements to Bennett Preservation Engineering's server. Our experience has found that we are generally able to record measurements to 20 micrometers (1/50 millimeter). This precision allows us to see buildings move during the day as the sun warms and

cools various sides of the building. We are looking for the average slope in the trend line of the measurements, not specific measurements of any one location, with particular emphasis on whether the crack width returns after one year of seasonal movements to the same place in which it was installed.

- **Both Systems**: The daily digital photograph of the Avongard crack monitor serves as rough backup to the electronic measurements and allows us to measure the movement of the structure to approximately 100-200 micrometers (1/10 to 2/10 millimeter). The Avongard crack monitor will be installed at the tile vault over the entry vestibule.
- **Both Systems**: Quarterly or annual measurements of measurement points installed on each side of the crack in the tile vault over the entry vestibule and installed on each side of the crack in the tile floor of the rotunda. The bronze or stainless steel measurement points are set up to allow measurements with a micrometer and serve as a robust backup should the electronic crack monitoring system be damaged, accidently or intentionally. Please note that a City's representative will be responsible for measuring the measurement points at the two locations installed, and submitting the data to Bennett Preservation Engineering quarterly.

<u>Proposed Scope of Work for Low-Precision Monitoring:</u>

- 2-day site visit by the Bennett Preservation Engineering team, including our IT consultant to:
    - Install the Avongard crack gauge and the measurement points;
    - To meet with the building's IT manager for installation and coordination of internet access;
    - To meet with a representative of the City's team to review how to take measurements of the measurement points.
- 1-day site visit for Bennett Preservation Engineering's consultant only, if necessary, for installation troubleshooting.
- Maintenance and repairs of the equipment are not included with this scope of work.
- Quarterly reports of the monitoring results. Each report will include findings, and if early conclusions can be reached, conclusions. The final report will also include recommendations addressing building movement and truck traffic. You can expect each quarterly report to include:
    - Typical photographs of the Avongard crack monitor;
    - If any are taken, a record of the measurement points.

<u>Proposed Scope of Work for High-Precision Monitoring:</u>

- 2-day site visit by the Bennett Preservation Engineering team, including our IT consultant to:
    - Install the electronic crack monitor, the Avongard crack gauge, and the measurement points;
    - To meet with the building's IT manager for installation and coordination of internet access;
    - To meet with a representative of the City's team to review how to take measurements of the measurement points.
- 1-day site visit for Bennett Preservation Engineering's consultant only, if necessary, for installation troubleshooting.

- Quarterly reports of the monitoring results. Each report will include findings, and if early conclusions can be reached, conclusions. The final report will also include recommendations addressing building movement and truck traffic. You can expect each quarterly report to include:
    - Plots of the movement of the electronic crack monitor;
    - Typical photographs of the Avongard crack monitor;
    - If any are taken, a record of the measurement points.

We have made an estimate of our hours and have provided <u>two fixed fee options</u> for the monitoring portion of the project. We propose completing:

1. The low-precision monitoring scope of work for a fixed fee of $17,320 or;
2. The high-precision monitoring scope of work for a fixed fee of $33,355.

The following tables were used to develop the professional fee for this project. This does not commit Bennett Preservation Engineering to spending the exact number of hours associated with each task or each person listed. Bennett Preservation Engineering reserves the right to redistribute the hours within the tasks and between tasks. We realize that some tasks may take more hours and some tasks may take fewer hours.

LOW-PRECISION MONITORING AND REPORTING	**Professional Time**	**# Hours Principal Engineer**	**#Hours Project Manager**	**IT Consultant Expenses**	**Misc. Expenses**
	Hardware Expenses	--	--	--	$1,100
	Crack Monitoring Hardware & Software Setup	5	--	$2,000	-- --
	Travel Time	4	4	$800	--
	Onsite Installation	8	8	$1,440	--
	Hotel (1 night)	--	--	--	$600
	Food	--	--	--	$350
	Mileage (2 trips)	--	--	--	$275
	Reporting Post-Installation	--	--	--	--
	First Quarter Report	4	4	--	--
	Second Quarter Report	2	2	--	--
	Third Quarter Report	2	2	--	--
	Final Quarter Report	4	4	--	--
	Maintenance & Repair	--	--	--	--
	Management	2	4	--	--
	Total Professional Hours	31	28		
	Subtotal	$6,975	$3,780	4,240	2,325
	Total Professional Fee		**$17,320**		

