

MSA

Making Sustainable
Architecture

HERITAGE IMPACT ASSESSMENT

13004 | Tivoli Theatre (108 James St. N)



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EXECUTIVE SUMMARY

The purpose of the report is to evaluate the impact of the proposed development on the designated Tivoli Theatre site and to suggest a mitigation strategy for possible changes to the original building. In our research, both archival and primary, we have validated that the building is significant to Hamilton's cultural heritage however, it has faced numerous structural challenges throughout its history, one which has resulted in the collapse of the former carriage factory which formerly fronted on James Street North. In this report we have balanced the desire to respect history, with the need to address contemporary concerns. As such, we have recommended a solution that addresses the building's cultural value, development potential and functional challenges to link new and existing buildings.

Preserving the architectural history of this building is important to the historic fabric of the Downtown Core, thus the proposed redevelopment will help preserve its most essential features by restoring the interior of the existing auditorium. The Lobby which has been removed from designation will be removed in order to meet the programmatic and functional requirements of both the theatre and new mixed use development. MSA proposes to mitigate this effect by providing historical documentation, and a strategy to reinvent its function into the new building. We see the Tivoli theatre redevelopment as a potential catalyst for urban renewal that has all the ingredients to be a landmark building in the downtown. The proposed design will not only leverage its historical value for prospective stakeholders, but may also contribute to the downtown regeneration through the addition of a diverse program, and increased density to the Art District on James Street.

1.1 PURPOSE

MSA has been retained to prepare a Heritage Impact Assessment to evaluate the impact of the proposed development on the cultural heritage of Tivoli Theatre. The purpose of this study is to ultimately recommend an overall approach to both the restoration and adaptation of the Tivoli Theatre's resources throughout the design process and facilitate a retention strategy. Historical analysis, design recommendations and coordination are required to address both the existing property and the resulting impact of the proposed alteration and construction using the City of Hamilton's planning requirements and the Ontario Heritage Act for guidance.

This relationship will be based on a thorough understanding of the significance and heritage attributes of the Tivoli Theatre and identifies the impact of the proposed development on its status as a cultural heritage resource. In the report, both conservation and mitigation options will be considered, where appropriate, in order to approach the development which best conserves, adapts and adds to its existing cultural resources. The adaptation strategy will apply conservation principles balanced with new construction techniques to mitigate any potential negative impacts to both the original structure and decorative features. A balanced approach to conservation and adaptation should guide the development design in all areas. The adaptive reuse strategy recommendations will be general with the intention to become more specific and detailed in future design phases in order to inform decisions and direct Tivoli Theatre's re-development throughout the process.

It should be noted that Diamante Investments has proven their commitment to the project by allocating significant financial investment to retain and restore the auditorium. While the lobby will not be maintained, a substantial effort has been made to strategically salvage areas of the greatest heritage value and impact to the City of Hamilton and will incorporate crush space and a grand entry sequence as part of the design. The development as a whole will respond to James Street with a sensitive and dynamic approach to urban design (see Urban Design Report in Appendix).

1.2 METHODOLOGY

The research methodology requires gathering relevant data from the city archives (maps, photos, publications, primary source etc), input from former members of the church and community, and first hand analysis of the site from all relevant stakeholders and consultants (Developer, Architect and Structural Engineer). In doing so, we intend to shed light on the following questions:

What is the historical and cultural value of the building?

What is the current condition of the building?

What physical or referential aspects of the building are most crucial to maintain to conserve its cultural value?

What is the structural condition of the building?

If a partial demolition is required for life safety and economic reasons, what are the best mitigation strategies to protect aspects of the building to be retained and reused in the new development?

What are the opportunities to make the building more accessible to the public?

The Heritage Impact Assessment will utilize both contemporary and historical accounts to develop an approach that balances conservation, urban densification and adaptation to achieve the mutual goal of sustainability among the public, city, developers and designers.

1.3 CONTACT INFORMATION

Diamante Investments

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TIVOLI THEATRE WITH ORIGINAL MARQUEE



Image Reference:

- 2.1.1 Tivoli with Marquee (1944)
- 2.1.2 Demolition of carriage factory and lobby (2004)
- 2.1.3 Tivoli Lobby (1944)



2.1 CULTURAL CONTEXT AND HISTORICAL BACKGROUND

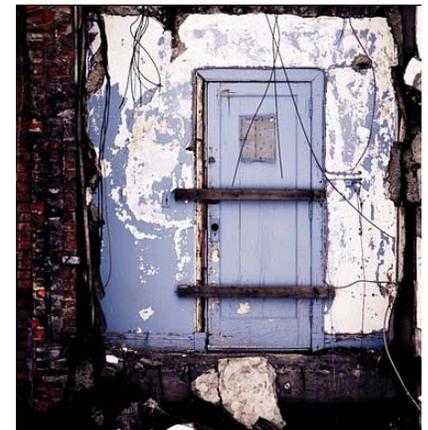
HISTORIC BACKGROUND

While originally constructed as a carriage factory in 1875, this function for the property ceased in 1901, and by 1908, it was established as the first in a sequence of theatres: the Wonderland, succeeded by the Colonial (1910-1912), and the Princess (1913-1923). These were located within the original carriage factory, later serving as the lobby to the Tivoli Theatre. In 1924, the complex was substantially enlarged with the addition of the auditorium to the rear of the property, and renamed "The Tivoli", serving as a prominent vaudeville and motion picture venue, and noted for being the first cinema in Hamilton to present movies with sound tracks.

The original carriage factory was built in Second Empire style by Hamilton architect Albert H. Hills, the designated features of which are no longer existent. The interior of the auditorium was designed by Toronto architect B. Kingston Hall, in an Italian Renaissance style featuring the proscenium, elliptical ceiling, decorative cornice and frieze, and five-arch colonnades along each of the side walls. The arches adjacent to the stage contain bronze statues of Caesar and Minerva, and the bases of the remaining arches are decorated with medallions representing the four seasons. These original elements represent the remaining features identified in the reasons for designation for the property, and do not include any exterior features.

Subject to substantial renovations in 1943, 1947, and 1954, the Tivoli ceased to operate as a movie theatre on September 28, 1989, and was then adaptively reused as a retail location for music sales, and subsequently, by various community theatre groups.

In late June 2004, the 1875 carriage factory portion of the Tivoli Theatre complex suffered structural failure of its south façade. City Council at its meeting held September 15, 2004 approved a demolition permit for the remnant carriage factory portion of the complex, excluding the 1908 lobby portion. The partial demolition of the carriage factory portion was required to stabilize the building and render it safe and secure.



TIVOLI AUDITORIUM (1944)



The stabilization process also involved removal of the designated James Street west façade and a number of architectural features including: round-arched windows with two-over-two sash windows and ornate moulded surrounds, gabled dormer window and the tall mansard-roofed tower convex-shaped, corner tower with narrow, paired arched dormers surmounted by circular windows and a bracketed cornice.

Following failure of the roof structure and the masonry wall on the south side of the carriage factory portion of the theatre complex in June, 2004, subsequent demolition work was carried out to stabilize existing building fabric. On July 16, 2004, the City of Hamilton received three demolition permits pursuant to the Building Code Act, as follows:

- 108 and 112 James Street North (Demolish 3-storey building, “Tivoli” building”)
- 114 James Street North (Demolish 3-storey building, “Sam the Record Man” building)
- 111 Hughson Street North (Demolish Theatre building)

Ownership of the property was assumed by the Canadian Ballet Youth Ensemble in 2006 and undertook feasibility studies from 2007-2009. The property was sold to Diamante Investments in 2012 who have been working with MSA - McCallum Sather Architects to develop a mixed use condo project that would support the longterm usage of the Tivoli auditorium.



2.2 STATEMENT OF SIGNIFICANCE

Hamilton Heritage Volume 5: Reasons for Designation Under Part IV of the Ontario Heritage Act

Schedule “B”

To By-law No. 04-256

Tivoli Theatre Auditorium

111-113 Hughson Street North, Hamilton

REASONS FOR DESIGNATION

Built in 1875 as a carriage factory for J.P. Pronguey, the building at 108-112 James Street North has served primarily as a theatre since 1908. In 1924, the building was substantially enlarged by an auditorium added to the rear to accommodate the Tivoli Theatre, the name by which the building has since been known.

CONTEXT

With its architecturally impressive facade, dominant corner tower, and high visibility, the Tivoli Theatre is a major contributing component of the James North Heritage streetscape. It also provides a dramatic visual terminus to the block extending from Cannon to Wilson Street. The adjacent site at the north west corner of James and Wilson was, for many years, occupied by the Grand Opera House and Hotel, erected in 1880 and demolished respectively in 1960 and 1986.

HISTORICAL SIGNIFICANCE

The Tivoli, a vaudeville theatre and motion picture house, was the first theatre to introduce sound movies in the late 1920s. Of the numerous theatres built in Hamilton during the early 20th century, the Tivoli counted among the seven largest and grandest, the most resplendent of which were the Capitol and the Palace. All but the Lyric (now the Century) and the Tivoli have been demolished; and of these two only the Tivoli has retained any part of its original interior decor.

ARCHITECTURAL SIGNIFICANCE

INTERIOR

The Tivoli Theatre was greatly admired for its sumptuously decorated “Italian Renaissance” interior, designed by Toronto architect, B. Kingston Hall. While a significant proportion of the original decor was removed or covered in the course of renovations undertaken in 1943, 1947 and 1954 (when the most extensive remodelling occurred), the main architectural features of the auditorium are still largely intact. These include the proscenium, the ceiling with its elliptical design, the decorative cornice and frieze below, and along each side wall: a colonnade comprising five round arches sprung from coupled pilasters. The two arches on either side of the stage still contain the original bronze statues of Caesar Augustus and the goddess Minerva. At the base of each of the other eight arches are medallions depicting the four seasons.

DESIGNATED FEATURES

Important to the preservation of the Tivoli Theatre are the original architectural features of the auditorium, including the ceilings, proscenium, colonnades, statuary, and other decorative wall elements. Excluded from designation are the more recent additions, such as the floor covering, seating and stage curtain.

INTERIOR OF THE AUDITORIUM



Image Reference:

- 3.1.1 View of Tivoli
- 3.1.2 Statue of Caesar Augustus and the goddess Minerva
- 3.1.3 Elliptical design of ceiling
- 3.1.4 Ceiling detail with fleur de lis pattern
- 3.1.5 View of Theatre from Balcony

3.1 ARCHITECTURE

***NOTE: Exterior features of the Tivoli and the Lobby are no longer noted as part of the heritage designation. The designation is currently reserved for specific features and characteristics of the remaining auditorium building.**

Auditorium

The 1924 structure is of heritage interest in its own right, distinct and separate in style and character from the earlier 1875 carriage factory. The auditorium appears to be in generally sound condition and not in an apparent state of imminent failure or threat to public safety. Up until the failure of the factory portion, the auditorium has functioned as a performance venue up until 2012. The Lobby has suffered failure at its west facade and has temporary hoarding to protect the space.

It appears that there are no major structural deficiencies that would warrant demolition of the auditorium due to unsafe conditions that immediately threaten public health and safety. Life safety issues such as foors, sprinklers, exit signage, door hardware and emergency lighting should be verified. A full lifesafely review should be done prior to any occupancy of the building. Partial demolition of the James Street façade was considered to be warranted due to increasing structural instability and threats to public safety and neighbouring property.

The auditorium's function as a substantial seating area, complete with proscenium arch and stage, also suggest that there remains potential for continued use as a distinctive space for the performing arts and other related activities.

Auditorium Features



The following are the site conditions of the remaining building and its systems from a site visit on April 11, 2014 and supplemented by notes as per the Janice Barlow Report in 2009:

- **Structure, Masonry:** *Currently in fair condition, but requires some repair.*
- **Roof Assembly:** *According to the 2007 inspection, the roof leaks and requires replacement. In 2010 some stabilization work was undertaken. Downspouts were noted as cracked and leaking on the site.*
- **Door and Windows:** *Require replacement and security hardware.*
- **Walls:** *Plaster Finish - isolated to extensive repairs are required*
- **Heating / Air Conditioning:** *no system exists on site*
- **Electrical , Plumbing:** *New upgraded systems required.*
- **Code Compliance:** *Requires building and fire code upgrade such as sprinkler system, fire exit adjustment, fire alarm systems, fire curtain repair, barrier-free access, hazardous material abatement (if any).*
- **Acoustics, Noise Control:** *Amplification and insulation required*
- **Sightlines:** *Insufficient verticality for dance*
- **Stage:** *requires reinforcement re-surfacing and re-equipping*
- **Backstage, Loading:** *May require some expansion.*
- **Parking:** *Requires resolution - none on site*

Features of the Building to be retained

The historic interiors will require further study and stabilization and will be focused on the following:

- the proscenium
- the ceiling with its elliptical design
- the decorative cornice and frieze below, and along each side wall: a colonnade comprising five round arches sprung from coupled pilasters
- The two arches on either side of the stage still contain the original bronze statues of Caesar Augustus and the goddess Minerva.
- Medallions depicting the four seasons located at the base of each of the other eight arches.

