

Boston Public Library
McKim Building Improvements Project

Master Plan Report - Volume 1 Executive Summary

October 22nd, 2021



City of Boston
Mayor Michelle Wu
David Leonard, President, Boston Public Library
Kerrie Griffin, Director, Boston Public Facilities Dpt.



Shepley Bulfinch + designLAB Architects + Stoss Landscape Architecture & Urban Design

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Introduction

Participants

Boston Public Library

Boston Public Library

David Leonard, President

Steering Committee Members

David Leonard, President

Michael Colford, Director of Library Services

Eamon Shelton, Director of Operations

Beth Prindle, Head of Special Collections

Laura Irmischer, Chief of Collections

Anna Fahey- Flynn, Central Library Manager

Alison Ford, Major Projects Program Manager

Kelly Hall, Major Project Coordinator

Focus Groups

External Focus Group – Arts & Special Collections

Giordana Mecagni – Northeastern University

Tom Hyry – Houghton Library at Harvard

K. Matthew Dames – Boston University Dean of Libraries

E.C Schroeder – Beinecke Library at Yale Univeristy

Eleni Glekas – Boston Architectural College

External Focus Group – Social & Cultural

Kirsten Greenidge – Company One Theater / School of Theater BU

David Valdes – Company One Theater / Boston Conservatory at Berklee / Tufts

Beth Chandler – President and CEO of YMBoston

Matt Gelman – Theater Offensive

Akiba Abaka – Arts Emerson

Jackie Yessian – Neighborhood Association of Back Bay

External Focus Group – Youth Educators

Michelle LeBlanc – Director of Education, Lenventhal Map and Education Center

Lynn Brown – Education Coordinator, Lenventhal Map and Education Center

Laura Koenig – Head of Children’s Services, BPL

Farouqua Abuzeit – Manager of Youth Services, BPL

Jeri Robinson – Retired, Boston Children’s Museum

Eli Gerstenlauer – Learning Project Teacher 6th grade

Rose Marz– Librarian, Boston Arts Academy

External Focus Group – Higher Education

Jessica Colati – Archivist at UMASS Boston

K. Matthew Dames – Boston University Dean of Libraries

Heather Reid – Dean of Library and Learning Resources at Berklee College of Music

External Focus Group – Tourism

Elliott Laffer – Chairman of the Neighborhood Association of Back Bay

Meg Mainzer-Cohen – President of the Back Bay Association

George Terpilowski – General Manager of the Fairmount Copley Plaza

Daniel Donahue – President of Saunders Hotel Group

Kate Davis – Director of the Mayor’s Office of Tourism, Sports, and Entertainment

City of Boston

Mayor’s Office

Michelle Wu, Mayor of Boston

Project Administration

Public Facilities Department:

Maureen Anderson, Senior Project Manager

Jim McQueen, Senior Project Manager

Alistair Lucks, Staff Architect

Kerrie Griffin, Director

Project Consultation

Disabilities Commission

Parks and Recreation Department

Boston Planning and Development Agency

Public Works

Boston Landmarks Commission

Community Advisory Committee

Back Bay Association, Meg Mainzer-Cohen

Neighborhood Association of Back Bay, Jackie Yessian

Boston Chamber of Commerce, Beyazmin Jimenez

Tourism Industry, Martha Sheridan

Boston University Dean of Libraries, K. Matthew Dames

Boston Arts Academy Librarian, Rose Marz

Company One Theatre, Summer L. Williams

Now and There, Kate Gilbert

Mayor’s Youth Council, Minh Mai and Deborah Adelbanjo

SPARK Boston, Sarah Abkowitz

Historic Boston, Derek Lumpkins

Boston Preservation Alliance

Project Place, Aaryn Manning

Accessibility Advocate, Carol Steinberg

Design Team

Shepley Bulfinch

Executive Architect

DesignLAB

Civic Spaces and Exhibits Consultant

Landscape Design

Stoss Landscape Urbanism

Historic Preservation

Building Conservation Associates

Lighting

Sladen Feinstein Integrated Lighting Inc.

Civil Engineering

Nitsch Engineering

Mechanical, Electrical, Plumbing and FP Engineering

Altieri Sebor Wieber

Structural Engineering

Odeh Engineers

Code Advisor

Code Red Consultants

Vertical Transportation

Lerch Bates

Cost Estimating

CHA Consulting



Acknowledgments

The design team has been honored and inspired by the opportunity to work with the Boston Public Library and the citizens of Boston to develop planning strategies for the renewal of the historical McKim Building.

We would like to thank all who contributed for their thoughtful and thought-provoking input, and we are grateful to the library Steering Committee and Public Facilities staff for their hard work and dedication to development of these recommendations.

Process

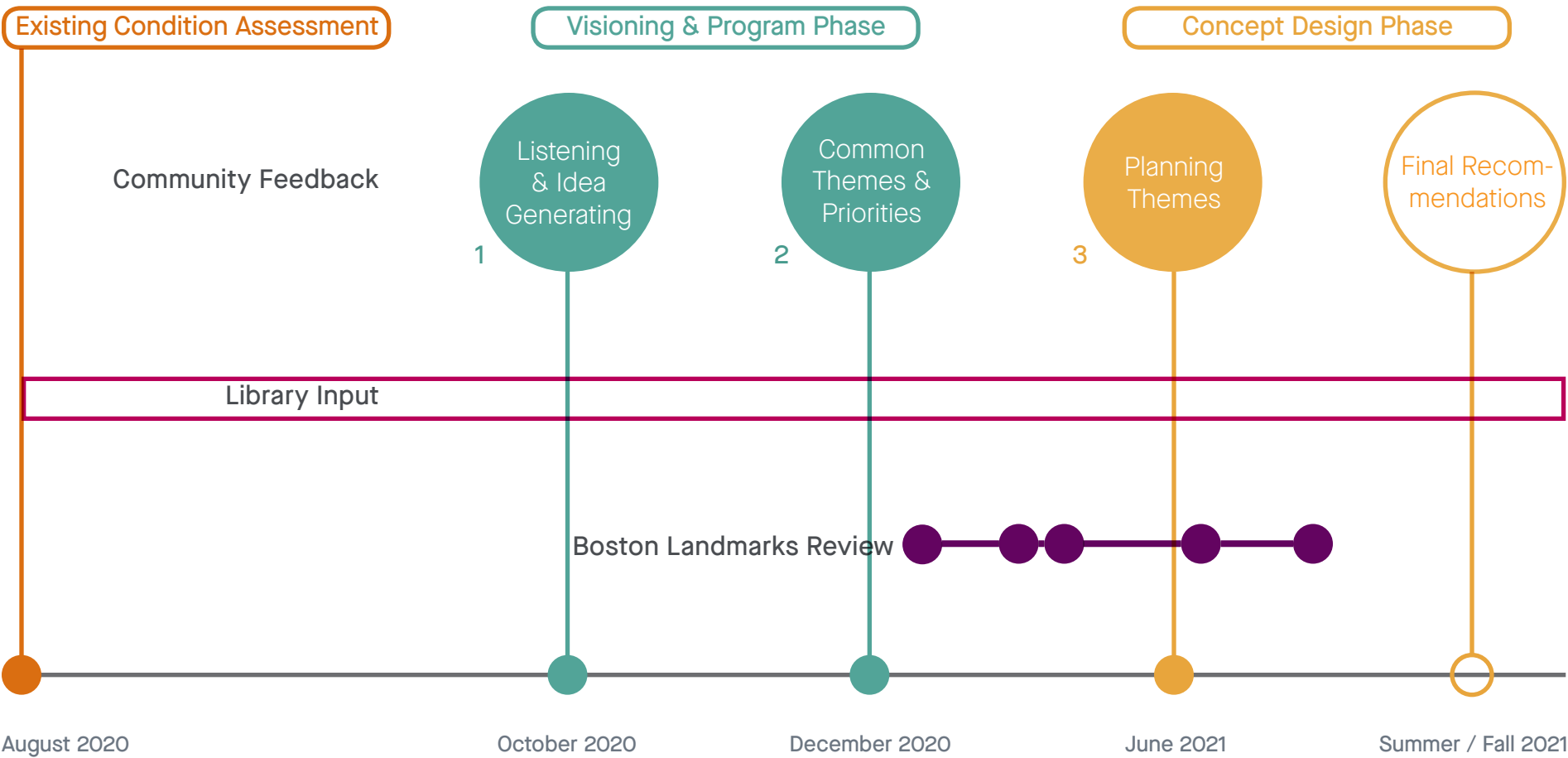
In September 2020, Shepley Bulfinch and designLAB began the effort of re-imagining the McKim Building with the City of Boston, Boston Public Library (BPL) and design team consultants to create a master plan that would meet the needs of the library and visitors today and in the future. A series of in-person site visits and virtual engagement sessions were held throughout the study.

Library Engagement

The design team held meetings with the BPL Steering Committee every two weeks where the team explored multiple planning scenarios and program opportunities focused on the 3rd Floor, 2nd Floor and 1st Floor of McKim. To supplement the Steering Committee meetings, the team met with BPL stakeholder groups to define program goals and needs around the following departments and services:

- October 1, 2020: **Internal Focus Group - Events**
- October 19, 2020: **Internal Focus Group - Art/ Architecture/ Historic Preservation**
- October 20, 2020: **Internal Focus Group - Special Collections/ Collections**
- October 22, 2020: **Internal Focus Group - Public Services**
- October 22, 2020: **Internal Focus Group – Operations**

Schedule Overview



Process

Community Engagement

The recommendations of this master plan have been shaped by the input of many participants, including the City of Boston, Public Facilities Department, Parks Department, Boston Public Library (BPL) leadership and staff, and members of the community. The planning team coordinated design recommendations for Dartmouth Plaza with the Boston Parks Department process to redesign Copley Square so that the two projects will be complementary. The engagement process has spanned a full year and involved numerous interactive workshops, aimed to discover the needs and priorities of the library and community, as well as refine design recommendations to best meet these.

To supplement the regular visioning and concept development sessions with the library's Steering Committee, the design team sought the advice of the public through a series of focus groups and community meetings:

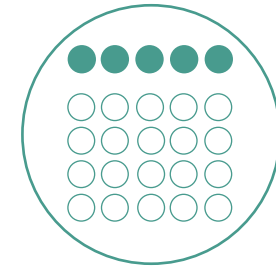
- October 28, 2020: **Community Meeting #1 - Listening & Idea Generating**
- December 7, 2020: **External Focus Group - Art & Special Collections**
- December 8, 2020: **External Focus Group - Social & Cultural Organizations**
- December 8, 2020: **External Focus Group - Youth Educators**
- December 9, 2020: **External Focus Group - Higher Education Institutions**
- December 10, 2020: **External Focus Group - Business & Tourism**
- December 15, 2020: **Community Meeting #2 - Common Themes & Priorities**
- June 3, 2021: **Community Meeting #3 - Planning Themes**

Community Meetings

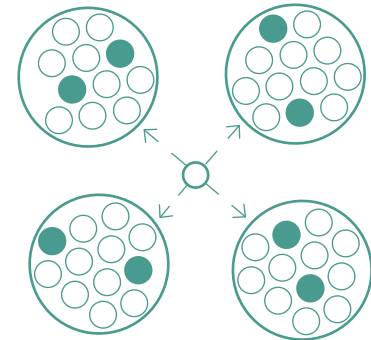
Due to the COVID-19 pandemic, the community meetings were held virtually using the Zoom meeting platform. Each meeting began with a presentation of the existing conditions and opportunities, or initial design proposals as the master plan progressed, and was followed by optional group break-out sessions where participants could ask questions and voice their opinions. This community feedback was documented live during the break-out sessions through a digital whiteboard, which helped the groups and the design team better understand where the consensus was. This also became an important tool for vetting ideas against moving forward. After the meeting, a recording of the presentation was uploaded to the project website on BPL.org, which hosted other project updates, past presentations, and surveys as well, for those who were unable to attend or participate in the group discussions. Paper copies of the surveys were available at the Central Library.

Community Meeting Format

1. Presentation



2. Optional Break-Out Group Q&A Sessions



3. Paper & Digital Surveys



External Focus Groups

The external focus groups were composed of members from the community, organizations, and institutions associated with the Boston Public Library. During these virtual meetings, they provided feedback on issues and opportunities within the existing McKim Building and Dartmouth Street Plaza based on their experience and individual areas of expertise, and identified how better partnerships could be forged between them and the greater community through the master plan process.

In addition, the planning team participated in the Boston Parks Department community engagement sessions for the redesign of Copley Square, adjacent to the library's Dartmouth Plaza.

Topic #2 Free to All

1 Do you currently visit the McKim building? Why or why not?

- Lunch at the cafe, courtyard, favorite place in back bay, listen to live music
- Self tour of Art and Architecture Galleries
- Giving tours, business with staff or catered affairs
- Rarely enter that way- thought it was a "private entrance"
- Way in heading to Johnson Building
- Events reveal that it is an active building
- Visited the courtyard as a student

2 What do you love about the McKim building? Is there anything you would change?

- Beautiful third floor spaces opportunity for people to engage with distinctive collections in "people spaces"
- Courtyard is a hidden gem
- Architecture specific library collection - Learning resource to understand architecture in the city of Boston and the architecture of the McKim building. McKim story. Very rich architectural archive collections
- Improve accessibility and way finding. One of first elevators put in a public building - in poor repair Cheverus Room- not accessible
- Plaza is kind of a mess. Difficult to keep clean. Loose pavers.
- Not where you go to get your books/ materials/ resources. It is a place to study/ ponder them, but not to obtain them.
- Entrance looks like a castle- not public
- Scanner at front door is off-putting.
- Make the building "accessible to all"
- Opportunity to make McKim Entrance a community space. - (NYPL)
- Too formal, not homey, doesn't feel comfortable.
- Are we allowed to come in?
- Where are the books?

1

Screenshot of the digital whiteboard application used during the break-out group session of 1st Community Meeting

Process

Boston Landmarks Commission Process

The master plan process engaged with the Boston Landmarks Commission and allied preservation professionals to vet the recommendations and garner support for the various initiatives. Multiple meetings, and reviews were scheduled throughout the project:

- January 4, 2021: **Introductory Meeting to review existing conditions and historic art and architecture assessment draft report**
- April 16, 2021: **Site Visit - McKim Building Tour**
- April 23, 2021: **Follow Up Meeting to review initial recommendations and big ideas**
- June 1, 2021: **Formal Application to BLC requesting Advisory Review**
- July 27, 2021: **Boston Landmarks Commission Advisory Review Hearing (public)**



Next Steps

The master plan phase represents an early planning process. Future design phases will develop specific ideas for review and approval, building on concepts explored during the master plan. The plan allows for the design ideas to be implemented as a large, comprehensive renovation, or to be constructed over time, in phases, according to priorities and available funding.

Moving forward, the City and the library will need to develop capitalization and funding strategies to finance the project costs, and will also need City Council approval in the capital plan.

The BPL is committed to an open and inclusive design process where community feedback and collaboration will continue to play a critical role throughout the future design phases.



CERVANTES

Executive Summary

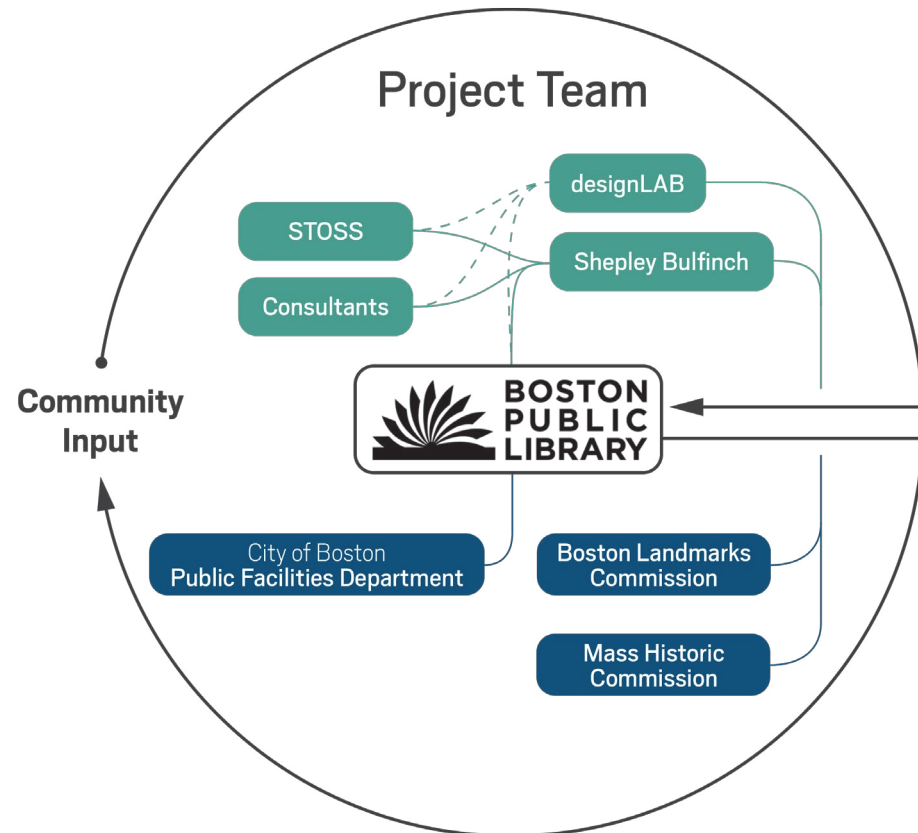
Project Goals

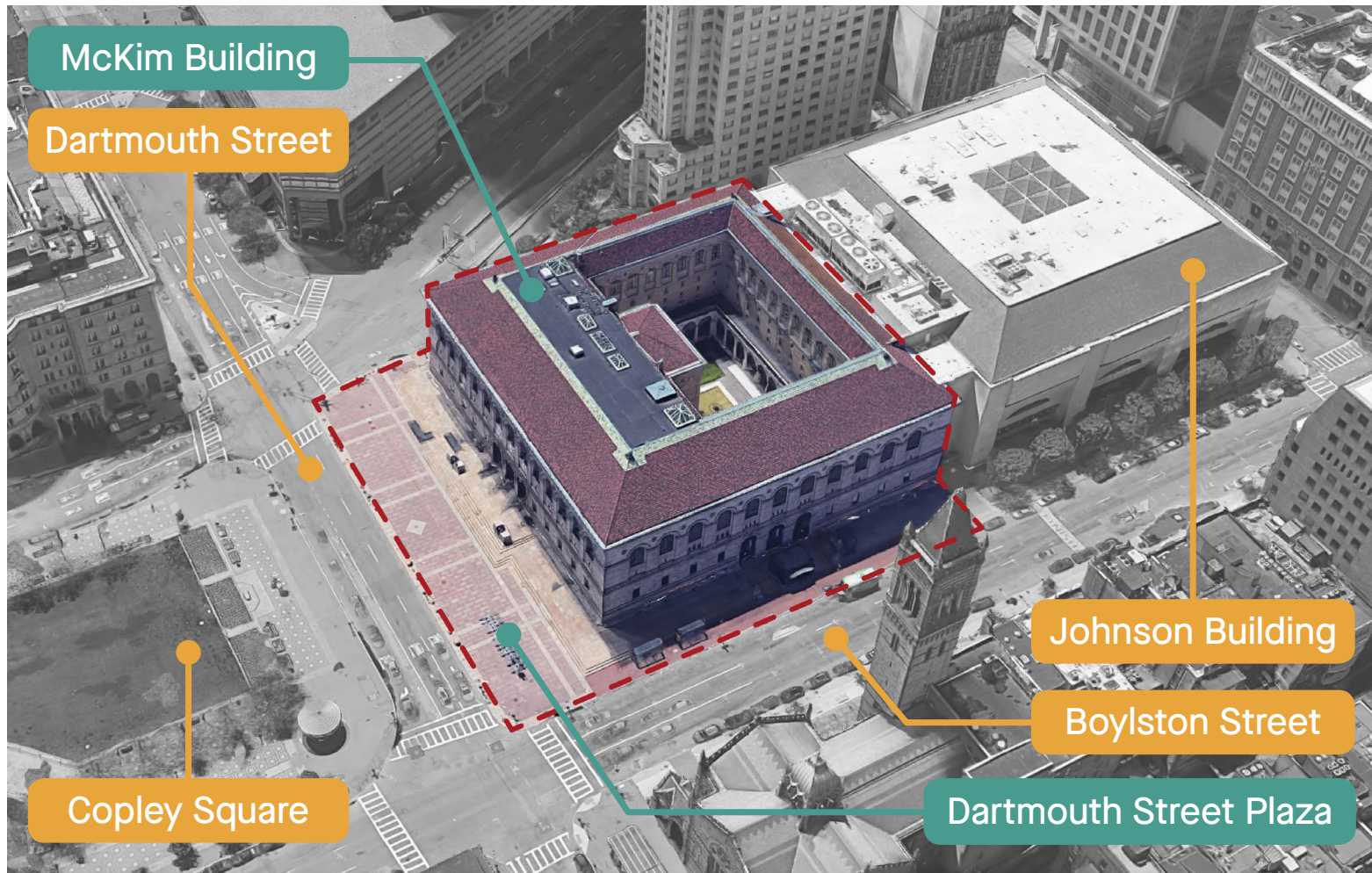
In August 2020, architectural firms Shepley Bulfinch and DesignLab, and landscape architecture and urban design firm Stoss were engaged by the City of Boston to create a new plan and conceptual design for improvements to the Central Library's McKim Building. Project goals include:

- Develop a space program that provides opportunities for education, interpretation, engagement, and improves access and performance within the building.
- Assess conditions of existing building systems, facades, art and architecture, special collections operations, and accessibility and make recommendations for preservation, repair and improvements.
- Develop renovation proposals for the currently closed third floor spaces to provide an educational and cultural destination through engagement with the library's special and research collections in new and compelling ways.
- Address the connection of the McKim Building to the Johnson Building, and identify opportunities for better utilization of the Elliot and Washington Rooms on the second floor and the Commonwealth Salon, Exhibition Hall, and Guastavino Rooms on the main level.
- Re-imagine the Dartmouth Street Plaza and entrance, improving accessibility and exploring how to use the plaza as a publicly engaging civic hub and urban destination within the heart of Boston.
- Develop estimates of probable cost to support potential City of Boston capital and private funding requests and campaigns.