HIGH-PRECISION MONITORING AND REPORTING	Professional Time	# Hours Principal Engineer	#Hours Project Manager	IT Consultant Expenses	Misc. Expenses
	Hardware Expenses	--	--	--	$1,850
	Crack Monitoring Hardware & Software Setup	10	--	$4,000	-- --
	Travel Time	4	4	$800	--
	Onsite Installation	12	12	$1,440	--
	Hotel (1 night)	--	--	--	$600
	Food	--	--	--	$350
	Mileage (2 trips)	--	--	--	$275
	Reporting Post-Installation	--	--	--	--
	First Quarter Report	12	4	$640	--
	Second Quarter Report	8	2	$640	--
	Third Quarter Report	8	2	$640	--
	Final Quarter Report	12	4	$640	--
	Maintenance & Repair	4	--	$960	--
	Management	2	4	--	--
	Total Professional Hours	72	32		
	Subtotal	$16,200	$4,320	9,760	3,075
	Total Professional Fee			**$33,355**	

With the approval of this proposal, Bennett Preservation Engineering is capable of starting this project in the very near future. Should additional work be required beyond this scope of work, we are happy to provide an addendum to this proposal based on an agreed upon fixed fee or we can work hourly per our standard hourly rates.

Should you wish to discuss anything in the proposal, please do not hesitate to call our office. If this proposal is acceptable, we have attached a short form contract for the work for you to sign and return.

Sincerely,

Amanda Brown

Amanda Brown
Architectural Preservationist
Bennett Preservation Engineering PC

An Agreement for the Provision of Limited Professional Services

Prepared by the Council of American Structural Engineers

Structural Engineer (SE):
Bennett Preservation Engineering PC
PO Box 684
Charleston SC 29402
Phone: (843) 577-8850
Email: cbennett@bennettpe.com

Client:
Rebecca Fenwick
Lominack Kolman Smith Architects
E: rebecca@lksarchitects.com

Date: *March 26, 2018*

Bennett Preservation Engineering PC Job Number: *18-005*

Project Name and Location: *Savannah City Hall Monitoring, Savannah, GA*

Scope of Services: *Provide engineering services for the Scope of Work as described in the attached proposal. Services may be continued beyond this phase by mutual agreement of the parties.*

Fee Arrangement:
Structural Monitoring Option 1 (Low-Precision System): Fee arrangement is a fixed fee of $17,320.

Structural Monitoring Option 2 (High-Precision System): Fee arrangement is a fixed fee of $33,355.

Retainer Amount: *(none)* _____

Special Conditions: *(none)* _____

Offered by (SE):

March 26, 2018
(signature) (date)

Craig M. Bennett, Jr., President
(printed name/title)
For Bennett Preservation Engineering PC

The terms and conditions following this form are part of this agreement.

Accepted by (Client):

_____
(signature) (date)

_____
(printed name/title)

_____
(for)

CASE - Council of American Structural Engineers
1015 Fifteenth Street, N.W., Suite 802, Washington, D.C. 20005 202-347-7474

HOURLY RATE SCHEDULE

July 1, 2016

Bennett Preservation Engineering PC provides engineering services on a time and materials basis as follows:

A. For employees of Bennett Preservation Engineering PC

Principals, Engineering	225
Registered Specialty Engineers	175
Registered Engineers	150
Architectural Conservators/Project Managers	150
Preservationists/Project Managers	135
Engineers (Masters, Not Registered)	125
Preservationists (Masters)	120
Preservationists (Bachelors)	85
Clerical/Word processing	50

B. For services of consultants including but not limited to architectural, structural, civil, mechanical, electrical, and surveying, a multiple of 1.10 times the amount billed to Bennett Preservation Engineering PC.

C. For reimbursable expenses such as postage, telecommunications, reproduction, photography, printing, travel, etc., a multiple of 1.10 times the actual invoice.

D. For principals, minimum billable time for advising not involving engineering, is two hours at $275/hr.

E. For principals, minimum billable time for litigation research/meetings, litigation document (plans, estimates, and specifications) preparation, is two hours at $350/hr.

F. For principals, minimum billable time for mediations, depositions and court appearances is two hours at $400/hr.

G. Unless other arrangements are made, billing shall be upon completion of services or every thirty days. Payment is due upon receipt with late charges of 1.5% applied for each month after the first 30 days.