Image Reference:

- 3.1.1 View of Lobby
- 3.1.2 Exposed brick behind deteriorating plaster
- 3.1.3 Plaster decorative wall niches on wall - showing wear and tear of chipped paint and plaster
- 3.1.4 Plaster Wall medallions spray painted gold
- 3.1.5 Plaster coffered ceiling - some areas show signs of deterioration and water damage.

**Aspects of the Building which may be removed or altered**

To accommodate for function, code compliance and requirements for the new development, there may be some alterations for the following aspects:

- lobby (what was the original smoking lounge) to be removed
- the balcony
- seating
- stage curtain
- floor finish

For more detail. refer to Appendix B- MSA: Photo Documentation of Existing Lobby

Conditions of Lobby

3.2 STRUCTURE

Summarizing Observations (Stabilization Report: August 2008)

The stabilization report completed in August 2008, confirms that the building has undergone more deterioration during the past winter with the primary source of deterioration being the entry of water from the roof which is finding its way into the building, and the action of frost. The combination of freezing and thawing in the damp conditions is rapidly deteriorating plaster and paint finishes as well as the fundamental masonry structure.

The theatre's historic stature requires that a stabilization plan must be supervised by specialized preservation consultants. Any work that will alter or is likely to affect the remaining original architectural features of the lobby and auditorium including the ceilings, proscenium, colonnades, statuary and other decorative wall elements identified in the Reasons for Designation will require approval of a heritage permit prior to proceeding.

A Stabilization Plan supervised by specialized preservation consultants for the theatre's historic stature has been developed. Implementation of the stabilization work must be undertaken to reduce the speed of deterioration of the remains of the Theatre. Any work that will alter or is likely to affect the remaining original architectural features of the lobby and auditorium including the ceilings, proscenium, colonnades, statuary and other decorative wall elements identified in the Reasons for Designation will require approval of a heritage permit prior to proceeding. In 2010, stabilization work was undertaken to open the facility for James Street Art Crawl, but has been out of use for the past year.

¹⁸ The following information is extracted from the "Review of Existing Conditions and Proposed Stabilization Work" by PGA -GBCA, April 02, 2009 (See Appendix E)

Summarizing Observations (Site Visit: April 2014)

Quinn Dressel Associates were able to undertake a limited visual review of the interior and exterior of the present day Tivoli theatre. The theatre property traversed the property from James Street North to Houghson. The rear, or back-stage of the theatre fronts on Houghson. The original theatre lobby has been demolished at some point in the past.

The building is founded on spread footings sitting on till of unknown bearing capacity. A single storey basement exists below the stage portion of the building where dressing rooms, service space and an orchestra pit are located. The audience chamber itself is a slab-on-grade construction, probably on some degree of fill. Two heating plenums are located below the audience chamber floor at the two north and south walls.

The bearing walls observed are constructed of three wythes, with the outer two of clay brick and the inner wythe a 4" x 5" hollow clay tile. The inner wythe is generally not viewed as providing any structural capacity. The walls of the stage house are generally thicker,

A series of perimeter steel columns are spaced at 14'6 centres and provide direct support to steel trusses forming the roof framing above the audience chamber. Adequate access to the steel roof trusses was not available at the time of our visit.

From a structural perspective, given the age of the building, one would have to say the condition is in reasonable decent repair, with some relatively minor interventions required to provide for continued long-term service.

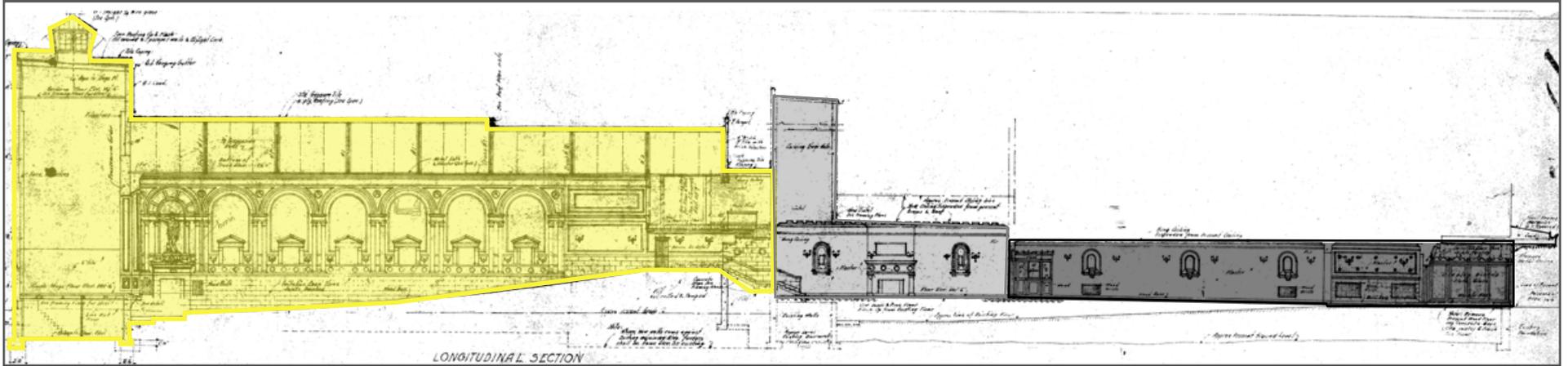
The main concern for the building as a whole, including the structure is the control and cessation of moisture ingress going forward. It is our opinion that water has been entering the building fabric for many years, and should this be allowed to continue the integrity of the building's structure could become compromised, if it hasn't already.

Secondly, and of equal concern to the moisture issue is the lack of heat within the building, even at minimal levels. This cannot be allowed to continue without jeopardizing the existing conditions. The volume of water entering the building is significant, and ice is still present in portions of the building on April 10th.

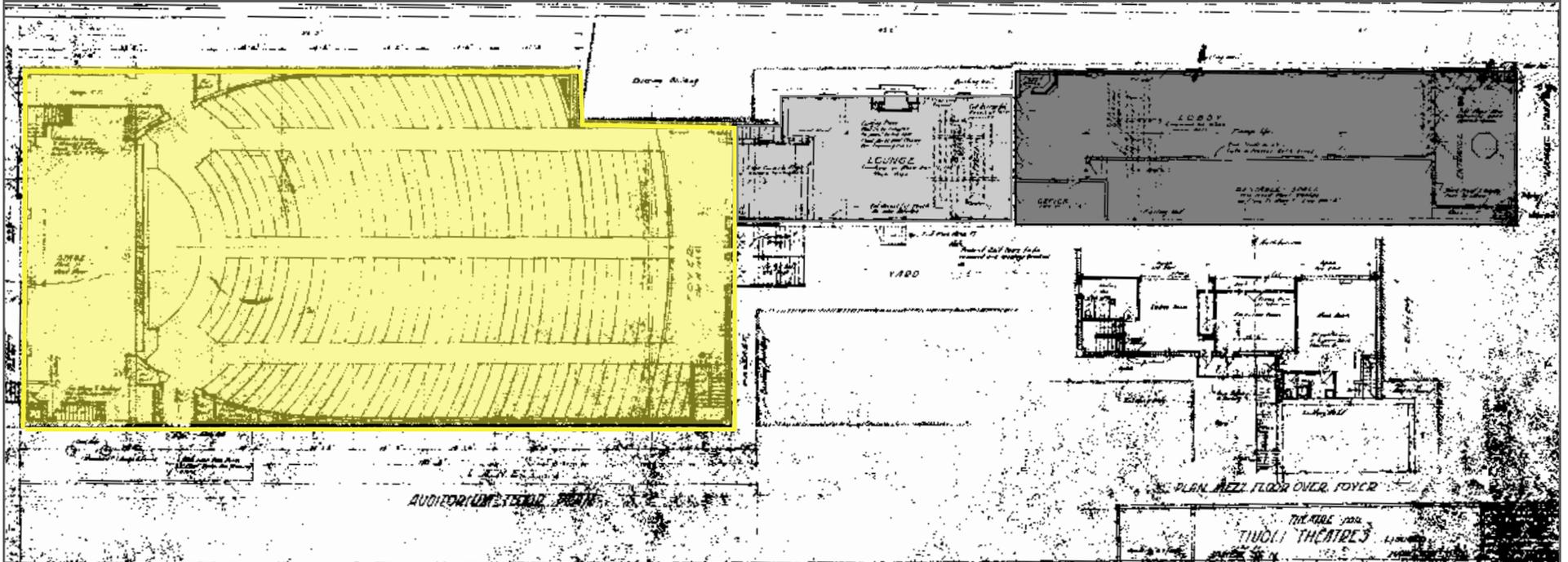
Overall Conclusions

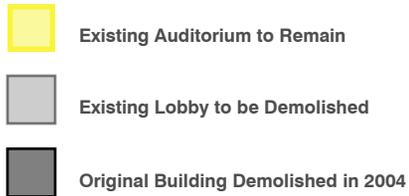
In conclusion, it is our opinion that the building structure can accommodate continued long-term service but immediate repairs to control the ingress of water are necessary, as are the provisions for minimal heat during the winter months. Repairs to the brick exterior wall, and other less obvious repairs are required to ensure this long-term service, but these can be practically achieved.

DESIGNATION AND DEMOLITION OF THE TIVOLI



SECTION THRU ENTRANCE LOOKING NORTH





3.3 RECOMMENDATIONS

Adapting the Tivoli

While the restoration work will occur during a phased design, the following outlines driving principles which will guide the adaptation of the retained auditorium and considerations which will be used in the design of the new development. While the original carriage factory on James street was lost to demolition in 2004, some of its original characteristics and function will be restored with the re-established James Street frontage.

Marquee and Grand Entry

The original building on James street North featured an octagonal ticket office and an ornamental sign marquee, above which was a vertical “Tivoli” sign projecting at right angles to the street. The original marquee may be in storage, and if found could be re-incorporated into the project, while a new contemporary marquee will be designed to mark the main entrance for the new building.

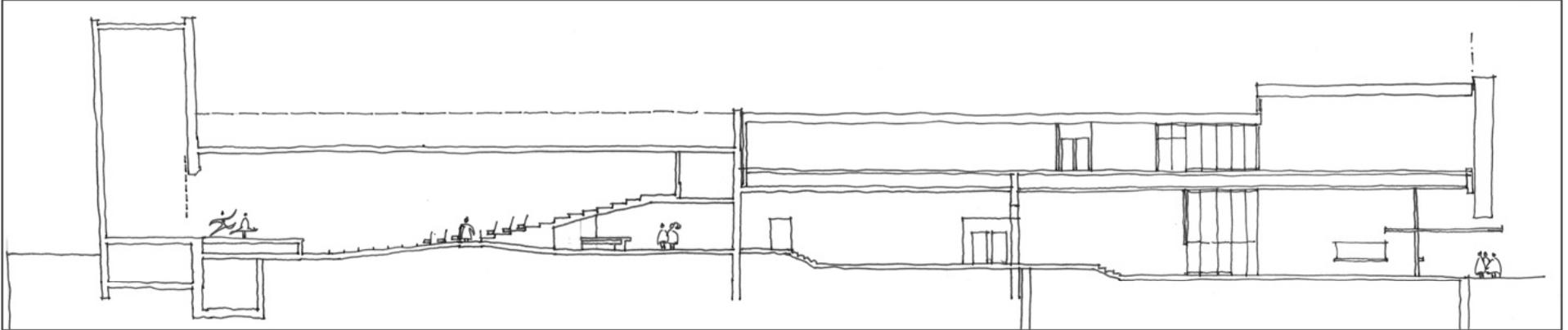
Grand Stair

While the original Tivoli theatre was accessed up 9 stairs to the main seating area in the auditorium, performance spaces often will showcase a grand stair to evoke the drama of the theatre. The main lobby off James Street shall have access to a grand stair and an elevator to bring the visitors to the new entrance off the balcony level.

