The Ragon Institute of MGH, MIT and Harvard
Proposed Demolition of 624 Main Street
10 September 2020

PAYETTE

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Figure 1 - *624 Main Street, Existing Conditions View*

1.0 Overview

1.1 Pursuant to Chapter 2.78, Article II of the Cambridge Municipal Code, The Ragon Institute / Massachusetts General Hospital seeks approval to demolish the existing building at 624 Main Street. At the outset of the project, design studies were undertaken to preserve and incorporate the structure into the proposed replacement. However, after completion of additional geotechnical, structural, and construction logistical investigations, it has been determined that the structure can neither be maintained or preserved without the total loss and replacement of original contributing elements. A replacement design is proposed to house the Ragon Institute, a department of the Massachusetts General Hospital operated in collaboration with Harvard University and The Massachusetts Institute of Technology.

The adjoining structure at 600 Main Street is considered of low significance and demolition is anticipated.

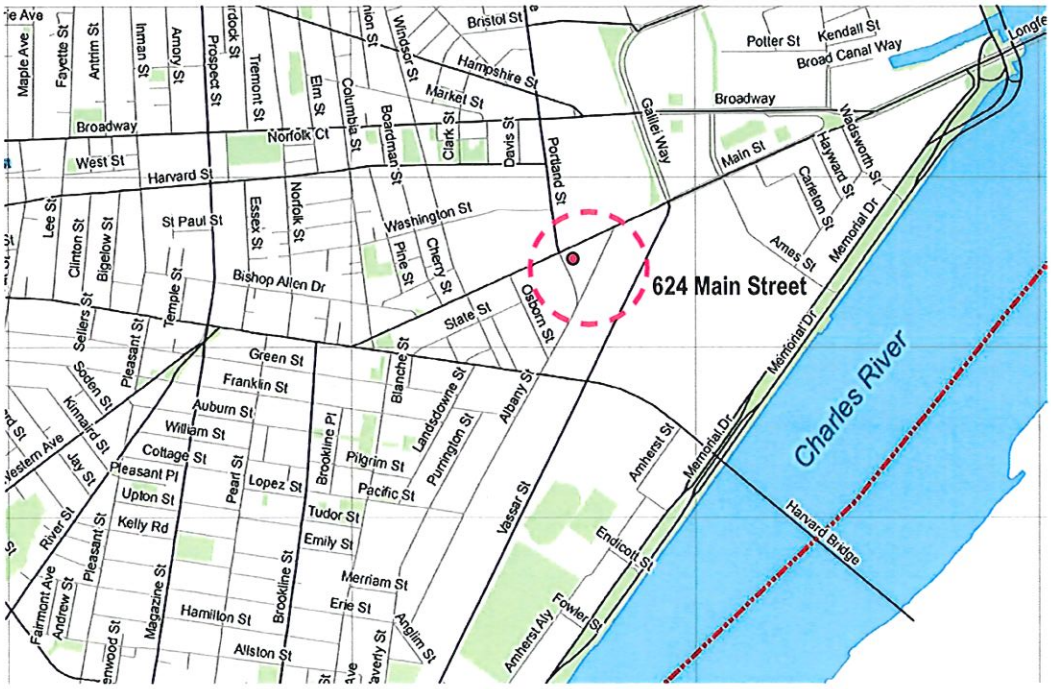


Figure 1 - *Location Plan*

2.0 Existing Building

2.1 Description of the Existing Building at 624 Main Street

The existing building at 624 Main Street was constructed in two phases; the first in approximately 1883 and the second sometime before 1903. It is a two story load bearing masonry structure with a wood framed interior.

Despite the advanced degradation and dilapidation of the structure, the contents include examples of industrial works components. These gears, traction pulley systems, and other miscellaneous remnants of its previous inner workings are candidates for removal, preservation and educational display. See Appendix 4.4.

The building is unoccupied and currently unfit for habitation. It was abandoned by the early 1990's and was briefly used as a temporary construction field office between 2011-2013

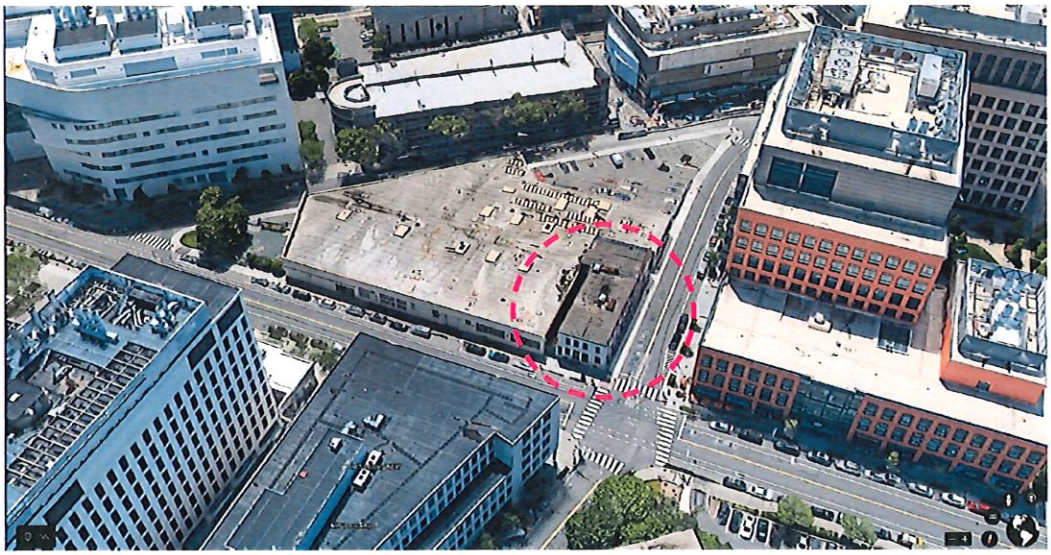


Figure 3 - *Aerial Site View, Existing Conditions*

3.0 Proposed Replacement

3.1 Proposed Replacement: The Ragon Institute of MGH, MIT and Harvard

The proposed replacement structure is the Ragon Institute. A non-profit institution, it is a department of the Massachusetts General Hospital operated in collaboration with Harvard University and The Massachusetts Institute of Technology.

The Ragon Institute currently resides adjacent to the site across Main Street at 400 Technology Square. The institute consists of research laboratories, offices and support spaces that are dedicated to work in six research priority areas: HIV/AIDS, Global Infectious Diseases, Emerging Infectious Diseases, Vaccine Development, Basic and Applied Immunology, and Clinical studies. Their research area contributes to our goal of understanding the immune system in order to prevent and cure disease. The site was selected for its proximity to the current Institute and for its proximity to its collaborator faculty, students and resources.

The proposed replacement is a 235,000 gross square foot, five story institutional quality building of laboratory, office, and collaboration space in five stories above grade, plus penthouse, with a basement that will include off-street parking. The building will house 37 faculty members with their research groups, and administrative and support staff.

