

Draft report for discussion purposes only – 12/11/2014

Faneuil Branch Library EXISTING CONDITIONS

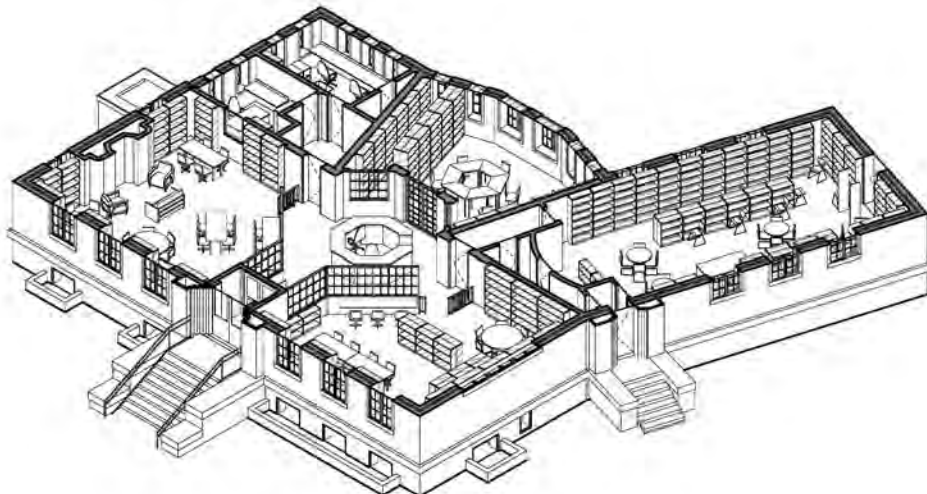


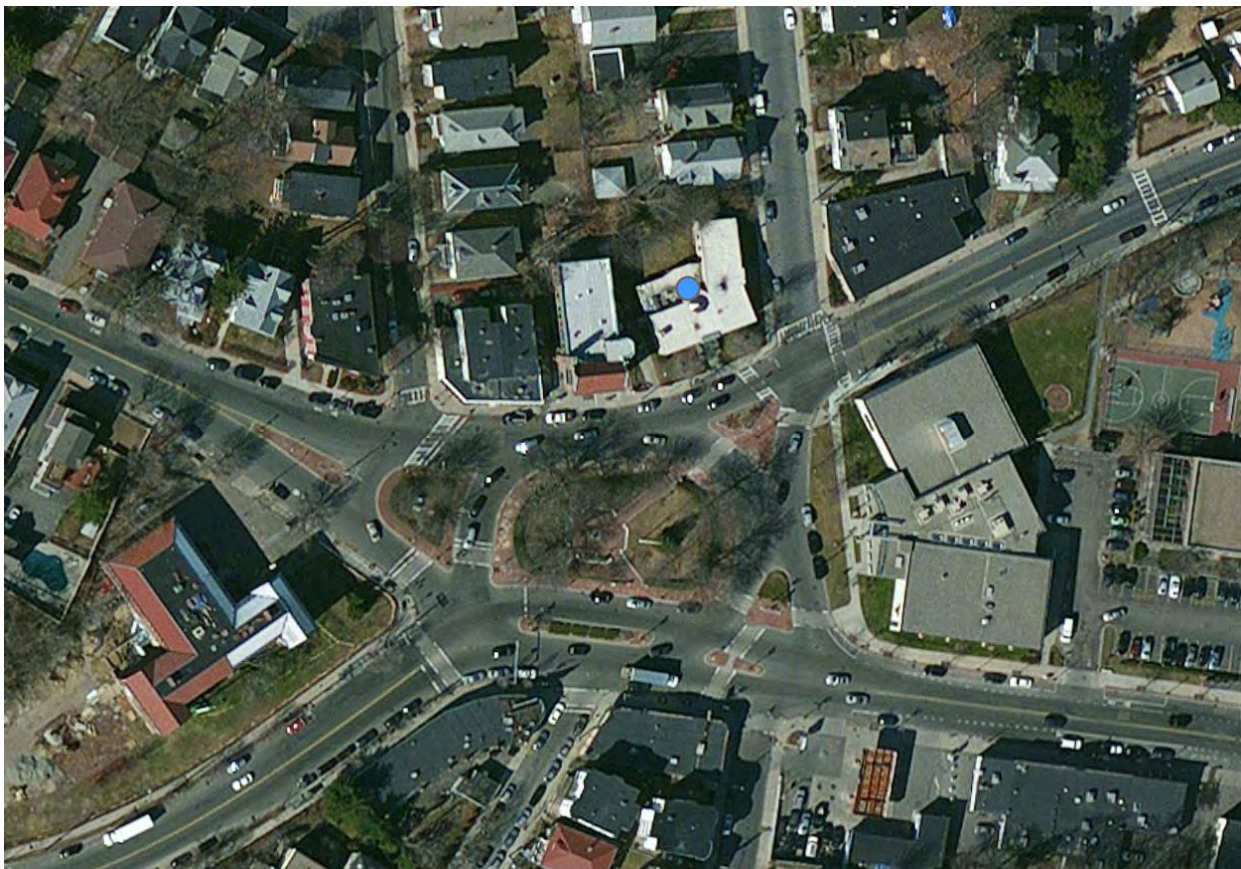
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INTRODUCTION

The library is located on a roughly rectangular site at the intersection of Bigelow Street and Faneuil Street in Brighton. The site abuts a Fire Station to the West on Faneuil Street and a residential property to the North on Bigelow Street. The building is well positioned on the urban open space of Oak Square, sharing frontage on the Square with other prominent civic intuitions (YMCA, Fire Station, Church, bank), as well as several local eateries.

The existing library was designed and constructed between 1930 and 1931 and opened to the public in the Spring of 1932. There have been a series of minor improvement and maintenance projects over the decades (including replacement windows in 2004), but the building remains a largely intact example of the Art Deco style and the only building in this style in the Boston Public Library system.



The building has approximately 7,600 gross square feet and is one and one-half stories, with the main level used for the majority of public services and basement primarily for staff functions. There is also a crawl space under the portion of the building currently used for Children's services.

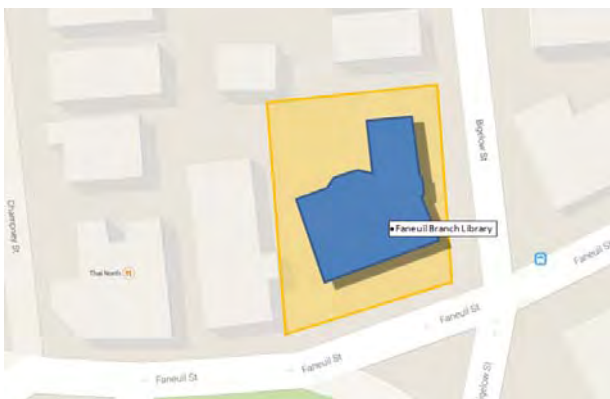
The following narrative represents our observations and opinions about the Faneuil Branch Library, based on our visits to the facility and discussions with the library branch staff during the Summer and Fall of 2014, as well as our review of the drawings made available to us by the BPL and Boston Public Facilities Department.

PRINCIPAL ISSUES & OPPORTUNITIES

SITE & LANDSCAPE



The library is located at the intersection of Faneuil Street and Bigelow Street, and fronts on Oak Square. The abutting Fire Station and flanking YMCA and church also border Oak Square.



There is street parking available on the adjacent and surrounding streets, but no dedicated parking for library patrons. Bus #57 provides service to Oak Square from the Kenmore Square MBTA Green Line subway/streetcar station "In a recent survey¹ of library patrons, more than 54% of the respondents walked to the library (approximately 40% drove, 3% took the bus, and 3% biked).

A site survey is beyond the scope of this study and there was no previous survey available to document the boundaries, the topography, nor the specific area of the site. However, the site slopes from a high point at the rear, which is approximately at the main floor level, down to the south front where the grade is roughly a half story below the floor of the main level.

¹ See Appendix for a copy of the Survey. Survey Results will be in a separate report.

Because the footprint of the library is “L” shaped, with the legs of the “L” facing the streets, there is open space behind the library which has occasionally been used as a venue for outdoor library events during good weather.

This open corner of the site is to the northwest, and concealed behind both wings of the building, largely obscured from view either street. Branch staff have not reported any problems with loitering in this concealed space.

This area of the site may present an opportunity for expansion. Should the Library needs and future aspirations for service change, consideration can be given to expansion into this area. Given the

location of the available site, preservation standards for expanding historic buildings can be accommodated (e.g. the Secretary of the Interior Standards for renovating historic buildings recommends that additions be placed on sides that are not conspicuous). Additionally, the compromise to the available community open space is mitigated, given the library’s frontal location on a more prominent open space, Oak Square.