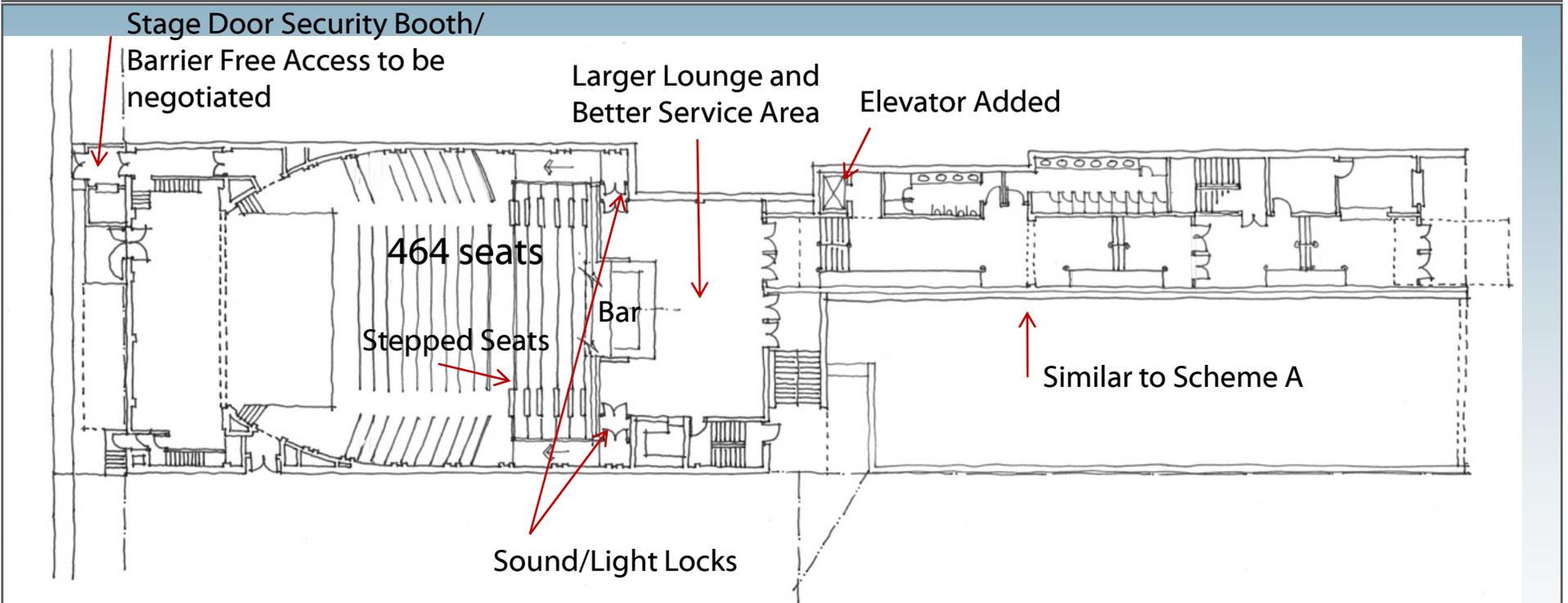
Front-of-house Elements

The theatre will require the support from front-of-house elements such as a foyer, box office, lobby, lounge and admin. A small rehearsal/ meeting space should be included in the new building. New accessible washroom are also required to support public use.

LONG SECTION – TIVOLI MINI SCHEME B (JANIS A BARLOW STUDY 2010)



PLAN – TIVOLI MINI SCHEME B (JANIS A BARLOW STUDY 2010)



Auditorium

Changes to the auditorium's existing seating and connection to the balcony are required to make the Tivoli function as a performance space and to create the physical connection with the new building. Some issues in adapting the auditorium have been identified by Janis A Barlow Associates Report in September 2010 (See Appendix F) and are the following:

- Sightlines, acoustics at the rear of the house are problematic for film, dance and acoustic music
- Reducing the depth of the house and creating a lounge will improve access, sightlines, acoustics and services to the public
- The centre aisle divides the house for the performer and is where the best seats should be located
- Contemporary cinemas have no centre aisle and elevate seating at the rear of the house for better sightlines

The Tivoli Mini Scheme B figures to the left illustrate how stepped seats may be used to improve the acoustical volume of the auditorium, responds to the issues relating to sound / light locks, sightlines, barrier free and accessibility while also facilitating the connection to the balcony level which is proposed in MSA's mixed use condo scheme.

IMPACT OF THE PROPOSED DEVELOPMENT (TERMINUS OF VINE STREET)



“To restore an edifice is not to maintain it, repair or rebuild it, but to re-establish it in a complete state that may never have existed at a particular moment.”

– Eugène Viollet-le-Duc

“Old ideas can sometimes use new buildings. New ideas must use old buildings.”

– Jane Jacobs

4.1 RESULTING IMPACT OF PROPOSED DEVELOPMENT

The proposed Tivoli Condo is located on James Street North in the heart of Hamilton’s burgeoning art community and where the monthly ‘art crawl’ takes place. Directly to the east is the historic Tivoli theatre, one of the first Vaudeville theatres in Ontario and last of its kind in Hamilton will be restored. Given the uniqueness of the site, the Tivoli is a development which not only provides much needed density to Hamilton’s Downtown Core, but also has the opportunity to directly contribute and benefit from the cultural actives – both past and present which currently define its position on James Street.

There is no visual impact to the building as the previously designated carriage factory was demolished in 2004. The remaining designated features will be restored as part of the new development and are not externally impacted. Instead, the presence and purpose of the Tivoli as a landmark building on James Street will be re-established through a new building. The podium and tower of this scheme is designed to address the scale of the street for the first three levels, responding to the former Union Furniture Co to the north while expressing the new programmatic relationships internally. The existing brick building of the remaining theatre auditorium will be maintained and stabilized in order to protect its designated interior features.

At grade, the podium provides connection to the Tivoli theatre physically through the building through an elevator and grand staircase. Its architectural expression may also reference its history through the use of materials, details and by re-creating a sense of drama and procession. Main access to the theatre hall will be provided through a new connection at the balcony level. This will accommodate parking stackers on the ground level which is a key design requirement for the condo. In order to negotiate the demands for both the theatre and the proposed mixed use condo building, the existing lobby will be demolished. However it’s functional program will be addressed and improved upon in the new addition through the provision of additional washrooms, an updated ticket wicket, event space, meeting room and coat room and will be updated to meet building and fire codes. Accessibility will be provided through a passenger



IMPACT OF THE PROPOSED DEVELOPMENT (WEST ELEVATION)



EXISTING CONDITIONS OF TIVOLI THEATRE



IMPACT OF THE PROPOSED DEVELOPMENT (WITH NEW MARQUEE)



IMPACT OF THE PROPOSED DEVELOPMENT (VIEW NORTH DOWN JAMES STREET)

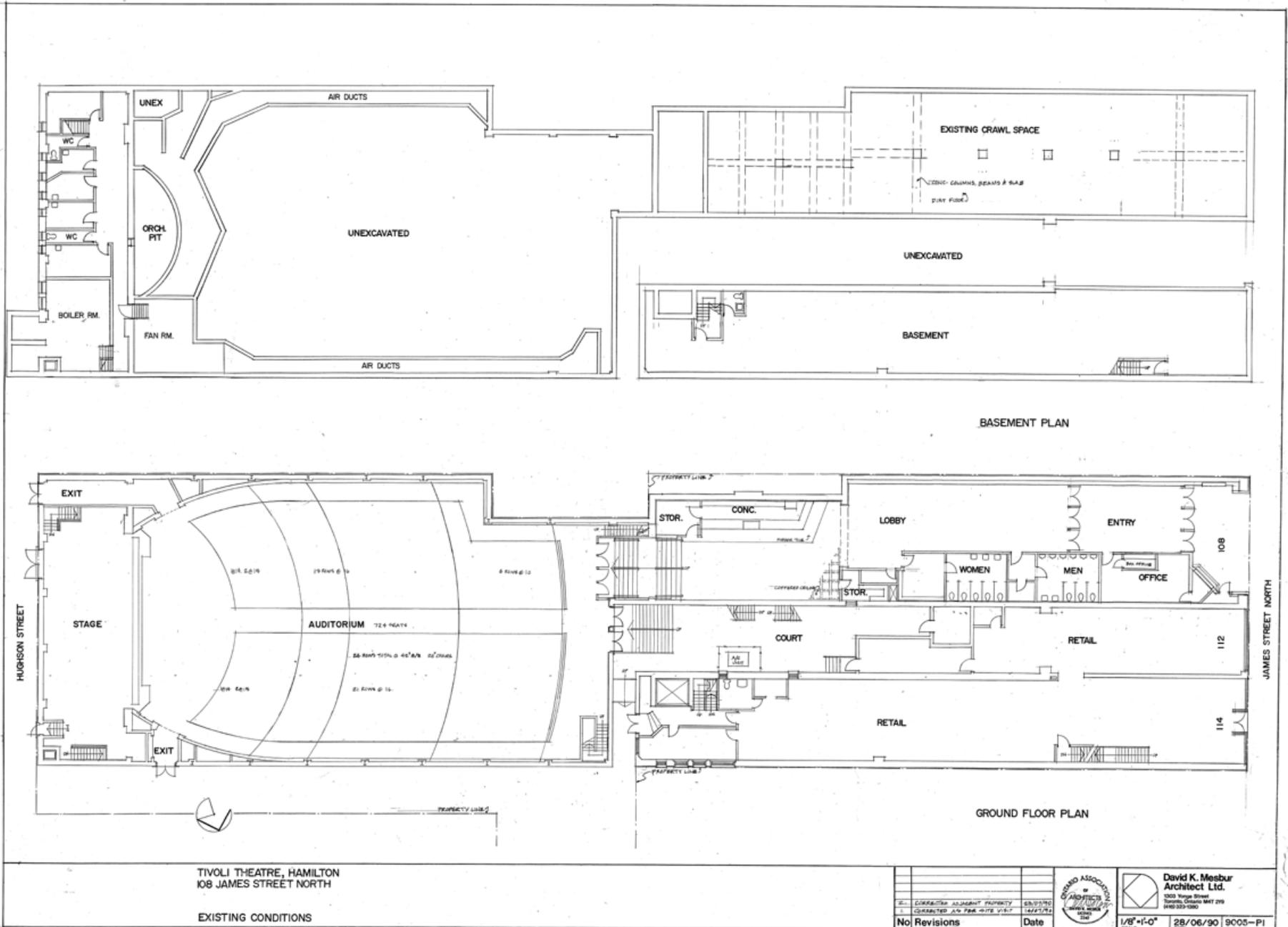


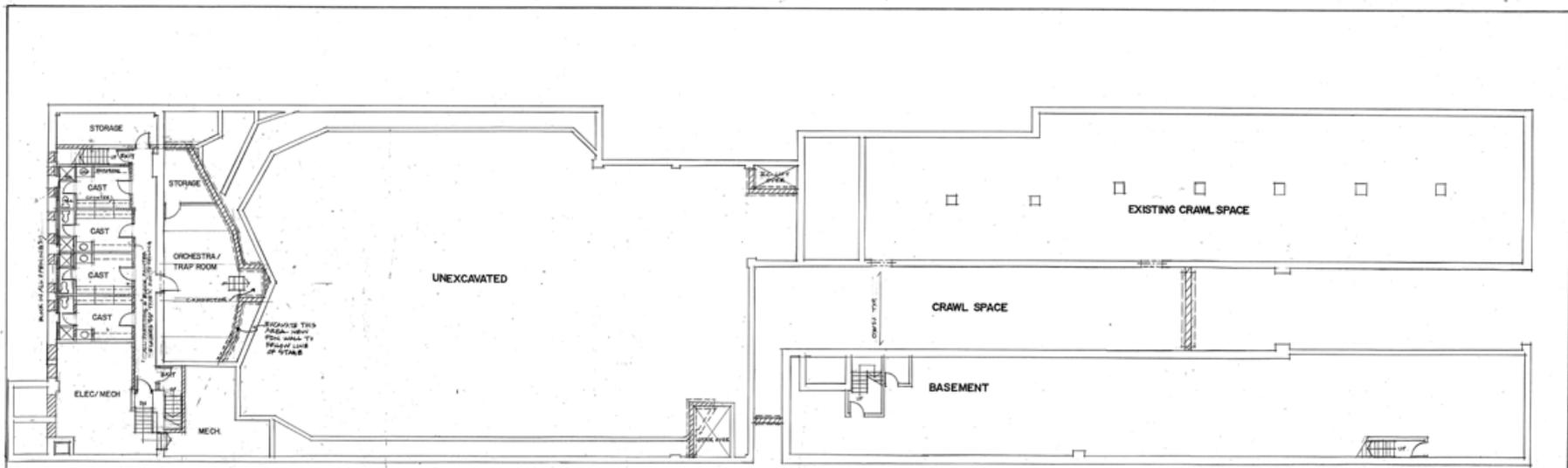
IMPACT OF THE PROPOSED DEVELOPMENT (VIEW SOUTH DOWN JAMES STREET)