3.2 Site Survey - Existing Conditions

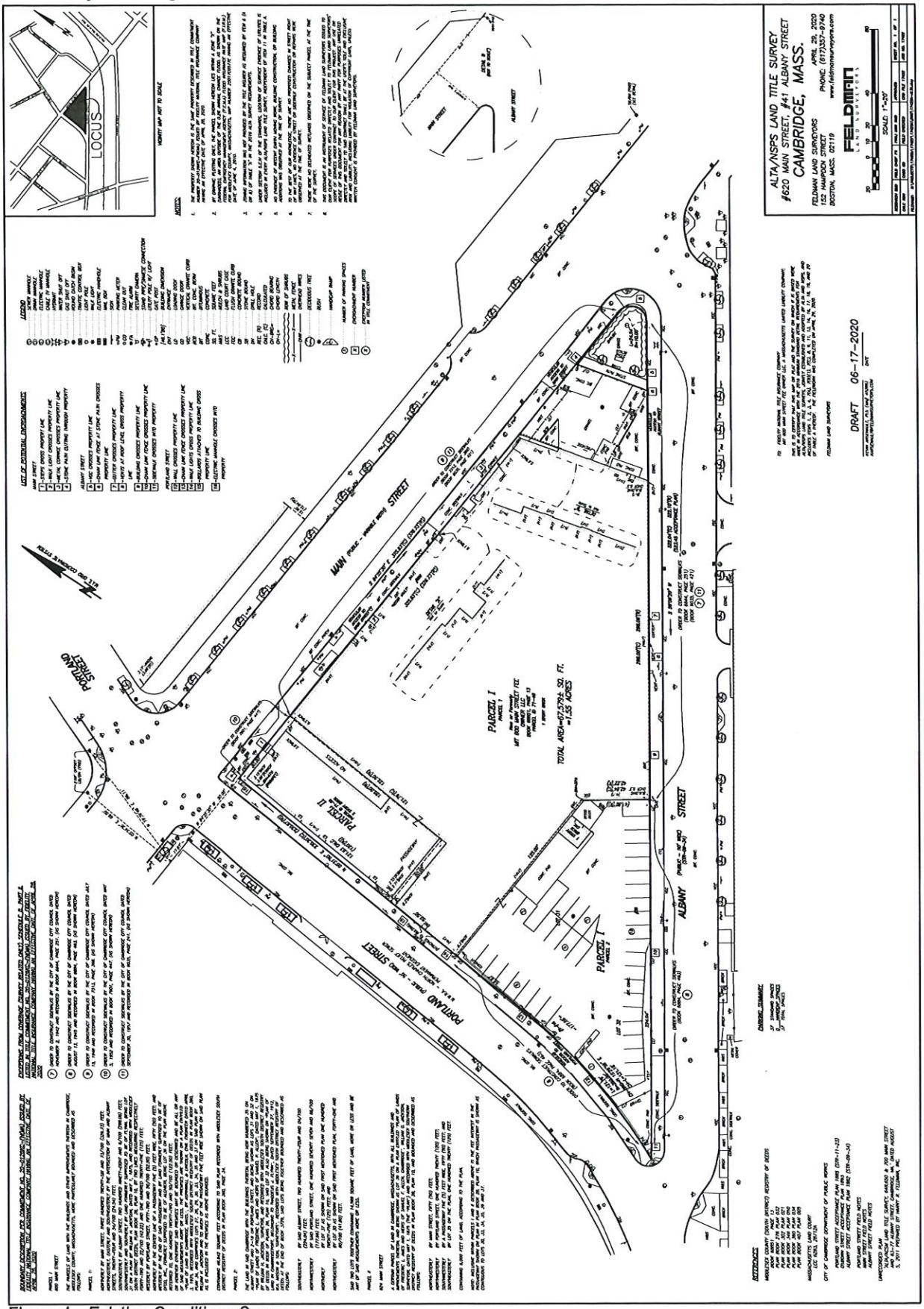


Figure 4 - *Existing Conditions Survey*

3.3 Proposed Site Plan

Figure 5 - *Proposed Site Plan*

3.4 Proposed Aerial View

Figure 6 - *Aerial View*

3.5 Proposed Street View - Looking West

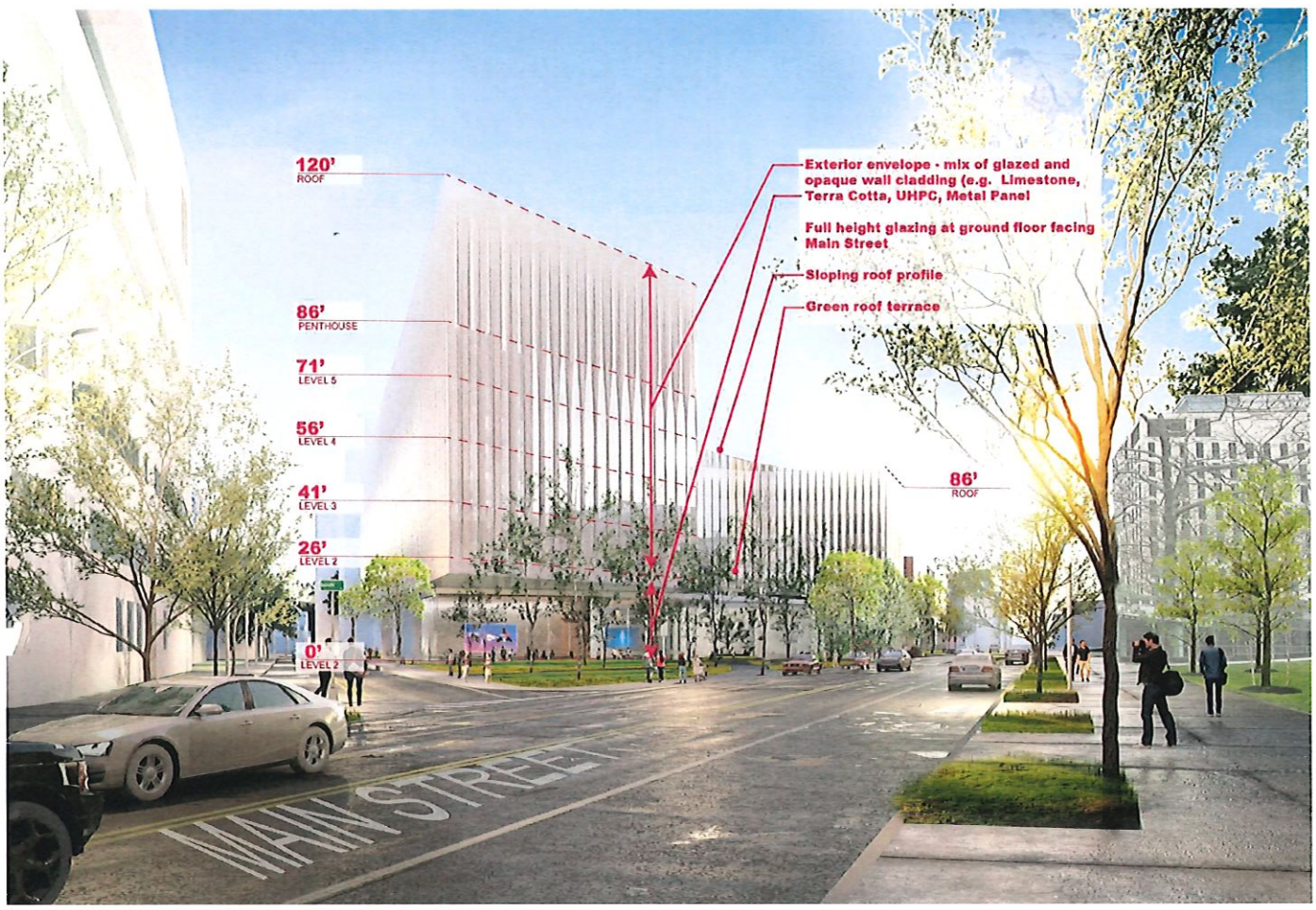


Figure 7 - *Main Street View Looking West*

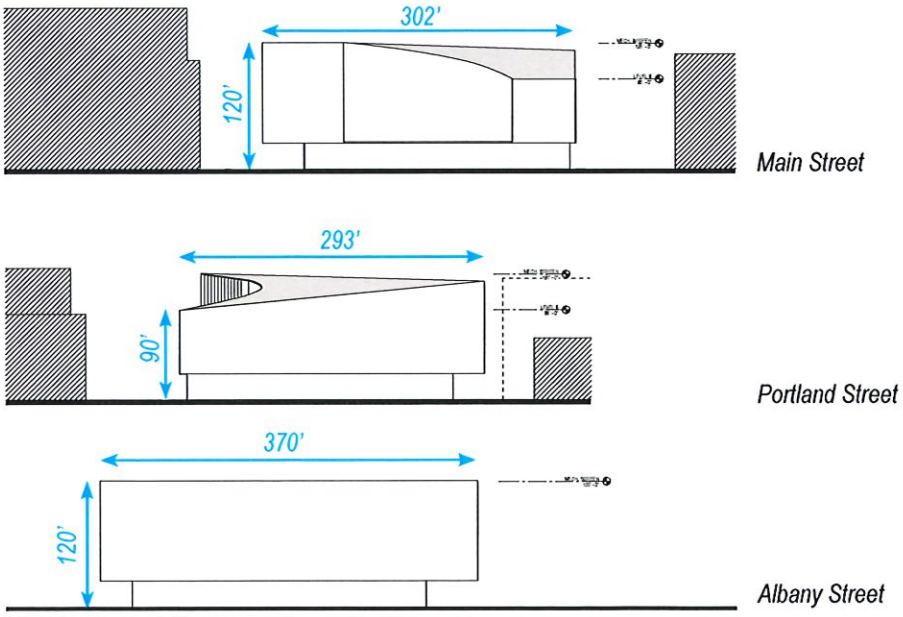


Figure 7 A/B/C - *Proposed Building Dimensions*

3.6 Proposed Street View

Figure 8 - *Main Street View Looking East*

4.1 Geotechnical Assessment - Haley & Aldrich, Inc.

HALEY & ALDRICH, INC.
465 Medford Street, Suite 2200
Boston, MA 02129
617.886.7400

MEMORANDUM

10 August 2020
File No. 135155-004

TO: The General Hospital Corporation, c/o WaypointKLA
James Koningisor

FROM: Haley & Aldrich, Inc.
Joel Mooney, P.E.

SUBJECT: Existing Conditions Summary
624 Main Street, Cambridge, Massachusetts

This memorandum summarizes observations of existing conditions at 624 Main Street and comments on geotechnical-related issues for the structure, based on a site visit on 3 August 2020 and review of readily-available documents related to the subject building. In summary, the building is unsafe for occupancy, evaluation, or any type of renovation in its current condition; the majority of the building's structural components are in severe distress and have failed; and the building's foundation condition cannot be repaired or underpinned. These conditions, therefore, makes it infeasible to salvage or repair the building, or attempt to return any portion of it to useful service.

BACKGROUND

From recent site observations and a review of other reports on the subject building:

- The building is a two-story masonry structure with a single level basement. It is comprised of two sections built at different times (believed to be during the mid-1800s), joined at a shared interior load-bearing masonry wall. Exterior walls are load bearing masonry, with interior floor framing and structure constructed of wood. The basement floor is a slab-on-grade.

- The exterior load bearing masonry walls (stone/rubble with brick above) are supported on wood piles. The interior framing is pocketed into the load bearing masonry walls and supported by a wood beam mid-span (between the exterior load bearing walls) supported by masonry columns on spread footings.

- The subject site was originally marshland within the Charles River basin, which was filled in the early 1800s at the time Main Street was constructed. Approximate location of the subject site is circled on the figure below.

- Subsurface conditions at the subject site (and the general vicinity of the site and much of the Kendall Square area) generally consist of the following stratum below ground surface:
    - Fill - sand with varying amounts of debris, brick, ash, and cinders
    - Organic Deposits – former marsh and swamp deposits
    - Marine Sand – naturally-deposited sands and gravels
    - Marine Clay – 100± ft thick layer of soft clay
    - Bedrock exists at approximately 125± ft below ground surface