There are two large and mature trees on the front fenced lawn of the library and a 3rd tree on the sidewalk.



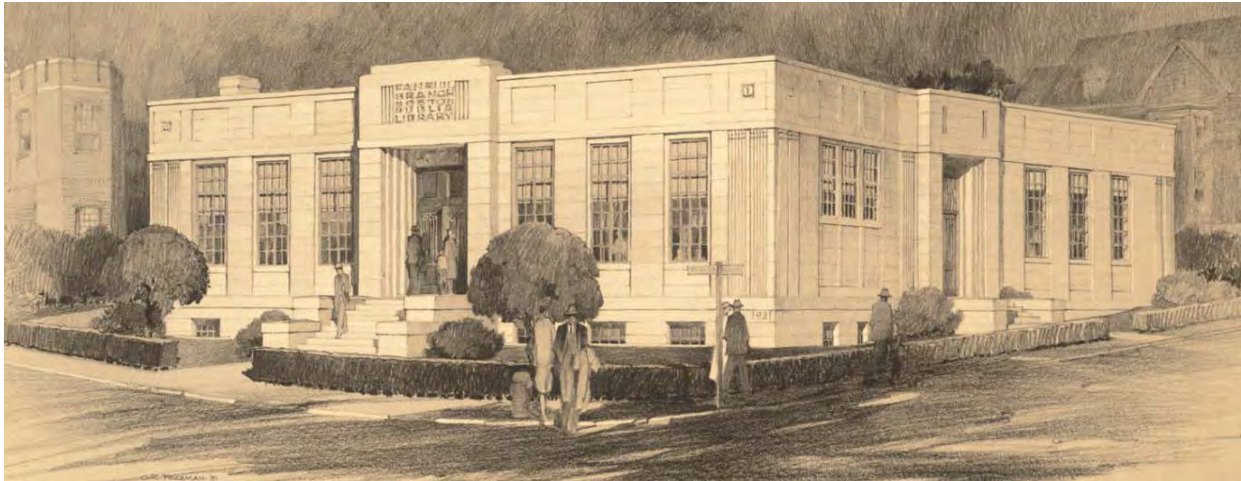
LIBRARY FRONT OBSCURED BY TREES



ORIGINAL LIBRARY LANDSCAPE CONCEPT

While these relatively mature trees are appreciated by the community of library users, they block light and views to and from the library, which are concerns relative to desires for better and more efficient lighting and improved interior environment. The leaf fall from these trees becomes a roof drain maintenance issue since they are so close to the library. The large trees are also not consistent with the historic presence of the building and diminish the building’s prominence on the square. These trees should be examined by an arborist to determine their future viability and potential replacement with a variety that does not grow so large.

EXTERIOR ARCHITECTURAL CHARACTER



As the only BPL facility in the Art Deco style, the Faneuil Branch has a unique character which is valued by the community for its distinctive and stately presence on Oak Square. In general, the character-defining elements of the exterior (subtly detailed and well-proportioned limestone, tall windows, etc.) are intact and do not need extensive restorations to retain their appearance and substance well into the future. “Consumable” elements of the exterior construction that typically need periodic maintenance will require updating and replacement over time and should be completed in the context of a major capital project (e.g. repointing of masonry, replacement of sealant at windows and doors, re-roofing and flashing repairs). Obsolete and incompatible building system components that have a negative impact on the building’s appearance should be removed when building systems are updated (e.g. window air conditioners).



BIGELOW STREET FACADE



ORNAMENTAL DOOR GRILLE



ORNAMENTAL DOOR GRILLE (SIDE DOOR)



STONWORK OVER ENTRANCE



CORNER DETAIL WITH BOOK MOTIF

INTERIOR ARCHITECTURAL CHARACTER



Like the exterior, much of the original Art Deco interior of the library remains intact, although compromises to the historic integrity have been made over time.



ORIGINAL PAINTING OVER FIREPLACE

Preserved character-defining attributes:

- Skylight
- Stepped plaster ceiling edge detail
- Ribbed plaster cornice detail in the reading room
- Glass and ornamental steel “wing walls”
- Fireplace
- Steel and glass interior double doors into the bookstack area
- Clock
- Much of the original shelving in the bookstack wing

Acceptable (or reversible) compromises:

- Replacement flooring pattern
- Repainting of walls (originally the walls were “...finished in graduated color tones starting with light yellow at the ceiling and changing to brilliant yellow...”

Compromises:

- Replacement light fixtures (original reading room lights were “...a standard Holophane Filterlite and completely changed its appearance by a specially designed chromium fitting and suspension hanger.”
- Removal of paintings seen in historic photographs.
- General overcrowding of the space by collection, seating and equipment.

Many of the original period-appropriate furnishings and custom designed pieces remain in serviceable condition, including the original service desk in the center of the library. The desk is somewhat large for the space and contemporary service models, however.



A unique feature of the Faneuil Branch is the pair of low, glass and steel “wing walls” that extend parallel to each other from the entrance toward the desk and then diverge at 45 degrees around the desk.



Consideration should be given to re-creating (e.g. missing lighting and furnishings), restoring, preserving and reincorporating these unique architectural/library planning features. These restoration efforts will need to be balanced with initiatives to accommodate contemporary library services and current code, life safety and accessibility requirements.

Additional interior detailing, unique to Faneuil and meriting preservation:



ORIGINAL CLOCK



FIREPLACE



STEEL AND GLASS PARTITIONS



PILASTERS AND OTHER PLASTER DETAILS



PLASTER DETAILS AT CROWN AND CEILING



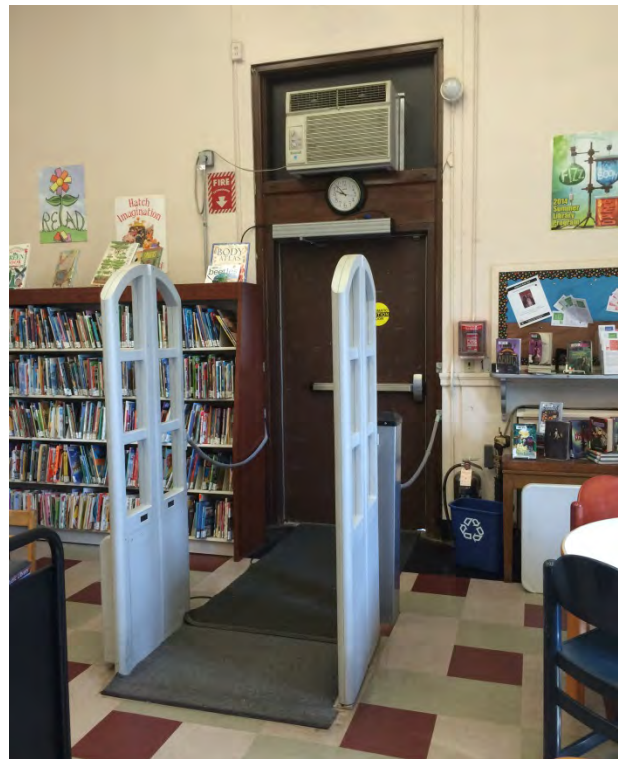
MISCELLANEOUS ORNAMENTS

ACCESSIBILITY



Although the rear door to building has been made wheelchair accessible, and from there most areas on the main level of the building are potentially wheelchair accessible, the front door is inaccessible due to the traditional flight of steps up to the main level. This does not meet the requirements of MAAB, which mandate that all entrances be accessible. Additionally, many areas of the main level which could be accessible have been crowded with collections and/or furniture so that there is insufficient clearance to meet the requirements of ADA and/or Massachusetts Architectural Board (MAAB).

An additional issue with the rear door access is that it leads directly into the Children's area, through which any visitor to the library can now legitimately pass, diminishing security for children. Also, within the Children's area, the raised platform that is enjoyed by so many and sets up a smaller scaled space within the overall large room, is not accessible to children or their caregivers in wheel chairs, and is not ADA compliant.



The lower level does not meet accessibility requirements. Vertical circulation inside the building is via a stair with “winders” and non-compliant nosings that are inconsistent with current building code requirements (and are steep, and narrow).



Staff spaces located in the (inaccessible) basement precludes having staff members with mobility concerns assigned to work at the Faneuil Branch.

Public Toilet facilities are located on the inaccessible lower level. This scenario makes it very difficult for a parent to escort a child to the toilet, as well as making it impossible to serve wheelchair bound patrons or patrons with ambulatory issues.



The Bigelow street entrance is also not accessible (although not used as an entrance since the meeting room was transitioned to Children’s Wing.