“This planning project provides a once in a generation opportunity to re-imagine this beloved space... Currently large sections of the McKim Building function as a museum, or even as storage space. Through this project, we can reinvigorate and re-imagine McKim, making it a functional, versatile space that best serves the needs of the Boston community.”

David Leonard, President of the Boston Public Library





Project Goals

The new plan for the Boston Public Library's McKim Building aims to further the mission of the Boston Public Library - an institution that is "Free to All." It seeks to realize McKim's fullest potential in establishing new ways for the public to be aware of and engage with the depth and breadth of the holdings. In step with this goal, realms of exploration centered on

- Justice, Equity, Diversity, and Inclusion
- Way-finding and Accessibility
- Stewardship and Scholarship

In addressing these themes, the planning proposals are focused on resolving the many existing barriers to the building. These include creating a new universally accessible route into the Dartmouth Street entrance to McKim as well as providing equitable access through the many level changes within the building. Attention has been paid to creating better connections between McKim and Johnson. In addition to physical accessibility, the proposals are designed to enhance visibility of library programming and collections, making them more inviting and easily accessed. To address the library's goals of advancing the stewardship of the special collections and expanding opportunities for visitors to engage with them, new reading rooms and spaces for scholarly research are proposed.

Finally, the plan explores the potential to enhance access, preservation, and programming through creating a sky-lit cover for the McKim Building courtyard.

Focusing on these realms that were formed through engagement with the community and with Boston Public Library representatives, proposed programmatic and space planning proposals have been organized around three themes. The McKim Building of the BPL Central Library must be:

- Accessible and Legible
- The Home to New Contemporary Library Spaces
- Broadly Connected



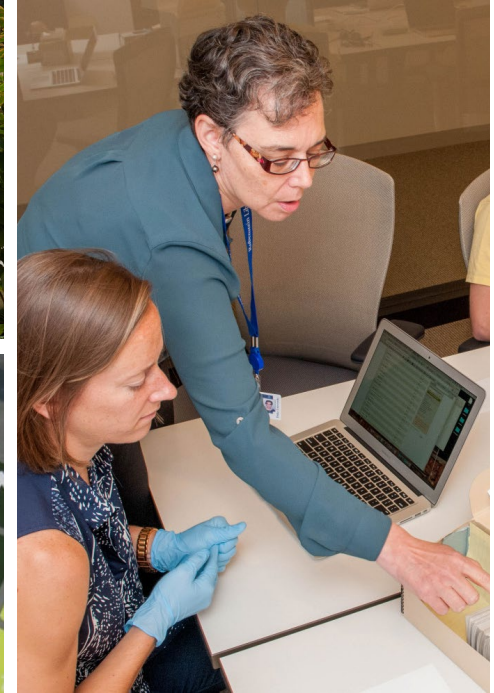
Justice, Equity,
Diversity & Inclusion



Addressing
Accessibility



Improve Way-finding



Stewardship &
Scholarship

Project Goals

Accessible and Legible

Making the McKim Building accessible to all users is a priority goal for the master plan. Comprehensive renovations are proposed to provide full accessibility, including accessible washrooms, paths of travel, clearances and reach ranges, life safety systems, signage, visual and audible information systems and assistive listening devices.

Currently, multiple barriers prevent the McKim Building from being easily and intuitively navigated and used. Floor level changes in the historical building require ramps, lifts and elevators. The exterior courtyard, while beautiful and highly valued, must be traversed or navigated around at all floor levels. On the first floor, the only public route between the McKim Building and the Johnson Building is outside, through the courtyard. The historical Dartmouth Street entrance is accessible only via an unwelcoming and ad-hoc ramp arrangement.

In addition to the proposed comprehensive renovations to provide access for all, the plan recommends specific

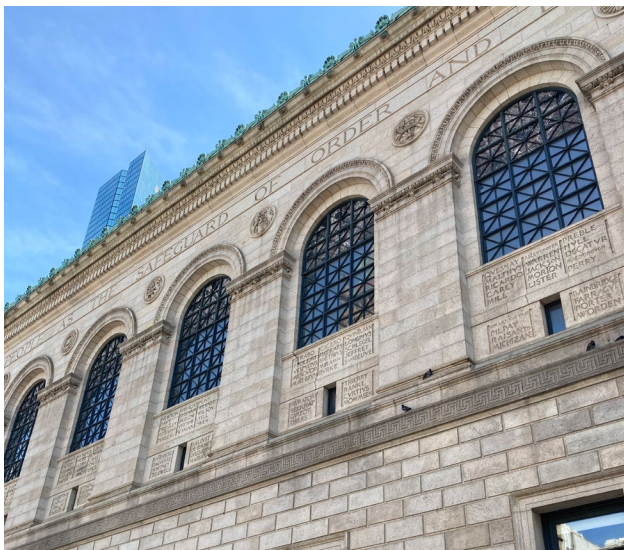
changes to building and site configuration. These include a new and accessible entrance as part of Dartmouth Plaza renovations, elevators, enclosed lifts, and more hospitable ramps to provide equitable movement throughout. Through a proposed new sky-light covering for the McKim courtyard, the main floors of Johnson and McKim can be connected with an accessible interior route.

The Home to New Contemporary Library Spaces

The McKim Building is an incredible specimen of 19th century American civic architecture, and is a unique example of synergy amongst engineering, architecture, and art. The McKim Building's identity as a museum-like tourist destination draws many people into the Central Library, yet this can leave an impression that is somewhat in competition with the building's function as a public library. The master plan aims to breathe life into the historical shell of the McKim Building, place library functions and programs front and center at the McKim entrance, and transform the building's interior spaces to respond to, and serve, the needs of a contemporary

public library that is welcoming to all. The program proposes enhancement of multi-purpose spaces for library educational programs, cultural enrichment events, and research consultation. More small, enclosed rooms for group work by patrons, as well as areas appropriate for display and use of the library's special collections will be provided. Service desks will be repositioned to provide a clearer support model for the public, including a one-stop reference area for patrons engaged in research with the BPL collections. Staff areas will be improved to provide accessible service routes, environmental conditions that support preservation goals, and security, especially for the library's special collections.

A key priority for the library is to continue and improve on the stewardship of the collections and expand the opportunities for visitors to engage with them. One of the master plan's important goals is to realize the McKim Building's full potential in establishing new ways for the public to be aware of and engage with the depth and breadth of the holdings.



Building



Collections



Services

Broadly Connected

Improving equitable access is fundamental to the McKim master plan. This effort begins at the McKim Building's front door, facing Dartmouth Plaza. The planned improvements will invite all visitors into the library. Opportunities will be provided for meaningful engagement with the citizens of Boston, as well as visitors from all over the world. The entrance will be reconstructed to provide gently sloping walkways in place of the existing ramps. Plantings and benches will create outdoor spaces to read, connect or enjoy outdoor programs provided by the library. Access to power, utilities and new lighting will be provided to support extended use of the plaza, and improved signage will be provided to announce library programs.

The renewal of the plaza will position the McKim Building to contribute to Copley Square as a central city landmark and destination. The viability of pedestrianizing Dartmouth Street in the block facing the McKim Building, between Boylston and Blagden is under review by the city. If Dartmouth Street were closed to vehicular traffic- on an occasional or long-term basis- Dartmouth Plaza and Copley Square would be united as an iconic historical place providing welcoming outdoor zones for a variety of activities.



To create a more welcoming entrance, sloped walks are proposed to replace a temporary ramp on Dartmouth Plaza

Site and Building Assessment

Historic Assessment Summary

By way of introduction, the master plan Request for Qualifications (Feb. 2020) well states:

“Designed in the Renaissance Revival style by Charles Folan McKim of McKim, Mead & White and constructed between 1888 and 1895, the McKim Building at the Central Library in Copley Square was listed on the National Register of Historic Places in May of 1973 and granted National Landmark status in 1986. It is considered by historians to be the pinnacle of McKim, Mead & White’s work. As such, modifications that affect the “specified exterior and interior features” fall under direct review of the City of Boston Landmarks Commission. In addition, the Trustees of the library have entered into a Preservation Restriction Agreement with the Commonwealth of Massachusetts, through the Massachusetts Historical Commission which establishes specific restrictions guidelines of the Boston Public Library. Work on these spaces will require input and approval from the Landmarks Commission and an ongoing open line of communication between the Commission, the BPL and the PFD.”

The Amended & Restated Preservation Restriction Agreement was executed 2006 and extends for 50 years, therefore MHC review is required.

The primary goal of the Historic Art and Architecture Assessment is to inform the overall master plan process by assigning a level of significance to spaces through detailed descriptions and analysis. Using a generally accepted historic preservation rating criteria for the spaces within the scope of the master plan, each is rated into three categories based on their level of architectural and/or artistic significance. The master plan recommendations then refer, and adhere to, these ratings when considering any potential planning schemes or design options.

Several critical design issues, identified in the 2008 Programming Report, remain relevant to this master plan and historic assessment report. These issues have been thoroughly considered and will be managed carefully through the proposed improvements and interventions so as to minimize any adverse impact on the areas of significant historical art and architecture relevance:

1. Historic Fabric of Building

Possible impact from proposed design interventions to the historic spatial organization, finishes and general appearance of historically significant spaces within McKim should be carefully considered. To minimize the impact potential master plan interventions have on existing historic art and architecture elements throughout the building, the rating criteria defined for each space within this assessment should be carefully reviewed and adhered to through the master plan process

2. General Circulation

Navigating multiple levels within McKim and the connecting link between McKim and Johnson will prove to be one of the most challenging components of the master plan. Remedying these level changes through new sloped walks, ramps and elevators should carefully balance the impact these interventions have on existing historic fabric and meeting appropriate accessibility requirements.

3. Building Systems Integration & Coordination

Similarly, integrating new building systems (HVAC, sprinklers, etc.) into the existing historic fabric should be done carefully and sensitively so as to limit any potential negative impact on historic spaces.

The McKim Building has three primary patron levels. The first floor features the Lobby, Grand Stair, and courtyard; the second floor features Bates Hall and the Abbey Room; and the third floor Sargent Gallery leads to several significant space that are currently closed to the public. The building has ten stack/mezzanine levels where collections and staff spaces have historically been located. A portion of these areas are now used for library staff and operations. The building's functional features have evolved over time to reflect updated working practices and to incorporate new programs and technologies, most recently with late 1990's - early 2000's and 2010's renovations. All the while, the essential historic material of the building has remained intact and restorations and sensitive adaptations have produced the iconic McKim Building that we appreciate today.

The original building consists of wood piles driven into clay soil that are capped with granite block piers and walls, forming the foundation. Walls are masonry with granite facing on the exterior elevations and roman brick on the courtyard. These walls consist of a load-bearing mass up to three feet thick. Internally, the building uses Guastavino tile arches to form the ceiling and floor constructions on the primary floor levels and the courtyard arcade. Shallow brick arches span between the iron framing to form the flooring in areas of the building originally designed as stack areas. The mezzanine level structures and the roof trusses are iron framing.

The roof is clay tile attached to concrete panels on purlins between trusses. This current roof has been modified from the original design to prevent leaking. Still in place from the original building is a drainage plane, located within the attic, that consists of corrugated metal sheets sloping to an internal gutter.

Typical windows are wood frame and sash, with single pane glass. Many exterior windows have been restored and updated with double pane insulated glazing. However, windows facing the courtyard have not been updated, and include large arched windows at the third floor level.

The McKim Building is a treasured part of the BPL System, yet it does present challenges that affect the master plan and proposed design intentions.

- The pile foundation of the building is not capable of supporting additional weight from new structure and the groundwater levels in Back Bay require constant recharge and monitoring to ensure continued longevity of the piles. The BPL monitors the stability of the building's structure through an ongoing program of spot elevation surveys.
- Special Collections spaces lack enclosure enhancements needed to maintain appropriate temperature and humidity conditions.
- The exterior masonry walls must maintain a delicate balance of absorbing water and releasing moisture, which cannot be disrupted by new insulation or barrier membranes. Deterioration on the surfaces of interior walls and arches is evidence of the inability to control relative humidity and moisture incursions. The cause of the deterioration must be addressed, and repairs implemented.
- The wood windows need to be restored in a way that maintains original material and appearance. To improve thermal performance and stabilize interior environments, this may include carefully reworking frames to accept thicker insulated glass units within the existing sashes and re-installation in a manner that stops air infiltration.

- The lowest level of the McKim Building extends under Dartmouth Plaza and is prone to leaking from the plaza above. Steps to control leaking should include installation of a new waterproofing barrier below the plaza paving.

Integration of new work and modern materials must be done with aesthetic and technical sensitivity to achieve respectful and long lasting results.



Site and Building Assessment

Architectural Assessment Summary Continued

The courtyard within the McKim Building is a special place within the city- its garden offers a sense of calm from the bustle of the surrounding area. As seen in the photographs to the right, the arcade surrounding the courtyard has remained intact, and the warm mix of marble, brick, terra cotta, bluestone, and granite lend the space a pleasant feeling. Various plantings have occupied the courtyard, centered around a rectangular fountain, attributed to Phillip Martiny. The sculpture at the center of the fountain, like so many elements of the library, carries with it an interesting history. It is a replica of a bronze statue created by Frederick William MacMonnies and donated by his friend, Charles McKim, to the library in 1896. After public outcry over the "indecent" of the sculpture, McKim ultimately donated the piece to the Metropolitan Museum of Art. With the installation of the replica in 2001, the fountain design was finally completed as originally envisioned.

Many of the previous uses of the courtyard still endure today. Through archival photos it is shown that the courtyard has always served as a space for enjoyment where one could read outside, socialize, and even exercise. Today, the courtyard is frequently used for similar functions: as an outdoor reading room, as well as a venue for library programs, performances and events.



Boston Public Library, Copley Square. Courtyard. ca. 1927



Boston Public Library: Courtyard



Boston Public Library, Copley Square. Courtyard. Physical culture class of Emerson College, 1926



Outdoor reading at the Library

Structural Summary

The four-story heavy-masonry McKim Building is built around an open central courtyard. Over the 125 year life of the building, its spaces have been renovated for various library uses. The McKim Building is founded on a system of timber piles driven through the underlying organic substrates into the stiff top layer of Boston Blue Clay. The structural framing is iron framing. Structural clay tile arches typically appear to span between the iron framing members with concrete fill to create the level floors. Framed floors typically appear to clear-span across the spaces from bearing wall to bearing wall. The bearing walls appear to be a combination of structural clay tile and brick masonry, finished with plaster on the interior. The exterior portion of the exterior bearing walls is carved Milford Granite. The attic/roof level around the perimeter of the courtyard is framed with scissors trusses consisting of riveted steel angles and plates.

Currently, the floors and walls appear to be in sound and uncracked condition. The structural framing and floor systems appear to be adequate to support their current loading conditions.

With regard to future possible renovations and additions, because the heavy structure is founded on 19th century timber piles, renovations should be designed to impart similar or lesser loads to the existing foundations. New heavy loads must be supported on a new system of columns founded on new pile supported foundations. Any large additions should be an independent structure and not rely on any elements of the existing structure for either vertical or lateral support.



Basement Construction of Guastavino Arches



Construction of 3rd Floor, West Corridor

Site and Building Assessment

MEP, FP & IT Assessment Summary

Mechanical:

The majority of the existing heating, ventilating and air conditioning (HVAC) equipment and controls serving the McKim Building are at or near the end of their average life expectancy. This includes ventilation air handling units in the basement & attic, vertical 4-pipe fan coil units serving the stacks, and equipment controls. In addition, it has been noted by BPL facilities staff that previous work in Johnson uncovered corrosion issues with the “small piping” for hot water, chilled water, and steam requiring significant replacements. The current internal condition of McKim piping is unknown however it is suspected to require replacements based on its age and history of corrosion.

The first floor Exhibition Hall is currently heated and cooled by 4-pipe fan coil units with ventilation supplied directly to the space from an air handling unit located in the basement. The ventilation air handling unit provides heating only. Therefore, during summer months, warm and humid air is supplied directly into the Exhibition Hall. In the areas of stacks 5 & 6, and the third floor that are not served by fan coil units, heating is accomplished by exposed hot water piping (stacks 5 & 6) and exposed steam piping and steam radiators (third floor). There is no cooling provided in these areas, and minimal ventilation is provided. Portions of steam piping serving the third floor are cast in the stacks 5 & 6 walls. Previous leaks in the piping required repairs to be performed to the difficult to access piping. The proposed work includes removal of all steam heating and in-wall steam risers up to the third floor.

The existing chilled water plant includes three steam absorption chillers and is located in the Johnson Building mechanical room. The existing chiller capacity

is estimated to be sufficient to serve the additional chilled water load to cool stack 5, stack 6 and the third floor, as well as the proposed courtyard addition. However, the additional load will reduce the available redundancy in the system. The system currently operates primarily on two out of three chillers during peak hours. If a chiller were to require servicing during a period of peak demand the full load would not be met, and some areas would be required to reduce cooling. Recommendations for future study of the library chiller system are discussed further in the Program Summary section of this report.

Heating hot water is generated by heat exchangers utilizing steam as the heat source. The heat exchanger (converter) and pump are located in the Johnson Building. The additional demand to support the proposed program is expected to max out or exceed the available capacity of the existing hot water system supplying McKim. The existing steam to hot water converter and pumps are at or near the end of their average life expectancy and should be considered for replacement. The existing 8” hot water supply piping to McKim is large enough to support the increased hot water demand.

The HVAC controls in McKim have been noted by the BPL facilities team to be of older technology, and replacement parts are difficult to obtain. Much of the existing controls are not connected to the central building automation system (BAS). This includes the controls for the absorption chillers in Johnson, which are currently operable only by the local controllers at the unit. New digital controls are recommended for all new and existing equipment throughout McKim.

Electrical:

The majority of the existing electrical equipment serving the upper floors of the McKim Building is at or near the end of its life expectancy. Stack 5 includes a central lighting control relay system interconnected with the building automation system (BAS) that can be reused and expanded. Electrical installations on the stack 6 and the third floor levels include power receptacles, switches, lighting fixtures, and panelboards that appear to be more than 50 years old and are beyond their usable life.

The existing electrical service capacity in the McKim Building main distribution board is estimated to be sufficient to serve the renovation loads for the new program areas within the McKim Building. The existing McKim Building generator is well maintained and in good operating condition, however it is near the end of its expected service life. The existing generator automatic transfer switch (ATS) is serving both life safety and optional standby loads which is not allowed by the current building code.

Information Technology:

The existing telecom and security systems in areas of stack 5 and stack 6 require complete replacement. The third floor includes very minimal modern telecom distribution and will require a new IDF room to serve the renovated areas.

Security:

Security cameras are installed in the existing book stacks. Card readers are installed at some door locations, but most restricted access doors are provided with key locks. The existing security systems are proposed to be replaced with new to support the new program areas.

Plumbing:

There are currently no restrooms on the third floor of McKim. Existing domestic water, waste, and vent piping extends up to the stack 6 level. The interior condition of the piping is currently unknown and should be inspected to determine its condition. Depending on the condition of the piping, replacement of piping up to the proposed new toilet rooms may be required. New toilet rooms on the third floor will require a larger domestic cold and hot water piping riser extended from the basement systems. The existing hot water heater supplying domestic hot water to McKim is located in the Johnson Building. Based on visual inspection of the existing domestic water heater, it appears to be older equipment and it is recommended that the domestic hot water heater be replaced.

Fire Protection:

The existing sprinkler zones are fed from standpipes extending down to the main service in the McKim basement.

The McKim Building fire suppression system includes standpipes extending up to the stack 6 level. The standpipes are currently operating off of street pressure from the Blagden Street 12" water main.

The library's designation as a high-rise requires that standpipes have a minimum pressure of 100 psi at the top of the standpipe. The 2008 Phase IID Programming Report indicates an available pressure of 80 psi currently.

Fire Alarm:

New fire alarm initiation, notification devices, and wiring with full smoke detection coverage reporting to a new fire alarm data gathering panel (DGP) are proposed. A separate fire rated emergency power room will be required. The new data gathering panel will report to the building's central fire alarm system. A Boston Fire Department bi-directional antenna system (BDA) is proposed be included as part of the new renovations.