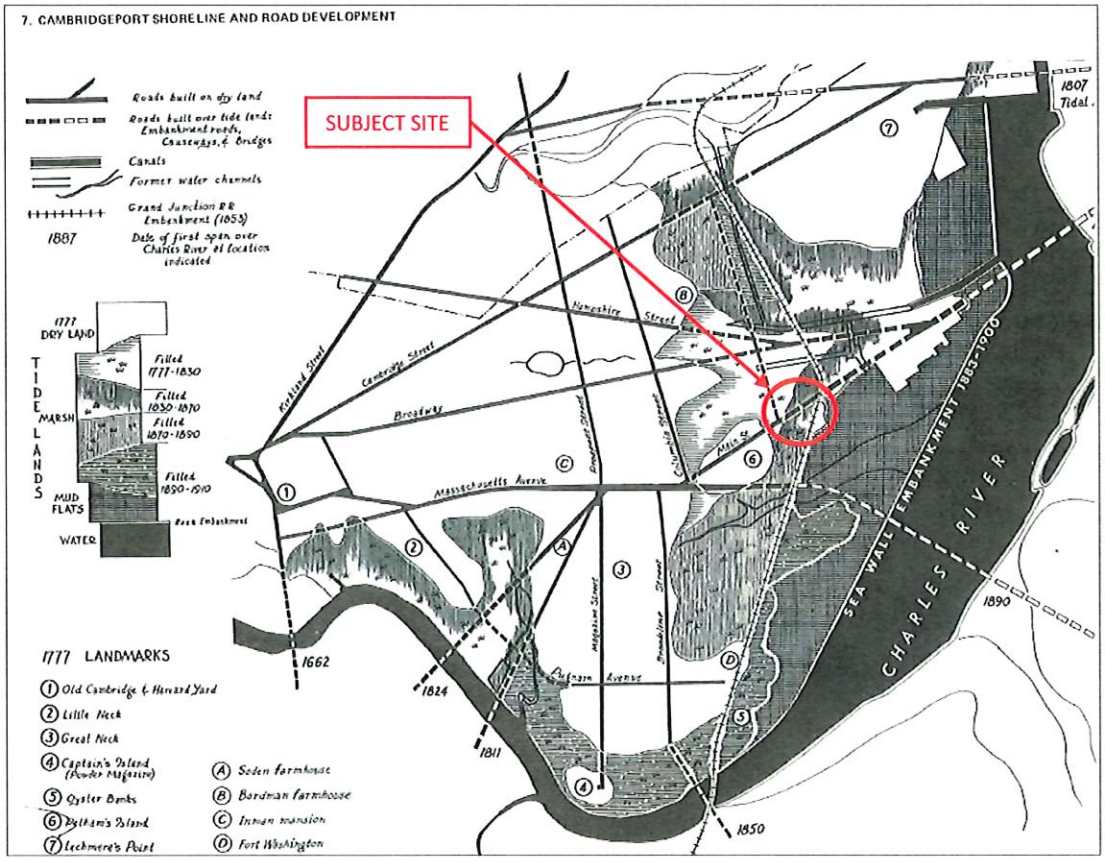


Image from "Survey of Architectural History in Cambridge, Cambridgeport" by Cambridge Historical Commission, 1971

- Due to the heterogeneity of the Fill and compressibility/decomposition of the Organic Deposits, both of those soil strata are unsuitable for support of foundations and slabs. Given satisfactory design and construction, buildings of this type can be supported on the Marine Sand and/or Marine Clay stratum.

- At the time of this building's construction, design and construction methods and materials were still evolving (e.g., reinforced concrete was not commonplace) and, therefore, the design and construction techniques used for this building unlikely considered a design life greater than 50 years.

CONDITIONS OF BELOW-GRADE AND FOUNDATION ELEMENTS

Test pits within the basement had been previously completed by others and were left open.

Portions of the building's foundations, foundation walls, and basement slab-on-grade have undergone total settlements of up to approximately 12-inches, with differential settlement between adjacent structural elements approaching 6-inches. These magnitudes of settlement are beyond satisfactory limits of performance and indicate failure of one or more of the building's components. Based on recent observations and our experience with buildings of this type of construction, this settlement is attributable to a combination of factors:

- Cutoff (top) of wood piles are above the groundwater table and exposed to air that promotes pile deterioration. The picture (left) shows the rubble foundation wall, the pile cutoff above the groundwater level, and the rot growth (white) at the top of the pile. As the top of the pile decays it loses strength and compresses, allowing the foundation wall to settle. This settlement is visible in the relative movement between various blocks in the wall (yellow oval upper left).

- Also related to pile performance, the piles could be broken, overloaded, and/or otherwise unable to support building loads, resulting in their creep and continued settlement over time. A full survey of the wood piles would be needed to make this evaluation.

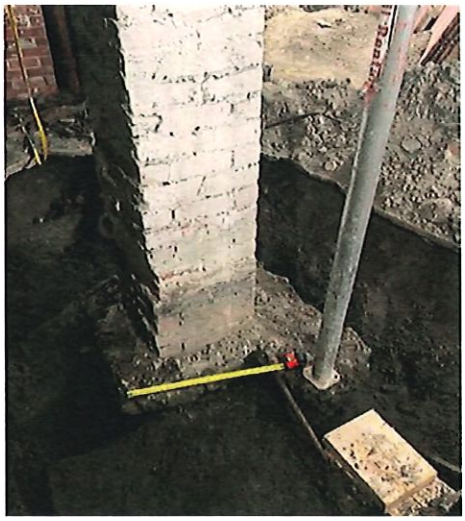
- Within the exterior foundation walls, there are various openings which are framed by lintels and arches. These were likely to provide access to the basement for materials and supplies (e.g., a coal chute) or, since an industrial building, to provide ventilation via a connection to an areaway. It is not clear whether the foundation system (pile layout) accounted for the increased loading that would occur at either side of the opening; there was no visible difference in the foundation wall.

- The variability of the subsurface conditions across the site and building construction types (piles, spread footings, different periods of construction) are also conditions that promote differential settlements. Given that Organic Deposits can compress and decompose over time and that they can settle a large percentage of their initial thickness, a 1-ft variation in Organic Deposits thickness can manifest in large amounts of differential settlement.

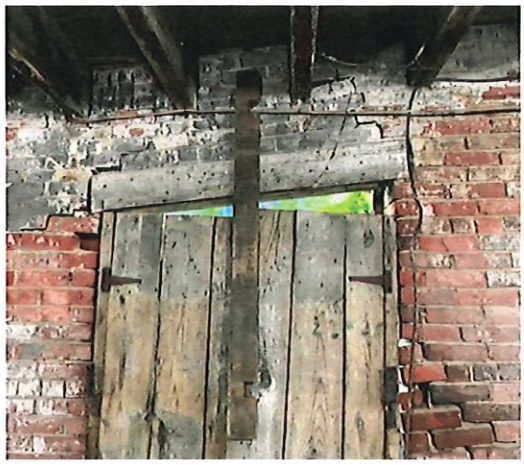
- Careful design and construction are necessary to have different foundation types yield similar performance over time. This building does not appear to have a satisfactorily designed and constructed foundation system (i.e., complete removal of Organic Deposits to a suitable bearing condition).

- Irregular and non-symmetrical footing foundations support interior piers. The picture (below left) indicates the extent of the spread footing foundation for an interior column and its

irregular nature. Given this condition and the amount of settlement of certain interior columns (below right), the interior column foundations appear to be undersized, overloaded, and/or founded on disturbed or unsuitable soils (e.g., Organic Deposits) which allowed settlement to occur.



- The building's envelope has multiple openings and penetrations such that weather (since the building is unheated) and water have been able to adversely impact and promote deterioration (e.g., freeze/thaw, rot, mold growth, masonry spalling) of the building's foundation materials. This condition and related distress are noted in the photos below; exterior ground surface is about at the level of the horizontal crack in the foundation wall in the photo (below, right). Water and freeze/thaw have split the masonry and are bowing this foundation wall. The impact or water, freeze/thaw, and settlement are contributing to the failure of this opening in the exterior foundation wall (below, left).



BUILDING STRUCTURAL COMPONENTS

The building's exposure to water and weather over time has caused deterioration of the building's materials. This combined with the magnitude of total and differential settlements it has undergone, have resulted in failure of building's structural systems.

- Wood piles rot and compress causing total and differential settlement resulting in foundation walls that are cracked, bowed, and not plumb or level.
- Weather exposure and presence of water promote deterioration and loss of compressive strength of interior wood structure, and cracking, spalling or masonry walls.
- Ground floor slab and interior foundations settle due to a combination of improper design and construction, and incomplete removal of compressible Organic Deposits.



Deterioration of the building's materials have reduced their physical engineering properties (e.g., compressive strength, load carrying capacity, etc.) and total and differential settlements have caused structural elements to be stressed beyond normal service conditions. This reduction in strength coupled with the increased stress has resulted in a condition beyond failure for the major structural components of the building. This condition, therefore, makes it not feasible to salvage or repair the building, or attempt to return any portion of it to useful service.