BALANCING COLLECTION SPACES & SERVICES



One of the challenges, that nearly every older library has encountered, is the pressure of evolving collections. Libraries designed for a given collection capacity (and/or collection type) face compromises to the space available for patrons as they accommodated expanding and changing collections over time. At the Faneuil Library, the existing and added shelves are beyond recommended capacity and patron experience is crowded and compromised, contributing to shorter stays in the library. Book shelving units constrain circulation aisles, compromising both convenient access and emergency egress. In Children's, seating is placed directly in front of the collections in at least a half dozen locations.

In the space behind the service desk, some of the original bookstacks have been removed (to make space for the library's computer center), but the shelving that remains creates dead-end aisles that are not compliant with ADA requirements for wheelchair access.



CHAIRS BLOCK COLLECTIONS



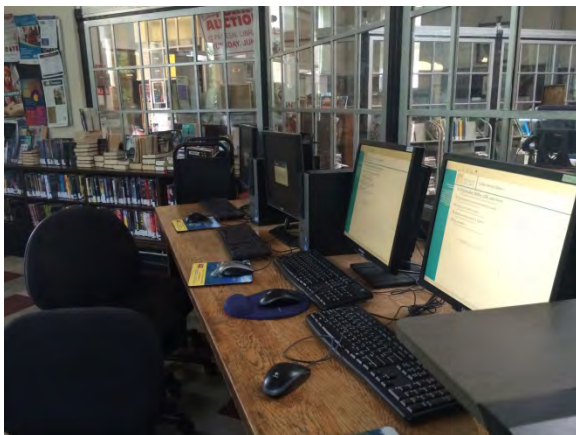
NON-COMPLIANT DEAD-END SHELVING AISLE



COLLECTIONS CROWD HALLWAY



HIGH PICTURE BOOKS – NOT CHILD FRIENDLY



TEEN COMPUTERS ARE CROWDED TOGETHER



HOLDS CROWDS CIRCULATION SPACE

COMMUNITY MEETING



There is no special accommodation for hosting community meetings. The space constructed for the purpose was converted for primary use as the Children's Library. Since then it has served dual purposes, displacing children's furnishings and collections while being rearranged for meetings.



ORIGINAL MEETING SPACE

STAFF ACCOMMODATIONS



As noted earlier, the service desk has historic character, but is outsized relative to the actual service functions performed. Some of the functions that have space allocations at the desk do not necessarily need to be in the public view. They are accommodated there because branch library staff often need to do “off desk” tasks while stationed at the service desk.

The “period appropriate” staff work areas may not be most efficient configuration for contemporary service and have been compromised by the insertion of the data closet.

The window between the original Children’s Library (current reading room area to the right of entrance) and the Librarian’s Office to the north is not an asset.

Now that the patron space is used for general seating, the window is blocked to make the office more private. In the context of renovation, better use of these spaces and features should be considered.





CURRENT STAFF WORKROOM



ORIGINAL STAFF WORKROOM



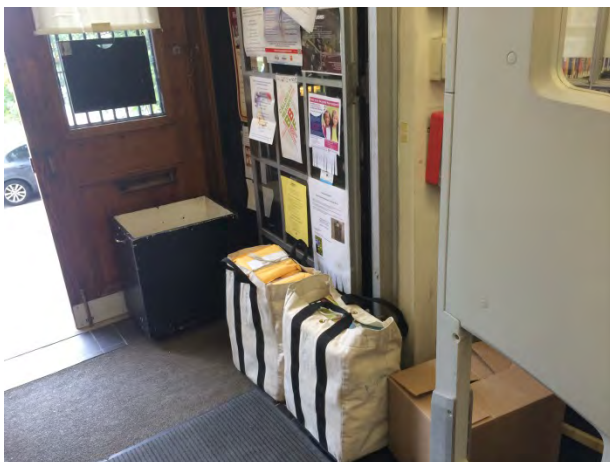
STAFF BREAK ROOM



STORAGE AREA

The basement staff break room has deteriorated finishes, is equipped with salvaged appliances and repurposed book shelves and is wholly sub-standard and should be slated for comprehensive renovation.

Storage space is limited throughout the main floor and the basement storage is well used.

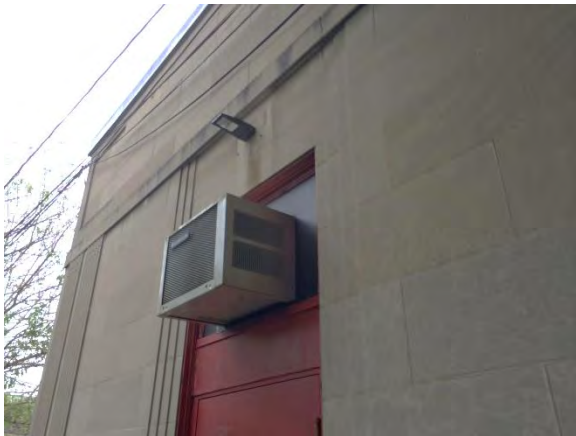


OUTGOING MATERIALS WAIT IN ENTRY AREA

OUTDATED OR INAPPROPRIATE BUILDING SYSTEMS

As described in the sections from our consulting engineers, most of the building systems for HVAC, Electrical & Data, Plumbing, and Fire Protection are recommended for replacement.

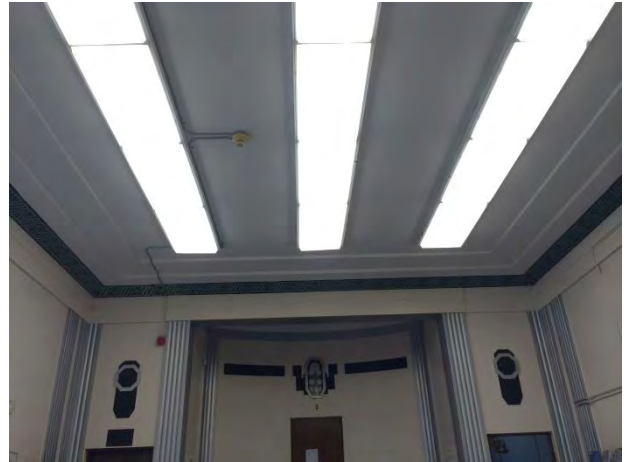
Heating Ventilating and Air-Conditioning systems are either obsolete, underperforming, in poor condition or a combination of these characteristics. Additionally, components of these systems which were added subsequent to the original construction (there was no AC originally) occupy prime space in the public areas, or are added onto the exterior of the building in unattractive ways (e.g. window air conditioners). The equipment is noisy when in operation, compromising the library's acoustic environment.



Also, collections and furnishings have been added in from of radiators, negatively impacting system performance, energy efficiency and patron comfort

Plumbing system is sub-standard and should be completely replaced and upgraded, including all fixtures and distribution. A larger service from the street will also be required.

Original lighting has been replaced throughout the building with fixtures that are not compatible with the original design intent, do not appropriately or adequately light the spaces, and are not as energy efficient as replacement fixture would be.



ENVELOPE CONDITION ISSUES



As noted earlier, the exterior of the building is in relatively good condition. The masonry does not show signs of structural distress and although it has an aged patina is not generally stained and dirty.

Some masonry deterioration can be observed at the front steps and flanking walls which should be addressed in the context of a capital improvement project.





DETERIORATED PLASTER AT WINDOW JAMB

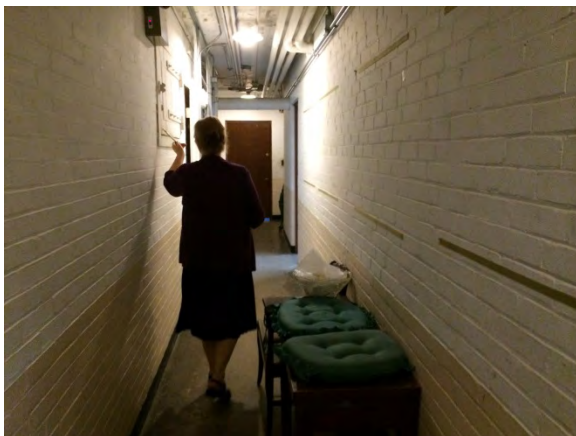
Despite the good condition of the windows, there appears to be some continued deterioration of the interior plaster at the jambs. It is not clear whether the deterioration is caused by water infiltrating from the outside or from condensation on the frames. The exterior masonry does show obvious deterioration that would lead to water infiltration. Blocking the flow of warm air from the perimeter radiation could precipitate the formation of condensation on the relatively cold window frames when the interior of the library is relatively warm and humid. However, this is not that common in library interiors, where the winter indoor environment is not mechanically humidified. Additional observation of these areas will be necessary to determine the cause

Roof condition was not visually inspected, but no issues with active roof leaks were reported. Librarians noted past repairs to the plaster crown detail over the entrance doors and no additional on-going deterioration was observed.