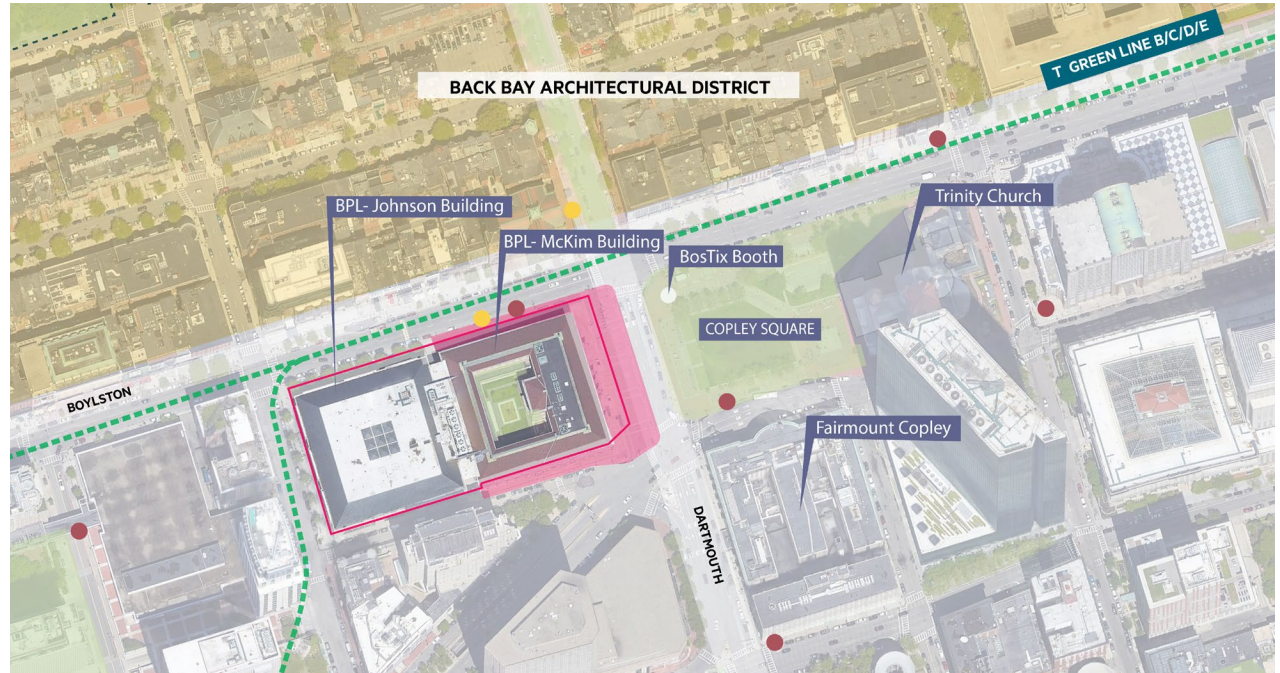
Site and Building Assessment

Site Summary & Urban Context

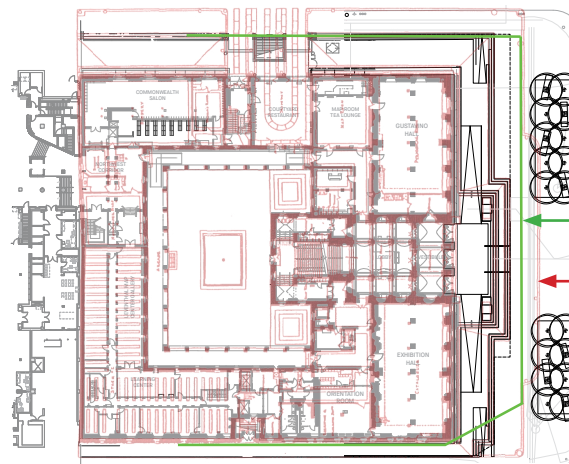
Dartmouth Plaza Assessment

The Boston Public Library Central Branch, which is located within historical Back Bay, is a cultural resource not only of the neighborhood, but of the entire city. The original McKim Building and Johnson Building extension are within the context of several other notable structures, including Trinity Church, Old South Church, and the Fairmont Copley Hotel. The McKim Building is situated at the south edge of the Back Bay Architectural District. The property is designated as a City of Boston Landmark by the Boston Landmarks Commission, and is a National Historic Landmark. The Overlay Plan indicates the BPL property line and the boundary of the historic designation area, as delineated in the 12 December 2000 Boston Landmarks Commission Study Report and Recommendation.

In addition to being surrounded by noteworthy structures, the library is situated within an area containing many recognizable urban open spaces. The image to the right catalogues a number of these open spaces and categorizes them as primarily plaza/hardscape or parks/lawns. The Commonwealth Greenway and Boston Common are both within a short walk of the library, and the McKim Building sits directly opposite Copley Square.



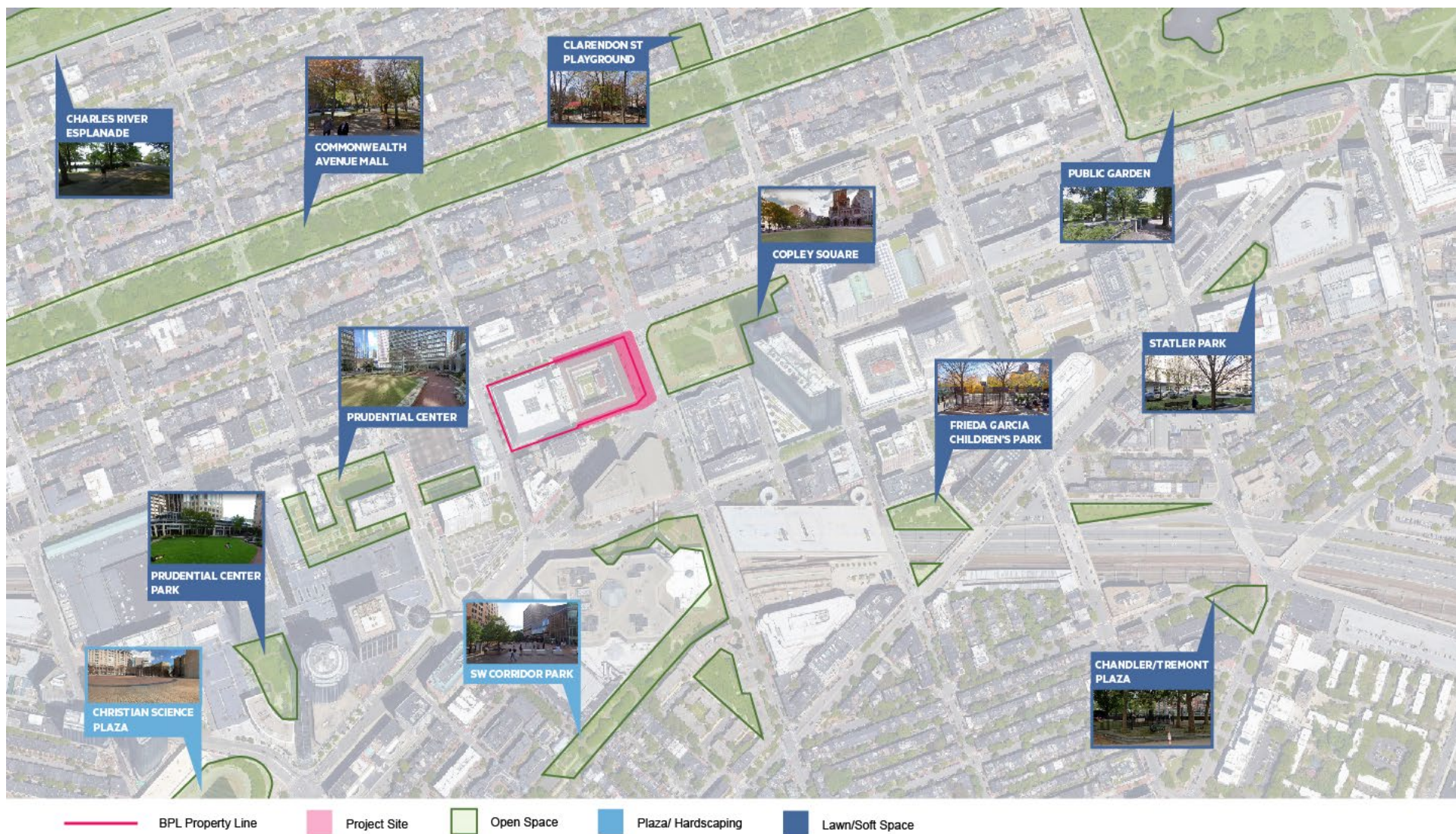
Existing Context



Overlay Plan

Property Line per City Tax Parcel Viewer

Boundary of Historic Designation, BLC Study Report, 12/12/2000



Nearby Open Spaces

Site and Building Assessment

Site Summary Continued

The McKim Building's porch, which extends across both the Dartmouth and Boylston Street facades and the adjoining plaza on Dartmouth Street is the library's most civic gesture- combining public space, sculpture, and architecture- with outreach and connection to the community.

In the historical photos to the right, the library can be seen through the decades. The McKim Building was commissioned in 1887, but the Boston Public Library system had been established in 1848, making it the oldest municipal free library in the United States. The building that the people of Boston know and love today, however, has served as a "palace for the people" and the library's headquarters since its completion in 1895. The site's enduring and elegant character both inside and out gained the McKim Building a spot on the National Register of Historic Places in 1973 and the designation of a National Historic Landmark in 1986. A series of renovations have been undertaken to maintain the building and its courtyard for generations in the future to enjoy.

Although some of the context surrounding the McKim Building has changed, including what is now called Copley Square, the library continues to enchant visitors and locals alike. An integrated bench at the base of the building creates a civic space along it's edge. As seen in the image to the right, this exterior space on the library's plinth has been a space of public enjoyment for many years.



The Boston Public Library 1895



Exterior of the completed McKim Building



Copley Square 1950



Bird's eye view of Boston Public Library entrance 1930



People Sitting on Boston Public Library platform 1930

Dartmouth Plaza presently consists of a large open space comprised of hardscaping elements with several distinct features, many showcasing the historical building facade. Banded tan and red stone paving divides the plaza into several sections, with a band running along Dartmouth Street capturing the historical stone bollards. An original stone plinth integrates stairs to allow for access from the plaza up to the main entry, which features decorative lighting fixtures, doors, and gates. As visitors move up the stairs, they pass through two flanking sculptures, entitled Art and Science, completed by artist Bela Pratt in 1912.

The integrated bench along the building's perimeter is an element of urban furniture. Particularly at the corner of Dartmouth and Boylston, which receives ample sunlight, the bench is frequently utilized by visitors and those stopping by to enjoy a moment in the city, as well as by unhoused citizens.

To assist in making the library more accessible, temporary ramps have been deployed to mitigate the stairs at Dartmouth Plaza. Two ramps occupy the southern end of the plaza, and one is used at the top plinth to navigate the two steps at the entrance threshold.



Plaza looking north



Plaza looking south



Current accessible ramp at plinth



Current accessible ramp from upper plinth



Allegorical sculpture of Science from the flanking pair of statues, Art & Science



Existing stone bollards at edge of plaza



Edge seating with integrated exhaust vents



Existing handrails at steps

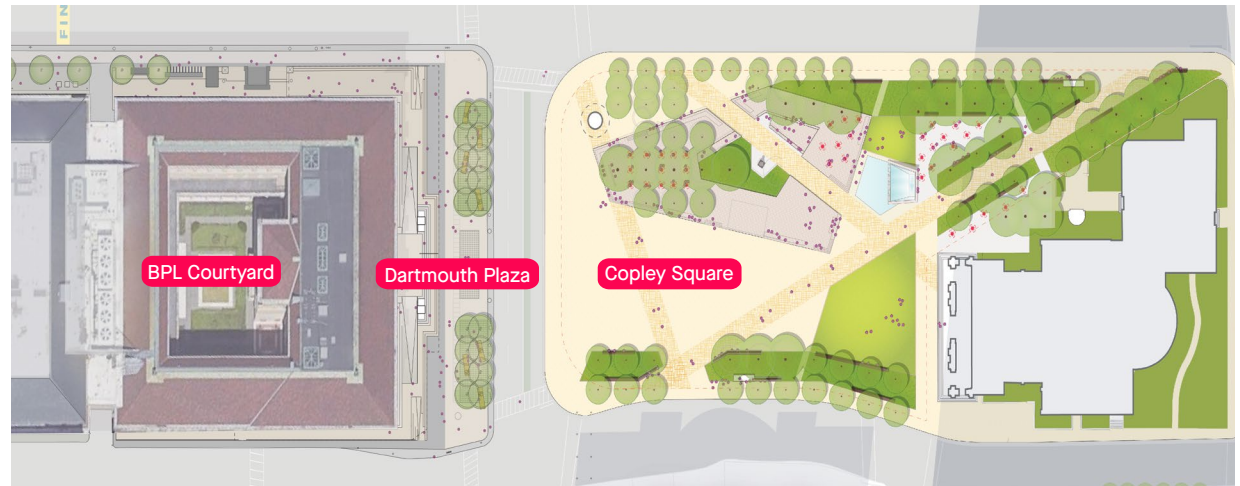
Site and Building Assessment

Site Summary Continued

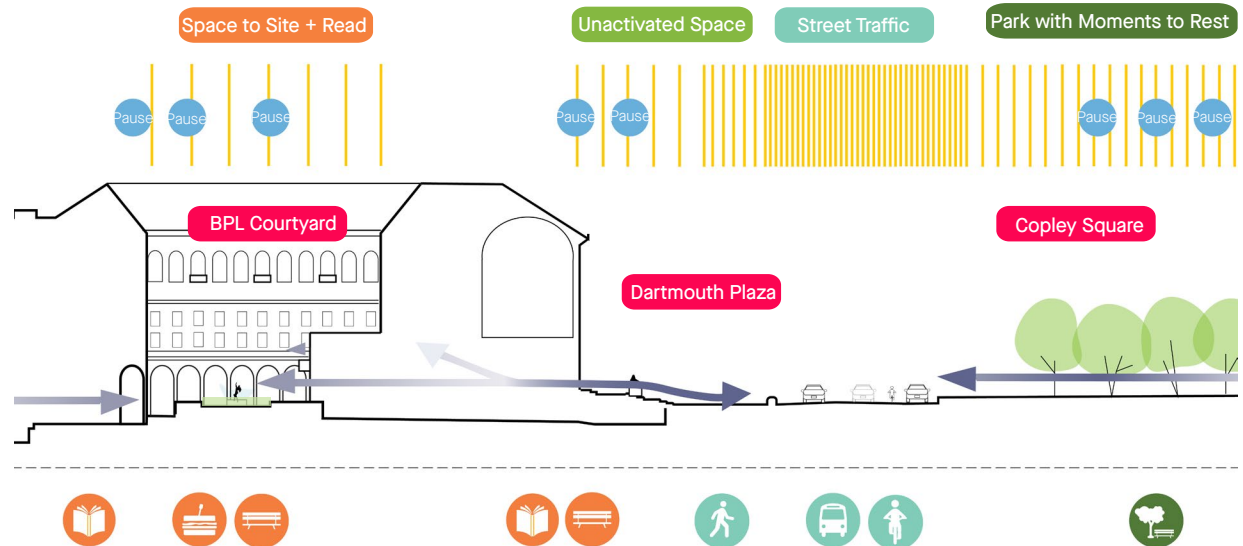
One of the goals of this master planning project is to celebrate Dartmouth Plaza as a key space in a collection of urban experiences, leading from Copley Square through Dartmouth Plaza, into the McKim Building, into the library's courtyard, and into the Johnson Building lobby.

Dartmouth Plaza can be accessed both from the north via Boylston Street and from the south off of Blagden Street, with pedestrian crosswalks extending to directly connect to Copley Square to the east. Several public transit lines serve the immediate area, including MBTA bus and the T Green Line B/C/D/E lines and the Orange Line Back Bay station. The Green Line Copley Square stop serves the area, with a station entrance on Dartmouth Street directly outside of the McKim Building. The station provides access to the train line, which runs below Dartmouth Street. Dartmouth Street features one-way traffic running north and includes a bike lane. Presently, access is also facilitated via a Blue Bikes station for bike-sharing located at the north end of the plaza. A row of granite bollards help delineate and buffer the plaza from Dartmouth Street, giving it a sense of separation from vehicular traffic.

Another key aspect of the public realm surrounding this site is the dialogue with existing planting. Street trees along Boylston create a corridor of urban canopy, and existing planting at Copley Square assists in framing views of the library's historic facade. The library courtyard offers an oasis in the city that currently features low shrubs and ground cover.



Public Spaces in Immediate Context

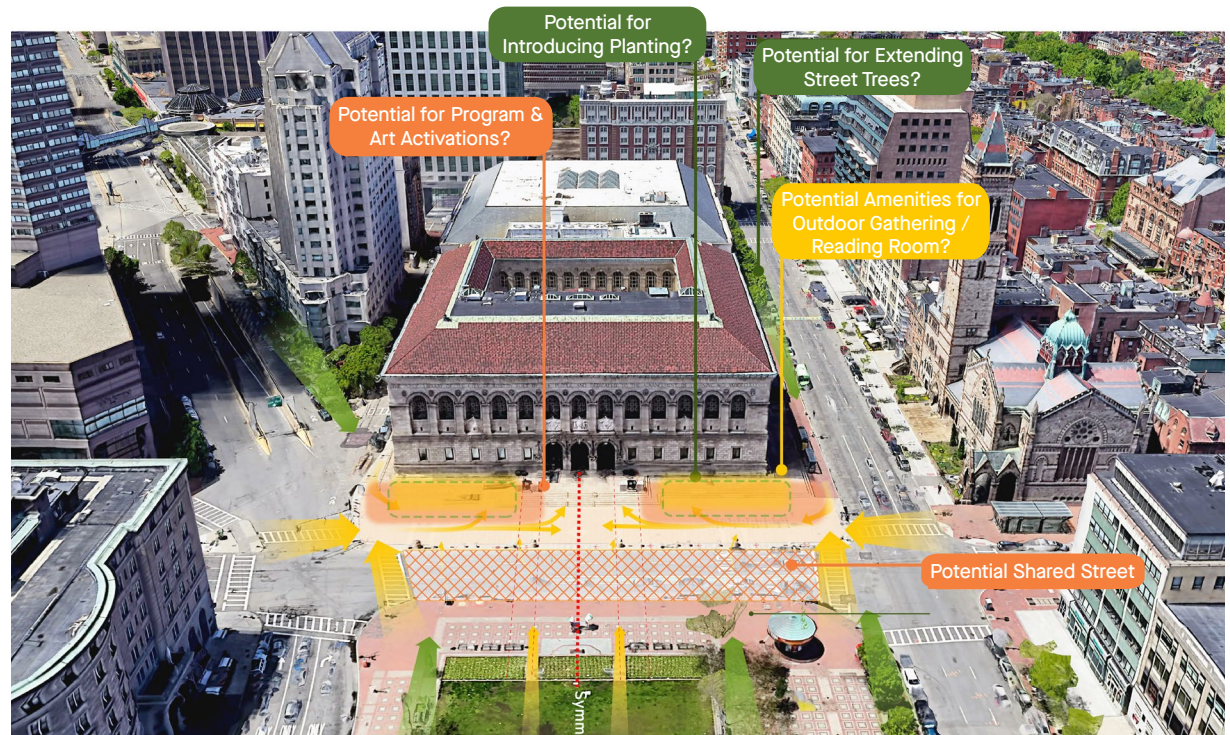


Site Rhythm in Section

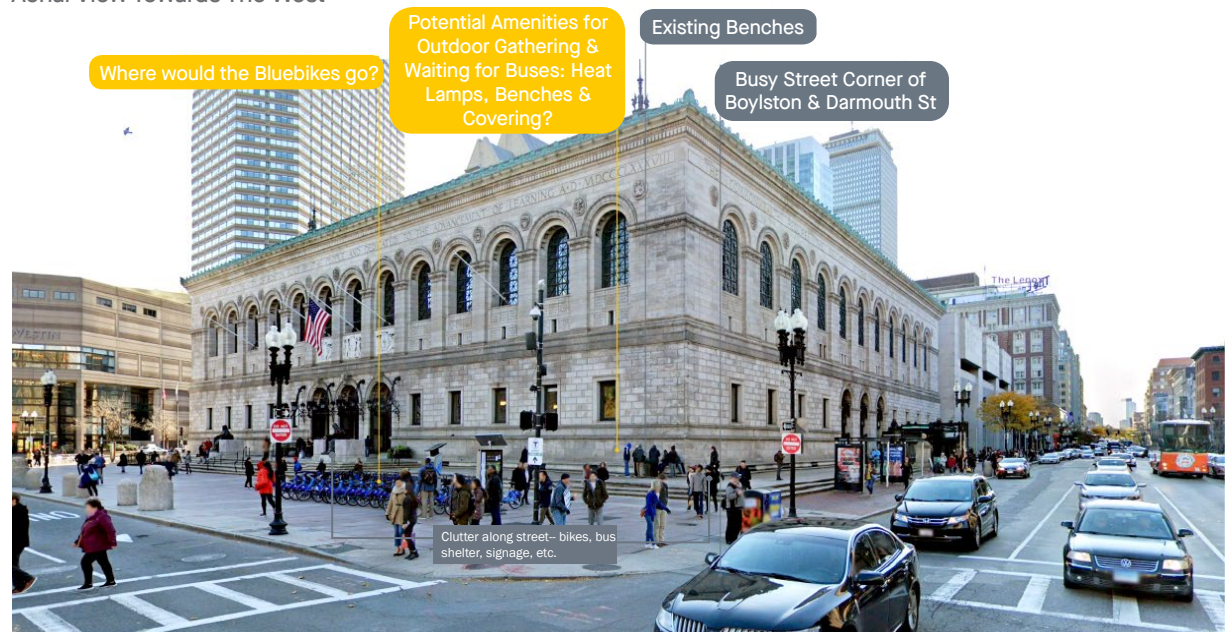
Although this is a bustling part of the city capable of holding large-scale events- from protests and parades to viewing the Boston Marathon finish line- the re-imagination of Dartmouth Plaza seeks to understand the everyday rhythm of the site and its context, and to offer a space of respite and comfort in the public realm. The image to the left diagrams popular activities that presently take place: from sitting among the trees in Copley; to the traffic along Dartmouth Street; to the currently unactivated space of Dartmouth Plaza; up through McKim into the relative peace of the library courtyard.

Primary objectives of this master plan are to think about big-picture moves that will transform the plaza into a more comfortable space that remains an active and important part of the Back Bay's urban realm. In community meetings, some of the public's key insights provided the team with valuable feedback into how to move forward with design proposals. These insights included the following:

- Consider how to break up the hardscape, which offers no relief, no green, and no shady areas
- Tendency of the plaza to feel empty and without places to sit
- While the library is a magnificent resource, the community often feels that its architecture could be imposing rather than welcoming
- A lack of human scale on the plaza makes it difficult to relate to the monumental facade
- An opportunity has been missed in that there is difficulty sensing the richness of cultural programs inside the building
- Better, clearer access is needed for all
- Provide programming for both everyday and larger feature events in partnership with Copley Square



Aerial View Towards The West



Corner of Boylston & Dartmouth

Site and Building Assessment

Civil Summary

The Boston Public Library property is a single parcel of approximately 3 acres, encompassing the McKim and Johnson Buildings. Significant features on the Boylston Street side include the MBTA Green line, Copley station and subway tunnel. The elevated Blagden Street entrance serves as a loading point for certain library support operations.

The library is served by utilities from each of the surrounding streets, as illustrated by the color-coded Existing Utilities Plan. These services include:

- Steam on Blagden
- Water and fire protection on Blagden
- Fire Department connection on Boylston
- Sanitary on Blagden and Boylston
- Storm drain on Dartmouth and Boylston, leading to infiltration structures
- Electrical on Boylston
- Further review of gas service and grease trap provisions to accommodate catering services is needed.
- Telcom on Boylston to main distribution in Johnson

The property is located with the Boston Groundwater Trust Conservation Overlay District, adopted by the City of Boston to protect wood pile foundations from deterioration caused by lowered groundwater levels. BGWT observation wells are regularly monitored by the Trust, eight of which are located within the curbed area surrounding BPL. It will be important for the plan to maintain existing infiltration structures, while providing new areas to contain and release storm water.