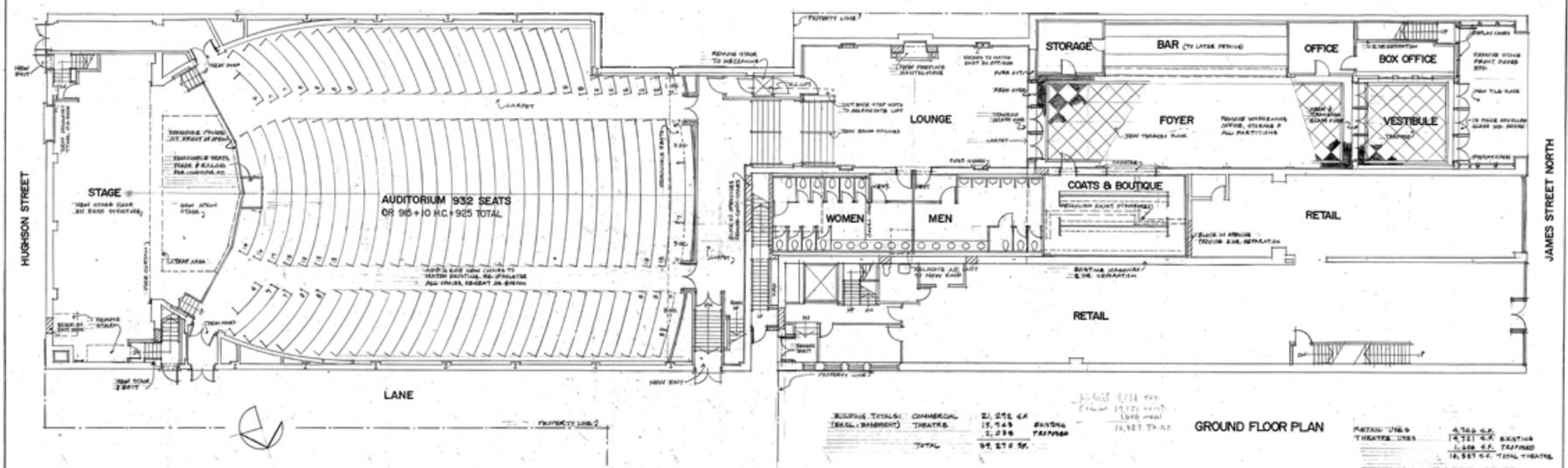
4.2 MITIGATION STRATEGIES

1. **Document the Existing Lobby Building:** While the lobby has been removed from the interior designation, the interior features will be documented with text and photographs to keep a record before its demolition.
2. **Protections and Maintenance:** Temporary heating system and repairs to roof downspouts to prevent further damage to the interior. Once the lobby is removed for site work, structural hoarding will be provided to protect the remaining auditorium from the elements and vandalism.
3. **Restore and Re-establish:** Stabilize and repair the existing theatre component by resolving any building envelope issues. Restore any damage sustained to the designated components of the remaining interior.
4. **Continuity in Conversion:** The new addition will play a significant role in maintaining a conceptual relationship as well as a physical connection. It restores the former presence of the theatre on James Street through a podium which invites the public in off the street.





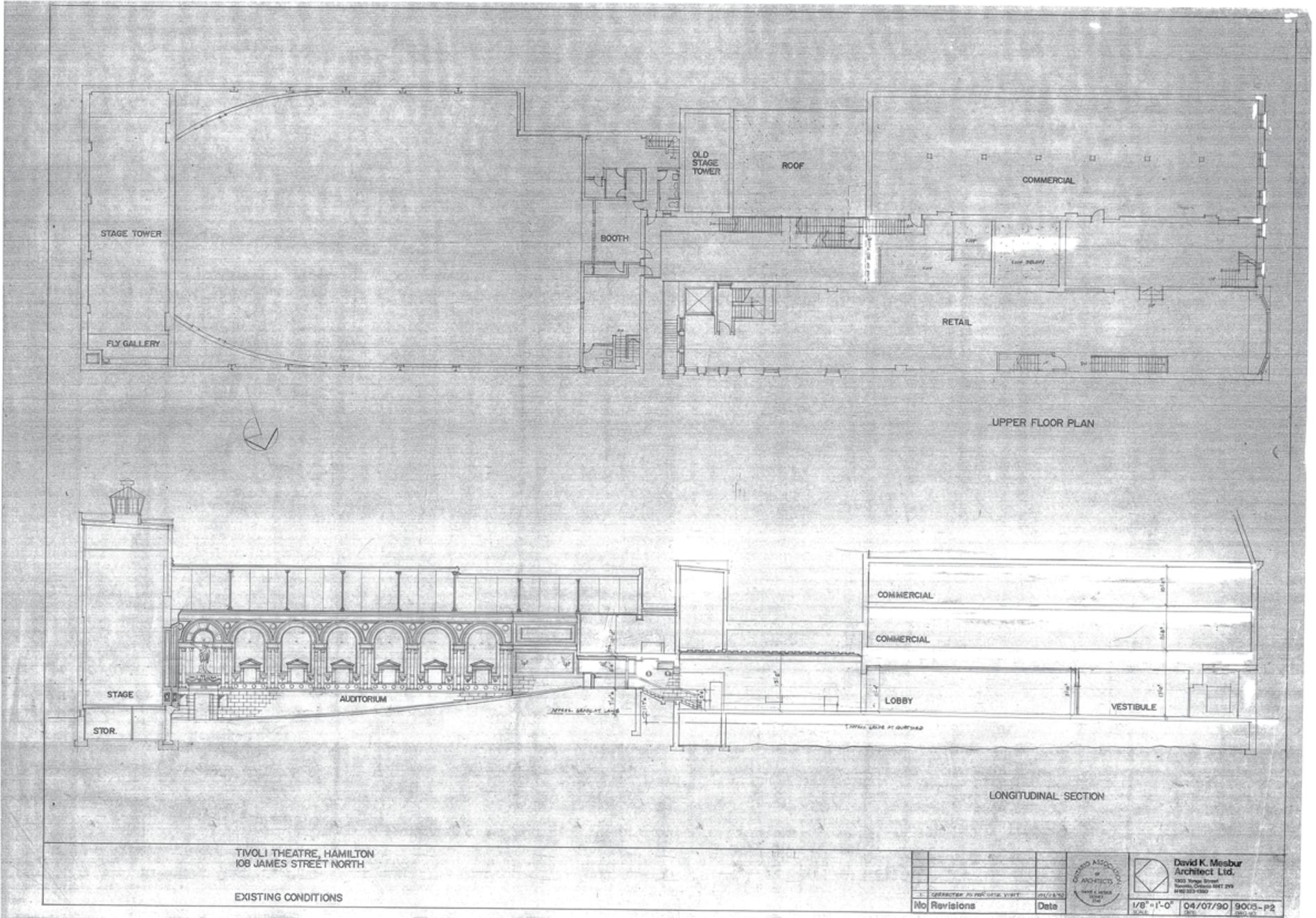
BASMENT PLAN
 RETAIL STORAGE: 5,128 S.F.
 THEATRE USE: 5,128 S.F. EXISTING
 8,256 S.F. TOTAL
 8,256 S.F. TOTAL THEATRE

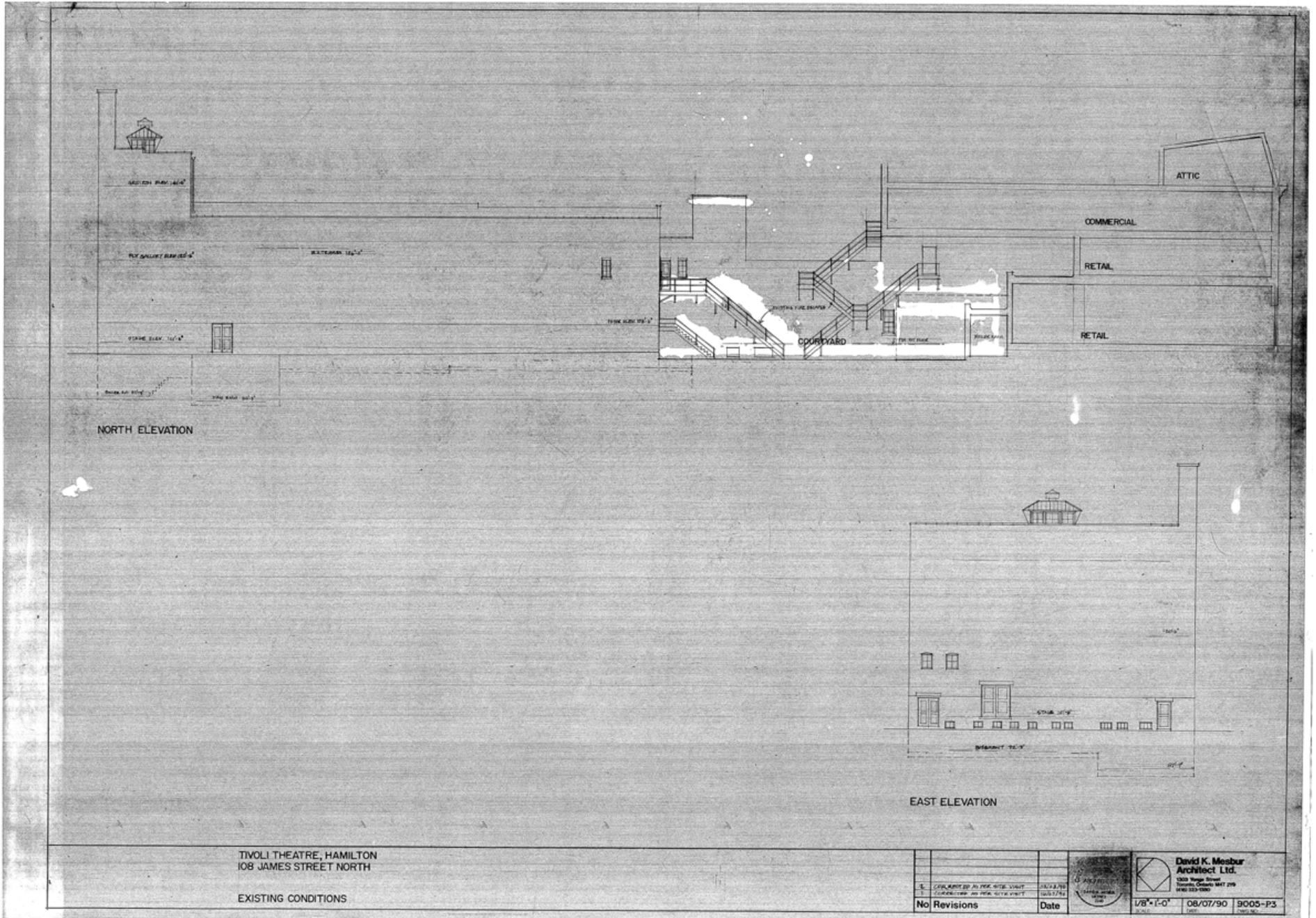


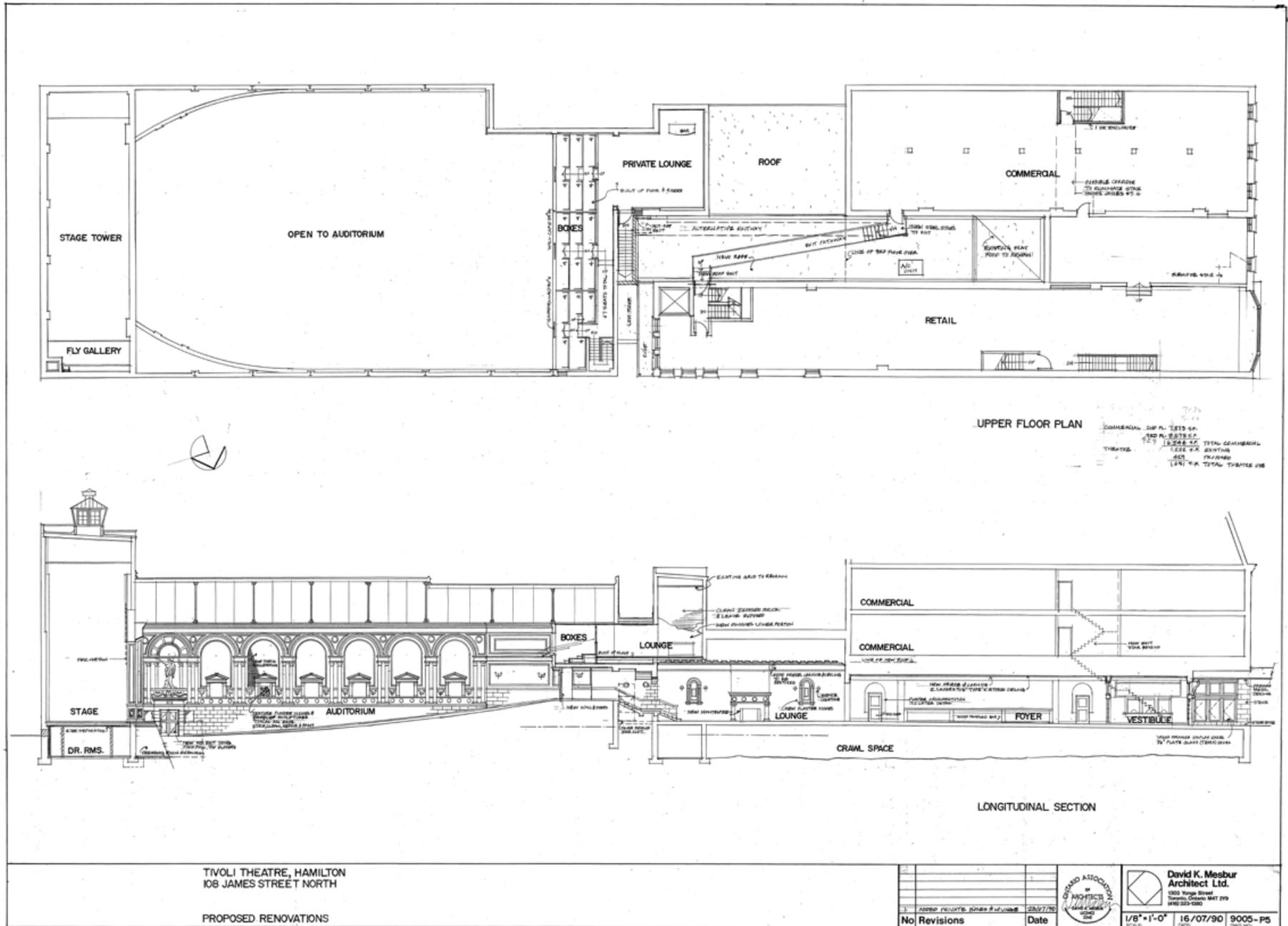
GROUND FLOOR PLAN
 BUILDING TOTALS: COMMERCIAL 21,276 S.F.
 (EXCL. PARKING) THEATRE 18,545 S.F. PARKING 14,517 S.F.
 TOTAL 54,338 S.F.
 RETAIL: 4,768 S.F.
 THEATRE USE: 14,747 S.F. EXISTING
 14,747 S.F. TOTAL THEATRE