INTERIOR CONDITION ISSUES

In general, the interior surfaces and finishes of the building are in two categories: 1) those that have been recently updated (e.g. paint in most areas) and 2) those that are in need of replacement (e.g. flooring in most locations). Fortunately, most of the original interior detailing remains intact and suitable for renovation/restoration. However, some uses detract from the spatial qualities and the user experience (e.g. posting bulletins on architectural features).

Additional various conditions and configurations:



BASEMENT SPACES UNSUITABLE FOR PATRONS



FLOORING IN CHILDREN'S



FLOORING AT MAIN DESK



PEELING PAINT IN BASEMENT



FLOORING IN BASEMENT



MISUSE OF BUILDING ATTRIBUTES



FLOORING AT TOILET ROOM



**HIGH WINDOWS PROVIDE EXCELLENT DAYLIGHT
(AUTOMATED SHADES WOULD BE BENEFICIAL)**



**SKYLIGHT AND CLERESTORY WINDOWS ENHANCE
DAYLIGHT**



COMPUTERS IN CHILDREN'S NOT CHILD-FRIENDLY



STORAGE BEHIND PLATFORM IS INCONVENIENT



TECHNOLOGY NOT WELL ACCOMMODATED



CHILDREN'S DESK NOT CHILD-FRIENDLY



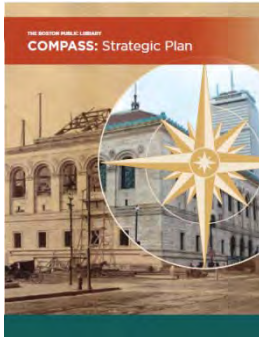


TECHNOLOGY NOT WELL ACCOMMODATED



ART OVER ENTRANCE TO CHILDREN'S WING

COMPASS POINTS



The 2009 BLP Strategic Plan, or “Compass,” outlines a set of principles (user-centered institution, community gathering, special collections, center of knowledge, children and teens, access and innovation, sustainable organization and fun) – for the BPL system. Therefore, we need to look at the Faneuil Branch through the lens of the Compass and identify where the physical configuration of the existing branch supports (or fails to support) the established expectations for the BPL system. Below, is a review of the 8 Compass Points of the BPL Strategic Plan relative to the current Faneuil Branch and its future potential.

1. USER CENTERED INSTITUTION

Key Elements for Faneuil Branch: Enabling easy and effective access to library services which respond to neighborhood interests, and serve a diversity of users.

Areas of Relative Success:

- Active CAC group keeps the branch informed of the community’s expectations from the branch.
- Community bulletins are generously accommodated
- Rear door has been made ADA compliant.
- Although signage and wayfinding is limited, the departmental layout of the library’s patron areas is readily apparent

Areas for Potential Improvement:

- Physically accessing the building through the main entrance is a challenge for community members with compromised mobility. Entering through the rear accessible entrance is not compliant with ADA.
- Interior spaces and configurations hamper access for mobility challenged patrons due to furniture and bookstack placement.
- Establish venues to celebrate learning achievements and successes for the spectrum of library users
- Curate and consolidate community bulletins for more attractive effective communication of community activities
- Replacement of mature trees in front of the building which diminish the library presence on Oak Park and in the neighborhood.

2. COMMUNITY GATHERING

Key Elements for Faneuil Branch: Establishing quality spaces with appropriate furnishings that support positive interactions between patrons in the library, and that foster teaching and learning.

Areas of Relative Success:

- Space in the Children’s room (originally a lecture hall and still retaining a raised platform) can still be used for large meetings, providing the children’s activities are suspended and the furnishings rearranged.
- Space in front of the fireplace is a desirable destination and can be converted from

- study tables to host smaller community meetings.
- Security is facilitated by the placement of the desk and the layout of the main reading room.

- Original round tables facilitate small group dialog and collaboration

Areas for Potential Improvement

- There are no group meeting or study rooms for small groups or designated community meeting space for larger groups
- Furnishings upgrades to accommodate gathering, including additional soft seating
- Find opportunities to incorporate “learning lab” space
- Children’s space security can be improved by not having the only accessible entrance pass through the Children’s wing
- Having public toilets on the main level rather than in the unsupervised basement would improve personal security for patrons and library security

3. SPECIAL COLLECTIONS

Key Elements for Faneuil Branch: Preservation of distinctive collections as a component of cultural heritage.

Areas of Relative Success:

- The building itself is a significant piece of cultural heritage that is reasonably well preserved, and suitable for continued use.
- Many of the interior furnishings are still in use (and in serviceable condition) and were either selected to be compatible with the overall original design concept or perhaps custom designed for this branch.

Areas for Potential Improvement

- Collections that are unique to the neighborhood, including artifacts of the existing building (e.g. the painting from over the fireplace) could receive special accommodation and emphasis.
- Restoration of original paint color palette.
- Replacement lighting can be configured to match the original Art Deco design intent.
- Additional replacement furnishings can be reproductions of the historic pieces or be inspired by them.
- Reinstallation of original art.

4. CENTER OF KNOWLEDGE

Key Elements for Faneuil Branch: Serve the intellectually curious in the community with information resources and the space to acquire learning.

Areas of Relative Success:

- Collection capacity is maximized throughout all library departments
- Computer cluster and available laptops provides access to digital information
- Partial height glass partitions facilitate the acoustic separation of different group learning activities within the reading room
- There is strong collection of fiction, bestsellers, mysteries and romances, non-fiction, magazines, and DVDs, as well as a

good selection of travel, college reference, large print, and Spanish and Russian materials

Areas for Potential Improvement

- Carefully curate the collections to assure the availability of materials is aligned with community needs and is presented in a manner that enhances discovery and access
- Enhanced support for patrons to learn from other members of the community and to share information
- An early literacy computer center is included in the Children's Library
- Relieve congestion around the computer cluster
- Current computer cluster configuration is not conducive to instruction. Establish a venue for computer instruction for enhanced access to digital information and for learning skills to be productive with digital technologies

5. CHILDREN & TEENS

Key Elements for Faneuil Branch: Foster reading and critical and creative thinking in young people.

Areas of Relative Success:

- Distinct space within the library for Children's services facilitates creating a learning environment for children that does not interfere with the activities of older users.
- Mobile furnishings in the Children's Library facilitate re-configuring the space to accommodate large programs and storytime activities rather than collections.
- Children's library service point is central to the Children's library
- Teen's space has several computers and a segregated collection

Areas for Potential Improvement

- Relieve the overcrowding of collections, seating, computers and service desk that complicates access to services and diminishes children's experience at the library
- Re-establish the children's service desk as a child-friendly interface for interactions between children and librarian.
- Accommodate information technology in a configuration that is scaled to the users and the children's space
- Space for positive and energetic programs for Children and Teens is not adequate
- Establish a teen space that has a distinct location and identity
- Support homework activities for individual teens and teen groups
- Provide for teen activities in a manner that does not interfere with other patron's library needs and experience (e.g. acoustically separate, but easily supervised) Children's collection is expansive relative to the available space

6. ACCESS & INNOVATION

Key Elements for Faneuil Branch: provide access to innovative technologies, electronic resources and digital information.

Areas of Relative Success:

- There are several computers in the adult area, the teen area and the children's area available for individual use.
- Laptops are available to check out for use in the library

Areas for Potential Improvement

- Improve facility to support training and peer to peer learning about making productive use of the available technology
- Create opportunities for collaborative use of technology
- Enhance opportunities for use of technology for creative purposes
- Incorporate state-of-the-art AV technology for enhanced information access and sharing

7. SUSTAINABLE ORGANIZATION

Key Elements for Faneuil Branch: Streamline the workflow for staff and enhance opportunities for collaboration with neighborhood business and institutions. We take this opportunity to integrate observations about **Sustainable Design** as well.

Areas of Relative Success:

- Service desk is strategically positioned and accommodates tasks that are typically "off-desk" thereby improving staff efficiency
- Basement space, which cannot be easily used for patron services, is used for storage
- The majority of the public spaces have the opportunity for effective daylight from 3 sides of the rooms, the main reading room actually has light from 4 sides, plus the skylight
- Windows have been improved by replacement with thermally efficient units

Areas for Potential Improvement

- There could be clear line-of-sight from the staff workroom to the service desk.
- Workroom is small and does not have desk space for each full time librarian
- Children's librarian could have dedicated space to work other than at service desk
- Additional storage would be useful, especially on the main floor and for children's services
- HVAC systems can be replaced with ones that are more effective and more energy efficient while improving indoor air quality
- Lighting can be more energy efficient and reduce the lighting power density while providing better light quality
- Daylight harvesting can be more efficient - once the shades have been drawn to block unwanted glare or heat gain, they have been left down preventing effective daylight penetration
- Daylight sensors can be integrated to automatically dim electric lighting when adequate daylight is available

- Task lighting at tables would provide better patron control and more effective light than lighting from a high ceiling
- Enhanced thermal insulation can be achieved at the roof (although not in the walls)
- Water efficient plumbing fixtures can be installed throughout
- A hazardous materials survey and any required abatement can be completed

8. FUN

Key Elements for Faneuil Branch: Connect community with “edutainment” collections and activities as well as traditional recreational reading. Become a destination place in the community for cultural activities.