H. This rate schedule is subject to change.

Bennett Preservation Engineering PC
17 Lockwood Drive, Suite 500
Charleston, SC 29401

Project: SAVANNAH CITY HALL – MECHANICAL UPGRADES BUDGET

Mock Plumbing & Mechanical, Inc. proposes to furnish labor, material and equipment as required for the following:

NOTES:

1. The below budget prices does not include any engineering/design services, electrical work, wall or ceiling work (patching, removal, replacement, etc.), roofing work, overtime working hours, Davis-Bacon wages, etc.
2. It is recommended that Dulohery-Weeks design services become involved for any HVAC options pursued.
3. Pricing is based on each option being taken individually. If multiple options were taken together, pricing will be lower due to reduced number of trips, equipment controllers, and rigging efforts.

H1) Historic Interpretation ..... N/A

H2) Control System Abandoned ..... N/A

Options below will include controllers as required for new system.

H3) Add Ventilation to City Hall (All Spaces) ..... $ 287, 500.00

Proposal is to add a dedicated outdoor air system (DOAS) at approximately 4000 CFM total. It is unclear at this time where the unit can be located, but most likely in the ceiling above the 4th floor or in the basement mechanical room. The intent would be to run ducts in chase(s) in vent shafts in the council room for this area, and/or small round ducts (4-6") in the corners of the rotunda where some piping is already exposed, and locate lay-in air diffusers on each floor. An intake louver will be required either thru a roof or wall opening; there was a thru-wall A/C unit on the roof access area that suggests we can potentially locate this intake nearby there or at other penetrations on the roof level. Adding this much air will also likely require some exhaust work to balance the airflow, which has not been mentioned on the task list.

H3 ALTERNATE – there could be some significant cost savings if design team and local authority would approve introduction of outside air at the fourth floor only, and allow the air to mix whether by gravity or fan-forcing it somehow. Lay-in diffusers can be set in the corners of the rotunda here, and surface-mounted diffusers in office areas as well. Approximate savings would be $10,000 to $20,000 deduct from above.

H4) Council Chamber VRF System ..... $ 186, 500.00

Proposal is to remove and replace (8) console A/C units in the council chambers, and replace with (8) similar units in VRF application. Single thermostat will control the space temperature.

H5) Reception Room VRF System ..... $ 95, 000.00

Proposal is to remove and replace (2) console A/C units in the reception room, and replace with (2) similar units in VRF application. Single thermostat will control the space temperature.
It was noticed that in this space there are some existing HVAC grilles. This price does not include removing and patching these fixtures, or the units that serve them.

H6) Stairwell CHW Unit Replacement ..... $ 61, 500.00

Proposal is to remove and replace (1) chilled water unit in the stairwell from 1st FL to 2nd FL, and replace with (1) similar units in split system application. Because of the difficult location of this unit at the stairwell, with marble walls nearby, it is hard to determine if this system can be tied into other systems nearby such as the rotunda/lobby because of pipe/wiring routes.

(Continued on page 2)

Project: SAVANNAH CITY HALL – MECHANICAL UPGRADES BUDGET

(Continued from page 1, same notes apply)

H7) Lobby CHW Unit Replacement ..... $ 61, 000.00

Proposal is to remove and replace (1) chilled water unit in the lobby, and replace with (1) similar units in split system application. It is likely that this unit can be combined with the rotunda systems if desired to be applied in VRF application here.

H8) Rotunda CHW Units Replacement ..... $ 100, 000.00

Proposal is to remove and replace (2) chilled water units in the rotunda (one each on 1st and 2nd floors), and replace with (2) similar units in VRF application.

Plumbing) Rotunda Water Cooler Replacement ..... $ 2,000.00

Proposal is to remove and replace (1) single-height wall-mounted water cooler, similar to existing.

(Please see page 3 for relevant observations regarding this budget)

Project: SAVANNAH CITY HALL – MECHANICAL UPGRADES BUDGET

Noted Observations Relevant to this Work:

- Council area is seen as the most significant area for ventilation, given that it can hold 200+ people when it is fully occupied. Total outside air CFM for the entire building is approx. 4000 CFM, and this space would need about half of that by itself, or about 2000 CFM.
    - In revisit, it was proposed to potentially use some existing "sashes" at the base of the windows for direct outside air intake. There does not exist a "dedicated outside air unit" that would fit in this console application in the council room.

- Historical plans indicate that there are vent shaft(s) that rise from the basement mechanical room, to the council area. We would need some exploration done in order to determine the feasibility of running duct in these areas as described in the option on page 1. At this time it is not recommended to penetrate these shafts anywhere other than the council room, and as necessary on below floors so we could run the duct. Plaster walls, curved walls, etc. would not want to be disturbed. Concerns include but are not limited to:
    - Safely removing existing brick features in the basement – are these structural at all?
    - Safely running duct in what potentially is a closed-off old furnace shaft (i.e. wood-burning)
    - Are the vent shafts large enough for the amount of air needed to get to the council areas?