TIVOLI THEATRE, HAMILTON
 108 JAMES STREET NORTH
 PROPOSED RENOVATIONS

NO. 1	ADDED RENOVATION & PROTECTION ETC.	04/15/90	
NO. 2	ADDED RENOVATIONS	05/29/90	
NO. 3	GENERAL REVISIONS	08/07/90	
No Revisions		Date	



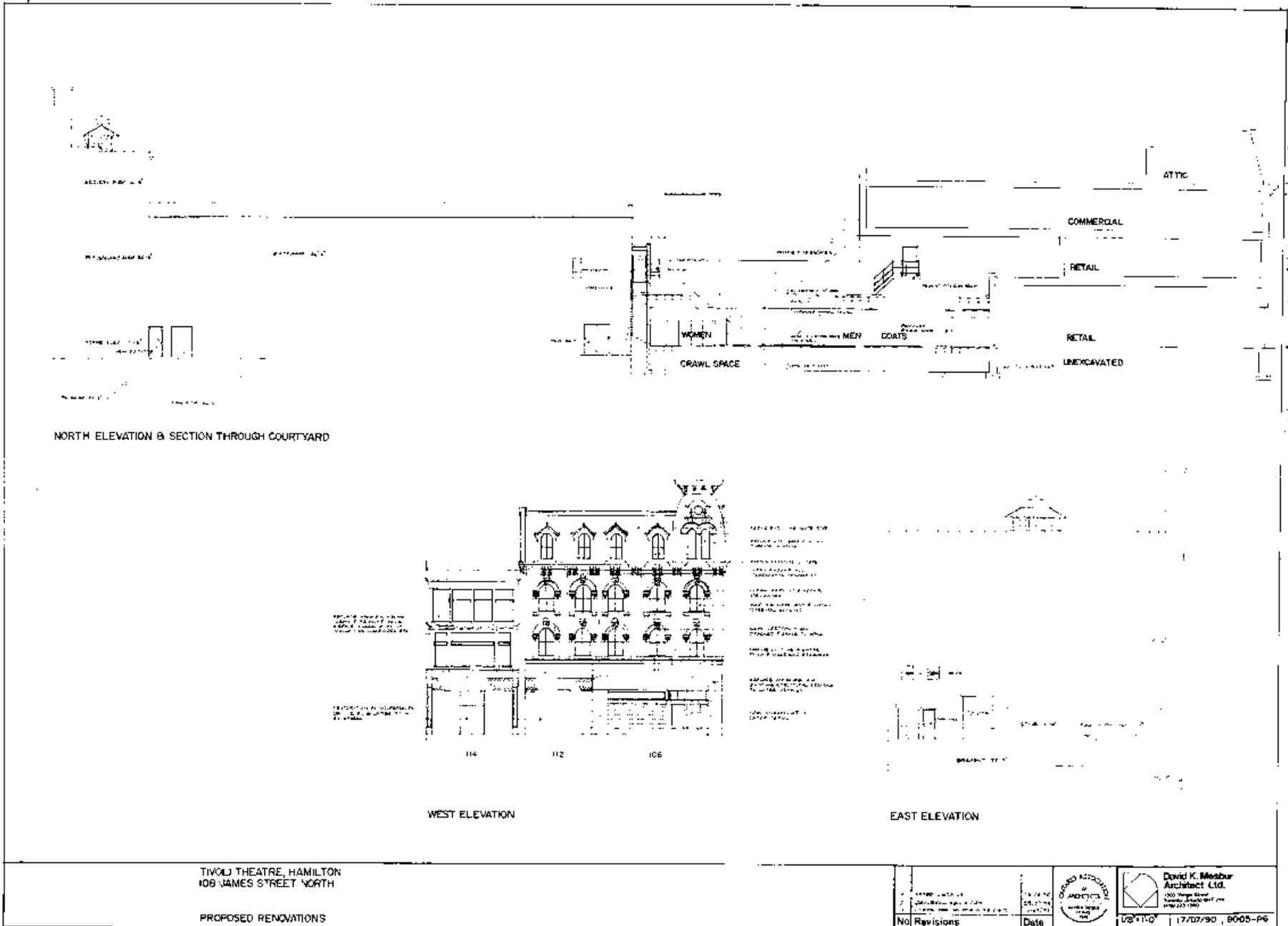




TIVOLI THEATRE, HAMILTON
106 JAMES STREET NORTH

PROPOSED RENOVATIONS

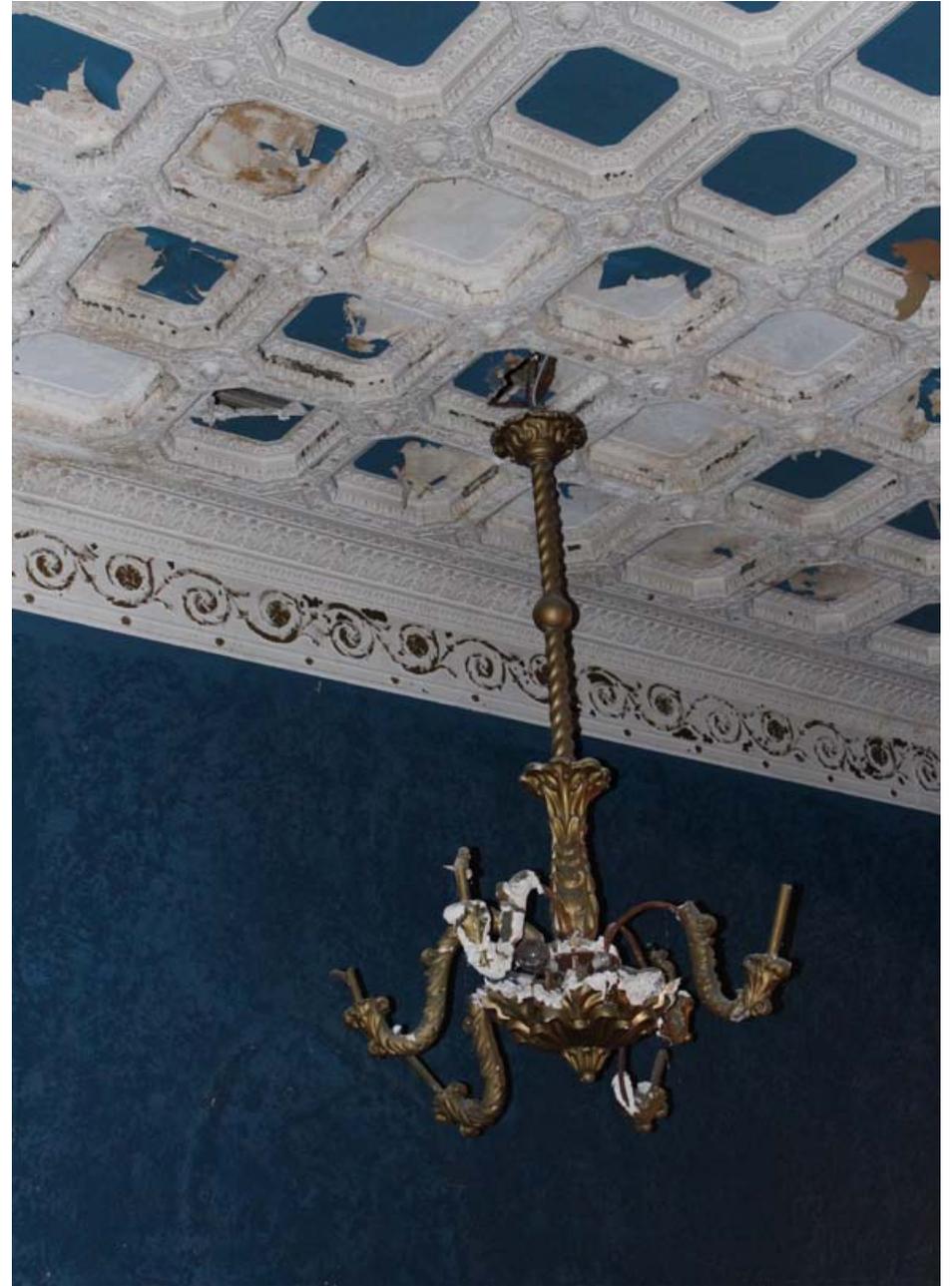
		David K. Mesbur Architect Ltd. 1510 Yonge Street Toronto, Ontario M4T 2Y9 416-593-1900
16/07/90 9005-P5		1/8" = 1'-0" SCALE











**Tivoli Theatre
April 2014****Structural Review**

Quinn Dressel Associates were able to undertake a limited visual review of the interior and exterior of the present day Tivoli theatre. The theatre property traversed the property from James Street North to Houghson. The rear, or back-stage of the theatre fronts on Houghson. The original theatre lobby has been demolished at some point in the past.

The building is founded on spread footings sitting on till of unknown bearing capacity. A single storey basement exists below the stage portion of the building where dressing rooms, service space and an orchestra pit are located. The audience chamber itself is a slab-on-grade construction, probably on some degree of fill. Two heating plenums are located below the audience chamber floor at the two north and south walls.

The bearing walls observed are constructed of three wythes, with the outer two of clay brick and the inner wythe a 4" x 5" hollow clay tile. The inner wythe is generally not viewed as providing any structural capacity. The walls of the stage house are generally thicker,

A series of perimeter steel columns are spaced at 14'6 centres and provide direct support to steel trusses forming the roof framing above the audience chamber. Adequate access to the steel roof trusses was not available at the time of our visit.

From a structural perspective, given the age of the building, one would have to say the condition is in reasonable decent repair, with some relatively minor interventions required to provide for continued long-term service.

The main concern for the building as a whole, including the structure is the control and cessation of moisture ingress going forward. It is our opinion that water has been entering the building fabric for many years, and should this be allowed to continue the integrity of the building's structure could become compromised, if it hasn't already.

Secondly, and of equal concern to the moisture issue is the lack of heat within the building, even at minimal levels. This cannot be allowed to continue without jeopardizing the existing conditions. The volume of water entering the building is significant, and ice is still present in portions of the building on April 10th.

In conclusion, it is our opinion that the building structure can accommodate continued long-term service but immediate repairs to control the ingress of water are necessary, as are the provisions for minimal heat during the winter months. Repairs to the brick exterior wall, and other less obvious repairs are required to ensure this long-term service, but these can be practically achieved.

Review of Existing Conditions
and
Proposed Stabilization Work



The Tivoli Theatre

Hamilton, Ontario

02 April 2009



Tivoli Theatre, Stabilization Review

26 March 2009

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1.0 Introduction

The following comments are based on our familiarity with the project having produced preliminary concepts for the future development of the site in 2008 and a site visit for the purpose of updating our understanding of the condition of the portion of the building which remains as of March 11, 2009.

The purpose of this report is to highlight a number of stabilization sub-projects which would aid in reducing the speed of deterioration of the remains during an interim period while the larger redevelopment project is under consideration.

This review was preliminary in nature and does not represent the full scope of deterioration of the building or represent the required restoration work which may in future become a component of the larger project. It is solely intended for the purpose of identifying a scope of work for short term stabilization.

The sub-projects set out in this report will require further development prior to tendering and execution. We recommend that the work identified in this report be carried out by trades qualified and experienced in this type of work.

We were requested to consider a scope of work in the range of \$120,000 of construction cost.

The “building” is a structure that at one time sat behind the commercial buildings on James Street North, on of Hamilton’s primary historic “man streets”. It had a narrow street elevation within the commercial building front elevation but the remainder of the building was constructed as an unadorned brick enclosure of a



West elevation of remaining building showing concourse cut off with auditorium house beyond



East Elevation, rear, of the building showing stage house

strictly functional nature. This enclosure included a concourse leading to the theatre, an auditorium house and a stage house.