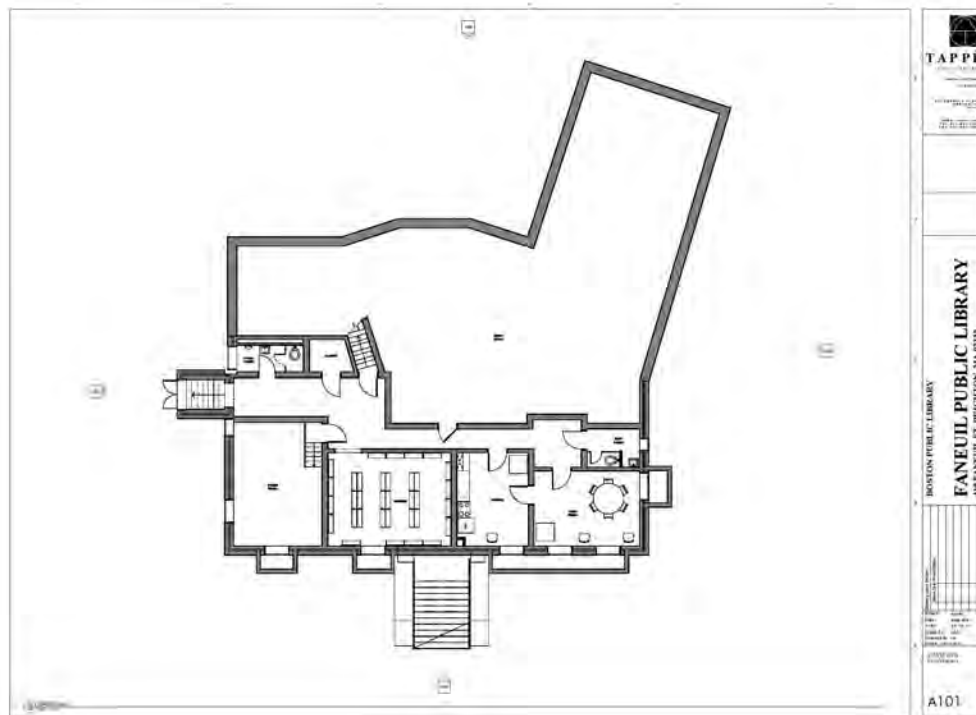
Areas of Relative Success:

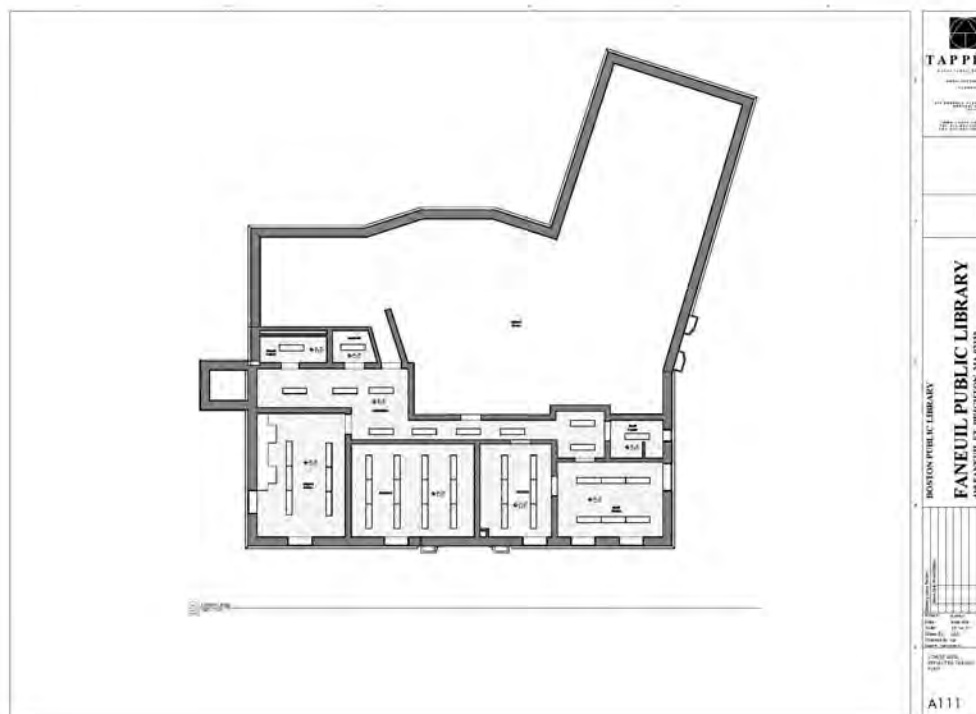
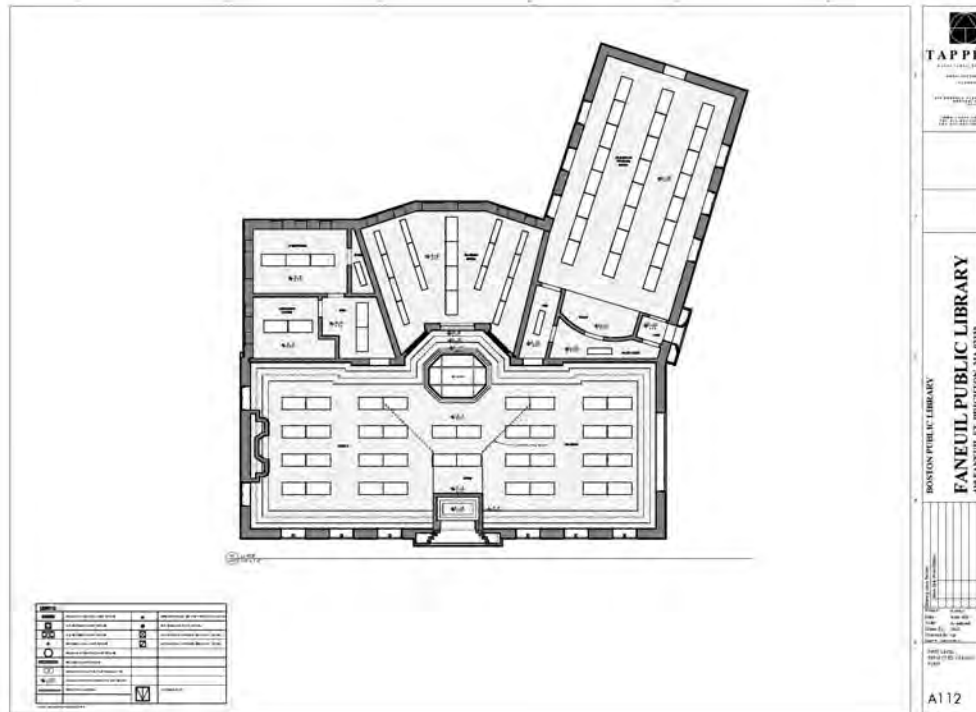
- The Art Deco character of the building makes it a uniquely attractive destination place in the community
- Programs for children are well attended