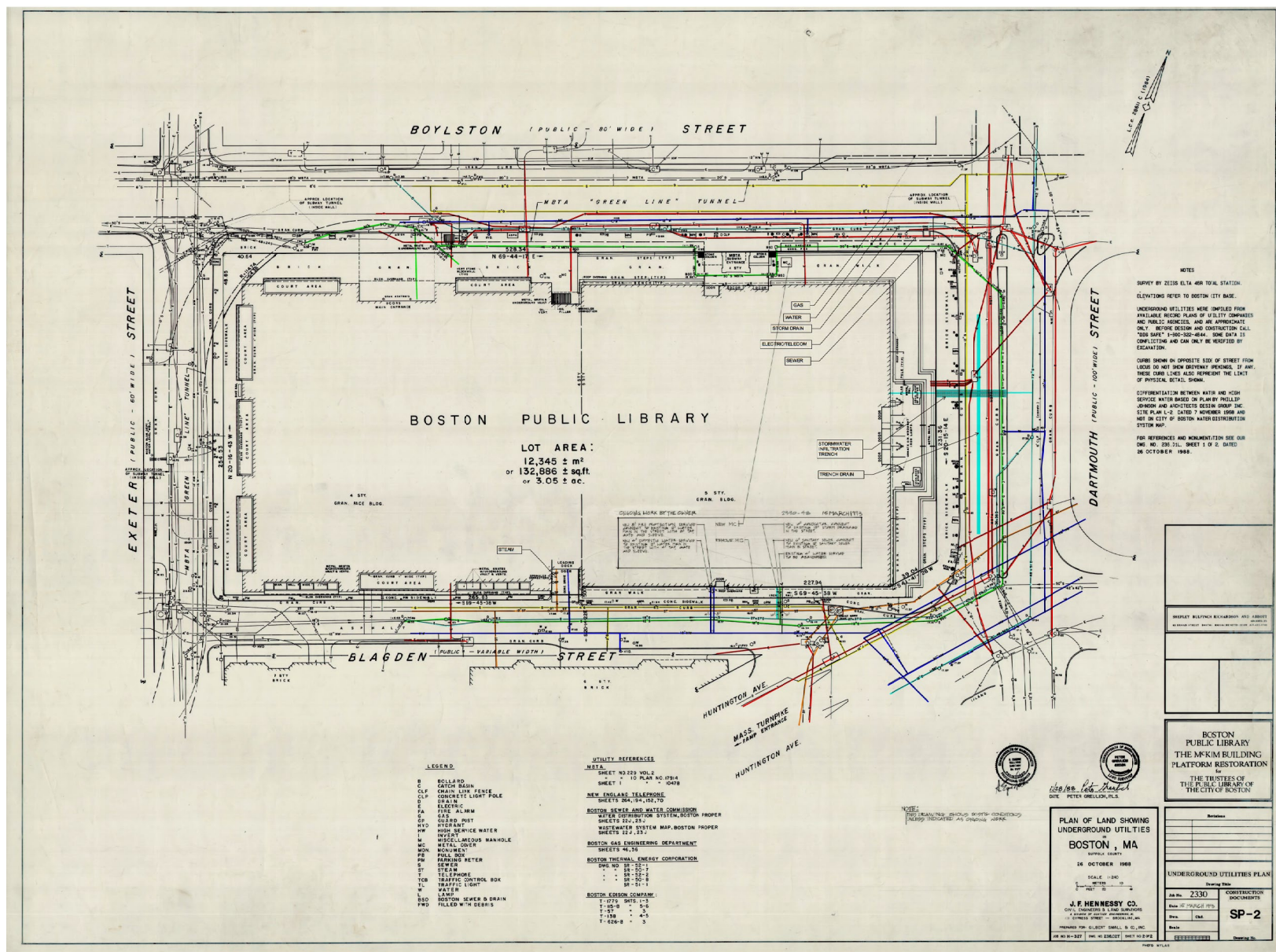
On the Dartmouth street side, where the plan proposes to renovate the current plaza, attention is to be given to existing service lines in the vicinity of the plaza. These include updating the existing plaza trench drain, and avoiding large gas, storm, sewer and water services. Localized electrical service for lighting and signals is likely to be impacted by the improvements.

Grades around the site are anticipated to remain largely the same while improvements are made.

Improvements for Dartmouth Plaza are within the city owned right of way and the project will engage with the Boston Public Improvements Commission for development and permitting.



Key Plan



Existing Utilities Plan

Site and Building Assessment

Security Summary

The McKim Building is open to all, magnifying its need for well managed security. In accommodating a broad spectrum of visitors, the desire to be open and welcoming must be carefully balanced with the need to monitor, control, and secure parts of the library. Security needs encompass the welcoming of visitors, management of staff zones, and protection of the collections and art and architecture of the building itself. To be effective, library security should be provided with several levels, including: passive measures such as space configuration and active measures such as security staff and policies; as well as deployment of equipment such as access controls, sensors, alarms, and cameras.

The proposed renovations improve pathways of movement on each floor as well as vertically through the building. The introduction of glass in doors will improve sightlines into public spaces, and enhancements such as better signage, lighting, av systems and accessibility will improve space utilization and increase activity levels in public areas. Relocated staffed service points will also contribute to improved way-finding and oversight of patron spaces.

Improvements to access control systems will enhance perimeters of staff-only library support and collections areas, while system monitoring will improve the security staff's ability to be aware of activity in the building.

As proposed renovations to elevators, stairways, library support and collections areas are considered, development of a corresponding access control design, including such potential components as key card readers and programmed locks are recommended. Protocols for and locations of the book detection systems should also be reviewed and coordinated with plans for service points, collections and patron reading areas. Adequate lighting will be provided, including on the building's exterior and at entrances and exits.

An integrated, building wide system of security equipment including intercoms, cameras, alarms, motion detectors and similar devices fully interfaced as a system is recommended. Entrance and exit points, including not only the main Dartmouth Street entrance, but also service and egress doors, should be secured and monitored. In addition, areas where materials of value are present, including the Exhibition Hall and areas for Special Collections should be equipped with enhanced security systems.

Lighting Assessment Summary

The lighting in the McKim Building is provided by a broad array of fixture types installed over many different eras. Overall, the lighting systems are outdated and inefficient, and very few locations are equipped with energy efficient LED sources. Exhibition, teaching and multi-purpose spaces lack contemporary lighting controls with dimming and scene setting capabilities.

The addition of modern lighting fixtures that provide high quality, low glare illumination will position library spaces for contemporary and new uses and extend their flexibility. Exterior lighting surrounding the building and in the courtyard is proposed to enhance safety and security, illuminate the McKim Building's distinctive architectural and landscape features, and to increase opportunities for evening programming. Historical fixtures will be relamped and restored. The Orientation Room, Exhibition Hall and Commonwealth Salon on the first floor, the Washington and Elliot Rooms on the second floor and the Wiggins, South and West Galleries on the third floor lack historical fixtures and should be equipped with new lighting systems.

In several areas, historic fixtures remain in place and need to be refurbished and re-lamped. Areas with historic fixtures include the Dartmouth Street Lobby, Guastavino, and the courtyard's exterior arcade on the first floor; the Abbey Room on the second floor; and the Sargent Gallery, Cheverus, and Jordan Rooms on the third floor. In these areas, new fixtures to provide general illumination to support contemporary uses is needed to supplement the historical fixtures.

The exterior historical fixtures flanking entrance doors are an iconic part of the building's architecture. In addition to the refurbishment of these fixtures, supplemental lighting is needed to expand programming capabilities and evening use of new seating areas, as well as to promote a safe and secure pedestrian environment.



Existing Historic Fixture, Jordan Room, Third Floor



Lantern, Dartmouth Street Facade



Exterior lighting and projection can be employed to support library programming on Dartmouth Plaza

Site and Building Assessment

Vertical Transportation Summary

Elevators in the McKim Building have been in service for more than 20 years and present issues of size, visibility, and reliability for library staff, patrons, and visitors.

The current public elevator on the Dartmouth Street side of McKim serves the main floors of the building, leading to destinations such as Bates Hall and the Sargent Gallery. This is a replacement of the building's original elevator and the cab was designed to replicate the appearance and mood of the original, while conforming to elevator standards. This elevator is in good working condition but the equipment is outdated, the cab is small for its purpose, and finishes have been worn down from use. The intention is that the cab and entrances will be restored, and all equipment and controls will be replaced.

The second public elevator on the Blagden Street side serves main floors and stack levels, thus it is used by patrons and staff. The location of the elevator is remote relative to public circulation. As such it provides limited enhancement of public use capacity relative to the more prominent Dartmouth Street elevator. While it is the most recently installed elevator within McKim, it is the most worn and susceptible to reliability issues when serving the upper levels. The master plan proposes that the elevator and shaft will be removed completely.

With the removal of the Blagden Street public elevator there will be improvements to horizontal circulation clarity, most notably on the third floor - where the existing historical spaces will be renovated for new patron uses.

The third existing elevator is for staff use, serving stack and main levels. The cab is small when considered for its purpose of movement of people and materials, so it does not serve the library well. The master plan proposes to completely remove the elevator and rebuild the shaft at a larger size to provide a new freight sized elevator.

To increase capacity to public spaces and to improve navigational clarity, the master plan proposes a new high capacity elevator be constructed within the McKim courtyard, opening into the public passageways on the Dartmouth Street sides of levels 1, 2, and 3, with an additional stop at the Cheverus Room level. The design concepts envision a glass-walled elevator providing views into the courtyard gardens while moving up and down through the space.

In addition to these modifications to the building's primary elevators, the master plan addresses the open platform lifts currently provided at the Commonwealth Salon and the Leventhal Map and Education Center. These lifts have been installed to navigate the partial level changes between these destinations and the first floor main passageway. Because many visitors are hesitant to use the open lifts, they are not providing truly equitable access. The master plan proposes the replacement of the open lifts with new enclosed elevators paired with steps. This new configuration will allow all patrons to have similar points of access and arrival to the Commonwealth Salon and the Leventhal Map and Education Center.

Program Summary

Library Conceptual Needs

The design team collaborated with the Steering Committee to develop a preferred program that aligns with the BPL's goals, and incorporates ideas and feedback from both external focus group meetings and community meetings. The master plan's goal is to create new contemporary library spaces that reflect the culture and integrity of the McKim Building and identify the types of activities and experiences that best support its patrons. Creating equitable and welcoming spaces in McKim will transform the library and will make the collections, resources, and services visible and accessible.

The key program elements include the following:

- Increase patron seating throughout all levels of McKim, providing a variety of open and enclosed areas for collaboration, individual work and use of digital technologies.
- Create a one-stop reference service point and research center.
- Provide flexible patron seating spaces that can transform easily to enhance education resources and library programming.
- Increase visibility of Special Collection material through teaching and display.
- Create teaching and learning spaces that inspire creativity and collaboration.
- Provide staff with workspaces that meet functional space requirements and provide appropriate adjacencies between departments and program spaces.
- Provide new public and staff toilet rooms.
- Provide adequate and appropriate storage that supports preservation and access to collections.

Program Summary

Proposed Space Allocations

The following chart compares the existing McKim Building space program to the proposed program. Below are key takeaways. The full detailed proposed program can be found in Volume 6 of this report.

- Increase patron space by 50%
 - Create a One Stop Reference Center
 - Provide spaces that enhance education resources
- Decrease collection storage by 50%
- Provide workstations and offices that meet conventional space standards

Existing Program

Program Space	Dept TOTAL ASF
PATRON SPACE	19,087
Public / Social Spaces	18,487
Reading Room	600
PROGRAM/ MULTI-USE	9,199
GALLERY	4,739
COLLECTIONS	24,014
Leventhal Map & Education Center Collections	5,047
Government Documents Total DGSF	7,834
Microfilm Total DGSF	11,133
LIMITED ACCESS	26,563
STAFF/SERVICES	21,791
Mail	341
Leventhal Map & Education Center Staff	2,088
Library Services Admin.	276
BPL Fund	867
Associates	602
Staff McKim Stack 3	1,837
Central Library Management Research Services and ILL	3,920
Neighborhood Services	475
Adult Library Services	1,360
Staff McKim Stack 4	1,149
Communications	485
Misc	2,008
BPL Administration	2,056
Project Management Office	1,756
Staff Growth	
Special Collections	
Service Points	1,582
Non-Library Staff	2,883
Support Space	1,092
SPECIALTY	12,222
Public / Social Spaces	2,863
Non-Public	9,359
Support Services	5,338
Outdoor Spaces	
PROGRAM TOTAL ASF	122,953

Proposed Program

Program Space	TOTAL ASF
PATRON SPACE	35,963
Public / Specialized Spaces	24,883
Reading Room	2,200
One-Stop Reference	6,388
Education Resources	2,492
PROGRAM/ MULTI-USE	6,488
GALLERY/Exhibition/ Display	8,487
COLLECTIONS	12,809
Leventhal Map & Education Center Collections	5,047
Government Documents Total DGSF	3,460
Microfilm Total DGSF	4,302
LIMITED ACCESS	5,030
STAFF/SERVICES	26,352
Mail	341
Leventhal Map & Education Center Staff	2,088
Library Services Admin	248
BPL Fund	632
Associates	128
Staff McKim Stack 3 Currently Misc.	
	2,760
Central Library Management Research Services and ILL	
Neighborhood Services	376
Adult Library Services	832
Staff McKim Stack 4 Currently Misc.	
Communications	256
Misc	838
BPL Administration	1,661
Project Management Office	532
Staff Growth	1,440
Special Collections Staff	6,368
Service Points	
Non-Library Staff	2,270
Support/ Meeting Room	5,582
SPECIALTY (NON-LIBRARY)	12,722
Public / Social Spaces	2,863
Non-Public	9,859
Support Services	7,156
Enclosed Spaces - Patron Space	4,000
PROGRAM TOTAL ASF	119,007
New Toilet Rooms - Staff and Public	1,000
New Elevators	1,500
New Ramps/ Access Routes	1,000
IDF and Electrical - 1 each/ floor 100SF	1,400
Expansion MEP (?)	1,000
TOTAL INFRASTRUCTURE EXPANSION	5,900

Program Summary

Proposed Space Allocations

McKim Third Floor:

The third floor provides the opportunity to enhance the visitor's experience by becoming a patron focused floor through renovation of the currently closed spaces, increasing awareness of it's programs, and improving accessibility as one approaches from the Sargent Gallery, the main stairs, the proposed extension of the existing stair from the Northwest Corridor, or the proposed new courtyard elevator. The one-stop reference and research center will accommodate a variety of programmatic elements that advance research, making collections and services more visible and accessible to the community.

Key program ideas include:

- The Cushman, Jordan and Koussevitzky Rooms will become patron focused spaces housing a variety of furniture that promotes, collaboration, quiet work, and use of technology.
- Collaboration Rooms will be incorporated within the existing niches along the Boylston Street and Johnson sides.
- A staffed service point will be provided to assist patrons with their research.
- The Music and Fine Arts Room along the Johnson side will be transformed into a Research Collections Reading Room for supervised use of collection.
- A new Special Collections Classroom will be created.
- The Wiggins Gallery will be re-imagined to be a multi purpose demonstration classroom.
- The Cheverus Room will become fully accessible, and will be transformed with flexible furniture arrangements that will allow it to function as a program space as well as an open patron seating area.

- New accessible Toilet Rooms will be provided
- Dedicated staff corridors to support movement of Special Collection material will be created

McKim Second Floor:

The second floor of the McKim Building renovation is focused around ways to reengage and activate the Boylston Street edge of the McKim Building by re-imagining the programmatic uses of the Boylston Room, Elliott Room and Washington Room. The proposed integration of the courtyard balconies as an interior circulation loop through the covered courtyard provides the opportunity for the Elliott and Washington Rooms to function simultaneously.

Key program ideas include:

- Re-imagined Boylston Room with enhanced seating for patron use.
- Transformation of the Elliott Room to be an active, multi-purpose classroom with furniture on casters to accommodate a variety of teaching styles, including display screens for the sharing of information.
- Renovation of the Washington Room as a space for the BPL to hold a variety of programs, including lectures, gatherings and demonstrations.

McKim First Floor:

The goal for the first floor of the McKim Building is to create an inviting entry that is welcoming and accessible by all patrons. The master plan focuses on the public spaces along the Dartmouth Street edge, and the Commonwealth Salon.

Key program ideas include:

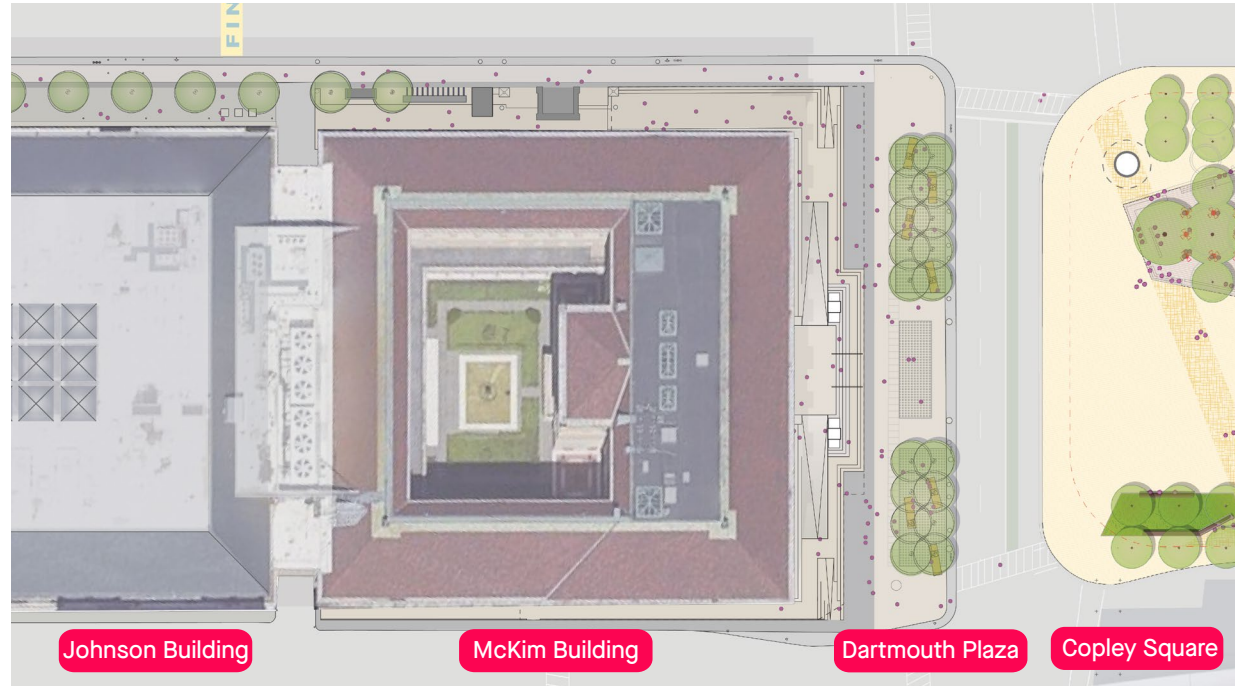
- Opening up circulation and movement between McKim and Johnson by removing walls of the storage room positioned at the corner adjacent to the Guastavino Room.
- Creating a more inviting Exhibition Hall by creating transparency into the Orientation room and showcasing exhibits as one moves between the two spaces.
- Positioning the Guastavino Room to function as a multi-purpose space by providing a variety of seating types and enhancing AV and lighting for events.
- Renovation of the Commonwealth Salon to accommodate a variety of BPL and community programs including the proposed removal of the mezzanine to create a full double height space and enlarging windows facing the courtyard.
- Improving accessibility for visitors by replacing platform lifts at the Commonwealth Salon and the Leventhal Map and Education Center with enclosed elevators.

Program Summary

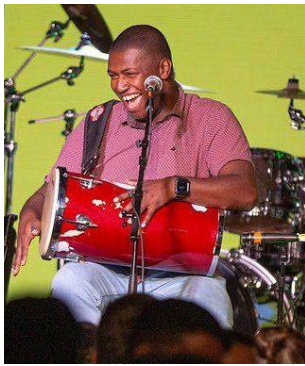
Site / Landscape Program Narrative

The conceptual design for Dartmouth Plaza is proposed to be a space for continued public use and a space of respite in the city. Proposed improvements offer a softer, more human-scale design of what is currently a large open space containing primarily hardscaping. The master plan proposes to improve accessibility and offer spaces that enhance the library's services, including spaces for public enjoyment, programmed events, and celebration, and to improve connections with the redesigned Copley Square across Dartmouth Street.

Imagined uses of an improved Dartmouth Plaza include space for: musical or theatrical performances; extension of the farmer's market or Boston Book Festival; and seated/shaded areas that will function as a type of outdoor reading room. The photos below indicate several of these potential programs.



Proposed Site Master Plan



Imagined Program Uses

Program Summary

MEP, FP & IT Recommendations

Environmental Standards:

Environments for collection spaces are determined by several factors including: the type of collection, the space occupancy, duration the material will be held in the environment, and micro-climates for exhibit casework. For the purposes of this study several standards were referenced including guidelines by: The Society of American Archivists, and the National Information Standards Organization (NISO).

The temperature and humidity control criteria for the McKim Building is proposed to provide three different environments, corresponding to use, preservation requirements and feasible improvements to the building enclosure.

General & Patron Spaces:

General & Patron space types are considered to include unimproved or minimally improved exterior envelope upgrades. In the McKim Building, this will include all staff and patron areas not identified for improved or special collections environments. These areas should not be humidified as humidification would pose a risk for condensation.