The front of the building was demolished along with the surrounding commercial building on James Street leaving a portion of the concourse and the auditorium and stage houses.

The principal heritage value of the remaining portions of the building lay in the interior.

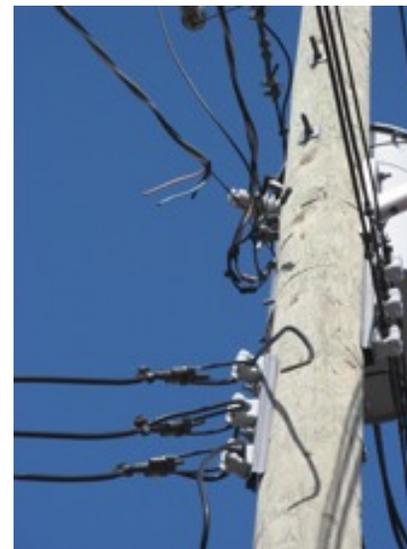
The interior of the concourse and auditorium are a finely detailed decorative plaster with paint finishes on the base masonry and steel structure. It was one of Hamilton's finest movie palaces in its day.

The interior of the stage house is strictly functional and although a movie palace, the stage is substantial and served by a full fly, with an upper grid and fly system, of a scope suitable to present vaudeville acts of the early 20th century.

2.0 Ongoing Deterioration.

It was apparent from our site visit that the building has undergone more deterioration in the past winter above what we observed last year. The primary source of deterioration is the entry of water from the roof which is finding its way into the building and the action of frost. The combination of freezing and thawing in a damp condition is rapidly deteriorating plaster and paint finishes as well as fundamental masonry structure.

3.0 Services to the Building



Detail at hydro pole showing service to building cut off, wires cut at pole

We were informed, and observed that there are currently no energy services to the building, both electricity and gas services have been cut off.

We presume that water and sewer services are still connected but that water has been shut off at the street.

No testing of the mechanical or electrical systems serving or within the building was undertaken at this time.

4.0 Summary of primary deterioration agents and proposed stabilization work

We looked at sub-projects in the following areas:

- Water
- Heat
- Physical stability

4.1 Water

The affects of water damage is the primary agent of deterioration of the building. Water is entering the structure in three ways, from the roof, through the walls, and from the ground. It is however the water which is entering the building from the roof that is causing the most rapid short term deterioration. Water coming through the walls and from the ground, is acting on the masonry structure of the building more slowly, however no less critically in areas of deteriorated masonry.

4.1.1 Roof



Detail at concourse, no roof flashing or roof seal at concourse



North Side of concourse, not roof flashing ripped off at west, right, end of roof

The roof system is a combination of flat and moderately sloping roofing on a roof deck supported by riveted angle iron roof trusses of considerable depth.

At the base of the roof slope the parapet walls create a gutter condition which is drained through internal rain water leaders leading to a sewer system below the floors inside the building.

We have been informed that a roof inspection last year confirmed the actual roofing materials are in acceptable condition. The penetration of water from the roof, we understand, is therefore not associated with a failing roof membrane. Access to the roof was not possible on the day of our visit.

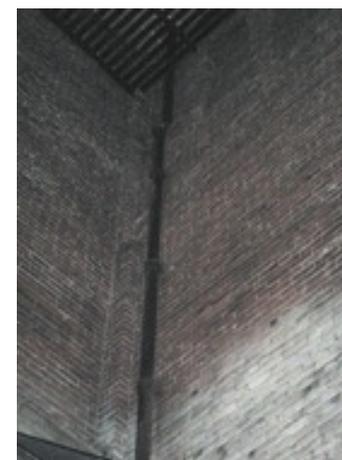
Water is entering the building in the spring and fall in periods when temperatures are around the freezing mark, this is a result of ice build up inside the internal rain water leaders as the interior is not heated. This ice blockage then causes the melt water from the roof, or rain, to back up in the gutter area at the base of the slope and when full to run over the parapet. At this point water then breeches the flashing at the perimeter of the roof and runs into the wall under the cap flashing.

Once the cap flashing is breeched water flows into the building down the outside wall below the low points in the roof system, near to the location of the rainwater leaders, but not limited to this area only.

This overflow water has severely damaged a considerable area of decorative plaster and paint finish in several locations in the building interior.



West end of auditorium house, staining indicates where water flows off flooded roof. This also flows to the interior under the roof flashings



Rainwater leader from high roof at stage house. 6 Rainwater leaders (RWL) require heat tracing to prevent icing in winter.

Projects

.1 To correct this issue we propose that you heat trace the rainwater leaders with heating cable. These would be controlled with sensors and turned on below freezing keeping the pipe warm and functional.

.2 At this time the RWL should be tested to ensure they do not leak into the building. They may have cracked with internal ice pressure.

It is not possible to cap the RWL and to install scupper drains to exterior RWL that shed the water off the roof as the building is constructed on the property line on the entire east side and this outflow would be required to pass onto the neighbouring property. We have been informed the neighbour will not permit this intrusion.

.3 Make miscellaneous patches to roofing membranes and flashings as required

4.1.2 Walls

Water is entering the building through the walls in a couple of ways.

The primary entrance point is the cut off line of the concourse at the west end of the remaining building. The closure of this hole is poorly constructed and is admitting water to this end of the concourse. This permits further damage directly through the action of the water, but also introduces much more humidity into the building.



Detail at cut of concourse, a new exterior wall is required to seal this location against weather and vandals.



Doors to auditorium and projection room. These should be sealed up, use concrete block or brick which may be removed in future.

A second entry point is damaged doors windows and masonry. Where doors do not seal fully or windows are damaged water is entering the building.

The lower basement in the ventilation room has standing water. This can be pumped out through the installation of a new sump pump in the existing sump hooked up to drain to the existing sewer line. This will remove a source of considerable dampness in the basement.

Where masonry jointing is severely deteriorated water is permitted to increasingly enter the wall more rapidly causing further deterioration and structural instability.

Projects

.1 We recommend that a more substantial closure wall be constructed to seal off the cut line of the concourse. This new partition should be constructed of metal studs affixed to the exterior of the existing structure to shed water beyond the walls and floors that remain. At its top it should be sealed and flashed to the existing roofing system and it should be sealed at its perimeter to the remaining walls. The partition exterior should be an exterior grade cement board or heavy plywood, painted, on a water repellant air barrier on steel studs. Insulation should be installed and this held in place by 6 mil ploy and drywall. It is not necessary to tape the drywall. No interior finish is required.

.2 We recommend that only one man door and one service door remain operable. These would be the doors on the east end of the building to the stage on Houghton Street.



Detail at north wall of concourse, note open hatch to crawl space admitting water and vandals, partially blocked by loose masonry at present.

.3 All other doors should be blocked up to prevent vandal entry and to seal them against the weather.

.4 Similarly all window openings, or service hatches should be sealed. We do not recommend ventilation grilles be sealed as these will continue to work to ventilate the interior as noted below.

.5 Install and hook up to drain, a new Sump pump in the existing sump pit in the low ventilation room in the basement.

4.2 Heat

The lack of heat in the building deteriorates the building in two ways primarily.

- Condensation
- Frost action

Condensation occurs when warmer damp air meets a cold surface, or condition, reducing the temperature of the air below the dew point such that water born in the air condenses. As the building is very damp from water penetration, and it is unheated, there would be many days when this condensation would occur both inside the wall and on the decorative interior surface. It is clear from the crazing and peeling of the paint and the general mustiness, moulding, of the interior that this is happening.

We have not undertaken a mould inspection but it is likely this is underway given the interior conditions, and the presence of so much fabric in carpets and seating.



Example of access hatch. There are several around the building. An attempt to pry this open is apparent. These should be further secured and sealed against the weather.

In order to control these conditions water must be kept out, as noted above, and heat must be added to the building interior to reduce the likelihood of interior condensation.

Frost action is a second destructive force. It acts when wet materials or wet ground outside or under structure freezes. Ice crystallization occurs in pours of materials damaging the very composition of material and / or soil expands heaving foundation walls and floor slabs on grade.

It is essential that some level of heat is added to the building in winter months to prevent this. Where the footings are well into the ground and the interior is backfilled it is less of an issue. In the area under the stage where there is actual standing water and no frost cover on the footings it is a definite issue and frost will be acting on the foundation walls and floor slabs

Projects

.1 Install a heating device to blow warm air into the space in winter months ducted to the below stage area and to add heat to the above grade room as well. This device(s) could be one or two large domestic furnaces. Placed in the space and served with temporary ducts. These units could be fueled by gas or electricity. However, as the site is not currently serviced by gas and the furnaces would not easily be connected to chimneys or be ducted to the exterior, we suggest electric units. Further this would be consistent with the need to re-service the building with electricity for RWL heating cable.

.2 At the same time as these units are installed temporary lighting should be installed for inspection purposes.



Detail at north wall of concourse. The brick masonry is severely deteriorated in this area and one full wythe of brick is missing. Joints should be pointed and missing brick replaced.

4.3 Physical Stability

From our site observations some areas of severe brick deterioration were observed.

An area of localized brick deterioration is located in areas on the north side of the concourse wall. These should be repointed and a few bricks need to be replaced.

A second area of deterioration at the roof level of the north wall just west of the stage house needs attention. A brick pier supporting a beam that supports the cooling tower is deteriorated and should be repointed.

A third area of deterioration is the top of the building chimney serving the historic boilers for the building. The top courses of the chimney are in very poor condition and a hazard to the street below.

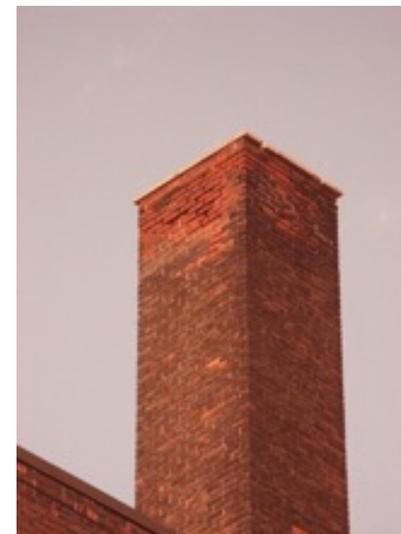
A detailed condition review was not conducted, however, no other serious deterioration, cracking or movement was observed at this time.

We wish to note however, that the entire lower south wall is concealed behind the immediately adjacent plaza to the south of the building and can not be seen.

Projects.



Detail of brick pier at north side of auditorium. This supports roof top equipment and should be repointed and missing bricks replaced.



Detail of badly deteriorated chimney at the north east corner of the building. This poses a hazard to the street below and should be pointed or rebuilt at its top as soon as possible

.1 The areas of brick repair noted above should be attended to for both building stability and as a safety measure against falling bricks. **The upper level work should be undertaken as soon as possible as a hazard exists to pedestrians below from falling brick.**

.2 Repoint and replace brick as required.

4.4 Miscellaneous work

Other smaller projects should be done at the same time for security purposes and for the health of the building. Further it is likely that there is asbestos and other hazards in the building. These should be identified wrapped and posted for the safety of maintenance workers in this interim period when the building is unoccupied.

The building is at present largely unventilated. this also allows for the build up of dampness inside promoting deterioration and mould growth in warm summer months.

Projects

Seal and secure all perimeter metal access hatch doors. bolt or spot weld closed. This should include the ground hatch door east of the stage house near the stage door.

.1 Have prepared by a qualified firm a report on the presence of hazardous materials in order that maintenance workers are protected and / or are prepared to wear appropriate protective equipment.



General view of east wall. Note location of deteriorated chimney



Detail existing Grille on north wall. This can be used to ventilate the interior

.2 Re-roll and wrap the fire curtain as it is likely asbestos. The building is not occupied and so it may not be necessary to remove the material at this time, however, for worker safety it should be wrapped and posted.

.3 Wrap and seal the pipe wrap in the basement and post as asbestos containing.

.4 Install a ventilation fan connected to the existing ventilation duct and exterior grille. This should be controlled by a humidistat and come on when conditions warrant. A duct heater should be installed to warm ventilation air in winter.

.5 Vandal access to the roof areas is supported by an existing fire escape stair on the north side of the concourse. This should be removed. A ladder should be purchased and be locked up inside for maintenance access.



View of fire escape stair on north side of the concourse. This should be removed as it permits vandals to reach the roof areas above.