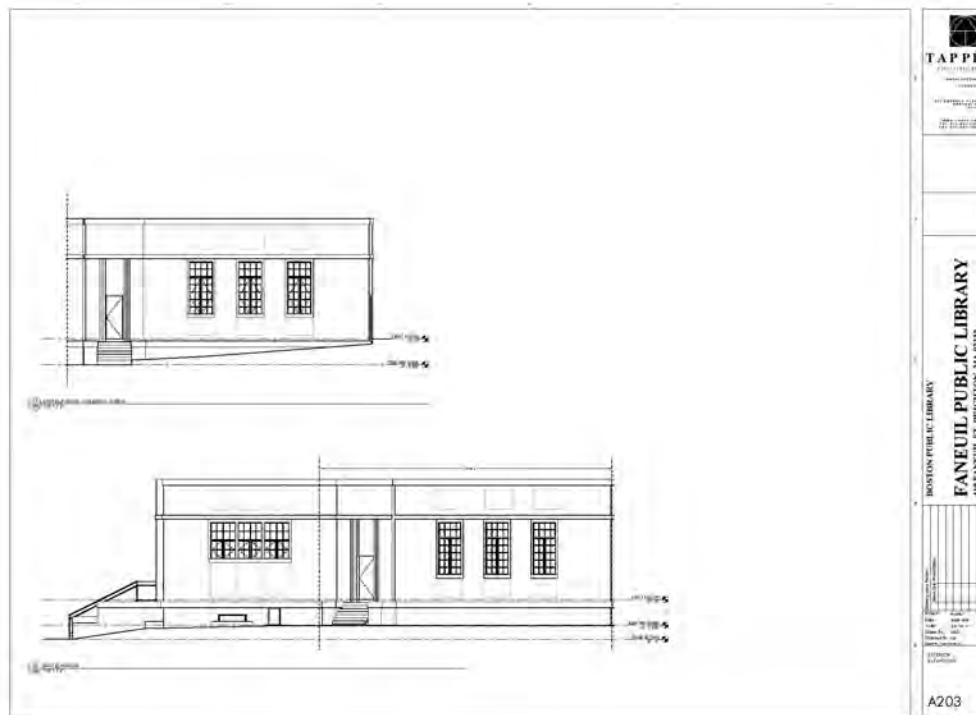
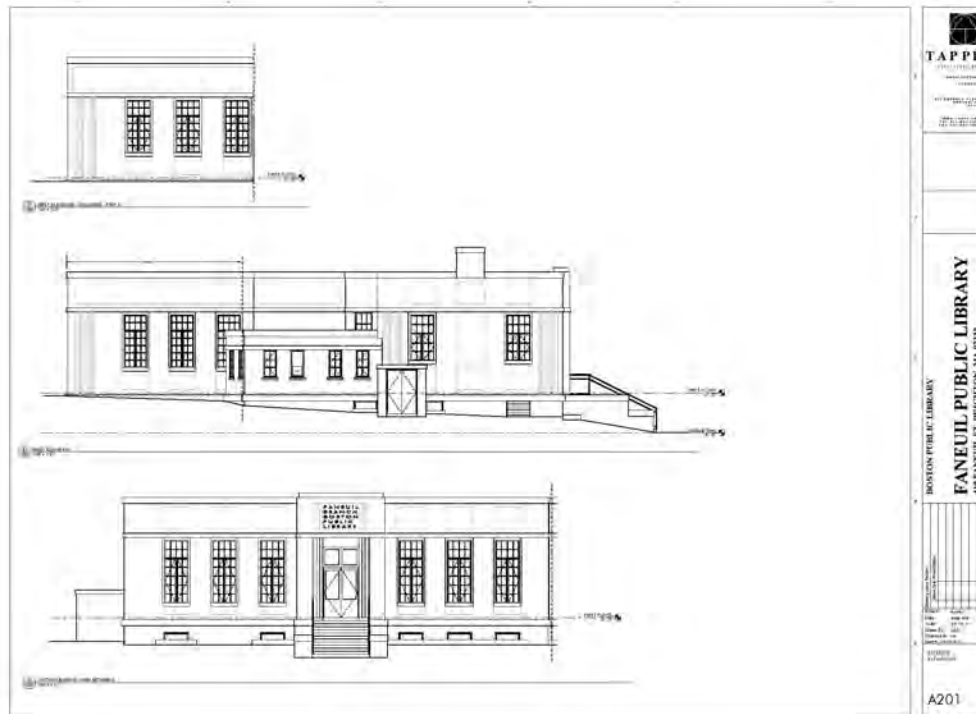
Areas for Potential Improvement

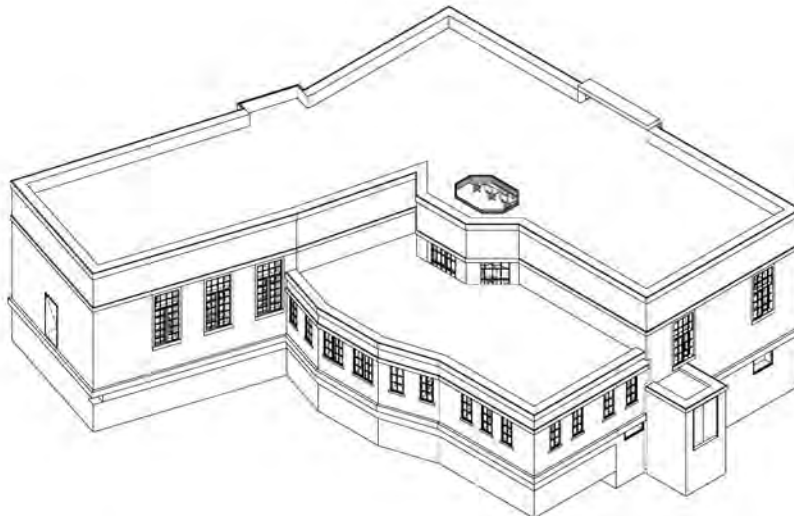
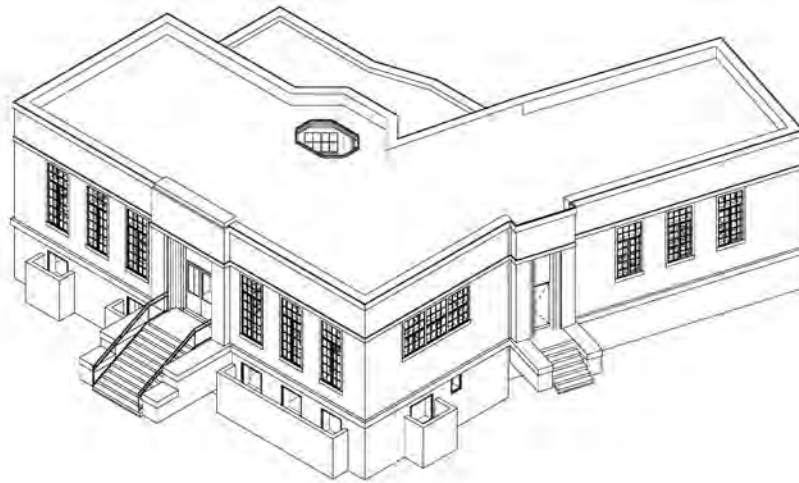
- Improved space for adult, teen, & children’s events and programs
- Improved space and equipment for cultural events
- Improved space for exhibits of library collections and activities

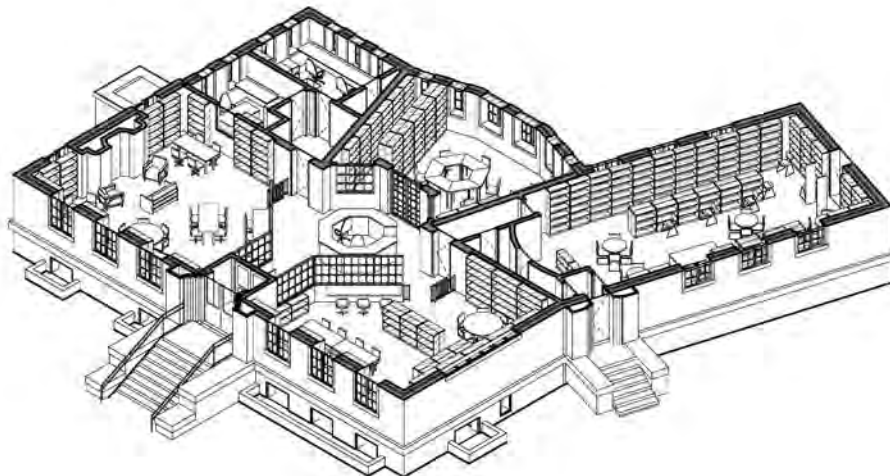
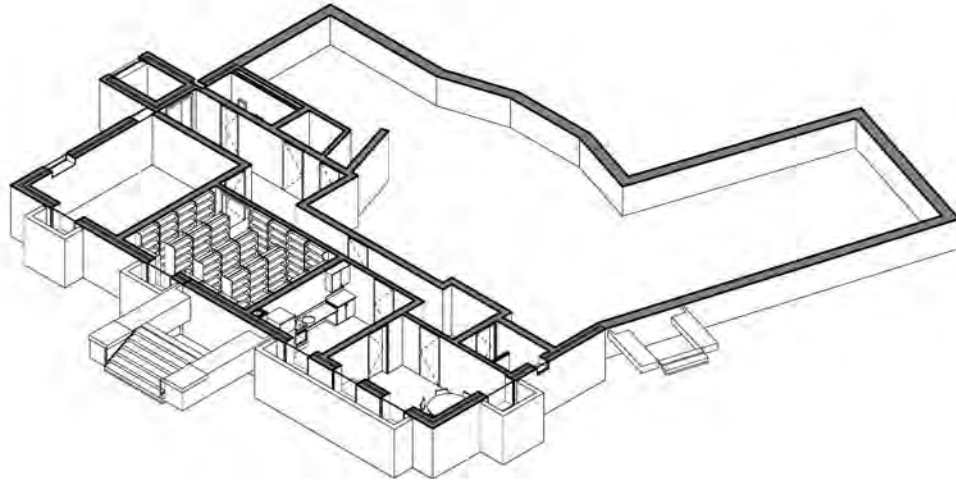
DRAWINGS