- If the shafts mentioned above are unusable, there is little-to-no room to run new piping or duct vertically in this building. It appears at this time that the best locations are in the corners of the rotunda where there are lay-in ceilings currently and pipe risers. It seems feasible to run 4-6" round duct vertically in these corners, with lay-in grilles in the ceiling, and perhaps could conceal with a soffit to prevent intrusion to the historical aspects.

- If it is not possible to run duct in the corners of the rotunda area, and the vent shafts are unusable, then it is likely necessary to have design and local authority compromise and provide ventilation as best we can, from the 4th floor likely. It may be possible to have design team select units that can have a small amount of outside air intake from the sashes (i.e. don't use 100% DOAS unit but a standard console unit with an OA intake leading to the return air), but it is not possible to determine this feasibility without design input. Costs are similar to current ideas.

- Piping for the council room and reception room will likely be run in same locations as current, and in enclosed covers outside as currently installed where required.

- Similarly, running piping/duct around the rotunda at each floor will be very difficult. There are brick "bulkheads" around each major corner and the plaster is something we would not recommend disrupting.

- Piping at the stairwell and lobby units is likely going to have to be removed in order to replace these units with split systems and/or VRF units. It is unclear if that is possible, given that the chiller and other CHW units may remain in operation and could be connected to these pipes.

Submitted By,

Andrew Booker

HVAC Estimator

andrewb@mocksavannah.com

HVAC License Unrestricted GA CN208055

Budget Proposal

April 12, 2018

Garbutt Construction

621 Academy Ave

Dublin, GA 31021

RE: **Savannah City Hall REV**

Attn: Matt Richardson

C.S. HURD Electrical Contracting, Inc.; a woman-owned business enterprise (WBE) with LEED Accredited professionals, is pleased to submit this proposal for the above-mentioned project.

SCOPE OF SERVICES

Furnish all material, labor, and supervision necessary for electrical installation

Per Walkthrough and Email.
See Budget Scope Below

Clarifications

Regular Hours work week labor only included.
Scrap metal and wire from Demo will be retained by CS HURD.

Exclusions

No Low Voltage wiring or components Included (Mech. i.e. Thermostat, Security
No Data/Comm Cabling or Equipment
No Cutting or Patching of concrete, drywall or paint.
Any changes made by the Architect, Engineer, Owner, or Authorities having Jurisdiction.

Price is based on current material pricing and cannot be guaranteed for more than 30 days. After 30 days extended cost may apply.

See allowance and Budget Pricing Next Page

C.S. Hurd Electrical Contracting, Inc.
480 Edsel Drive Suite 100 ~ Richmond Hill, Georgia 31324
Tel: 912-756-5881 Fax: 912-756-5882 ~ E-mail: info@cshurd.com, Web: http://www.cshurd.net

C.S. HURD ELECTRICAL CONTRACTING

Budget Proposal

Savannah City Hall Budget

Electrical				
E1	Each light is controlled by a separate switch	Rotunda	Consolidate and localize switches	$50,000.00
E2	Cloth wire deterioration and hazard	All	Evaluate and Provide Pricing	$2,200.00 Evaluation only
E3	Electrical panels and associated controls are past useful life and an eyesore	Rotunda Alcoves	Replace panels and associated controls and conceal in a shallow closet	$6,800.00
E4	removing as much wiring as possible, going cordless as much as possible	Council Chambers	**REWIRE WITH CHASE REMOVAL BY OTHERS**	$26,500 no wireless
E5	Fluorescent cove lighting does not illuminate evenly and some fixtures are not working	Lobby	Replace fluorescent cove light with led cove lights	$16,250.00
E6	Cables in cove are visible from the floor	Lobby	Conceal cabling better in cove	$4,250.00
E7	Track lighting is past useful life and not efficient	Rotunda Alcoves	Replace with led track lighting	$17,500.00
E8	Original fixtures have mismatched globes and other accessories	Rotunda	Locate Replica parts, restore, and install **ALLOW $39,000.00 Restore (done in phases)**	$61,000.00
E9	Spot lights for video producing heat and not efficient	Council Chambers	Replace with led lighting	$4,100.00
E10	Exit and emergency lights are past useful life	Council Chambers	Replace emergency lights with low profile emergency wall packs and replace exit lights with edgelit exit lights	$2,250.00
E11	Visible surface mounted receptacles at council's platform	Council Chambers	Relocate receptacles to under council's desk	See E4
E12	Fluorescent cove lighting does not illuminate evenly and some fixtures are not working	Lobby	Replace fluorescent cove light with led cove lights	$18,900.00
E13	Cloth wire deterioration and hazard	All	Install new wiring throughout building	See E2