5.0 Summary chart of proposed work and rough costs.

Schedule of Proposed Projects	
Item	Cost rough estimate
Heat trace the rainwater leaders with heating cable	10,000
Misc. roofing repairs	10,000
RWL should be tested to ensure they do not leak	2,000
closure wall be constructed to seal off the cut line of the concourse	8,000
doors should be blocked up to prevent vandal entry	1,500
window openings, or service hatches should be sealed	1,000
Install a new temporary electrical service	5,000
Install a heating device to blow warm air into the space	30,000
temporary lighting should be installed	3,000

Schedule of Proposed Projects	
Repoint and replace brick as required.	5,000
Scaffolding to reach upper levels	15,000
Fix sum pump system to drain lower basement	2,000
Seal Misc perimeter access hatches	2,000
Prepare preliminary hazardous material report	5,000
Re roll fire curtain and wrap to contain asbestos. Wrap pipe insulation. Post signs	6,000
Install ventilation fan to ventilate interior	10,000
Remove fire escape stair from north side	5,000
Sub Total	120,500
Contingency 15%	18,075
Contractor costs 15%	2,711.25
Estimated Total Construction Cost	141,286.25

6.0 Hazardous Materials

It is our belief that there is asbestos exposed in the building. Any contractor undertaking work to the building should be made aware of this and it should be posted. It is beyond the scope of this report to identify all sources of hazardous materials however, it can be assumed that this is located in the old fire curtain which has been deployed and separates the stage from the auditorium and in the pipe insulation wrap in the basement areas.

Before any significant renovation work proceeds a hazardous material report should be prepared for the building.

7.0 Conclusions

The fabric of the remaining portion of the historic Tivoli Theatre is deteriorating rapidly. It is essential to stabilize the building that, at a minimum, the work outlined in this report is undertaken in the near future. Without this work the building will continue to rapidly deteriorate from both environmental effects and vandalism.

This report is an outline of the work proposed. Proper construction documentation should be prepared and a competent contractor engaged to undertake the work outlined.

The proposed work outlined in this report is of a short term nature and will not in the long term address the restoration needs of the project. It is intended that this work reduce the rate of deterioration until such times as a full renovation / restoration of the project may proceed.

8.0 Next Steps

In order to implement these recommendations construction documents should be prepared for the instruction of the trades. This documentation will include drawings and specifications and may rely on photos as a base for detail work.

The following consultants will be required:

Architects
Mechanical Engineer
Electrical Engineer

A method of tendering the work should be selected. We recommend that a specialist general contractor or a construction manager familiar with work on heritage buildings be considered.

Although the work described herein is of a maintenance nature, it should be confirmed with the City of Hamilton authorities if a building or other permits are required for the work.

Regular review of the condition of the building should be maintained and any changes to it or indications of movement, such as cracking noted and appropriate action taken by individuals familiar with this type of condition, until such times as the new work of reusing the building proceeds. This should be done at a minimum on a regular bi-weekly basis.

The safety of the public should be kept in mind at all times



Janis A. Barlow & Associates



Re-Opening the Tivoli Theatre – Minimal Scenarios

September 2010

2010 Inspection - Operational Implications

Budget Constraints – will require a reduction in the current seating capacity, phasing of the completion of work and a reduced on-site equipment inventory

The Historic Entry Footprint – must be redesigned to meet current standards for front-of-house (FOH) support

Auditorium – improving sightlines in the auditorium can result in improvements to lobby space at the rear of the theatre

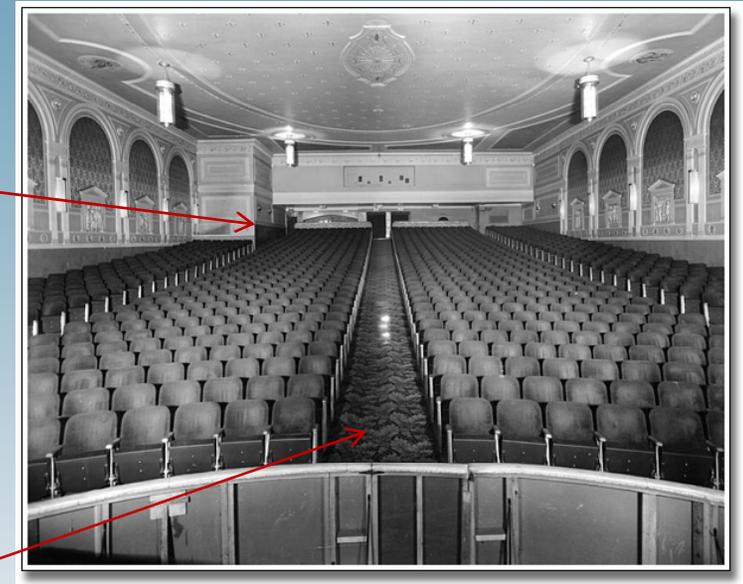
Administration and Rehearsal – will have to be added to the FOH with circulation through the auditorium to backstage

Barrier-free Access – to the backstage areas will require City assistance because of site constraints

Parking – off-site parking arrangements will be required with assistance from the City

Adapting the Tivoli Auditorium

- Sightlines, acoustics at the rear of the house are problematic for film, dance and acoustic music.
- Reducing the depth of the house and creating a lounge will improve access, sightlines, acoustics and services to the public.
- The centre aisle divides the house for the performer and is where the best seats should be.
- Contemporary cinemas have no centre aisle and elevate seating at the rear of the house for better sightlines.



Poor sightlines at the rear of the Tivoli auditorium

Adapting the Tivoli Auditorium

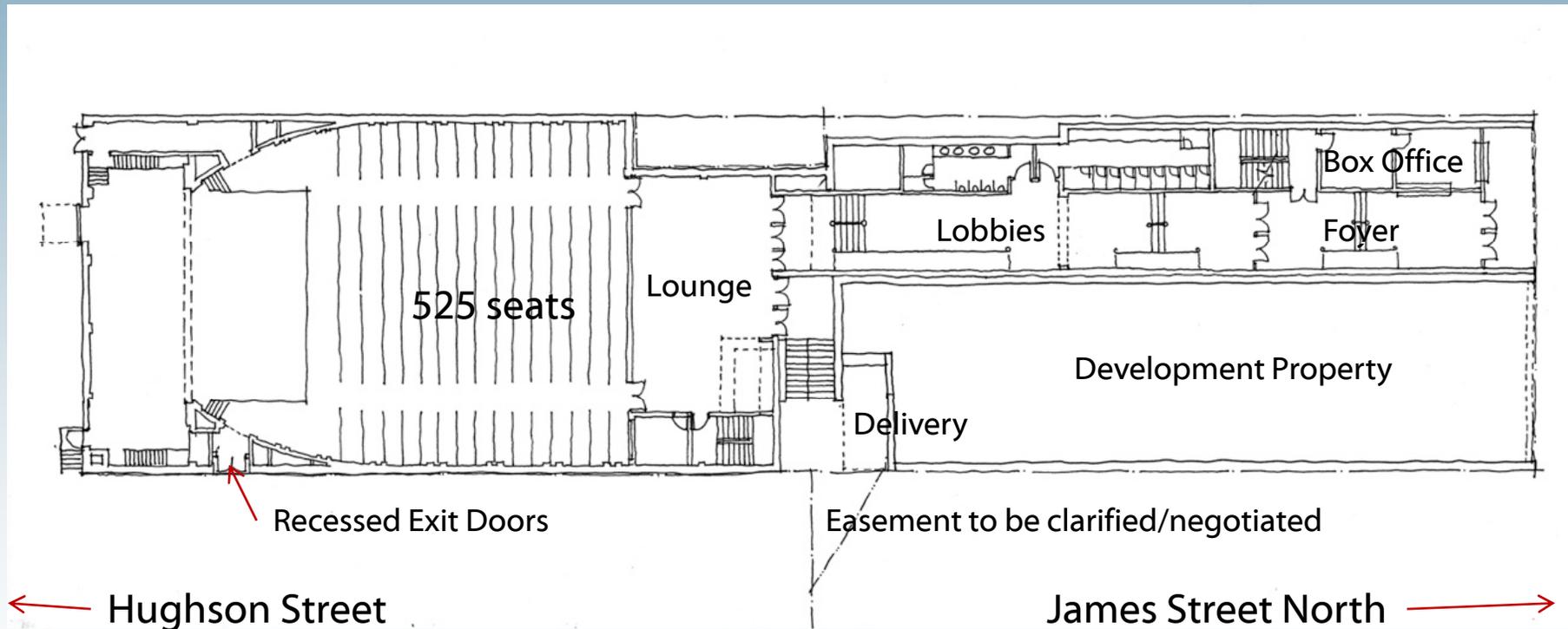
- The original smoking lounge had stairs leading directly up to the auditorium – later this area was converted to a snack bar.
- Barrier-free access, a licensed lounge and sound/light locks between the lobbies and “the house” are required today.
- Efficient loading and secure, barrier-free access and sound/light locks are also required to access the stage of the Tivoli theatre.



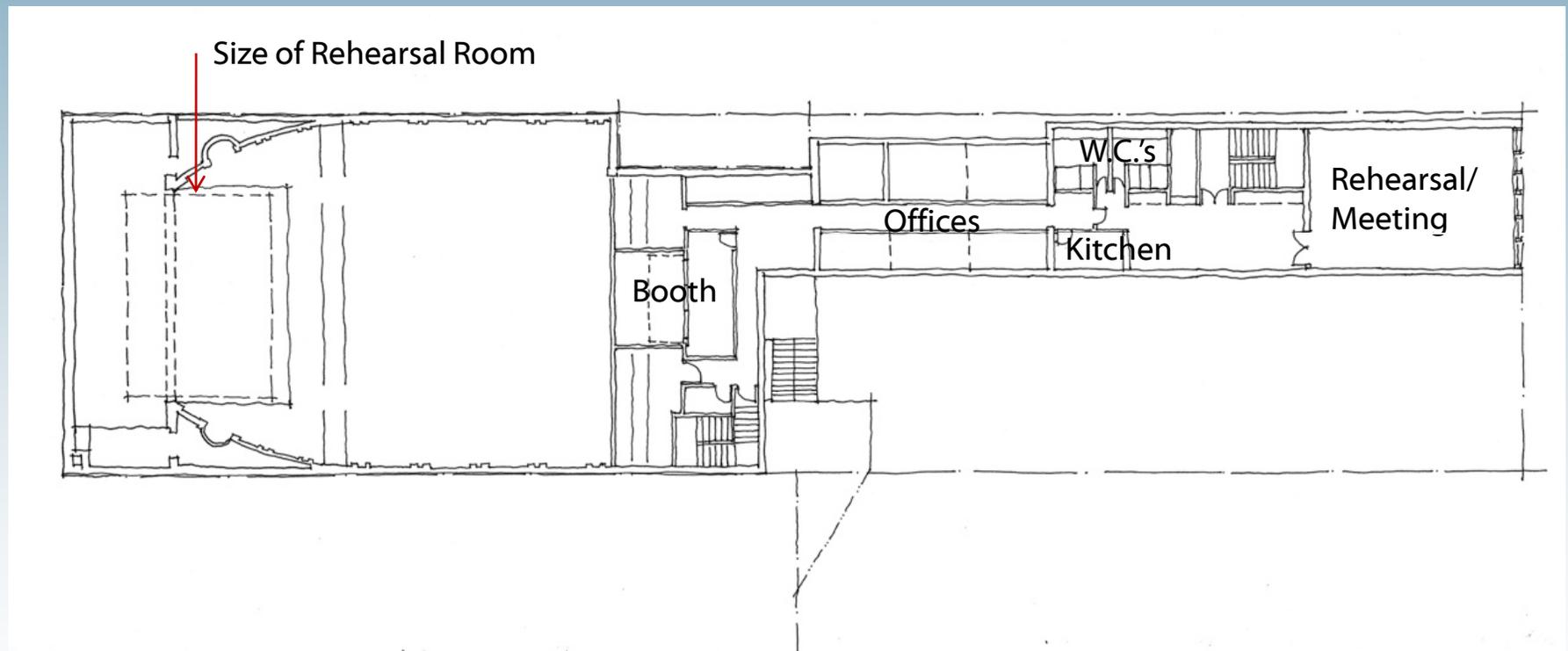
Tivoli stage house
on Hughson St.