SAFETY

Due to the deterioration and settlement of the building's structure, the building is unsafe for occupancy. A significant amount of work (e.g., stabilization, shoring, etc.) would be required to afford even temporary access to further evaluate and survey the existing conditions.

This type of foundation structure (rubble foundation walls, unreinforced masonry walls and columns) does not lend itself to underpinning or installation of supplemental foundations; there are not locations within the exterior wall structure (e.g., sills, beams, etc.) where the foundation wall could supported to allow underpinning. Since the foundation wall structure can only perform in compression, any underpinning support would need to be at the bottom of the foundation wall. These types of structures, however, cannot be self-supporting (i.e., will not be stable or span if excavated under) to allow underpinning. Furthermore, the failed condition of the structure makes any type of remedial work extremely unsafe and virtually impossible.

CLOSURE

In summary, the building is unsafe for occupancy, evaluation, or any type of renovation in its current condition; the majority of the building's structural components are in severe distress and have failed; and the building's foundation condition cannot be repaired or underpinned. This condition, therefore, makes it not feasible to salvage or repair the building, or attempt to return any portion of it to useful service.

If you have any questions or require additional information, please feel free to contact us.

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4.2 Structural Assessment - Arup

ARUP

Subject	624 Main Street – Structural Engineering Report		
Date	August 14, 2020	**Job No/Ref**	276550-00

1 Summary of Visit

A site visit was conducted to 624 Main Street on July 1, 2020. The purpose of the visit was to observe further extents of the existing building beyond the areas covered on the June 12, 2020 site visit.

The visit was attended by Stuart Bauer (Payette), Jim Koningisor (Waypoint KLA), Gabe Mater (Consigli), Gregg McGuirl (Consigli), and Michael Shearer (Arup). Photographs were taken by Payette, and a Matterport scan was conducted by Consigli.

2 Observations of Structural Conditions

2.1 Slab on Grade

The slab on grade in the basement is cracked through the thickness of the concrete and broken apart in numerous places. The resulting segments of slab are typically not level or coplanar, and in some places are missing entirely.

Figure 1 Damaged slab on grade in basement

Under portions of the slab on grade, it was observed that the soil has settled away from the underside of the slab, meaning that continuous support is no longer provided to the underside of portions of the slab on grade. This soil settlement may have also contributed to the settlement of interior columns which was observed.

Figure 2 Exposed spread footing under brick pier in basement

2.2 Brick Walls

The lowest level of the bearing walls was observed to have large horizontal step cracks through the thickness of the wall. The planes of the brick were observed to be offset above and below these horizontal cracks. Brick lintels over basement windows were observed to have settled and no longer horizontal. This indicates that portions of the bearing walls have settled differentially to a significant degree. These observations indicate both the vertical and lateral load-carrying capacity of the brick walls are significantly compromised.

Figure 3 Horizonal gap in perimeter bearing wall

Figure 4 Step cracking along the length of the basement wall

Figure 5 Bulging at base of perimeter bearing wall

The condition of the walls at the first floor could not be observed due to the screen on the exterior of the building and the architectural finishes covering the interior face of the walls. However, based on observations from the interior and the pieces of brick and mortar observed on the sidewalk at the base of the walls, as well as the understanding that the screen was installed in part to restrain falling debris, it is likely that large portions of the exterior brick walls will require repointing, repair, and/or brick replacement in order to restore full capacity.

At the second floor, near the rear staircase, it was observed that the brick wall had partially collapsed, and portions of the wall were missing. The missing portions of the brick wall were located around existing window openings. Remaining portions of the wall in this area were observed to be restrained back to interior columns using post-installed steel rope and wood blocking to prevent further collapse.