Improved Environment:

Improved environment areas are considered to be provided with humidification but may include only minor upgrades to the building envelope or the addition of perimeter radiation to achieve a modest increased humidity level in the space. It is recommended that heat transfer and vapor migration modeling of the existing or proposed envelope is performed by an envelope consultant to establish the humidification limits of the construction to prevent condensation. Dehumidification will be accomplished via the air system chilled water coils. Refer to the chiller system overview regarding the existing seasonal availability of chilled water.

Special Collections Environment

Areas that house special collections on a long term basis will require humidification and dehumidification modes of operation, and may require desiccant dehumidification equipment where relative humidity of less than 50% is required year-round. Improvements to the exterior envelope will be required where these spaces are located at the building perimeter.

McKim Building Proposed Environments:

Special Collections Environments:

- Leventhal Map and Education Center

Improved Environment:

- Exhibition Hall
- Archives Workspace
- Special Collections Classroom

General & Patron Spaces:

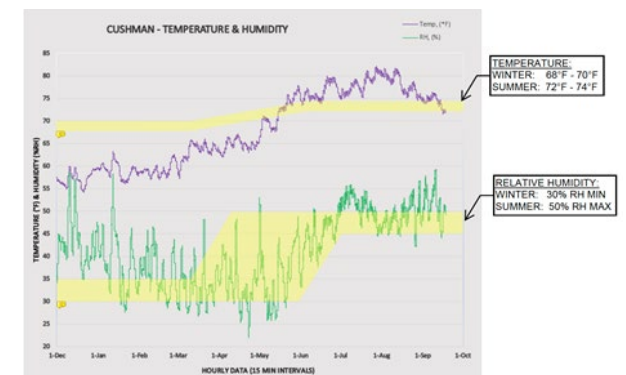
- Reading Rooms
- Open Patron Seating
- Collaboration Rooms
- Offices
- Elsewhere throughout McKim

Existing Environmental Conditions:

The existing minimally conditioned spaces in McKim undergo large temperature and humidity swings as observed from the data loggers placed in select areas at the third floor. BPL has collected trend data for a full year between 2019 & 2020 recording

space temperature and humidity level trends in the Cushman Room and Dwiggins Rooms on the third floor. The data shows temperature extremes from a low of near 50°F in the winter and up to 80°F degrees in the summer. The relative humidity (%RH) fluctuated between approximately 25 %RH in the winter and 60 %RH in the summer.

Although large seasonal temperature swings exist, the large thermal mass of the existing stone exterior library walls appear to effectively reduce the rate of temperature fluctuations even in Cushman and Dwiggins where there are no existing cooling systems. It is evident in the Cushman data logger Graph below that the humidity swings can occur very quickly by as much as 10-20%RH variation in a period of a few hours or days.



Overlaid on the graph are the temperature and humidity ranges corresponding to the "Improved Environment" space type. The unconditioned spaces fall outside of the recommended environment range for much of the year.

Program Summary

MEP, FP & IT Recommendations

Mechanical:

Where “Improved Environment” & “Special Collection” conditions are required, upgrades to the exterior envelope that improve thermal insulation, air infiltration, vapor transmission, and glazing performance may be required to maintain stable temperature and humidity setpoints. In general, interior zones would require less work to the existing envelope in order to achieve proposed design criteria. Specific performance criteria, methods, and materials used will be based on further study of the building and sustainability goals and historic preservation requirements.

Proposed heating and cooling systems for the stack 5 & 6 areas include extending hot water and chilled water piping from existing infrastructure to new 4-Pipe fan coil units. Both the “Improved Environment” and “Special Collection” proposed equipment would require allocation of mechanical space close to the conditioned space to house the new HVAC equipment. All of the existing air handling units in the attic and basement are proposed to be replaced. A renewal of older existing fan coil units, hydronic systems, and controls is proposed throughout the library.

New air handling units located in the attic are proposed to serve the third floor. These areas are considered as a mix of “General & Patron” and “Improved Environment” spaces. A new air handling unit located in the basement is proposed to serve the Exhibition Hall. Air handling units are proposed to be custom type units providing heating, cooling, and ventilation. Modifications to existing building fabric will be necessary to provide supply and return air for the new units. Air handling units are proposed to supply VAV boxes with hot water reheat coils to provide dehumidification. For areas defined as “Improved Environment” humidification is proposed to be provided as well.

Air handling equipment will be provided with high efficiency air filters. Gaseous phase filters may be utilized as required for specific collections and archives to eliminate gaseous contaminants from the environment.

Electrical:

The McKim Building existing main distribution board includes sufficient capacity to serve the renovation loads for the new program areas on stack 5, stack 6, and the third floor. New feeders are proposed to be extended to a new electrical room serving the upper floors.

The existing electrical distribution, power outlets, lighting, and all low voltage systems are proposed to be completely removed and replaced with new in the stack 5, stack 6, and third floor renovation areas.

It is proposed to provide a new emergency generator in a new location in the basement to serve the existing and new program life safety loads. The existing McKim generator is proposed to be replaced in kind and made available to serve optional standby loads such as backup to heating and cooling equipment serving critical spaces. A separate fire rated emergency power room is required to house emergency generator life safety power panel, ATS, and egress lighting controls.

Information Technology:

It is proposed to provide a full-scale redevelopment of the IT capabilities of McKim in coordination with main IT infrastructure located in Johnson. Existing pathways may be used to the extent possible and historical spaces will be regarded with sensitivity. New IT distribution rooms are proposed to be provided on each floor and will be aligned vertically to the extent feasible with existing conditions. The new program area is proposed to include new telecom distribution wiring and CAT6A data drops for WiFi and hard computer connections.

Cable routing and management will utilize cable trays and conduit in a manner that best suits the spaces being served with concealment in public areas being a priority.

Plumbing:

New toilet rooms are proposed for the third floor. A new waste stack, cold water, hot water, and recirculation piping will be required.

Fire Protection:

The wet system standpipes are proposed to be extended to provide full sprinkler coverage to the renovated areas. A new fire pump is proposed to provide the minimum code required pressure of 100 psi for high rises to the standpipes.

New fire protection sprinklers are proposed for all currently unprotected areas. Depending on the tolerable risk of water damage in various areas of the building, a double interlock pre-action sprinkler system or a wet pipe system may be proposed. For special collection and archival areas, a double interlock pre-action system may be an appropriate system type. A double interlock pre-action sprinkler system requires both a detection of smoke and a loss of system pressure. Further study will be required to determine the appropriate system type for specific areas.

Courtyard Enclosure:

The proposed large-scale infrastructure project to enclose the courtyard provides an opportunity to improve the backup power availability to both the Johnson and McKim Buildings. New generators needed to provide back up power for the new courtyard space could also provide capacity for additional standby power to support various systems critical to the library's operations.

Heating & Cooling Plant:

This study does not include a full analysis of the building connected hot water & chilled water demand, connected coil loads, and distribution equipment. It is recommended that a separate study of the Johnson & McKim Building heating and cooling system with conceptual design analysis be performed.

Hot Water Plant:

Based on the existing hot water system's current condition, available capacity, and anticipated new load, it is recommended the system be replaced. One option would be to replace the existing steam to hot water converter system with two or more new converters sized to cover the additional hot water demand and provide system redundancy. A second option would be to provide new high efficiency gas boilers.

Hot Water Plant Geothermal Option:

As a third option, the feasibility of a new ground source geothermal heat pump heating system may be studied. The ground source option represents a non-fossil fuel heating source aligning with the City of Boston's Climate Action Plan to make the city carbon neutral by 2050.

Chilled Water Plant:

The chilled water plant is operated from May to October and is offline in the winter. Library spaces served by air handling units utilize an economizer mode, which utilizes outside air for cooling when the chillers are offline. Areas that are served by fan coil units, which do not have an economizer mode capability, are typically located on the building perimeter, and are not expected to require winter cooling. However, comfort issues are likely to occur on unseasonably warm days in the shoulder months when chilled water is not available for cooling. Any areas designated as "Improved Environment" or "Special Collections" would require access to chilled water year round.

Estimated cooling loads based on the new and existing program areas show that the existing chiller capacity is sufficient to serve the proposed renovations. As shown in Figure M.1 & M.2, the additional load for the new program area is estimated at 224 tons and the cooling load for the enclosed courtyard is estimated at 100 tons. The additional new program load will reduce the

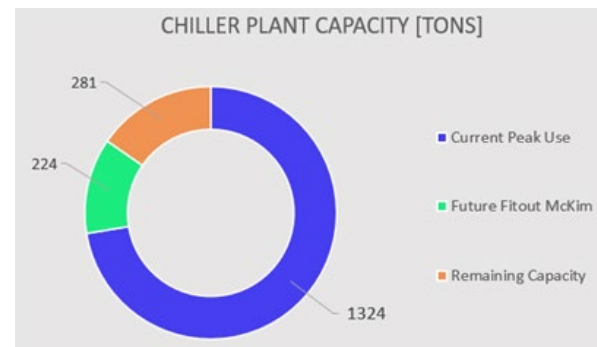


Figure M.1

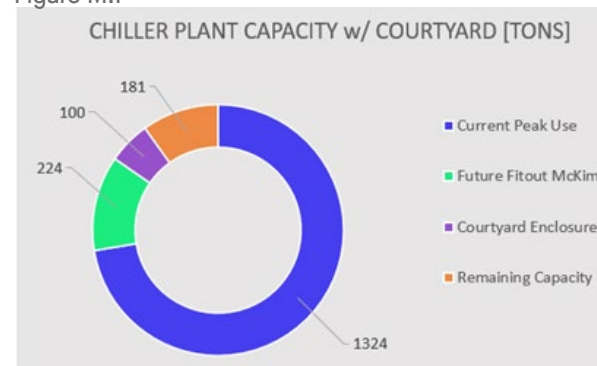


Figure M.2

existing available redundancy of the system. If a chiller failure were to occur during periods of peak demand, the library would need to shed load from the system, limiting cooling availability in certain library spaces in order to balance the available system capacity with priority needs.

Chilled Water Plant All-Electric Option:

New electric chillers are recommended in order to transition the library away from high costs associated with operating and maintaining steam absorption chillers and position the library for an eventual conversion to an all electric system driven by an alternative energy source rather than fossil fuel. The new chiller system should include a spare chiller to provide system redundancy. Space will need to be allocated to build out a new chiller room that is separated from the existing mechanical room.

A potential location would be adjacent to the existing plant in Johnson. Further study will be required to determine the phasing of work to keep the library operational while transitioning to new chillers.

The chiller plant upgrade will require that an additional electrical service be installed from an external utility vault that would feed a new main service disconnect and switchboard. It is recommended that at minimum one chiller is provided with generator standby power in order to match the level of existing generator backup of the steam absorption chiller plant. Electric chillers will require additional standby power as compared to steam powered chillers. The proposed courtyard generator project would be a potential source of new standby power to provide backup power to a new chiller.

Master Planning Concepts

Introduction

Beginning at Dartmouth Street, the proposed renovations to Dartmouth Plaza will provide a comfortable and accessible route up to the main entrance of the McKim Building. Dartmouth Plaza will be renovated to become an active extension of the library that is more capable of holding programs and events. The plan proposes to re-imagine the visitor's experience by creating a welcoming presence in the McKim Building Lobby with a new greeter's station and enlivening signage graphics, announcing what is happening in the BPL and where to find the treasured spaces of the library.

The main stair beckons visitors to ascend the steps, as it has since 1895, but the plan also seeks to provide new pathways leading to new experiences to enhance public engagement with the library. On the first floor, the corner adjacent to the Guastavino Room, and the Map Room Tea Lounge may be opened up to provide a more inviting pathway through the building. A new glass elevator is proposed in the courtyard to improve access to all of McKim's patron spaces, including Bates Hall, the Abbey Room, the Sargent Gallery; and the reopened third floor patron areas, including the Cheverus Room. Along the way, all library visitors will be welcomed with an equitable and accessible McKim Building experience.

The Exhibition Hall will be rehabilitated and equipped to enhance the library's capacity to secure and display its collections through curated, interpretive exhibitions that create a rich experience for visitors.

While the public enhancement of McKim will be the readily visible part of the plan, there will be improvements made to staff work spaces and movement patterns that will bring the work environment up to contemporary standards. The plan will utilize existing stack stairways and connections to Johnson, while replacing antiquated elevators and providing clarified access to the numerous back of house levels that are the functional core for the library's operations.

On the third floor, the new staffed service point will provide patrons with a single place to seek research help. From this location, staff will have direct access to the Johnson Building's stacks.

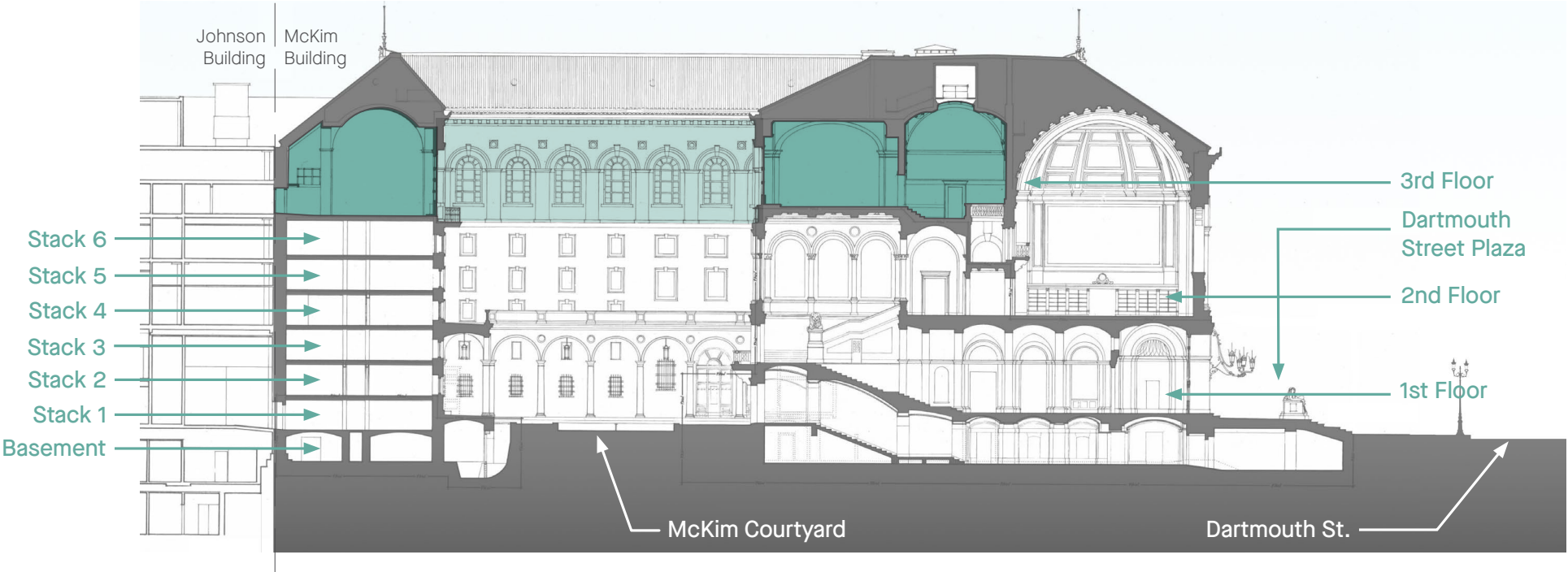
Inviting, connected patron spaces on the third floor will allow for movement about the floor and encourage people to make use of the collaboration and reading rooms. New multipurpose spaces will provide venues for library programs. The renovated third floor will become a destination that meets the needs of Boston in many ways, including introducing new patrons to the BPL's collections and supporting the specialized pursuits of researchers.

Further rounding out the offerings of McKim, the plan will adapt the Commonwealth Salon to become a more capable meeting space. The plan proposes to expand the meeting space by removing staff areas. The room may be made more open and accessible through removal of the existing mezzanine and the enlargement of windows on the courtyard side. Lighting, acoustics and audio visual systems should be enhanced, and a new, fully enclosed, lift added to provide access without traversing the several steps at the room's entrance.

The enclosure of the courtyard with a glass roof covering will protect the courtyard facades from weathering and deterioration providing a preservation benefit as well as reducing long-term building maintenance costs. The enclosed courtyard is one of the few opportunities available to increase year-round program space for the library. In addition, it would provide a critical accessible, interior circulation route between McKim and Johnson. An additional benefit of the enclosure is to improve second floor circulation, enhancing use of Bolyston, Elliot and Washington rooms by creating a new interior pathway via the courtyard balcony, which would be made accessible with new ramps to navigate floor level changes.

The recommendations on the following pages describe in more detail the range of improvements proposed to make the McKim Building inviting to its diverse visitors and to enhance its use and programs.

McKim Building Section



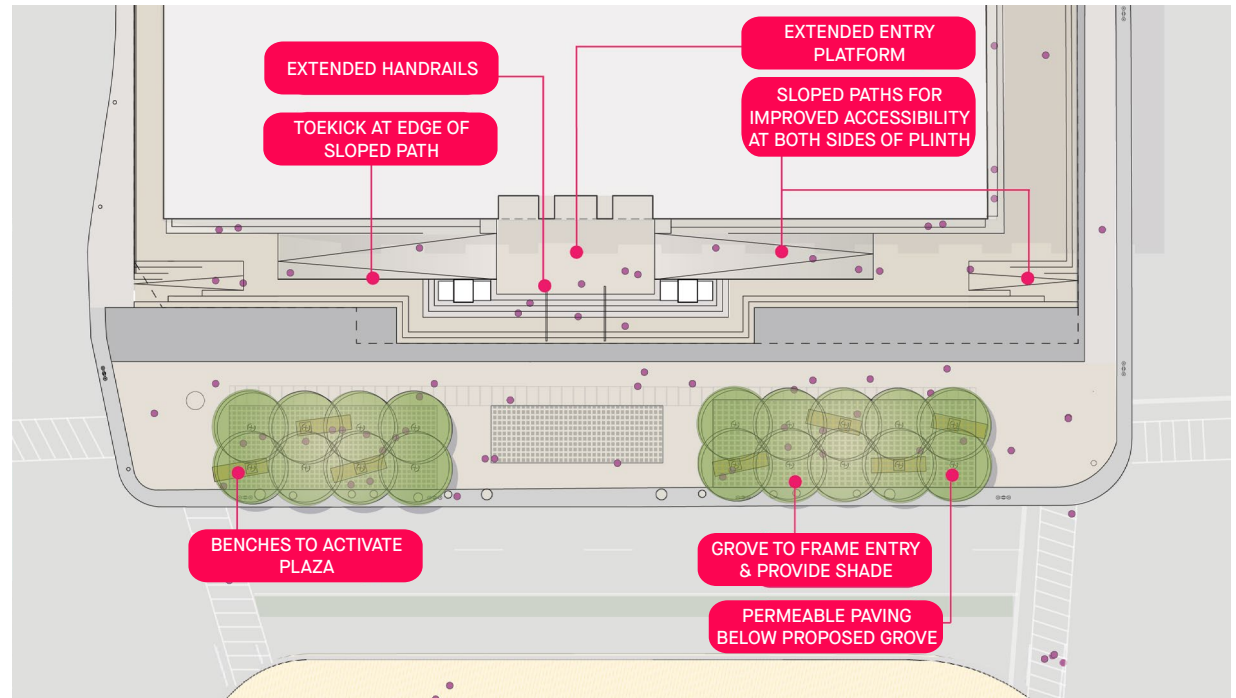
Master Planning Concepts

Dartmouth Street Plaza

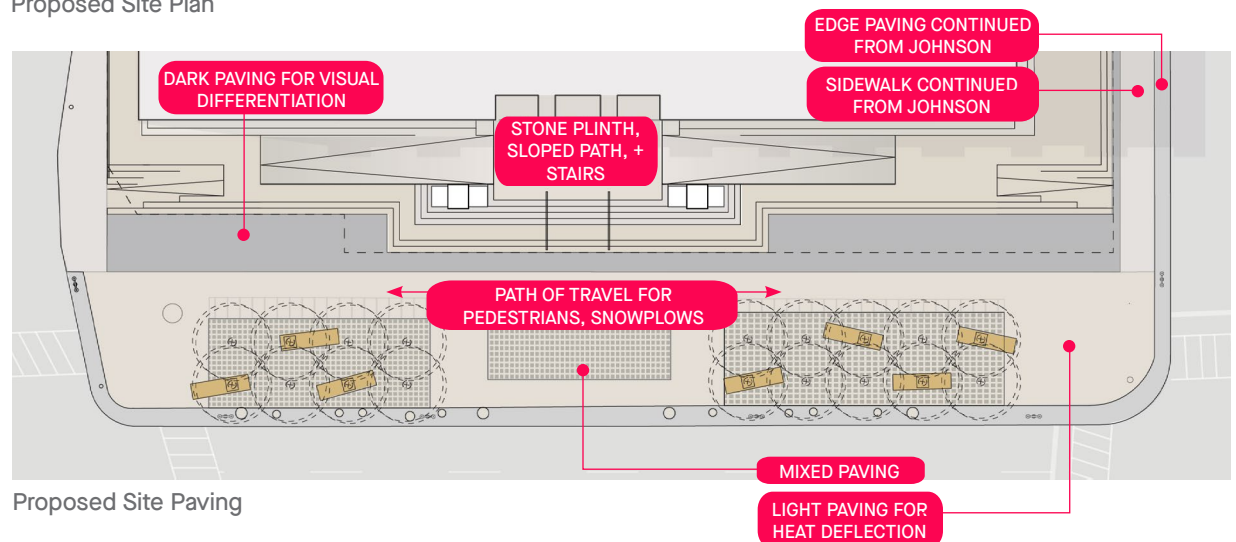
The proposed design seeks to improve universal access to one of the Central Library's front doors via the McKim entry. Sloped paths with an incline of less than 5% are proposed to be integrated into the existing granite plinth. These paths allow for visitor access both from Boylston Street and Blagden Street. Where required, the sloped paths would include an integrated edge to ensure safety and feature a non-slip texture.

The proposed improved access into McKim includes extending the steps to form an upper platform that aligns with the threshold to the Lobby. For visitors who utilize stairs, the existing path of entry via the central stair will incorporate two new steps at the top as part of the aforementioned platform. The existing sculptures of Science and Art are proposed to remain in place, anchoring the entrance. New handrails are proposed to replace the existing handrails and accommodate the new steps.