C.S. HURD ELECTRICAL CONTRACTING

C.S. Hurd Electrical Contracting, Inc.
480 Edsel Drive Suite 100 ~ Richmond Hill, Georgia 31324
Tel: 912-756-5881 Fax: 912-756-5882 ~ E-mail: info@cshurd.com, Web: http://www.cshurd.net

E14	Exit and emergency lights are past useful life	All	Replace emergency lights with low profile emergency wall packs and replace exit lights with edgelit exit lights	$5,250.00
E15	Light fixture lamp color temperature is inconsistant	All	Replace lamps to all have same color temperature	$10,000.00
E16	Original fixtures have mismatched globes and other accessories	All	Locate Replica parts, restore, and install **ALLOW $130,500.00 Restore (done in phases)**	$198,950.00
E17	Surface mounted raceway not installed correctly in many locations throughout the project	All	Replace surface mounted raceway with more decorative and consistant raceway	No Price-T&M at $105.00 per 2 man crew hour, plus materials.
E18	Power for Roller Shades x 11	Council Chambers	Power for Roller shades	No Price-T&M at $105.00 per 2 man crew hour, plus materials.
E19	Power for Roller Shades x 3	Reception	Power for Roller shades	No Price-T&M at $105.00 per 2 man crew hour, plus materials.
E20	Install 4 Ceiling Fans on Existing Light Boxes, remove existing Lights. Fans By Others	Council Chambers	Install 4 Ceiling Fans on Existing Light Boxes, remove existing Lights.	$990.00

David Harwood
Estimator/Project Manager
C.S. HURD Electrical Contracting, Inc.

Garbutt Construction

P.O. Box 712 • Dublin, Georgia 31040
www.garbuttconstruction.com
telephone: 478-272-4410 • fax: 478-275-0642

April 17, 2018

Rebecca Fenwick
Lominack Kolman Smith Architects
301 W. Broughton Street
Suite 301
Savannah, GA 31401

Re: Savannah City Hall

Rebecca,

This proposal is for the furnishing of four (4) ceiling fans in the Council Chambers for Savannah City Hall.

Allowance for furnishing of the fans at $800.00 per fan for a total allowance of $3,200.00.

Thank you,

Matt Richardson

Matt Richardson
Senior Estimator

City of Savannah Council Room Upgrade

Proposal for Audiovisual Services

Project Number 1-24273

Cary Shoob Systems Consultant
Cary.Shoob@StageFront.net

STAGE FRONT
a better plan for AV

Our Experience

Since 1978, Stage Front has designed and installed technical systems that help people better educate, communicate, and entertain. Our demonstrated strengths in technical design, defined process, and financial stability enable us to deliver projects on time and on budget.

Specific Areas of Expertise Include:

- Government (Municipal & Federal)
- Corporate Enterprise
- Higher Education
- Dental and Medical Education
- Auditoriums and Theaters
- Healthcare

We provide one-source responsibility for system integration of:

- Audio-visual
- Video
- Large-Screen Projection
- Specialty Lighting
- Performance Audio
- Remote Control
- Video Conferencing and Distance Learning
- Digital Signage USVA

Our Services

Design Services

- Consultation
- Needs Analysis
- Program Development
- BIM Modeling
- EASE Modeling
- Acoustical Analysis
- User Interface Design
- Bid Administration
- Construction Administration

Integration Services

- Project Management
- Pre-Fabrication
- Systems Installation
- Alignment and Final Adjustment
- Programming
- Proof of Performance
- User Training
- Quality Control

Support Services

- Warranty
- PMA (Preventative Maintenance Agreement)
- CMSA (Complete Maintenance Support Agreement)
- Onsite Sustaining Support
- Critical Inventory Management
- Remote Support
- Recurring User Training

1

Understanding the Client
Interviews, Needs Analysis, Long-term Goals

2

Program Development
Scope, Budget, Timeline

3

Engineering and Construction Documents
Published Infrastructure, Complete Design Package

4

Prefabrication and Programming
Build and Test Systems In-House, Control Systems Programming

5

Systems Integration
Field Services, Systems Delivery

6

Commissioning and Quality Assurance
Test and Tune, Client Approval

7

Sustaining Support
Full Parts and Labor Warranty, Preventative Maintenance, 24/7 Available Support

800.736.9242 stagefront.net

STAGE FRONT
a better plan for AV

Our Relationships

City of Augusta County Commission Chamber

Stage Front provided state-of-the-art equipment, design, and installation for the Augusta Commission Chamber, Beazley Community Room, and IT training rooms. The design/build integration services called for audio visual and control systems to provide a multi-media platform for large format presentation of digital and analog computer based programs and content via guest laptops.