Figure 6 Lintel which is no longer horizontal

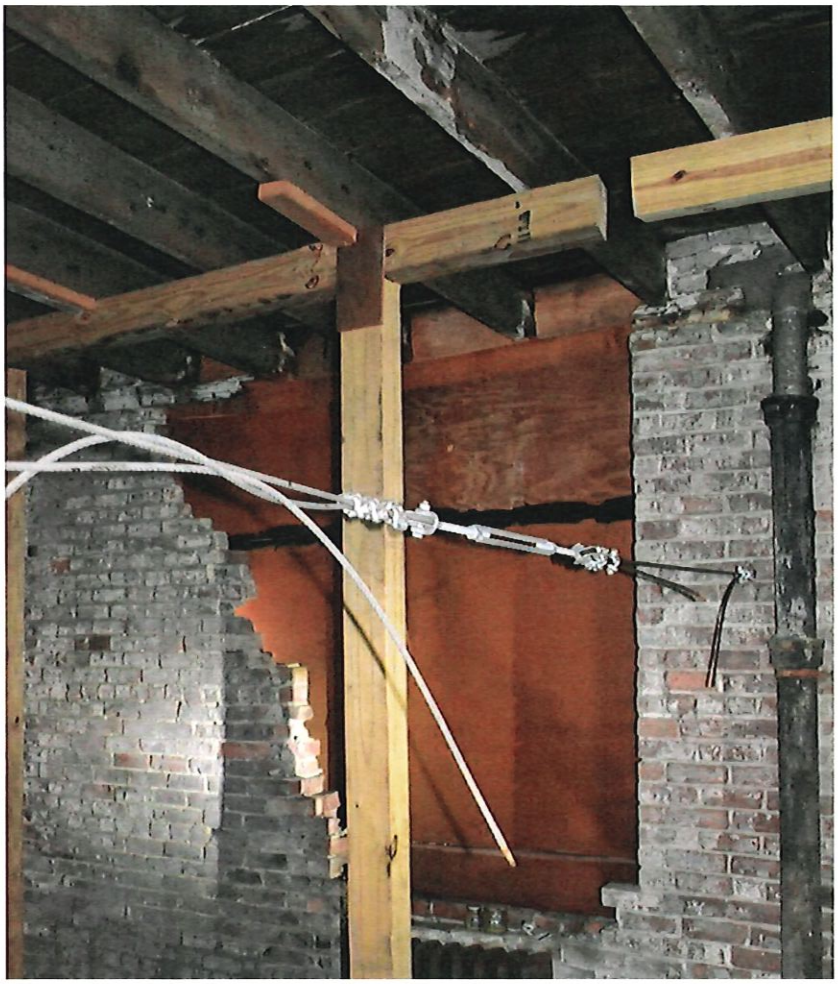

Figure 7 Area of collapsed brick wall and shoring of roof joists

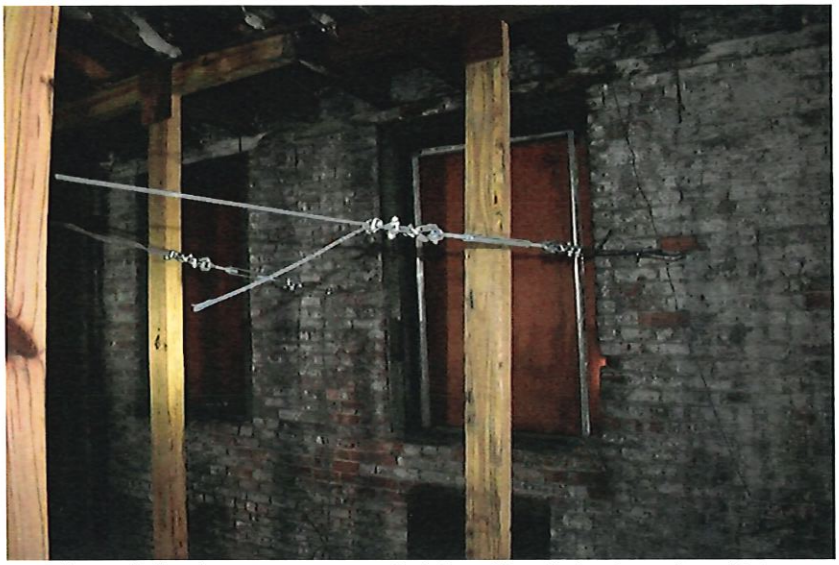

Figure 8 Steel rope support to brick wall and shoring of roof joists

2.3 Suspended Floors

The entirety of the first suspended floor was observed to slope uniformly towards the center of the building. From observations made in the basement, it appears that the structural system of the building is two bearing walls oriented roughly perpendicular to Main Street, with a central line of columns parallel to the walls. These central columns appear to have settled differentially to the perimeter walls, resulting in the observed floor slopes. The primary wood beams which span between these central columns were also observed to have excessive deflection, likely result from a combination of the interior column settlement, long-term creep of the material, and water damage.

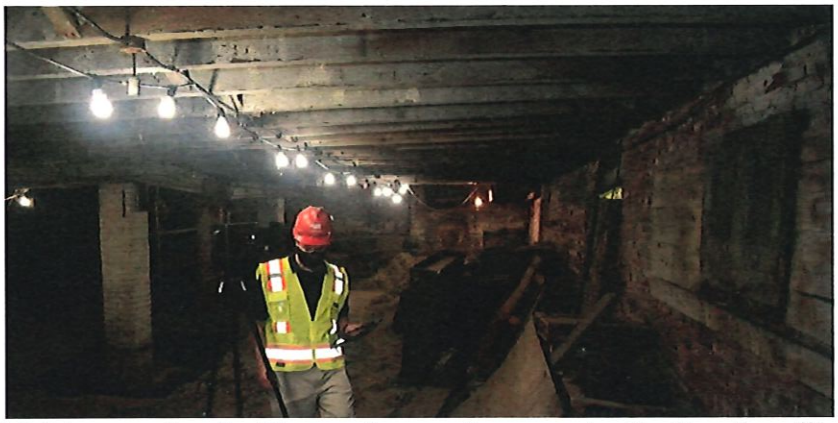

Figure 9 Joists supporting first floor, noting varying amounts of inclincation off horizontal

Figure 10 Central beam in basement

The walking surface of the first and second floors is very uneven. This unevenness could be the result of warping of the wood finished floor, or excessive deflection of the subfloor. Given the regular nature of the high and low points, and the parallel orientation of the high points, the uneven surfaces are likely the result of the subflooring deflecting excessively between the floor joists.

Shoring was observed in the basement and upper floors of the building addition, indicating that the floor joists in this area had previously been found to be deficient.

On the second floor, while walking between the rear staircase and the forward staircase, numerous soft spots where felt underfoot. This observation likely indicates weakening of the structural subfloor, possibly due to water ingress or other previous damage due to dropped or heavy objects.

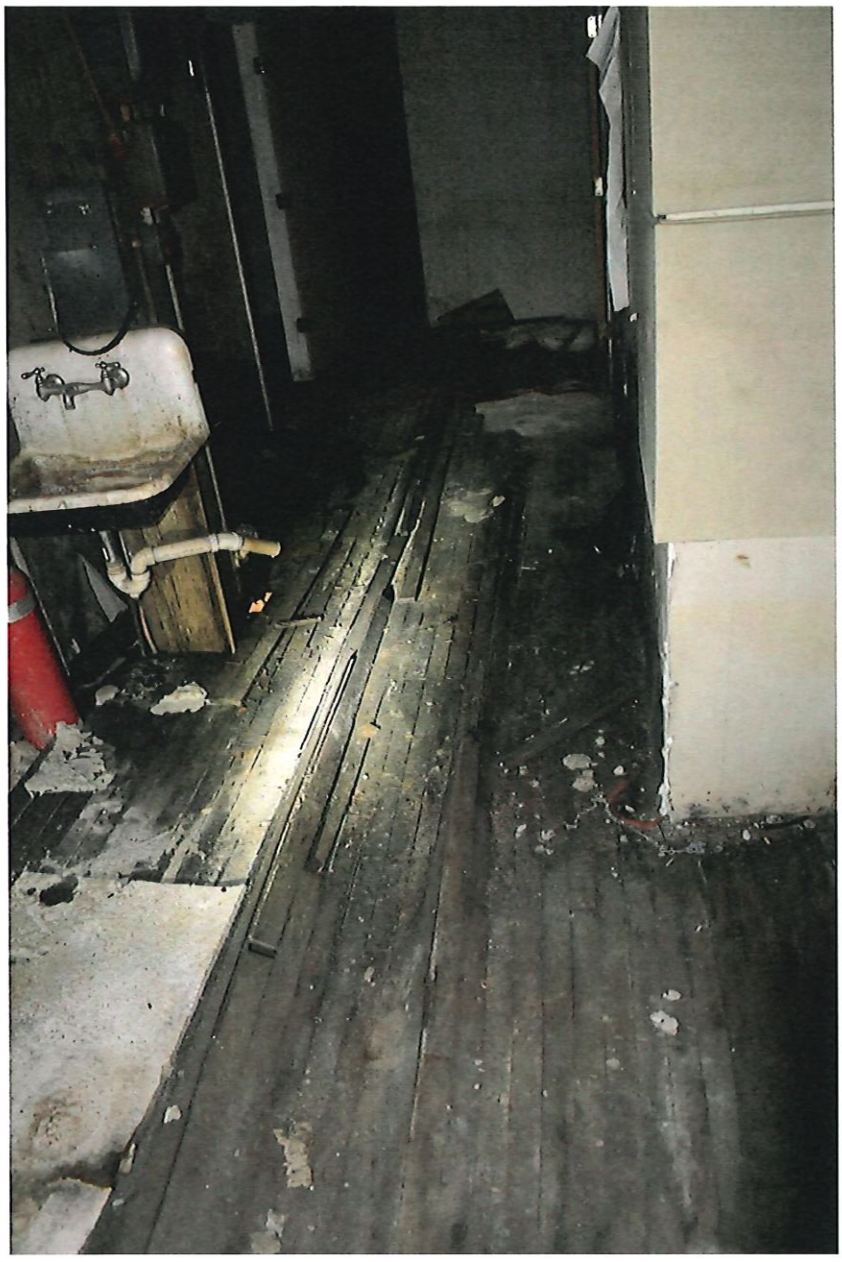

Figure 11 Uneven walking surface on first floor

Figure 12 Soft spots on the second floor, which been previously covered by plywood

2.4 Water Damage

Evidence of water infiltration was observed in the form of water staining on the wood structure and finishes, as well as mold and mildew on drywall and ceiling finishes. Active water infiltration was observed during the site visit. It had rained the previous night, and water was actively dripping from the ceiling down to the basement. Active water was observed on all floors of the building. Persistent ingress of water into a wood structure is detrimental to structural integrity.