The remaining space on Dartmouth Plaza seeks to address the monumental quality of the space and offer a conceptual design that honors the historical architecture while addressing some of the public's desires for the urban realm, primarily the desire for comfort in the city via shade. Two groves of trees are proposed to frame the entry to McKim and be limbed to provide clear site lines to and from the historical surroundings. Materials and patterns assist in delineating areas within the plaza and defining paths of travel for both visitors and maintenance equipment.



Proposed Site Plan



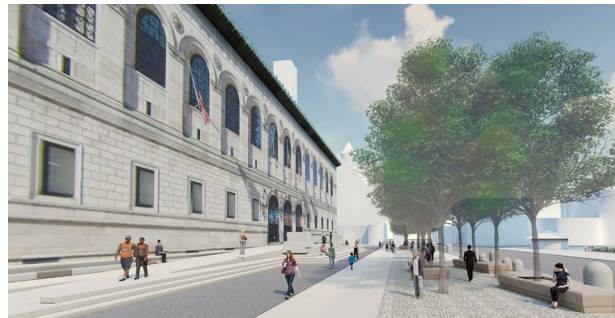
Proposed Site Paving



Proposed Plaza Design



View from Copley



View from Corner of Dartmouth & Blagden



View Crossing Boylston

Master Planning Concepts

Dartmouth Street Plaza

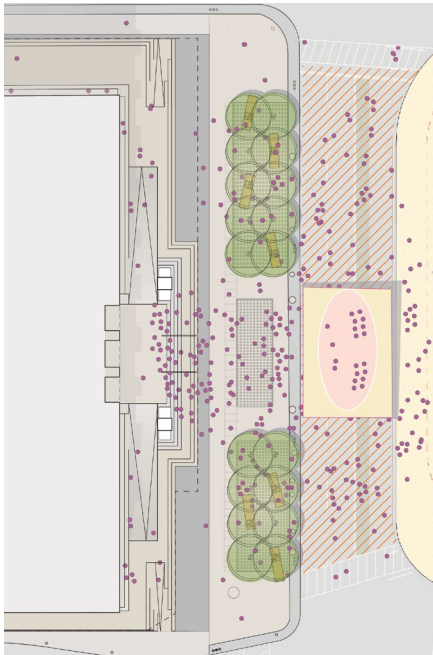
Dartmouth Street itself offers a valuable link between the re-imagined Dartmouth Plaza and Copley Square. If Dartmouth Street were to be periodically closed to traffic for the support of events, the proposed design could accommodate activities with large gatherings of people, such as performances and markets, in the plaza and street.

The proposed groves could offer a comfortable place from which to view an event or a space to enjoy food from nearby shops or the farmer's market. The plinth could be utilized for a smaller-scale event as well, with the groves framing the view.

On an everyday basis Dartmouth Plaza and the plinth are activated through casual meetings, book club gatherings, outdoor breaks, art installations, and photo opportunities.



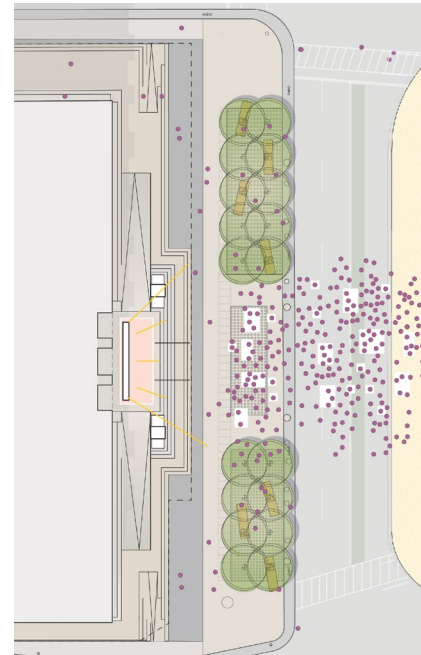
Potential Programming:
Event with Copley Square



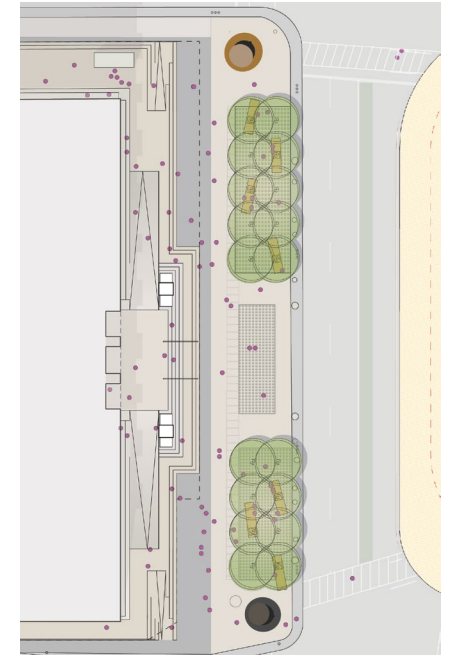
Potential Programming:
Performance



Potential Programming: Farmer's Market
Featuring 10'X10' Tents



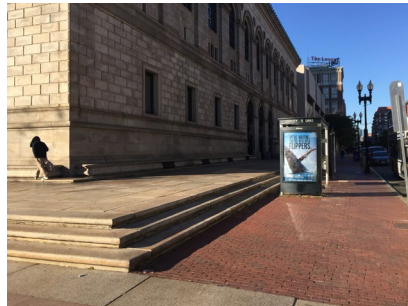
Potential Programming:
Movie Night



Potential Daily Use: Art Installations,
Vendors, Book Clubs, Casual Meetings/
Lunch

The porch along Boylston Street extends the potential for a transformed public space around the corner from Dartmouth Plaza. This portion of the porch connects directly to the renovated Johnson outdoor space to the west, and the proposed plan aims to further stitch together these two spaces through the use of paving and a continued line of planting.

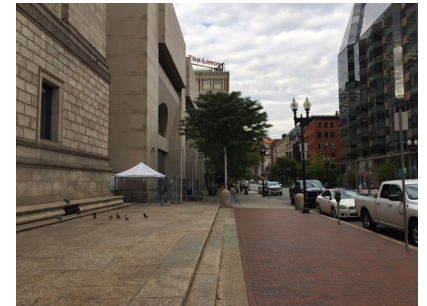
In order to free up a space at the sunny northeast corner of McKim, the plan proposes relocating several street furnishings to create a transit hub adjacent to the Green Line Copley station. Relocating the existing bus shelter and bike share helps to consolidate elements with a similar function and enlivens the Dartmouth and Boylston corner, with space for gathering. The location of the existing sub-surface tank will impact site layouts and will require further consideration in development of design proposals.



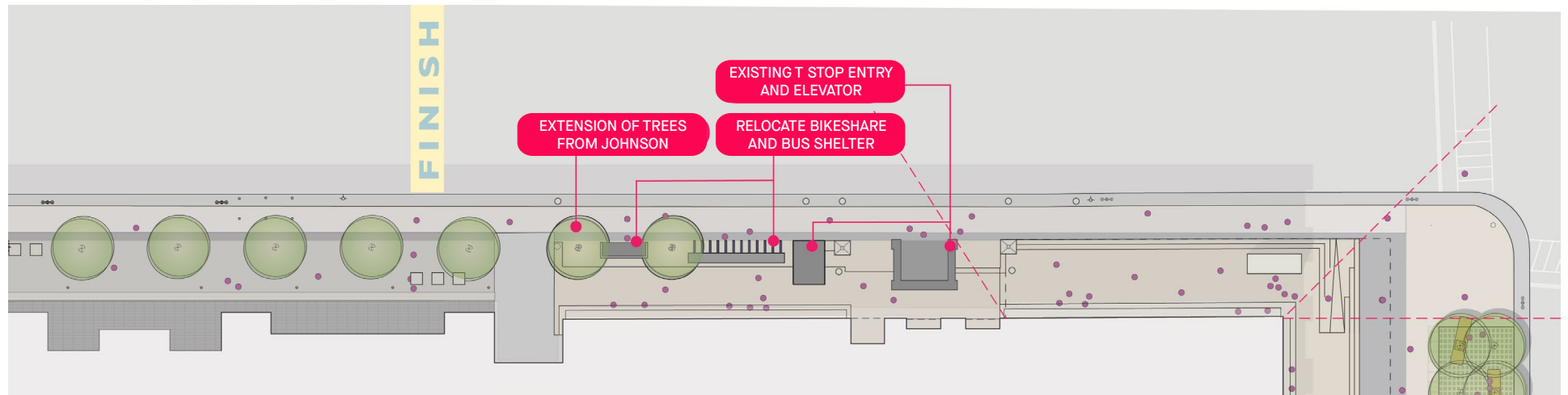
Corner Of Boylston + Dartmouth



Existing Green Line Station



View Down Boylston To Johnson



Proposed Boylston Plan

The Wiggin Gallery will be renovated to become a multi-purpose demonstration classroom. The original curved ceiling and oculus will be restored and the room will be equipped with acoustical paneling, multi-scene lighting and contemporary audio-visual systems for classroom instruction. The walls will include display areas to supplement library programs.

The Cheverus Room will be made accessible with the new courtyard elevator, and will be re-purposed as a multi-use patron reading and program space. The master plan proposes the removal of the large display cases to free up the space for more flexible use.

Existing Conditions



Jordan Room



Fine Arts / Music Room



Cushman Room

Proposed Uses



Patron Seating Example



Special Collections Classroom Example



Seating & Collaboration Zone Example



Preliminary Sketch of Third Floor Patron Reading Area



Preliminary Sketch of Cushman Room Renewal

Master Planning Concepts

Interior Restoration and Renovation - Second Floor

On the second floor of the McKim Building, the master plan proposes improving accessibility and movement through the building. The focus of the modifications will be on the Boylston Street side of the building, specifically on the Elliott and Washington Rooms which today – by virtue of the building's courtyard plan – serve as circulation pathways. The Elliott Room will become patron space which can be used as a multi-purpose classroom, and the tall, column-free space of the Washington Room will return to its original intended function as a space for diverse program activities such as lectures and performances.

The enclosure of the courtyard will allow patrons to circulate across the McKim Building via the balcony, which will be renovated to be an accessible path of travel. The result of this proposed modification would be rooms that can act more independently from circulation and serve a wider range of contemporary library functions.



Existing Conditions



Boylston Room

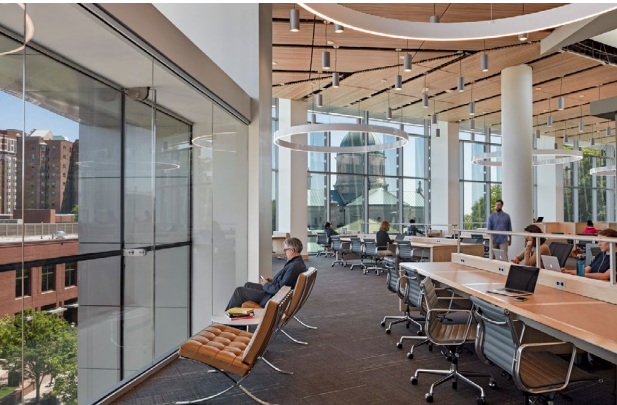


Elliott Room



Washington Room

Proposed Uses



Boylston Room - Patron Seating Example



Elliott Room - Classroom Example



Washington Room - Multi Use Example

Master Planning Concepts

Interior Restoration and Renovation - First Floor

The first floor of the McKim Building, the entry level, is where the library's original ceremonial entrance welcomes the public from Dartmouth Street, and where the McKim Building links most directly to the recently renovated lobby of the library's Johnson Building. Linking these two centers of gravity is an important element of this master plan. The proposed renovations on the first floor aim to satisfy key goals: providing a welcoming entrance lobby to the building that places library services and programs front and center; eliminating barriers to accessibility; and allowing for better, more intuitive movement across the McKim Building and stronger connections with the Johnson Building.

McKim Lobby

The existing staff desk will be removed and replaced with a new, smaller central kiosk. This will encourage users to experience more of the space within the lobby, including the flanking arcades and niches where displays may be installed. Lighting will be revised to better illuminate the architectural details and displays. Banners may be mounted on the column faces to supplement the exterior signage program. Improved signage will be added to assist with way-finding.



Preliminary Sketch of Dartmouth Street Lobby Renewal



Examples of interpretive displays in community spaces

Front Entry Façade

To improve the outward expression of the library and encourage visitors to enter, the iron gate doors could be salvaged and stored while leaving the decorative iron surround in the existing three portals. There are opportunities to improve the transparency of the wood panel doors, perhaps adding more glass panes and even changing color from black to something brighter, however further study is required into the function and types of doors which will best suit the library's long term maintenance and use needs. Upgraded lighting within the exterior portals will also reinforce these as public entry points.

There are several types of signage needed at the exterior, which will help visitors with orientation and act as part of the outward expression of the programs and resources within:

- Fixed identification, conceived of in the plaza, identifying the Boston Public Library
- Banners or signs which could be on the ground level windows or between them, which announce exhibitions or carry BPL branding



Dartmouth Street Plaza

Master Planning Concepts

Interior Restoration and Renovation - First Floor

Orientation and Exhibition Hall

The current Orientation Room will be renovated to provide a more welcoming introduction to the McKim Building. It may be used as a gathering point for building tours, providing displays and information on the history of the McKim Building and the BPL. It may also be utilized as a gift shop location. To create a more inviting approach, new signage on axis with the main approach, and the replacement of selected existing opaque openings with glass lights or doors are proposed.

The Exhibition Hall will continue to serve as the library's primary Exhibit Area. New gallery lighting will be needed throughout, and may include lighting to highlight the unique ceiling architecture created by the original Guastavino vaults. In addition to new lighting, the introduction of acoustical treatments and a new security system will improve functionality. Environmental controls should be improved to conserve materials exhibited within the space. This will require a new mechanical services as well as updates to the existing exterior windows. Visitor flow may be improved by instituting a one-way loop through the space, beginning in the Orientation Room and exiting through what is currently the Exhibition Hall entrance.

Guastavino Room

Updates to the Guastavino Room will make it a gracious area open for patron seating and also enhance its functionality as a multipurpose space for library programs as well as events associated with the adjacent restaurant. In addition, the Guastavino Room will continue to be a destination for architecture tourists intrigued by the room's unique vaulting. New event lighting and easily reconfigurable seating to accommodate transition from an open patron area to event use is proposed. A decorative room divider parallel to the north wall could be created to make a storage zone for ease of furniture set up and break down. The door into the Guastavino Room may be replaced with a glass door to increase visibility into the space from the adjacent, expanded corridor, on axis with the arcade pathway to the Northwest Corridor and the Johnson Building.

Commonwealth Salon

The Commonwealth Salon will remain as a multi-use space for meetings and programs. It's access and use will be enhanced in several ways. The existing mezzanine will be removed to provide a more generously proportioned public space, and a new elevator will replace the current lift to graciously accommodate all visitors to the space. Glass doors are proposed to replace the current solid entrance doors to make the room more visible and inviting to visitors. New lighting and audio visual systems will expand the room's presentation capabilities. The master plan also proposes that the windows facing the courtyard be enlarged to match the Palladian windows on the adjacent courtyard cafe in order to provide more access to daylight and to create a stronger connection between the Salon and surrounding public spaces. These strategies, taken together will substantially increase awareness and functionality, making the Commonwealth Salon more welcoming to all who use it.

Corridor Expansion

Often, patrons who enter the McKim Lobby have trouble navigating and finding other library spaces in the Johnson Building. The master plan proposes to expand the corridor between the lobby and the courtyard. This new space will improve the visual connection between the lobby and the courtyard to allow for more intuitive movement, and will also serve as an “ante-chamber” for events in the Guastavino Room. The south wall in this newly expanded area is an opportunity to display general library information, interpretation of the institution’s history and collections, or perhaps self-guided tour resources. Finally, this expanded corridor will be where the proposed elevator will arrive to bring patrons to all other levels of the McKim Building.



Proposed Corridor Expansion Sketch

To improve the interior circulation and reinforce connections to Johnson, the master plan proposes to relocate the storage room currently located next to the courtyard across from the Leventhal Map and Education Center Tea Lounge and Guastavino Room. This will open up the corner of the first floor so that it is similar to the Northwest Corridor connection to the Johnson Building, adjacent to the Commonwealth Salon. This will permit the pathway to Johnson Building, via the courtyard arcade, to be immediately visible from the McKim Entry Lobby. It will afford views to the courtyard itself by revealing a window and also invite use of the proposed new elevator by establishing a gracious lobby. This space then becomes a major way-finding hub, offering navigation information and historical displays, as it connects patrons to the second and third floor. These are opportunities for improvement that are not reasonably able to be incorporated into the historical Lobby.



Corridor - Existing Conditions

Master Planning Concepts

Renewal of First Floor Public Spaces



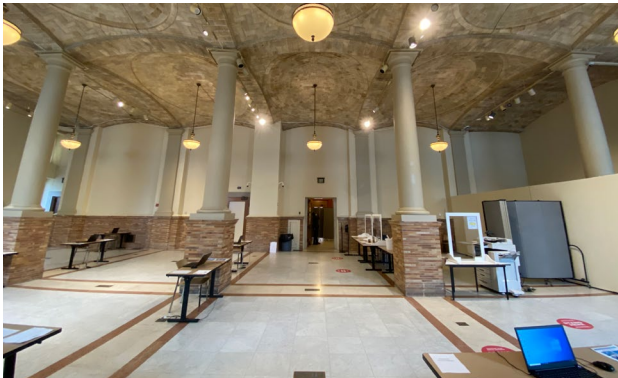
Existing Conditions



Commonwealth Salon



Guastavino Room



Exhibition Hall

Proposed Uses



Commonwealth Salon - Multi Use Example



Guastavino Room Example



Exhibition Hall Example

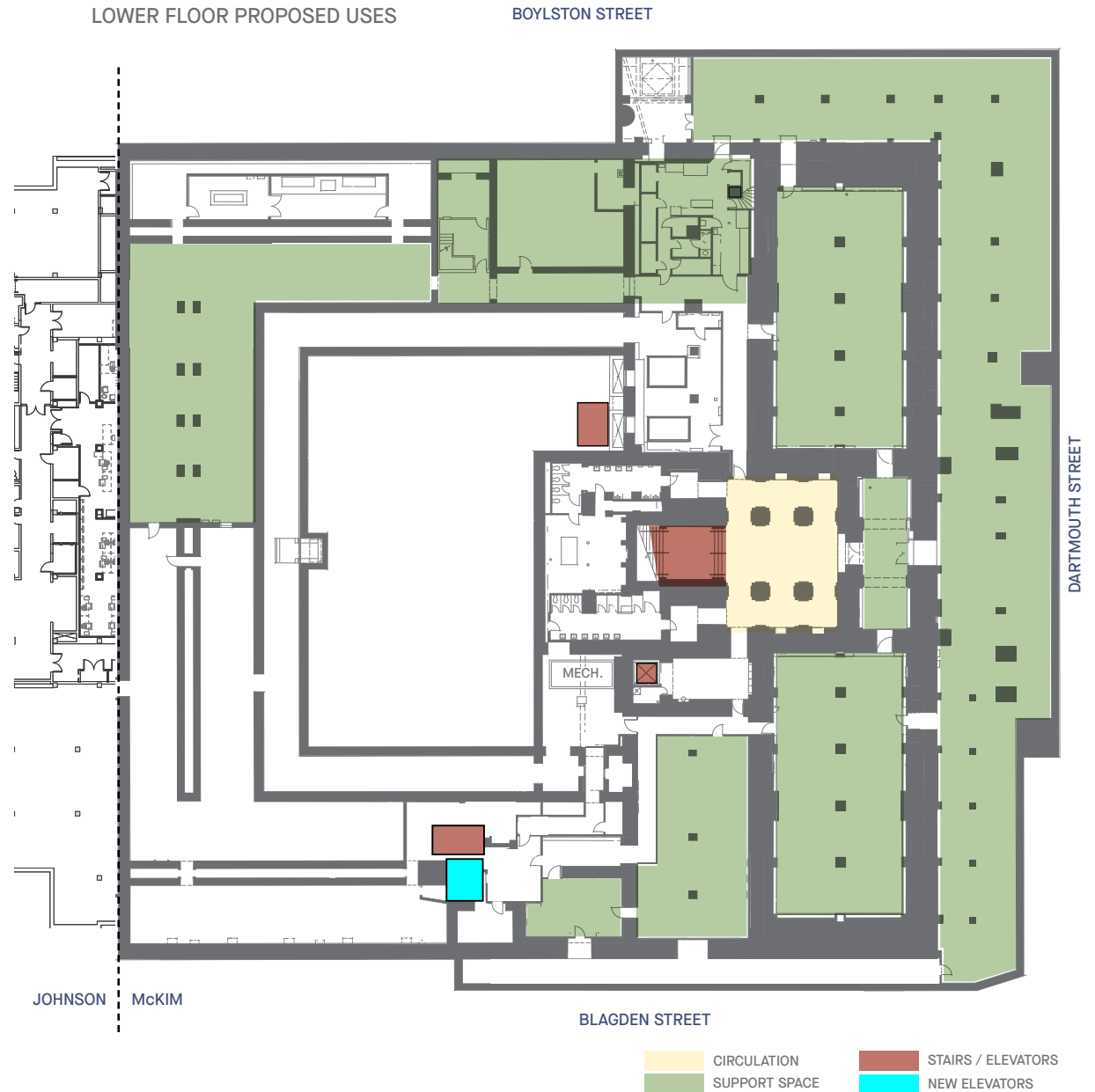
Master Planning Concepts

Interior Restoration and Renovation - Lower Floor

The lower floor of the McKim Building will continue to be closed off to the public, with the majority of the floor housing the Catering and Event staff, kitchen, food prep and storage.

The focus of the renovations will be the south conference room and the storage space under the plaza. The storage space under the Dartmouth Street Plaza will be renovated by excavating the existing foundation and providing a new waterproofing system, thus giving protection to the underground space from water infiltration. The new sloped walkways proposed for Dartmouth Street Plaza may somewhat reduce the headroom and footprint of the lower level storage areas. Development of the plaza design and detailing is needed to define this condition.