Pooler City Hall

Stage Front recently completed the design and installation of AV systems for the $18.1 million project of the revitalization of the Pooler City Hall building. The new 51,500sf city hall building is three stories tall and incorporates many of the city's departments: Pooler Police Department, administrative offices, the city council chambers, city manager's office, and other executive functions.

Fort Bragg Sustainment Brigade Complex

In this two-story headquarters and tactical equipment maintenance facility for Army Special Forces, Stage Front provided installation of AV systems for training, collaboration, and classroom environments. System elements include secure and non-secure video conferencing in command conference rooms, a divisible 3 space classroom with a 5 projector video configuration, stand-alone spaces for basic presentation, and a large operations center control. The facility also has multiple large flat panels for digital signage and CATV.

Presentation Systems Narrative and Budget

November 13, 2017

Rebecca Fenwick
Lominack, Kolman, Smith Architects
301 West Broughton Street, Suite 301
Savannah, GA 31402

RE: City of Savannah Council Room Upgrade Preliminary System Narrative and Budget

Dear Rebecca,

Thank you for meeting with me to review your audio, video, and lighting needs for the Council Room Upgrade. The purpose of this memo is to verify our understanding of those needs; to provide an overview of a reliable, cost-competitive proposed solution that will serve the City of Savannah for years to come; and to present an associated budget for designing and building the proposed system.

If the approach outlined in this memo meets with your approval, our engineering department will proceed with the necessary work to prepare a detailed system specification and firm quote. If there are items that do not meet with your approval, let's please discuss at your convenience so that we can modify the approach within the scope of system requirements.

Needs Analysis

My understanding of the audio, video, and lighting needs for upgrade is:

- Replace 5 cameras with PTZ High Definition (HD) cameras
- Add new production view camera controller
- Add 2 new 90" LED displays and remove projector and screens. A frame built around the displays to match the room will be done by others
- Replace gallery TV with new 60" LED flat panel and mount
- Add Air Media (for wireless video connectivity)
- Replace 3 wireless desk mics with new
- Remove existing spks and add 3 Bose MA12EX
- Add 7" touchpanel controller
- Add HD video switcher,
- Remove old equipment rack and replace with credenza style rack that matches the room.

Note: Need better lighting for TV add $2,000-$2,500 to budget by others

Preliminary Budget Estimate

In our experience with systems similar to the above, the total design-build Stage Front budget for Council Room Upgrade should be in the range of $96,000 to $105,000.

The exact price within this range will be determined primarily by 1) precise specification of such incidental items as connectors, cabling, pipe battens, etc. that add up in engineering design, 2) competitive pricing available on major components at the time of specification, and 3) small unknowns or customer-requested adjustments that can arise during the course of any design-build project.

What the Preliminary Budget Includes

- All equipment included in the proposed system solution
- Complete system design
- System design documentation, including a room equipment plan and signal flow diagrams for video, audio, and remote control
- Installation, from equipment delivery through install, test, and energization to the removal of all trash and debris related to Stage Front work
- System turn-on, including test, adjustment, and demonstration plus customer training on operation and maintenance
- Equipment instruction and maintenance manuals for customer
- One-year warranty on all materials, and 90-day warranty on all labor

Work Required by Other Trades

- At designated locations, regulated, clean 110VAC power with isolated ground
- All conduit, raceways, standard back boxes and line voltage wiring
- Any related phone and LAN systems and wiring
- Installation of dimmer rack

I look forward to your feedback on this preliminary program and budget. Please contact me at your convenience for discussion; I will be happy to visit your office for a meeting if you prefer.

Best regards,

Cary Shoob
Systems Consultant
Stage Front
912-721-5707
Cary.Shoob@StageFront.net

E. Annual Building Inspection Form and Data Sheet

Savannah City Hall Annual Building Inspection Form

NOTE: Each individual item related to the categories listed below should be assessed using an **individual** Savannah City Hall Annual Building Inspection Supplementary Data Sheet. All forms should be bound with the maintenance log **annually**.