Figure 13 Water damange on roof joists

Figure 14 Water damage on roof joists and exterior walls

Figure 15 Water damange and mold on interior finishes

3 Conclusions

If the existing building is to be retained and/or integrated into the new building, extensive interventions to every component of the structural system will be required, which in the majority of cases will entail replacement in kind. Components of the structural system requiring such intervention/replacement include the foundations, perimeter brick walls, primary wood beams, secondary wood joists, and structural floor diaphragm. While some structural members may be able to be reused, it will likely be more practical to replace them during the reconstruction process due to the anticipated extent of removed and replaced adjacent components.

Although the full extent of the structural damage and deterioration cannot be fully documented unless all interior finishes and exterior coverings are removed, it is evident from the condition of the observable structure that the following repairs and replacements would be required throughout the entire building:

- Replacement of foundation system. Per the 'Existing Conditions Summary' memo by Haley & Aldrich, dated 6 August 2020, the existing foundation system has failed, and is not a candidate for underpinning or other means of in-situ remediation. Replacement of the foundation requires the removal and reconstruction of the masonry walls and the masonry columns in the basement. The superstructure above, all of which is supported by the masonry walls and columns, would similarly need to be removed and reconstructed once the foundations had been replaced.
- Replacement of the slab on grade in the basement
- Replacement of the primary wood beams that support the first floor
- Assessment and likely replacement of primary wood beams that support the second floor and roof

- Replacement of wood joists which have: been damaged by water infiltration; been previously shored; had their end conditions damaged due to excessive settlement; or experienced long-term creep such that they no longer satisfy code-mandated defection criteria.
- Replacement of all subflooring which has been damaged by water or otherwise compromised. Due to the anticipated extent of damage, it may be most practical to remove and replace the entire diaphragm rather than splicing together new and existing subfloor elements, even if some portions of the subfloor are found to be candidates for reuse.
- Evaluation of any wood joists which may be candidates for reuse to determine structural grade, condition, and suitability for reuse. It is noted that, due to the extensive anticipated removal of joists and structural subflooring, it may be most practical to remove and replace all flooring elements, even if some joists are found to be candidates for reuse.
- Evaluation and likely retrofitting of connection between floor diaphragms and perimeter walls to ensure code-compliant seismic performance.

4.3 Construction Assessment - Consigli Construction Corporation

624 MAIN STREET

REVIEW OF BUILDING CONDITION

AUGUST 18, 2020

CONSIGLI
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Project Overview

After inspecting the existing conditions of 624 Main Street, the Consigli team has been tasked with reviewing whether the existing building at 624 Main Street could be properly and safely restored, given its present condition. We conducted a site visit on July 1, and on July 14th & 15th, we installed structural shoring at key locations where we felt there could be a danger of imminent collapse; we also installed plywood walkways to allow personnel to safely walk thru the building if they stay on the walkways. Please reference the geotechnical engineer, Haley & Aldrich's report dated August 10, 2020, and the structural engineer, Arup's report dated August 14, 2020 which outlines the conditions of the various structural elements. Due to the deteriorated condition of the building, our major concern is that any work and / or vibrations caused by one activity, such as installing a structural skeleton to try to stabilize the building or the foundation, could potentially cause a major failure in another area of the building, such as the façade collapsing. After our site visits and after reviewing Arup's report and Haley Aldrich's report, it is apparent that 624 Main Street would have to be essentially re-built in its entirety, and virtually all components of the building would have to be replaced due to the severity of the damage throughout the building caused by the differential settlement and deterioration of the foundation, and due to water damage, rot, and mold.

Temporary Shoring and Framing

Any attempt to save the building would first require installation of an internal, temporary shoring and framing system within the building to protect any workers and try to prevent the building systems from failing and collapsing. In addition, an external structural system would have to be constructed to attempt to keep the exterior brick walls from collapsing outward while the interior structure is replaced. In doing so, however, there is significant risk that vibration and other construction activities would result in damage or failures throughout the building. To install the temporary shoring and framing, openings in the existing building floors, walls, ceilings, and facades would have to be created, further increasing the risk of potentially losing sections of the brick façade, or entire exterior walls.

Interior Demo, Asbestos Abatement, Mold Remediation

If it were possible to safely stabilize the structure by following the procedure described above, the asbestos, the other hazardous materials in the building, and the mold throughout the building would have to be removed. All workers would be required to wear full PPE suits and be fitted with respirators due to the extensive mold. All nonstructural elements in the building, including the floor and roof framing, would have to be removed since the framing members are likewise water-damaged with evidence of rot and other failures. The brick foundation wall on the east side of the building would need to be fully demolished and re-built, since it has already partially collapsed. (Photo below)

CONSIGLI
Est. 1905

The demolition effort would likely uncover additional areas that would need additional temporary shoring to try to reduce the risk of collapse and allow interior demolition, abatement, and mold remediation to proceed.

New Interior Foundation System / Re-construction of Perimeter Foundation

The existing footings which support the interior columns and the interior structural system at 624 Main Street have failed and have settled at significantly different rates, resulting in uneven, sloping floors and a significantly warped central beam that supports the entire interior timber framing of the original building (Photo Below). The existing slab on grade would have to be removed in its entirety and the existing footings would have to be replaced, the strength and depth of which would be determined by the geotechnical and structural engineers based on the existing soil conditions. Some sort of mini-piles would likely be needed to support the new footings and new columns. Temporary shoring to support the timber framing above would be required at each footing and column location in an attempt to stabilize the structure during this operation.

624 MAIN STREET

REVIEW OF BUILDING CONDITION

AUGUST 18, 2020

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The existing stone foundation walls around the perimeter of the building would have to be underpinned to stabilize them and halt any settlement that may be continuing. However, in accordance with the geotechnical engineer's report (Haley & Adrich) and the structural engineer's report (Arup), the perimeter foundation walls cannot be underpinned or repaired in place but must be removed and replaced in their entirety. Because the unstable masonry walls sit directly on top of the stone foundation wall, the perimeter brick walls of the building would need to be demolished and rebuilt, as described in the next section entitled "Exterior Façade".