APPENDIX - MEP/FP REPORT

ROOME & GUARRACINO, LLC

Consulting Structural Engineers

48 Grove Street Somerville, MA 02144

Tel: 617.628.1700 Fax: 617.628.1711

October 23, 2014 (*Revised 10/29/14*)

Mr. Jeff Hoover, Principal
Tappe Architects,
6 Edgerly Place
Boston, MA 02116

Reference: Faneuil Public Library
 419 Faneuil St, Brighton, MA

Dear Jeff:

This letter reports our finding regarding the structural existing conditions and a renovation feasibility study for the above referenced building. Our review is based on a set of in-progress architectural drawings, provided to us by your office, and our on-site structural field observations. Field observations were limited to visual surface observations of architectural exposed finishes, no holes were cut into the building finishes to verify hidden structure. Testing has not been performed to determine the structure's material condition.

The Faneuil Library building is one story, plus partial basement & partial crawl space. The building is constructed of concrete frames and slabs, with masonry bearing walls and piers. The lateral force resisting system is unreinforced masonry bearing walls and masonry infill walls between concrete frame elements.

The current usage of the main floor is for library stack rooms, reading rooms, and offices. The basement level is used for storage, utilities, restrooms, and staff rooms. The balance of the basement is a crawl space of about four feet in height, and with dirt floor.

We understand the primary structural features of the proposed project scope to consist of the following:

1. A horizontal addition increasing building footprint.
2. An elevator for ADA accessibility to the Basement Level.
3. Main Level bathroom(s).
4. Additional egress / stairs

I. Existing Building Structural Conditions

The basement and crawl space was dry. Minimal signs of water intrusion into the building were observed, such as at the skylight above the circulation desk, which might be due to glass condensation as opposed to actual roof leaks. We did not observe structure or masonry damaged at lintels over windows, however the majority of that structure is hidden behind finishes. If damage were suspected, then the finishes could be removed for inspection.

The walls and floors do not exhibit significant cracking, nor other signs of differential foundation settlement such as unintended sloping surfaces, therefore the foundations appear to be performing well. Based on current floor usage, the floor design live loading would be offices(50psf), library reading rooms(60psf), or for Library stack rooms(150psf). The design of the existing concrete beams and slabs cannot be analyzed without the original construction drawings indicating the steel reinforcing bars hidden within. We did not observe signs of structural distress or unusual damage at the Faneuil Public Library, based on such observation and existing building codes, the current floor usage would be permitted to remain.

Work altering existing structural elements such as the re-arrangement of or adding new openings in existing masonry partitions, new floor openings in the existing Main Level slab, and cutting of existing header beams are recommended to be minimized. Individually such work may only require local reinforcing of nearby existing framing or new foundations below new posts; however, depending on the extent of tributary areas supported by altered structural elements a full IBC Wind & Seismic analysis of the existing structure may be triggered by the Existing Building Code.

II. Potential Addition

We understand if an addition is constructed, then it will be a one story plus basement horizontal addition. The addition will be required to comply with building codes for new construction. If seismic expansion joints are provided between the new addition and the existing structure, then the addition itself would not trigger any wind or seismic upgrades to the existing building. However, a structurally connected addition to an existing building, might trigger wind and seismic upgrades to the existing building. The actual code interpretation will depend on the code *compliance methods* selected by the design team after performing an overall cost-benefit analysis.

The structural framing for an addition could be concrete on metal deck floor and with a metal deck roof. The basement walls would be concrete walls and the foundation design and construction would be as recommended by a geotechnical engineer, in the employ of the building owner.

A significant foundation consideration will be selecting the location of the elevator relative to any nearby existing foundations. If not located several feet from existing foundations, then the new elevator pit will likely undermine the soil supporting nearby existing foundations, requiring those existing foundations to be underpinned. Fortunately, the existing boiler room slab and its foundations are already about 4'-0" lower than the typical basement slab elevation, therefore an adjacent elevator pit 4'-0" deeper than the typical basement slab elevation would very likely not undermine the boiler room foundations.

The lateral force resisting system for a structurally separated addition (with expansion joints) could be any one of many systems permitted in Massachusetts, including steel braced frames, steel moment frames or shear-walls systems such as reinforced masonry. If the addition is not separated from the existing building with expansion joints, then the addition may be restricted or prohibited from using less stiff lateral systems such as steel moment frames or plywood shear-walls.

III. Summary

This letter report addresses only those structural conditions referred to above. Structural problems may be concealed below grade, hidden behind finishes or not indicated on existing drawings. Although care has been taken in the preparation of this structural existing conditions and renovation feasibility study, no representation regarding latent or concealed defects, which may exist, is made, and authority on code requirements and interpretation rests with the building official.

In general, our findings indicate the existing structure to be in relatively good condition, and suitable to undergo a renovation and/or addition project. Expansion joint placement is expected to greatly diminish the potential lateral system upgrade scope. Careful selection of the elevator pit location could avoid the considerable expense of underpinning shallower nearby existing foundations.

Should you have any questions or require further assistance, please feel free to call me.

Very Truly Yours,
ROOME & GUARRACINO, LLC

Siegmar Knebl Jr., P.E.
Senior Engineer

APPENDIX - STRUCTURAL REPORT

**MEP/FP Systems Existing Conditions Report
and
Recommendations
(DRAFT)**

**Faneuil Branch Library
419 Faneuil Street
Brighton, MA 02135**

August 13, 2014
(Revised 12/9/2014)

Prepared by:



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HVAC

Existing Conditions

1. The building is currently occupied. Heating is provided by a gas-fired Burnham low pressure steam boiler located in the basement boiler room. The steam boiler has an output capacity of 1,342 MBH. Steam is piped to steam radiators and fin-tubes along the perimeters of the building to provide heating. Steam condensate is piped back to the condensate receiver (Hoffman Model 100VBES-B) and condensate pump located in the basement boiler room. The condensate pump pumps the condensate back to the boiler. The boiler was installed in 2001, and it is in fair condition. The original condensate pump was a duplex. However, only one pump is in place. The condensate receiver and pump seems to be in fair conditions.



The steam condensate receiver and the condensate pipes and accessories are not insulated.

The boiler room is vented via a vertical duct placed behind a louver on the exterior wall. There is no plenum behind the louver, nor any dampers to close off the louver or the ventilation duct when the boiler is not running.

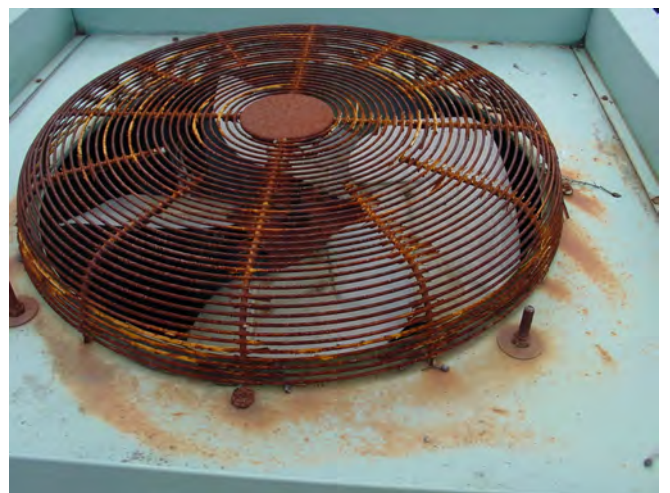


Perimeter steam radiators and fin-tubes are typically located under the windows. Some are blocked by book stacks or other furniture, negatively affecting their heating function. There are also radiators mounted at the middle height of a wall.



2. There are no central ventilation and air-conditioning systems to serve the entire building. In the two reading rooms at the front of the library on the first floor, there is a floor mount split type air-conditioning unit in each room. The condensing units for these two A/C units are located on the low roof. There are no dates on the A/C units. However, the

units look old. They are believed to have been installed during the 1989 renovation. The library staff reported that, while the units do provide adequate cooling, they are very noisy. The condensing units on the roof are rusted.



A/C units and book stacks are jammed together, not allowing proper clearance for good return airflow back to the units.