At the McKim steps adjoining Dartmouth plaza, the existing stone stairs and pavers will need to be carefully removed to expose the aged waterproof coating, which can then be removed for complete replacement. Concurrently, the existing foundation wall will need to be excavated and provided with an entirely new waterproofing system, in order to protect the underground space from water infiltration. Once waterproofing installation is complete, the plaza paving will need to be reset and supplemented by matching new stone pieces at sloped walkways and extended steps leading to the main entrance portals.

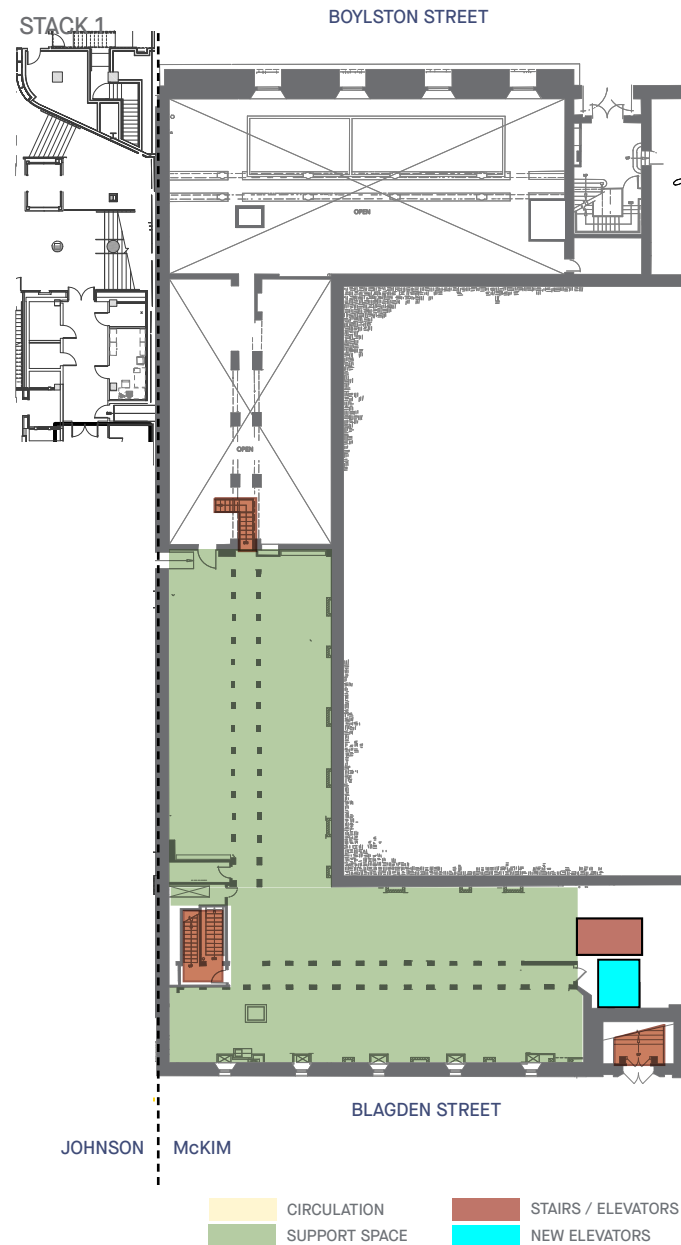


Interior Restoration and Renovation - Stack Floors 1,3,5 and 6

Supporting Library Operations

The existing stack floors 1, 3, 5 and 6 will be renovated to co-locate staff departments and create better adjacencies between work flow, individual work, and collaboration. One of the program goals for staff is to convert individual and shared offices to open workstations by removing the existing walls and to distribute conference rooms and shared processing and storage space of varying sizes on stack floors 3 and 6 among the staff areas. Due to the number of staff located within McKim, each staff floor will also include a small break room to meet their everyday needs. Staff toilet rooms on accessible routes will also be provided.

A limited amount of collection storage is included within the stack/ staff mezzanines. The collections areas will be reconfigured to create accessible aisle widths. The collection type to be located on each stack floor was not identified during this master plan Study and will need to be evaluated as the project moves design. The existing collections area at the north on stack 6 should continue to be used for collection storage, as its low ceiling heights do not meet code requirements for office space.



Master Planning Concepts

Interior Restoration and Renovation - Stack Floors 1,3,5 and 6

STACK 3

BOYLSTON STREET



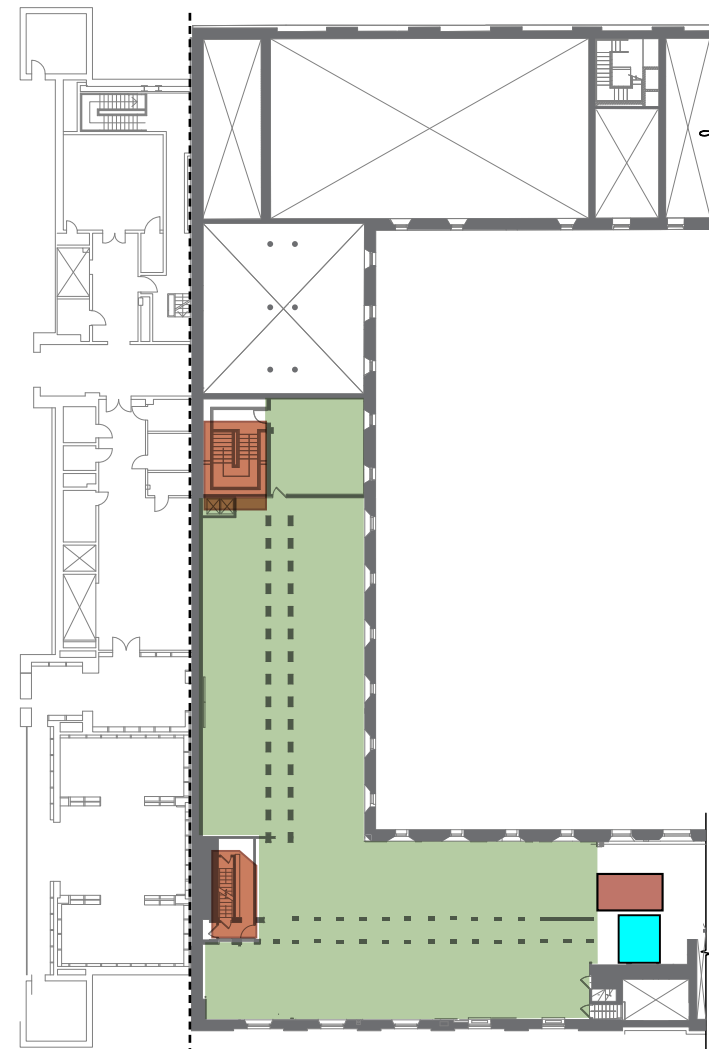
JOHNSON McKIM

BLAGDEN STREET

DARTMOUTH STREET

STACK 5

BOYLSTON STREET



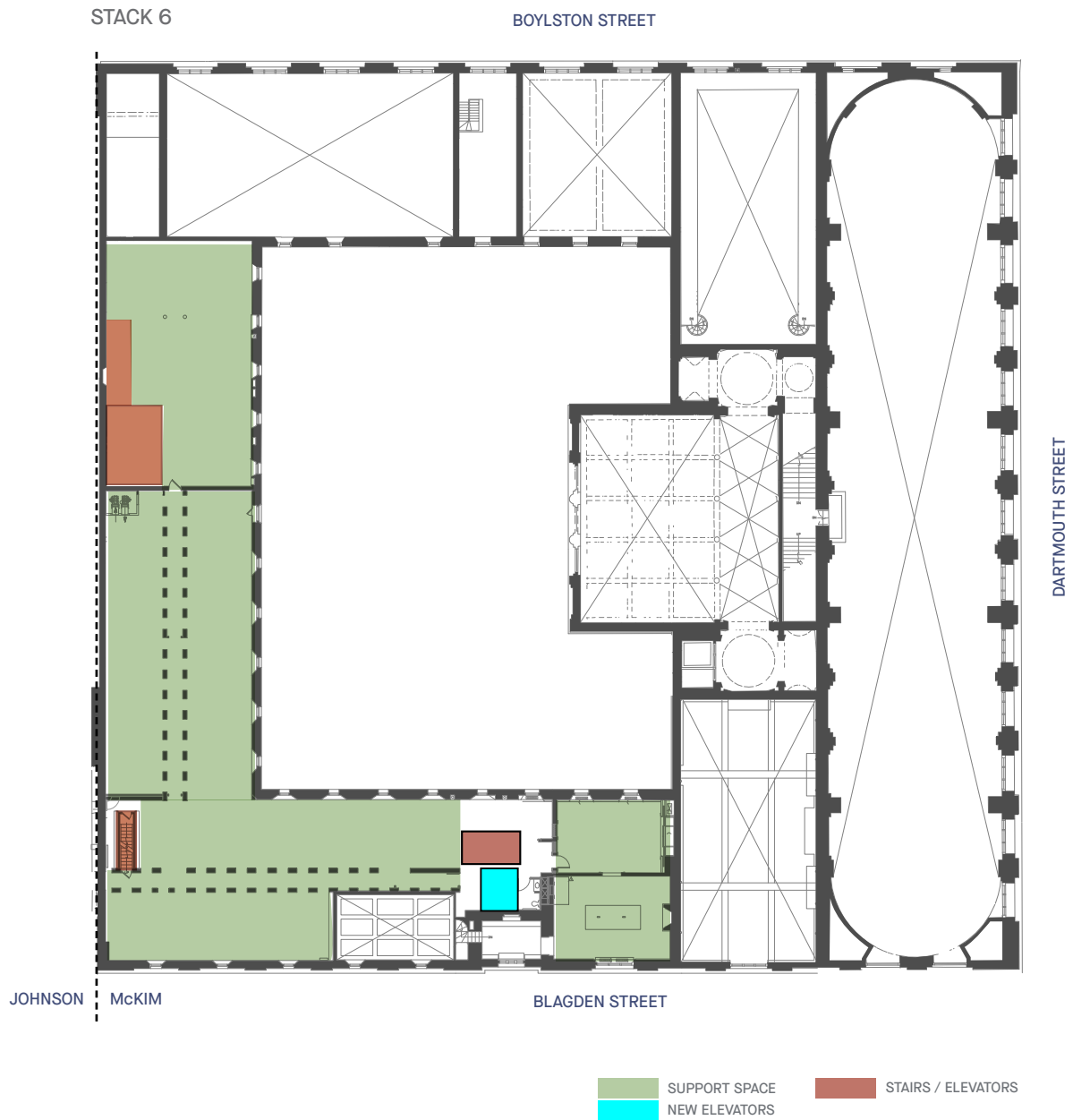
JOHNSON

McKIM

BLAGDEN STREET

SUPPORT SPACE
NEW ELEVATORS

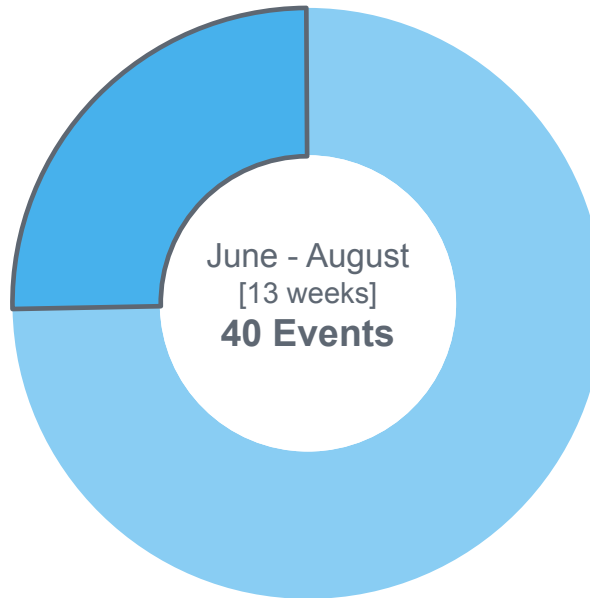
STAIRS / ELEVATORS



Master Planning Concepts

Courtyard Enclosure

The biggest idea explored in the master plan is to re-imagine the McKim Building's open-air central courtyard as a vibrant community space year round. A new sky-light roof covering is proposed to enclose the courtyard. The intent is to preserve its light filled and airy character that is the hallmark of this cherished oasis, while offering the experience through all seasons. If done carefully and conscientiously, what is most beloved and significant about the courtyard can be preserved and the addition of a covering will further enhance and extend its relevance and use.



2019 Statistics



The proposed enclosure of the McKim Building's courtyard with a new skylight roof system has many benefits for the library, its visitors, and the citizens of Boston.

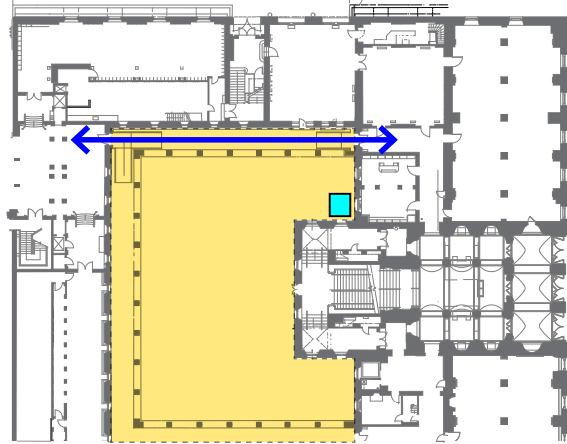
The enclosure will allow this beloved city space to remain as a publicly accessible historical landmark and iconic garden experience while extending its season of use. It will be suitable for library programs on a year-round basis.

In addition to extending the season of use, the enclosure of the courtyard will fundamentally transform and improve movement within the McKim Building and create a welcoming, weather-protected route between the McKim and Johnson Buildings on the first floor.

On the second floor, the use of the Washington and Elliott rooms is currently limited because these rooms must also function as pathways. If the courtyard is enclosed, the second-floor balcony, atop the courtyard arcade, will be converted to a useful interior circulation path from the Johnson Building to McKim's Bates Hall without need for an elevator, lift or circulation through interior rooms.

Finally, the enclosing of the courtyard will improve conservation of both the building's treasured art and architecture and its distinctive collections. The courtyard facades and walkways will be protected from further damage by weather-related challenges brought on by sun, rain, and snow. Enclosure of the courtyard will assist with the stabilization of the interior environments and simplify rehabilitation of historical windows.

Indoor Connection Between Johnson & McKim On The 1st Floor

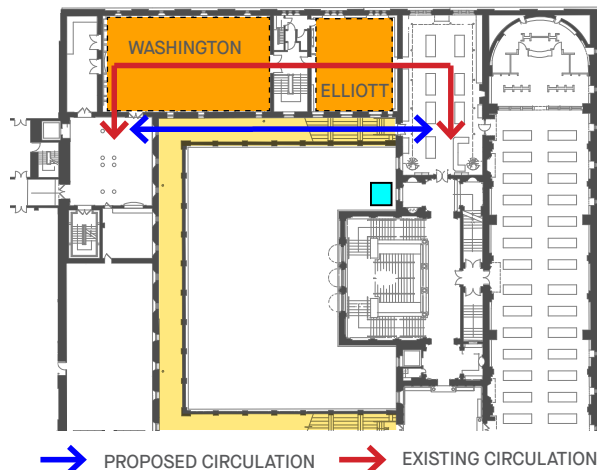


Level 1 Improvement:

- Pathway becomes continuous indoor space
- Maintain landscape design and plantings



Continuous Indoor Pathway To Public Areas On The 2nd Floor



Level 2 Improvement:

- New accessible indoor pathway allows Washington and Elliott to be used for library programs



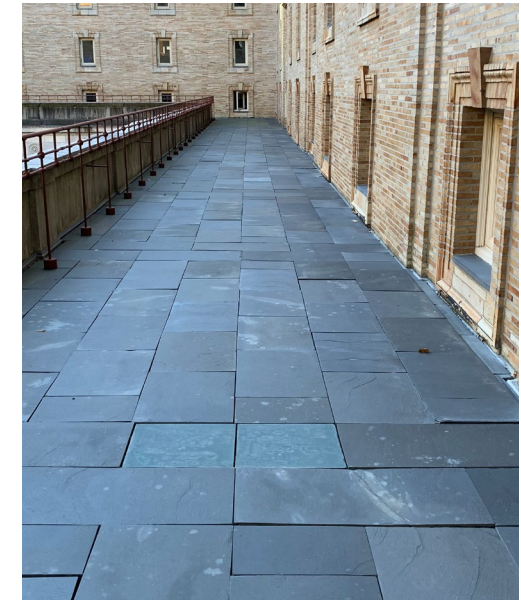
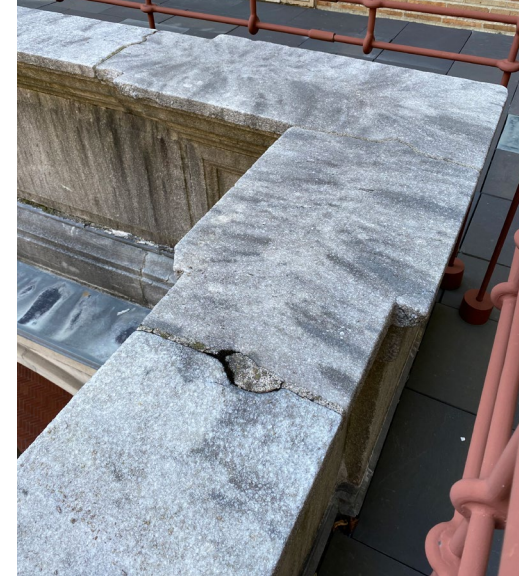
Master Planning Concepts

Courtyard Enclosure

The form of the new skylight roof will be the subject of future design explorations. Important design parameters will include:

- Scale, shape and relationship to the facades and roof structures of the original McKim Building, which should not be overpowered by the new components.
- Glazing strategy that transmits as much light as possible, while not overheating the courtyard space.
- Feasibility of creating operable roof lights that may be opened on days with nice weather, and potentially allow for ventilation of the courtyard space.
- Self-supporting structural system that avoids bearing on the historical foundations

In addition, HVAC and enclosure systems that accommodate the gardens and fountain will be required. The design concept proposes new lighting that allows for use in variable daylighting conditions, as well as nighttime use, solar control and shading, and updates to the arcade walkways and courtyard paths to create accessible routes into and around the gardens.



The courtyard enclosure will protect deteriorating building components

The proposed concepts for the courtyard include the gardens and the fountain as central elements. The courtyard enclosure presents a good opportunity to rethink how the garden plantings can both enhance the space and offer an area of improved programming. The gardens will be updated with plantings that will thrive in an enclosed, day-lit environment while still being in keeping with the historic character of the space. Considerations for maintaining the planting include the need for critical UV light to reach them, as well as development of an ongoing program for irrigation and maintenance. The fountain in the center of the courtyard, which was restored in 2020, will be preserved as a treasured centerpiece of the courtyard landscape.

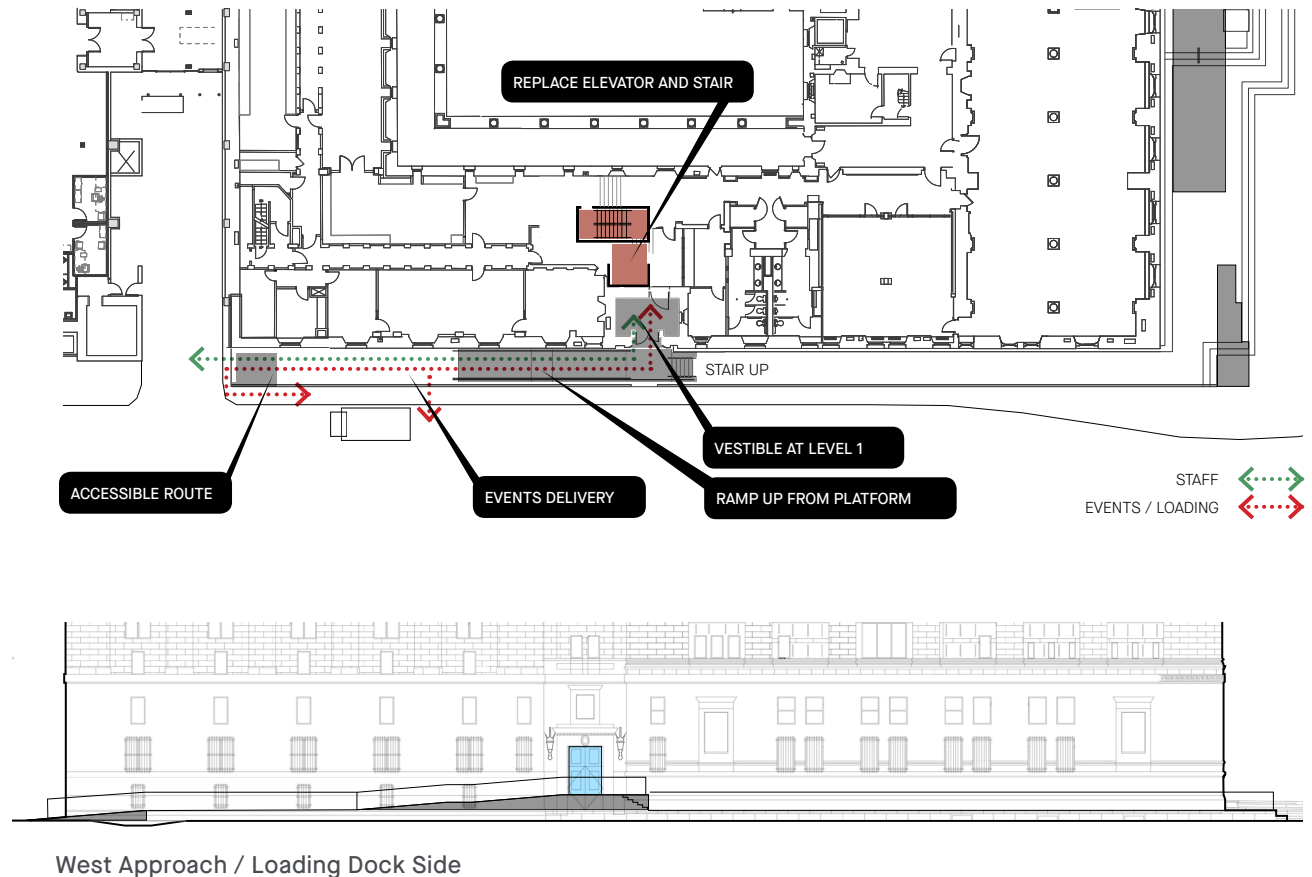


Master Planning Concepts

Improvements to Blagden Street Entrance

The Blagden Street entrance of the McKim Building will be altered to create an accessible route for BPL staff to enter the building. This dedicated entrance will allow BPL personnel to enter and exit the building at a secured location that is adjacent to updated stairs and elevators, leading to staff offices and work areas in the stack zone of McKim. The accessible route will involve adding a ramp that connects to the improved and accessible Dartmouth Street plaza.