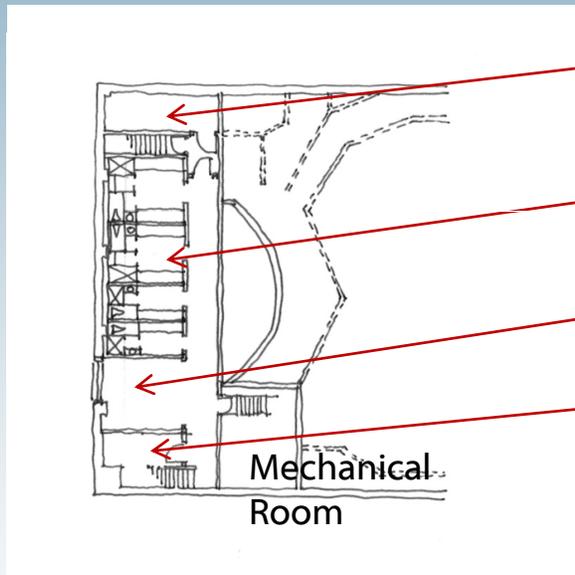
Tivoli Mini Scheme A – First Floor



Tivoli Mini Scheme A – Second Floor



Tivoli Mini Scheme A – Basement Floor



Electrical Room

Renovated dressing rooms (4)

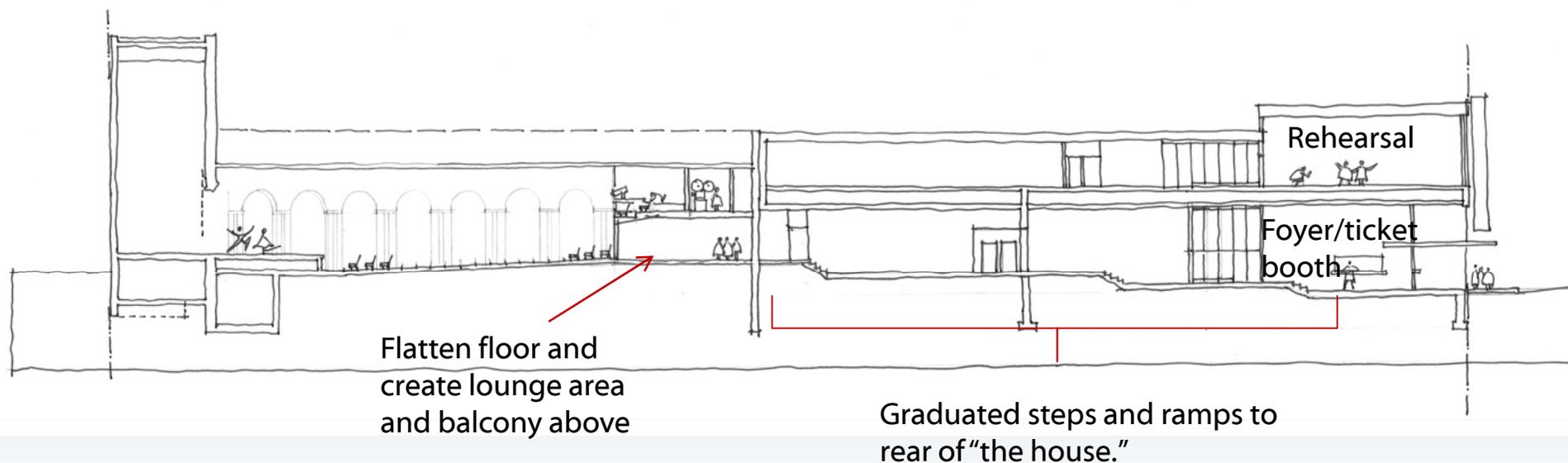
Green room

Stage/Company management office

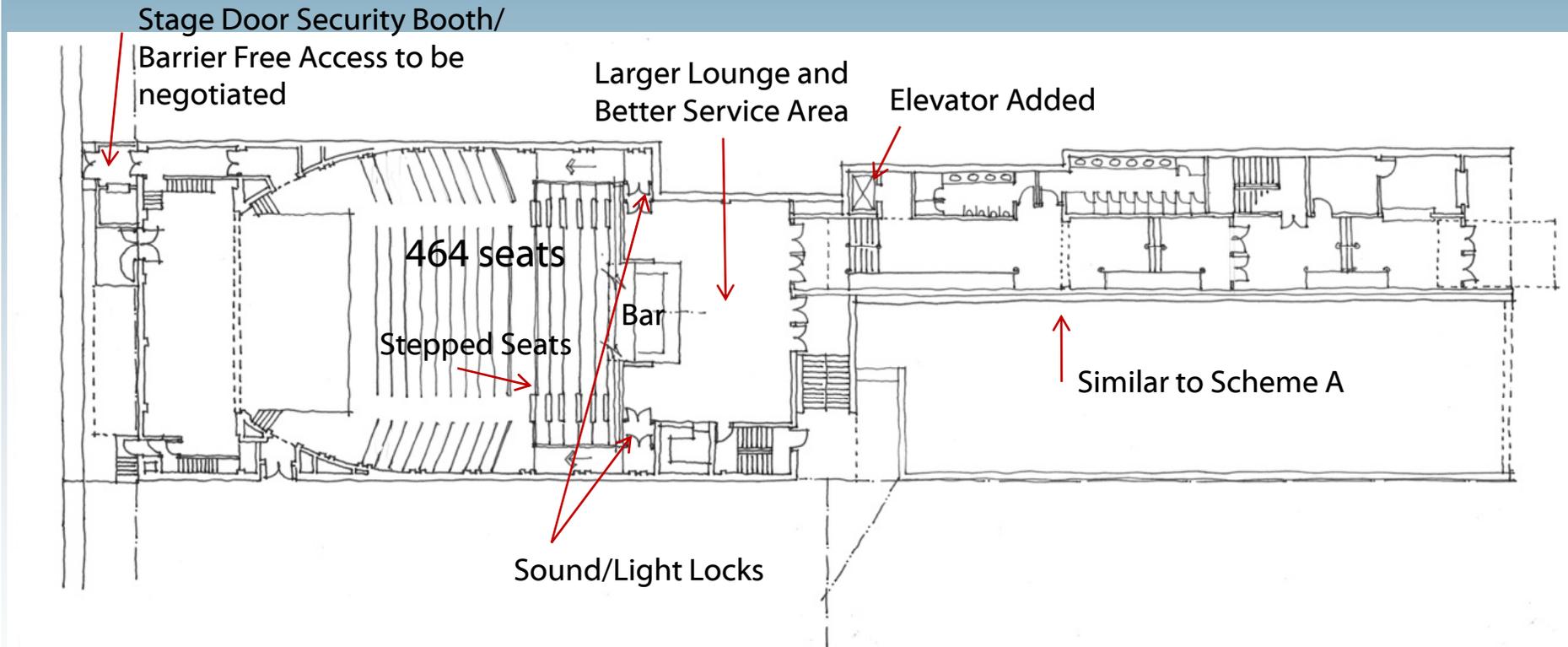
No basement under new front-of-house addition.

Tivoli Mini Scheme A – Raked Floor Section

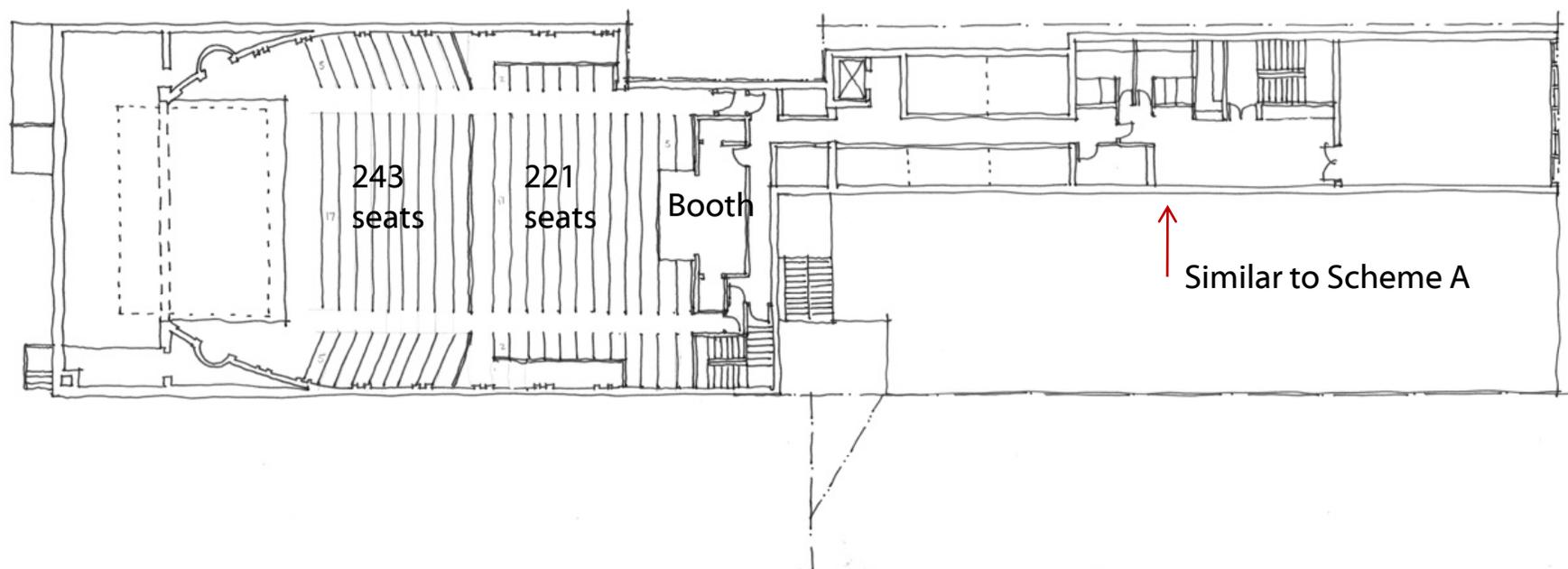
Summary: This scenario improves the acoustical volume of the auditorium but noise and light control, sightlines and safe, barrier-free access to the backstage remain problematic.



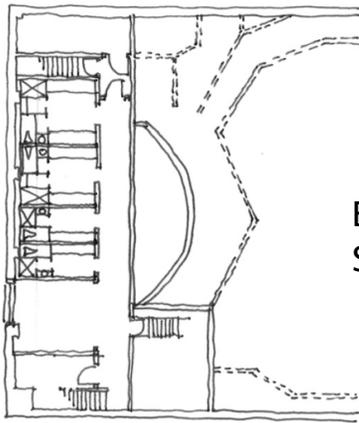
Tivoli Mini Scheme B – First Floor Plan



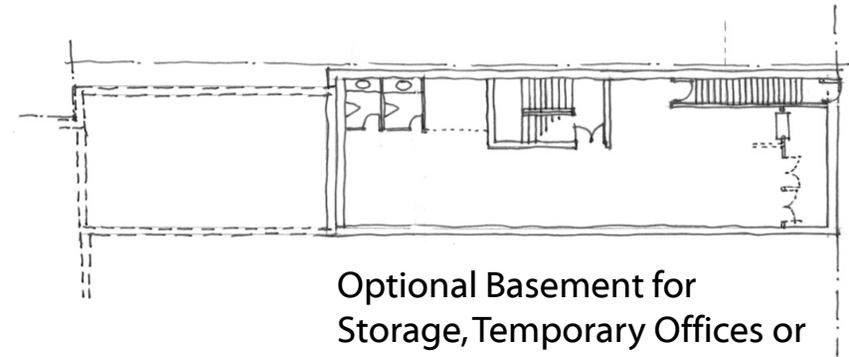
Tivoli Mini Scheme B – Second Floor Plan



Tivoli Mini Scheme B – Basement Plans



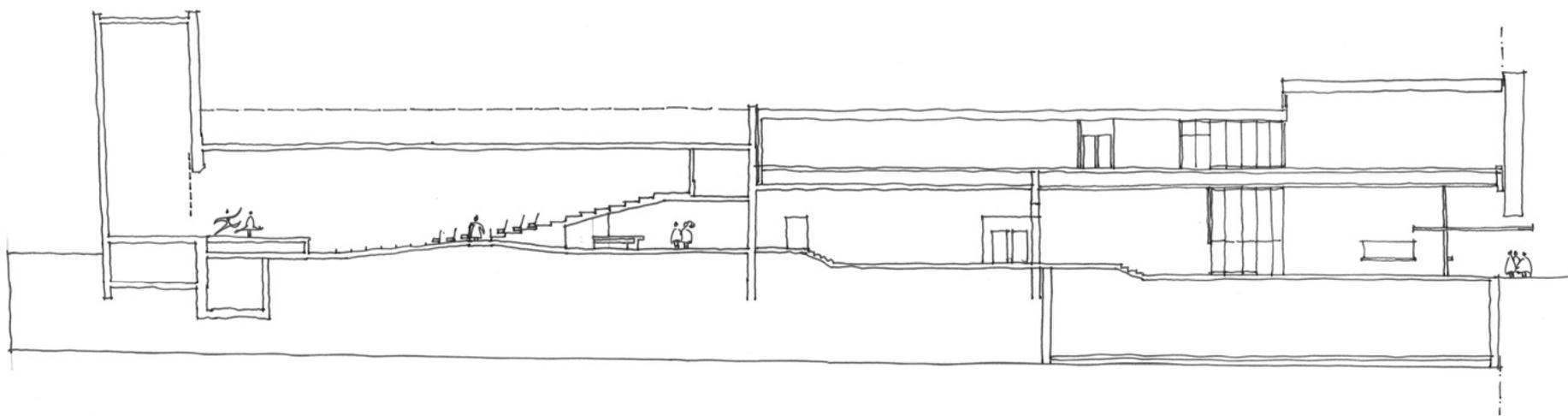
Backstage Basement =
Same as Option A



Optional Basement for
Storage, Temporary Offices or
Rehearsal

Tivoli Mini Scheme B – Stepped Floor Section

Summary: Scheme B addresses all the issues in Scheme A relating to sound/light locks, sightlines and barrier-free accessibility and offers a superior environment for film and dance.



This scenario also allows the original Tivoli ceiling to remain fully exposed.