WOODWORK	**INSPECTION**	**DATE**
Windows	Inspect for operability and condition of sash and hardware, missing or loose elements, stain consistency and finish, moisture damage, cracking, warping, etc.	
Trim	Inspect for scratches, scrapes, missing or loose elements, stain consistency and finish, moisture damage, cracking, warping, etc.	
Furniture	Inspect for scratches, scrapes, missing or loose elements, stain consistency and finish, moisture damage, splitting, cracking, warping, etc.	
Doors	Inspect for operability and condition of door and hardware, frame condition, missing or loose elements, stain consistency and finish, moisture damage, splitting, cracking, warping, etc.	
Parquet Floors	Inspect for missing or loose sections, raised nails, splitting, scratches, scrapes, warping, stains, fading or discoloration, etc.	

PLASTER AND PAINT	**INSPECTION**	**DATE**
Walls	Inspect for consistency of color, peeling of paint, presence of moisture, use of adhesives, holes, warping, etc.	
Ceilings	Inspect for consistency of color, peeling of paint, presence of moisture, holes, etc.	

TILE	**INSPECTION**	**DATE**
Mosaic Tile	Inspect for cleanliness, efflorescence, stains, cracks, grout loss, etc.	
Penny Tile	Inspect for cleanliness, efflorescence, stains, cracks, grout loss, etc.	

Savannah City Hall Annual Building Inspection Form

MARBLE	INSPECTION	DATE
Wall Surfaces	Inspect for cleanliness, chalking, stains, scratches, scrapes, the use of adhesives, holes, loss of grout, etc.	
Door Thresholds	Inspect for cleanliness, stains, scratches, scrapes, holes, loss of grout, etc.	
Fountain Base	Inspect for cleanliness, chalking, stains, scratches, scrapes, loss of grout, etc.	

BRASS	INSPECTION	DATE
Door Hardware	Check for any tarnish, scratches, scrapes, missing or loose elements, etc.	
Sconces	Check for any tarnish, scratches, scrapes, missing or loose elements, and bulb consistency in size, hue, and temperature	
Ceiling Mounted Fixtures	Check for any tarnish, scratches, scrapes, missing or loose elements, and bulb consistency in size, hue, and temperature	
Council Baluster Mounted Fixtures	Check for any tarnish, scratches, scrapes, missing or loose elements, and bulb consistency in size, hue, and temperature	

METAL	INSPECTION	DATE
Elevator Casing	Note cleanliness, loss of paint, missing pieces or elements, scratches, scrapes, etc.	

UTILITY	INSPECTION	DATE
Floor Mounted HVAC Units	Note operability, use, consistency, any issues or concerns	
Electrical Boxes	Note operability, use, ability to be accessed, any issues or concerns	
Temperature & Humidity	Moisture meter reading in every space, any issues or concerns	
Lighting	Note if configured correctly, check for operability and uniform hue and temperature	
A/V Equipment	Check for use and operability, visual obtrusiveness, the exposure of wires, etc.	

Savannah City Hall Annual Building Inspection Supplementary Data Sheet

Item for Inspection:	
Material:	
Room:	
Location:	
Drawing Sheet No.:	

General Notes:

GENERAL CONDITION

OPERABILITY

Does it retain its working parts and hardware? Can it be opened and closed easily? Does it work as intended?

APPEARANCE

Does it appear worn? Are there scratches or scrapes, signs of war, patina, discoloration, or fading?

HISTORIC FEATURES

Does it retain its integrity, i.e. its ability to convey its historical significance?

CONCERNS

Reviewed By:		Date:	
Approved By:		Date:	
Last Updated By:		Date/Time:	

RESTORATION/SOLUTION PROGRESS MONITORING:

DATE:	**DATE CORRECTED:**
CONDITION:	**WORK PERFORMED BY:**
NOTES:	**TREATMENT METHOD:**

NOTES

F. Maintenance Quick Reference Sheet

Maintenance Quick Reference Guide

METALWORK	RECOMMENDATION	TOOL KIT	FREQUENCY	PROHIBITED	REF. PAGE
Surface Cleaning	Removal by suction	Vacuum with nozzle attachment	Weekly		84
Cleaning	Low pressure water, non-ionic detergents, non-caustic degreasing agents		Monthly		84

MARBLE	RECOMMENDATION	TOOL KIT	FREQUENCY	PROHIBITED	REF. PAGE
Removal of Stains	ProSoCo Sure Klean Marble Poultice or Diedrich General Purpose Poultice	Soft bristle synthetic (non-natural) brush	As needed		52
Removal of Difficult Stains	ProSoCo Sure Klean Liquid Marble Cleaner, Sure Klean 942 Limestone and Marble Cleaner, or Diedrich 910PM Polished Marble		As needed		53
Polishing	Eastern Marble 52-B Polishing Powder or Eastern Marble Italian Craftsman (combine with mineral water)	Clean, lint-free cloths, fiber brush pads for restoration polishing	Monthly at minimum		53