624 MAIN STREET

REVIEW OF BUILDING CONDITION

AUGUST 18, 2020

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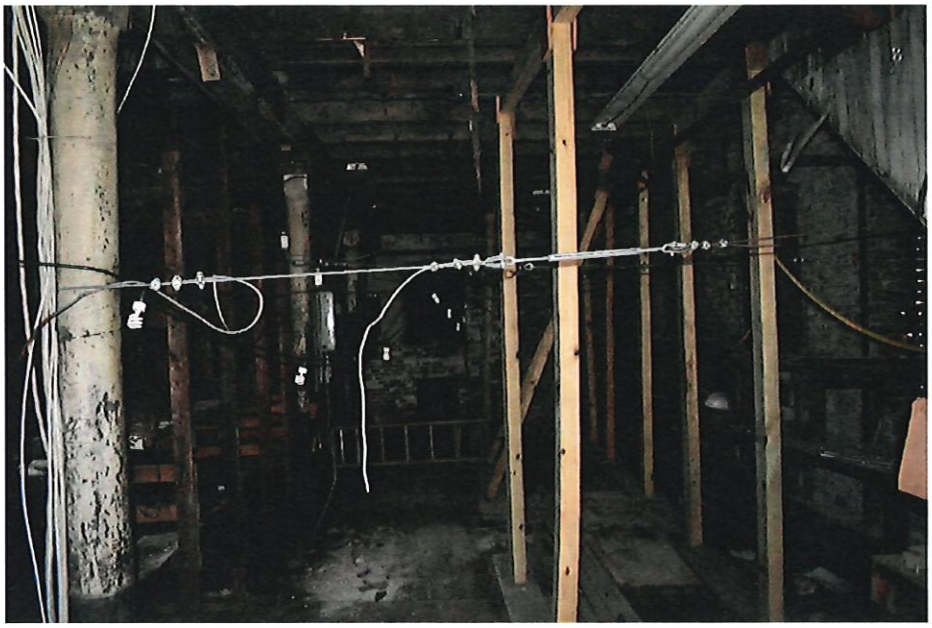
Exterior Façade

Currently the exterior façade is wrapped with a custom scrim preventing a thorough examination of the condition of the brick on the exterior. It is our understanding that this scrim was installed to protect the public from debris falling from the deteriorated brick façade of the building. There are pieces of brick along the base of the building around the perimeter indicating that the façade has been and continues to delaminate. In addition, the south exterior façade is currently being held in place by steel cables tied back to the interior structural columns in an attempt to hold the rest of the brick wall in place to prevent it from collapsing altogether (Photo Below). Even if the rest of the exterior walls could be saved, this location would need to be fully demolished and re-built in its entirety. It's not clear how this could be accomplished safely and without risking collapse of the building. However, since the perimeter foundation walls cannot be repaired or underpinned and must be demolished and rebuilt in their entirety as described in Haley & Aldrich's and Arup's reports, it is virtually impossible to retain the brick perimeter walls. This is because the brick walls sit directly on the foundation walls with no grade beam to hold up the walls if the foundation is demolished. The first floor framing members sit directly on top of the foundation walls set into pockets in the masonry. Therefore, it is virtually impossible to lift the building off its foundation, even if the existing masonry walls were stable and structurally sound. The situation would be even more difficult and precarious due to the many openings in the walls which would need to be cut in order to install a temporary stabilizing structure. Therefore, the brick exterior walls of the building would have to be removed and rebuilt in their entirety.



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New Timber Framing System

As mentioned above, due to the severity of the water damage to the existing timber framing, the entire timber framing system would have to be replaced. This process would require significant temporary shoring to systematically replace the existing structure from the ground up, starting with a new central beam, then replacing beams, joists, wood decking, and roof framing. A 3rd party engineer would be required to be onsite daily to try to safely replace the timber framing system and to ensure that the temporary shoring holds and that the building doesn't shift or become further de-stabilized.

Temp Shoring System Removal

If the operations described above could be completed sequentially without causing the building to collapse, the temporary shoring steel framing system to shore the building would have to be removed. With a new foundation, façade, and structural system completed, and remove the temporary Shoring and steel framing system would have to be removed. This would require cutting up the steel framing into manageable pieces to haul out of the building without damaging the new elements. After demolition and removal, all holes / openings would have to be patched, after which new sheathing, roofing, doors, and windows would need to be replaced.

Conclusion

Overall, the current condition of 624 Main Street is extremely poor. Extensive differential settlement of the entire foundation system, including the perimeter walls and virtually all of the interior support columns, has caused the entire structural system to fail. The damage is compounded by extensive water infiltration; thus the entire building would essentially have to be replaced in kind as outlined above. It is doubtful that any existing materials of the building can be saved in the re-construction except for potentially re-use of some wood members that may be salvageable, if any, and perhaps re-use of some brick that may not be damaged during removal of the perimeter walls. Phased demolition and reconstruction would involve serious risk of collapse during the process due to the vibration caused by the various operations required and due to the precarious condition of the structure of the building.

4.4 Historic Mitigation Proposal - Epsilon Associates, Inc.

Epsilon
ASSOCIATES INC.

August 24, 2020

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Attention: James Koningisor
via e-mail: jkoningisor@verizon.net

Subject: **624 Main Street – Historic Mitigation Proposal**
Ragon Project – Phase 1 / MGH Project #810009

Dear Jim:

Epsilon Associates, Inc. is pleased to submit the following mitigation proposal to Massachusetts General Hospital (MGH) for the proposed demolition and redevelopment of the building at 624 Main Street in Cambridge, Massachusetts.

Epsilon understands that the Ragon Institute of MGH, Massachusetts Institute of Technology (MIT) and Harvard is embarking on a planned new research facility at 600-624 Main Street in Cambridge. To facilitate the construction of the new research facility, the existing buildings at 600 and 624 Main Street will need to be demolished. The following summarizes measures proposed by the Ragon Institute to mitigate the proposed demolition activities.

I. Photographic Documentation

Prior to the demolition of the building at 624 Main Street, substantial new construction or other major change to any part of the Site, the Institute will document the existing building at 624 Main Street in accordance with the Massachusetts Historical Commission's archival photographic documentation requirements. The photographic documentation will include overview photographs of the Site, interior and exterior views of the building and notable architectural details. Approximately 20 photographs will be included as part of the documentation package. Photographs measuring 4" x 6" in size, will be archivally processed, keyed to a site map and provided in archival sleeves.

One set of digital prints and a CD containing electronic files of the digital prints will be made available to each the Cambridge Historical Commission ("the CHC") and, if they so desire, to the Charles River Museum of Industry and Innovation ("the Museum"). The photographic documentation packages will be submitted to the CHC and the Museum in an archival boxes.

II. Historic Research

The Institute will research the building at 624 Main Street to further document its industrial history. Research will be conducted at the CHC, Cambridge Historical Society, Massachusetts Institute of Technology, Massachusetts Historical Commission, the State Archives, Boston Public Library, other local repositories, and on-line to document the history of the building. Efforts will include attempts to identify the building's architect and builder and the building's role in the development of Cambridge's industrial history. The research material will be presented in a manner that can be used by the Museum to develop an exhibit highlighting the building's contributions to Cambridge's industrial past.

Both hard and electronic copies of the research will be made available to the CHC and the Museum for their use in developing an exhibit on the building's industrial history.

III. Historic Exhibition

The Institute will salvage the key remaining elements of the building's industrial equipment and donate them to the Museum for display in an exhibit highlighting the building's history. If the Museum is unable to accept the industrial equipment, the Institute will search out and offer to donate the equipment to other museums in the New England area for display.

If you have any questions regarding these potential mitigation measures, please do not hesitate to contact me (978) 461-6259.

Sincerely,
EPSILON ASSOCIATES, INC.

Douglas J. Kelleher
Principal