This ramp will be built over the existing tunnel on the south side of the building exterior and will slope to a height that aligns with the first floor Level of McKim. The ramp materials and rails are proposed to be sympathetic to the materials and designs of the historic McKim exterior. The facade portal and flanking light fixtures will remain as is, with adjustments to the exterior door and metal gate to accommodate the rise of the ramp. Within the entry vestibule a new floor will be added over the existing steps to align exterior and interior levels.



Vertical Access and Way Finding

Improving accessibility within the McKim Building is a high priority and considered in all aspects of the renovation. The master plan recommendations propose comprehensive renovations to McKim in order to make the building accessible. As a next step, the library proposes to undertake a detailed accessibility review to provide a detailed approach to removing obstacles, including those presented by signage, life-safety, communications and assistive listening systems, clearances, protruding objects, walking surfaces, hardware, reach ranges and toilet facilities. In addition, the master plan has evaluated the numerous challenges presented by vertical level changes along paths of travel, as well as the circuitous movement pathways of the existing building and proposed specific recommendations.

Movement up and down in McKim by its most obvious means is through the Grand Stair, beginning at the Lobby, leading to the second floor Chavannes Gallery outside Bates Hall and up to the third floor Sargent Gallery. This ascent is 92 steps, which roughly equates to five stories in a modern building. While the Grand Stair and its connected spaces are historically significant architectural works, they are not accessible to all.

Movement within McKim is challenged by level changes that occur between the front of the building on Dartmouth Street, and the sides of the building on Boylston and Blagden, and the back along Johnson. These changes are integral to the original architecture, where the building main floor is set above the street and grand public spaces were orientated to the front, while closely stacked support spaces were to the back. This resulted in a split-level arrangement where floor levels differ by approximately 36" – 42", varying with location. The third floor is the exception, where from front to back the floor is at a common level. The Cheverus

Room is the one departure from this continuity, where it is connected to the Sargent gallery by a 30" high rise of steps.

These changes in floor elevation are managed by numerous individual sets of steps or ramps, such as:

- Elliott Room to Washington Room steps located between the two rooms on the Boylston Street side
- Northwest Corridor to Commonwealth Salon steps, adjacent to Johnson
- Northwest Corridor to Leventhal Map and Education Center steps, adjacent to Johnson
- First floor to Courtyard Arcade ramp
- Steps between support and stack spaces and the main floor

In addition, there are two mezzanine levels in McKim. One is located at the front of the building between the first and second floor levels and is accessed by dedicated stairs discretely situated near the Chavannes Gallery. The other is the Trustee Room on the Blagden Street side, accessed from staff areas.

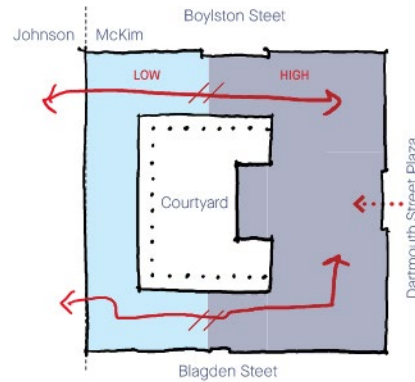
All totaled there are 13 occupied levels in McKim.

Master Planning Concepts

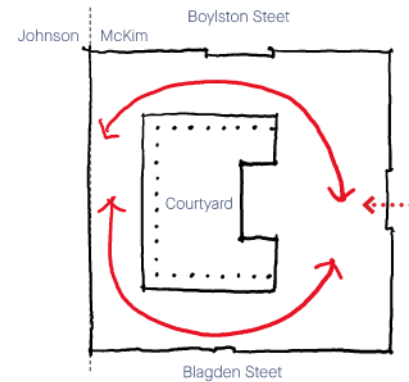
Vertical Access and Way Finding

Because of these levels of complexity, movement around the library is challenging and patrons are often tasked with following elaborate directions to find library destinations and resources. The plan proposes to address this complexity and confusion by providing new circulation pathways with improved organizational clarity and way-finding signage.

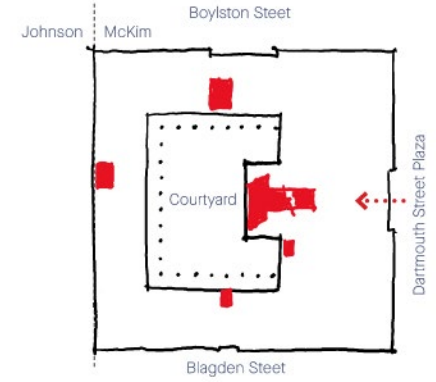
Existing Barriers to Movement & Accessibility



Horizontal Pathways
Floor Level Differences

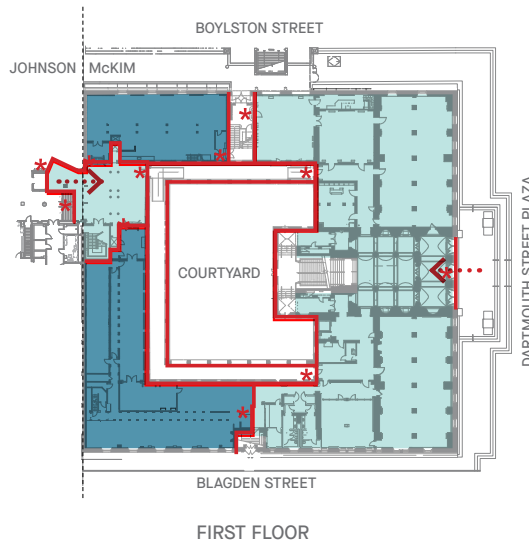


Courtyard Plan
Discontinuous & Lack of Clear Pathways

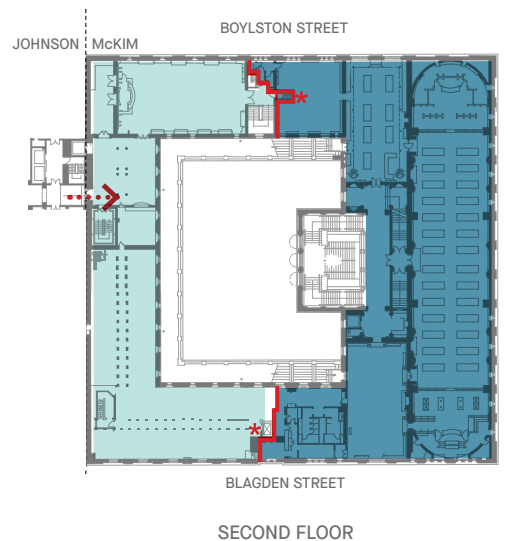


Vertical Movement
Interconnected Rooms & Pinch Points at Corners

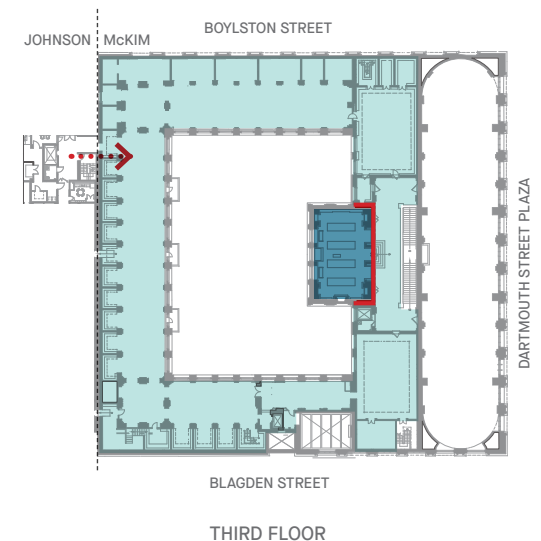
Horizontal Pathways - Existing Barriers to Movement



Multiple changes in floor level
• Reduce number of level changes
• Improve equitable access



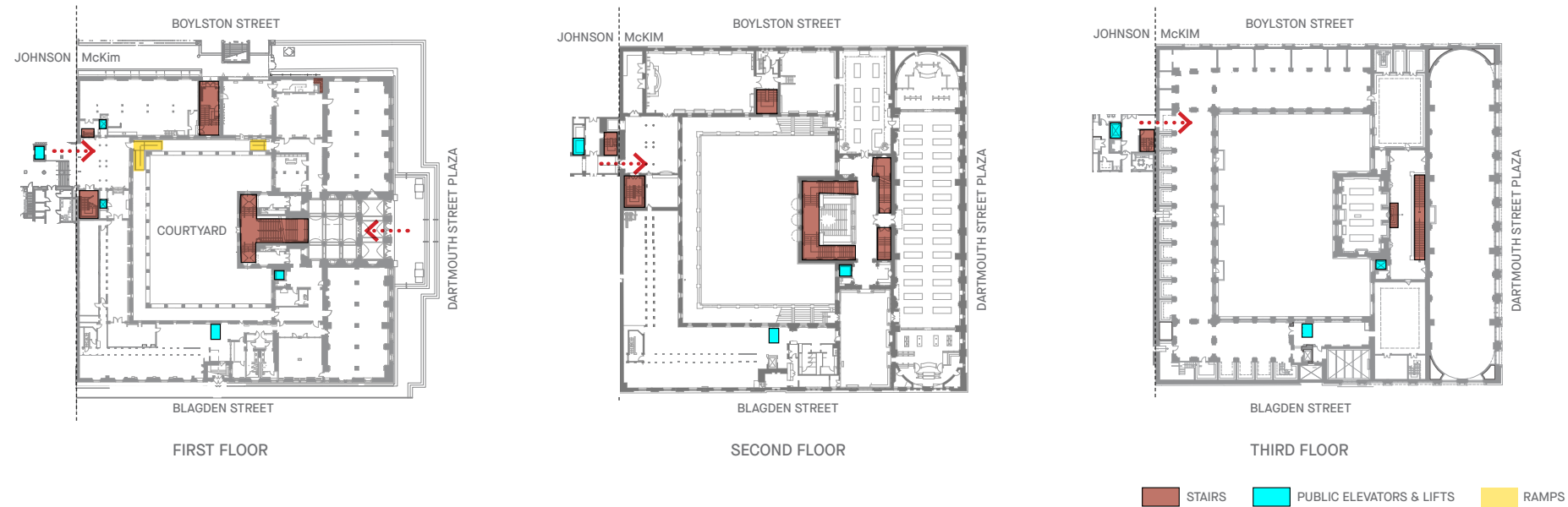
Changes in floor level between
Dartmouth and Johnson sides
• Improve equitable access



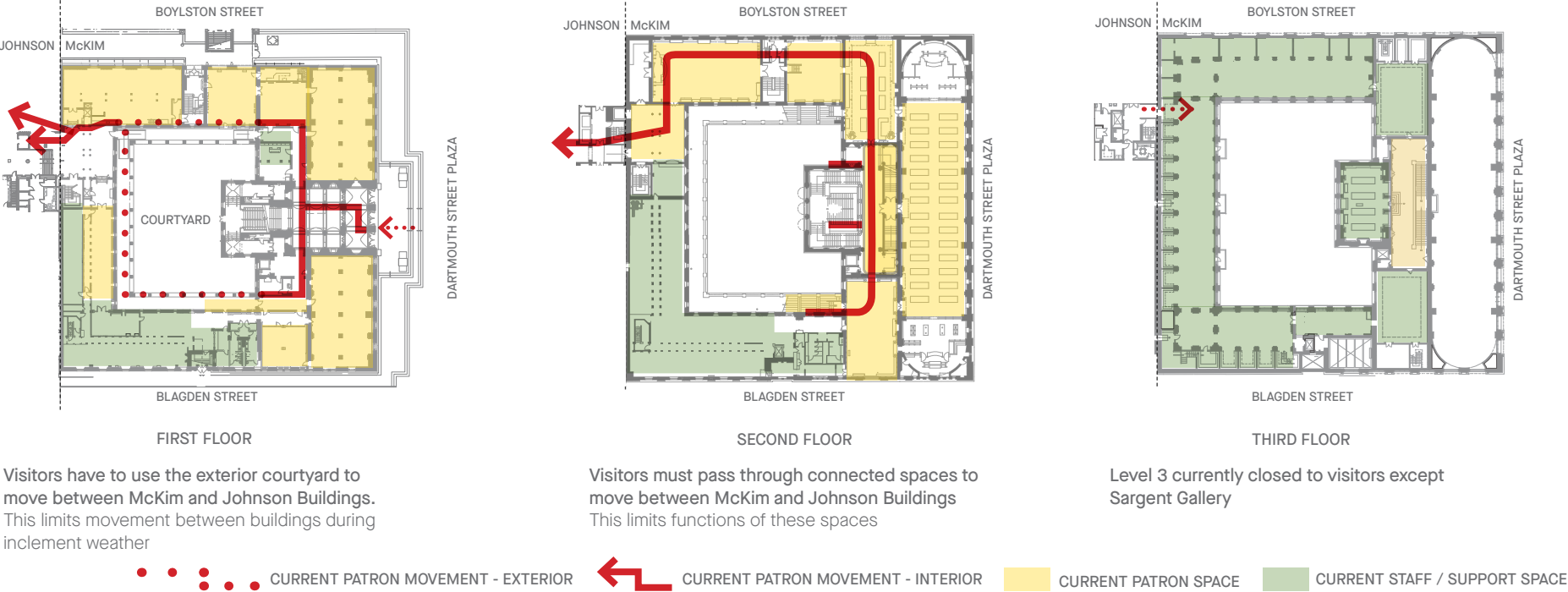
Change in floor level at Chevrus Room
• Improve equitable access

CHANGES IN FLOOR LEVEL
HIGHER FLOOR LEVEL
LOWER FLOOR LEVEL

Vertical Movement - Existing Elevator, Stairs & Ramps



Courtyard - Existing Public Movement



Master Planning Concepts

Vertical Access and Way Finding

Recommendations

In response to these existing barriers and limitations, the plan offers new equitable and gracious means to move from floor to floor, while providing comparably desirable experiences.

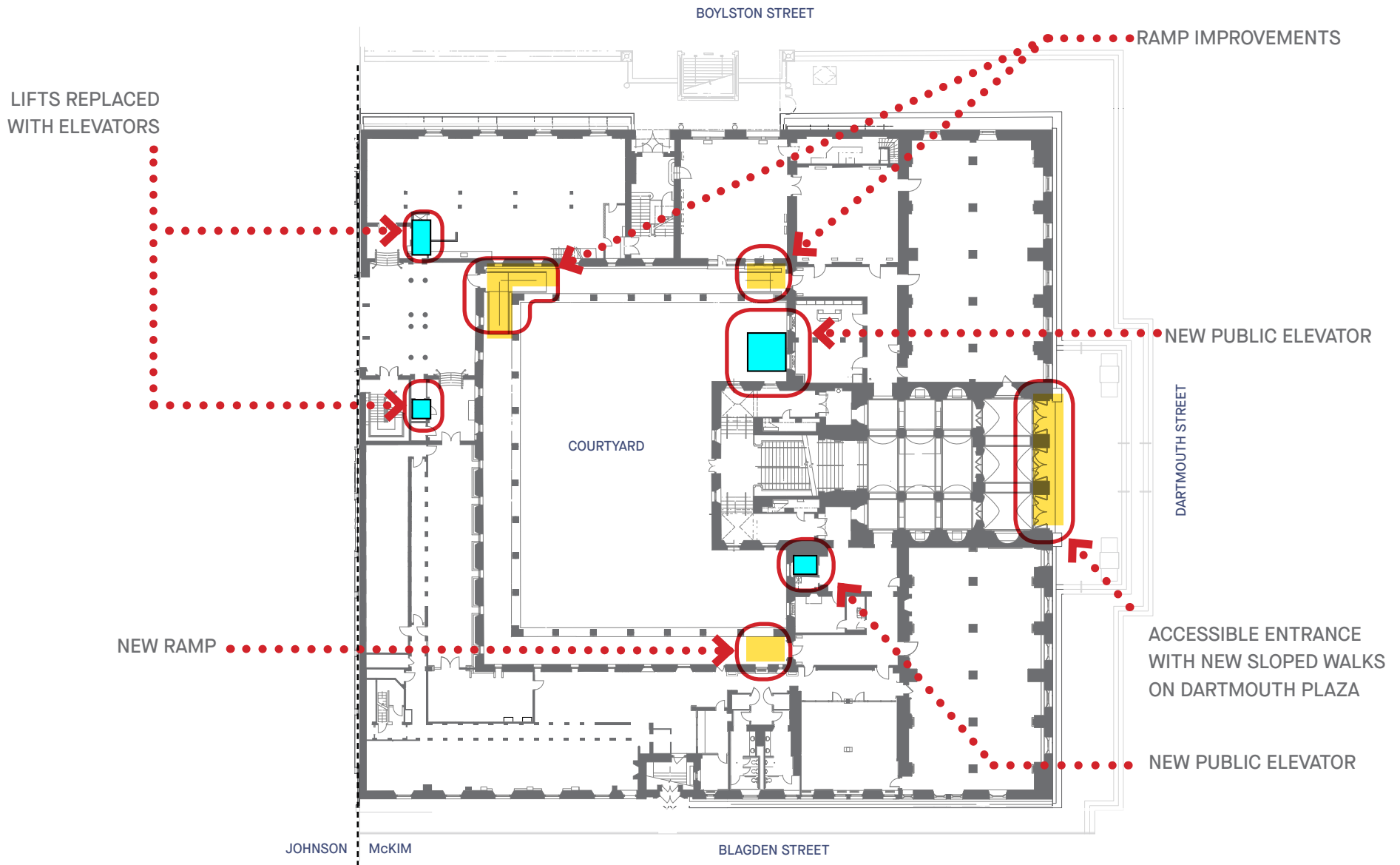
The existing Dartmouth Street elevator is proposed to be updated with new machinery and the cab- based on the design of the original McKim elevator- will be restored and remain in use. It is seen as an important reminder of building history, and is also valuable for patron movement on the Blagden Street Side of McKim.

To expand capacity and ease of vertical movement, the plan proposes a new patron elevator to be located within a corner of the courtyard. The elevator will be larger in size than the existing Dartmouth Street Elevator, and will be easy to locate along the building's main public pathways. The elevator will connect six levels: basement; first floor; mezzanine 1; second floor; third floor; Cheverus Room.

From within the new elevator patrons may experience views into the courtyard through a glass enclosed wall, so to ascend in the elevator will be to ascend in the courtyard and to take in the characteristic stone arcade, roman brickwork, tall arched windows, dynamic daylight on the walls, and views to the sky.

The master plan proposes new accessible means to navigate the level changes between important public spaces. Recommendations include:

- The installation of enclosed lifts that provide an experience similar to that of a small elevator for access to the Leventhal Map and Education Center and to the Commonwealth Salon
- Access from the new courtyard elevator at the level of the Cheverus Room
- Ramped pathways along the second floor balcony as part of the new interior access route created by the courtyard enclosure.
- New ramps within the first floor courtyard arcade, as well as the courtyard itself.
- Reconfiguration of Dartmouth Plaza to provide new sloped walks and a level pathway into the main McKim Building entrance.
- Installation of a new exterior ramp leading to a level building entrance with a new elevator at the Blagden Street service entrance.



Improved Ramps, Accessible Entrance, New Elevators

Proposed Renewal Projects

The master plan concepts envision a comprehensive renewal of the McKim Building. Implementation is proposed as a series of projects that can be done as funding becomes available, and will allow the building to remain open to the public during renovation. There are many different ways that the work could be divided up. As a starting point, the work has been divided into three projects. Once the library and the city define priorities and funding strategies, other configurations of scope may prove to be more beneficial.

The three projects proposed in the master plan have been organized so that each has a distinct focus: The Courtyard, the Third Floor Renewal, and The Dartmouth Plaza. Together they would provide a complete renovation of the McKim Building.

The Third Floor Renewal Project

- Third floor renovation and restoration
- Blagden Street Staff entrance, stair, and elevator
- Dartmouth Street elevator improvements
- Renovations to Mezzanines 1-6



Third Floor Renewal

The Dartmouth Plaza Project

- New Plaza landscape and entrance with sloped walks, exterior seating, plantings, and program spaces.
- Renewal of first floor spaces, including Lobby, Commonwealth Salon, Exhibition Hall and Guastavino Room.
- Repairs to basement spaces to address leaks and improve library support areas.
- Exterior Facade Restoration

The Courtyard Project

- New Courtyard Roof Enclosure
- Repairs/Replacement of McKim Roofs
- New Courtyard Facade Restoration
- Gardens and Plantings
- Accessible Pathways in Garden, Arcade and Balcony Walkways
- Updates to 2nd Floor Public Rooms, including the Washington and Elliot Rooms



Dartmouth Plaza

Additional elements of renewal that address building condition, infrastructure and accessibility, and improvements to library operations and visitor experience are distributed among projects to create logical work groupings. Detailed design and review of construction logistics may result in switching of scope items between groups.

The sequence of the projects will be determined by priorities, funding, and logistics, and is not prescribed by the order the projects are presented in this report. Further analyses and testing to be undertaken before commencement of detailed design and logistical planning are enumerated in the technical sections of this report.

As the library and the City evaluate priorities and funding strategies, a pathway to the complete transformation of the McKim Building will be defined. The renewed McKim Building will be more welcoming, easier to navigate, and infused with new patron places and programs. Its architecture will more completely fulfill the commitment inscribed on its façade: *Free to All*.



McKim Courtyard