*For protection of neighboring surfaces use ProSoCo Sure Klean Strippable Masking

PAINT	RECOMMENDATION	TOOL KIT	FREQUENCY	PROHIBITED	REF. PAGE
Stripping	3M 10101 Safest Paint Stripper Paint and Varnish Remover; ProSoCo Enviro Klean Safety Peel 1; Camuel Cabot Cab-o-sil, cornstarch, or fumed silica (to thicken)	Soft bristle synthetic (non-natural) brush	As needed		91

PLASTER	RECOMMENDATION	TOOL KIT	FREQUENCY	PROHIBITED	REF. PAGE
Concealing Water Stains	White pigmented shellac-based primer sealer such as Zinsser Rustoleum or Kilz Masterchem	Clean sponge, stiff fiber bristle brush, paint brush roller or airless sprayer	As needed		94

NOTE: All items listed are explained in greater detail within the Savannah City Hall Interior Condition Assessment and Restoration Plan. The reference page should be consulted for an in-depth explanation of the recommendations.

Maintenance Quick Reference Guide

BRASS	RECOMMENDATION	TOOL KIT	FREQUENCY	PROHIBITED	REF. PAGE
Surface Cleaning	Mild soap (best option), household ammonia, vinegar, or baking soda; Triton X-100; or Vulpex (in 3% water solution)	Vacuum with nozzle attachment; bristle brush or toothbrush; deionized or distilled water; mineral spirits (to rinse)	Weekly at a minimum	Mixing of ammonia with chlorine bleach (poisonous gas)	61
Calcareous, lime, or hard water deposits	Calgon sodium hexametaphosphate (10%) in deionized or distilled water	Stiff brush	As needed		61
Polishing	Fine calcium carbonate, chalk, or whiting (to form slurry paste); ethanol (denatured alcohol, ethyl alcohol); distilled water (rinse) OR Autosol general purpose polish and mineral spirits	Q-tips or cotton wadding at end of bamboo skewer; Jeweler's cloth such as Birk Cloth or Hagerty Glove	Monthly		62
Coating/Waxing	Renaissance wax or other microcrystalline (inert) wax; mineral spirits or lacquer thinner	Rag, bristle or shoe polish brush	After polishing	Lacquering (only by a conservator)	63

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Maintenance Quick Reference Guide

WOODWORK	RECOMMENDATION	TOOL KIT	FREQUENCY	PROHIBITED	REF. PAGE
Cleaning of Parquet Floors	Bona PowerPlus Hardwood Floor Deep Cleaner for spot cleaning; Minwax Hardwood Floor Cleaner (pH level 7) for mopping	Vacuum with soft floor nozzle, damp cloth, microfiber mop	Dry clean (weekly) and wet clean (monthly)	Strong vinegar or baking soda solutions, glow enhancers, acrylic polishes, floor cleaning equipment; No standing water or steam cleaning	98
Cleaning of Trim, Baluster, Furniture, and other Woodwork	Remove dirt and dust with vacuum with clean soft cotton cloth or vacuum with soft brush attachment. For deep cleaning, test mineral spirits such as V.M. & P. Naphtha or Stoddard solvent. If finish is not softened, use mineral spirits and a cotton cloth to clean. Soft bristle brush dipped in mineral spirits for hard to reach places. Wipe with clean cloth and allow to dry. Use Ivory Flakes soap shavings for stubborn dirt followed by wiping with clean cloth dampened with water. If finish is worn or cracked, use mineral spirits instead of water. Complete by drying with a separate clean cloth. Process must be followed by waxing.	Vacuum with a soft brush attachment, cotton cloths, cotton swabs, soft bristle brush	Surface clean (monthly) and deep clean (annually and as needed)	Ivory Dishwashing Liquid, detergents, oil-based cleaners, Excessive water	100
Waxing of Trim, Baluster, Furniture, and other Woodwork	A non-silicone solid wax protective coating is recommended, such as Staples, Butchers, or Johnson. Waxes with weaker organic solvents such as turpentine or mineral spirits are recommended. First test to see if finish is softened. If it does not soften, proceed and apply sparingly. Apply with clean cloth in circular motion, rubbing along grain. Dry for 30 to 60 minutes and buff with clean cloth. Apply two thin coats. For carved areas, use soft toothbrush. After drying, buff with soft shoe brush.	Clean cloth, soft toothbrush, soft shoe brush	Annually	Liquid and aerosol polishes that contain silicones; stronger solvents such as xylene and toluene	101

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