3. There are also a number of window-mount air-conditioners throughout the building providing local cooling.



4. Some steam and condensate pipes are running in the occupied space, making the space look primitive and awkward.



5. The original steam and condensate pipes have very old insulation on them. This insulation may contain asbestos.



6. There is no building management system or temperature control system in the building. Heating and cooling are controlled by local thermostats.
7. Both the heating and cooling systems are outdated and not energy efficient. The steam heating system, in particular, does not allow good temperature control. The boiler is not of high energy efficiency type. Lacking a building management system, the performance of the systems cannot be easily monitored.

Recommendations

For a major renovation of the building, we would recommend an entire new heating, ventilation and air-conditioning system using the high efficiency equipment, systems and technology available on the market, with a state-of-the-art direct digital control system to control and monitor the building systems function and performance.

1. A heat recovery type Variable Refrigerant Flow (VRF) heat pump system to be installed in the building to provide heating and cooling. The total tonnage of the VRF system will be based on the proposed new building with new additions, if any. With no new additions, the nominal tonnage of the VRF system will be about 20 tons.
2. The VRF systems will provide adequate number of thermal zones with their own thermostat control. The distributed indoor AH units will minimize the amount of ductwork distribution in the building, making it more practical to fit in the renovated existing structure.

3. The outdoor condensing units (ACCU's) will be mounted on the low roof.
4. An Energy Recovery Ventilation (ERV) system shall be installed to provide outside air for ventilation, and meanwhile exhaust the toilet rooms, mechanical and electrical rooms and certain storage rooms. The capacity of the ERV will be based on the proposed building size and programs. The pretreated outside air will be ducted directly to the indoor units of the VRF system.
5. Electric cabinet unit heaters will be installed at the entrance vestibules of the building to provide heating during the heating season.
6. Alternate HVAC system: In lieu of a VRF system for both heating and cooling of the building, a four-pipe fan coil system shall be installed for heating and cooling. The fan coil units (FCU) will be floor mounted under the windows along the perimeters of the building. A gas-fired condensing hot water boiler system shall be installed to produce hot water for heating in the FCU's. Two boilers, each about 500 MBH (without new addition), shall be installed to provide redundancy. Two (2) distribution hot water pumps, one running and one standby, shall be installed. The pumps shall be equipped with variable speed drives. Expansion tank and air separator and other accessories shall be installed for the hot water pumping system. An air-cooled chiller shall be installed on the roof to produce chilled water for cooling in the FCU. Without any new additions, the chiller will be about 20 tons. Two (2) chilled water pumps, one running and one standby, shall be installed in the same mechanical room as the boiler system. A 300-gallon chilled water buffer tank, along with other accessories such as expansion tanks and air separators, shall be installed for the chilled water pumping system. An energy recovery ventilator, equipped with a hot water coil and chilled water coil, shall be installed to provide ventilation air to the building. Treated outside air shall be ducted to the individual occupied zones directly. Hot water cabinet unit heaters shall be installed in the entrance vestibules of the building to provide heating during the heating season. Equipment sizes will be based on the size and programs of the proposed renovated building with new addition, if applicable.
7. A web-based Direct Digital Control (DDC) Building Management System (BMS) shall be installed to control and monitor the systems. The BMS will interface with manufacturer provided DDC interfaces of the ERV's and the VRF systems, allowing for remote control, monitoring and trouble-shooting.

Electrical

Existing Conditions

Normal Power System

The incoming electric service comes from an existing utility pole located. The utility company for this building is NSTAR. There are two existing services for this building. The first existing service is a 120/208V, 3-phase, 4-wire, 225A service feeding only mechanical equipment. The second existing service is 120/240V, 1-phase, 3-wire, 200A feeding the remainder of the Library. Both services run overhead from the utility pole to the basement of the library. The service's enter the building underground and terminate in a two panelboards. There are two existing NSTAR utility meters located in the basement next to the main electrical equipment. Power is distributed throughout the building from these panelboards located in the basement of the building. The main electrical equipment is located within the existing corridor in the basement.

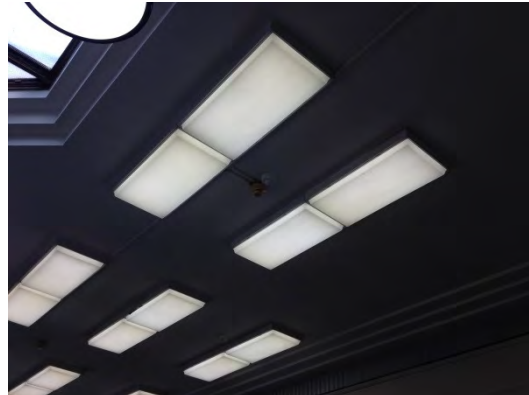


Lighting Systems

The majority of the lighting within the facility is fluorescent troffers. There are several incandescent fixtures located throughout the library. The lighting fixtures and control systems are not in compliance with the latest energy codes.

Emergency lighting is accomplished via battery units either in combination with exit signs or by remote mounted lighting heads located throughout the facility. It does not appear that there is adequate emergency lighting within the facility to meet the latest codes.

Exit signs are located throughout the facility and are in poor condition. There is not proper exit sign coverage for this facility.



Fire Alarm Systems

The existing fire alarm system a Federal Pacific fire alarm system installed in 1991. There are smoke detectors, pull stations and horn/strobe devices located throughout the library. The fire alarm is in fair condition and should be upgraded to meet the latest Fire Alarm codes.



Recommendations

Utility Service

Provide a single new 208Y/120V, 3-phase, 4-wire, 400A service from the existing utility pole to the library. The new service equipment shall be located within a new electrical room located in the basement.

Electrical Distribution

The main building distribution panel will be provided at 400A, 208Y/120V, 3-phase, to serve the building. Final sizing will be based on prescribed load calculation per Massachusetts Electrical Code when equipment data becomes available during the design phase.

Additional electrical distribution panels and panelboards will be provided within the main electrical room to feed all mechanical equipment, lighting, and misc. power throughout the library.

All office areas will need to be equipped with 50% of the outlets being automatically switched to meet the new energy codes.

Lighting and Branch Wiring

Lighting

General lighting is to be provided by either T-8 fluorescent fixtures or LED lighting using either recessed indirect or suspended direct/indirect light fixtures. LED exit signs are to be provided as required identifying the path of egress from the building. All new (4 foot T8) lamp and ballast lighting systems shall meet or exceed the Consortium for Energy Efficiency's (CEE) high performance T8 specification.

Lighting power density shall meet 0.9 W/ft² for office buildings on a whole building approach to further improve mandated energy performance.

Emergency Lighting and Exit Signs

Emergency lighting and illuminated exit signs will be provided in all means of egress, including on exterior of the building. All emergency lighting will be via new battery units located throughout the facility or via new emergency ballasts located within the certain fixtures. All new exit signs will be provided with batteries.

Lighting Control

In general, occupancy-type sensors with automatic 'on/off' controls shall be provided throughout the library. Manual override switches will be provided for every space that has an occupancy sensor control.

In areas where daylight is expected to infiltrate interior space, an intelligent daylight response lighting control system will be provided to automatically dim perimeter lighting in the day-lit zone via continuous dimming or by multi-level stepped switching. Localized override controls should be provided in areas with auto-off ability based on time or occupancy.

Fire Alarm System

A new addressable fire alarm system will be installed. The fire alarm system shall include but not be limited to, the following:

- Manual Fire Alarm pull-stations.
- Self-adjusting, self-diagnostic intelligent fire alarm smoke and heat detectors in storage areas, and other areas required by code.
- ADA/MAAB-compliant audio/visual and visual devices.
- Fire alarm duct smoke detectors for mechanical equipment shut-downs.

- Supervisory of fire detection and fire protection system.
- Fire Alarm should be tied to Boston Fire Department via City Master Box.

Plumbing

Existing Conditions

1. Existing Sanitary, Vent and Water piping is visibly aged and appeared to be in fair condition. The existing 4" Sanitary piping is located just above the basement floor slab, where the piping exits the building.



2. Existing Incoming Domestic Water piping is 3/4" with a 5/8" water meter and remote reader. Remote reader is located on the exterior of the building.



3. Wall hydrants for a hose connection are located in multiple locations around the exterior of the building.

4. Existing basement is equipped with a sump pit and pump. The condition and age of the sump pump is unknown.
5. The building is equipped with a 2" Natural Gas service with regulator and meter, located on the exterior of the building. Gas train vents run from existing boiler, up to the basement ceiling and out the side of the building through an existing window louver. There appears to be a secondary natural gas service, with a meter located within the basement. The current use of this service is unknown. It is assumed this service is no longer in service.
6. The building is equipped with an existing electric water heater and recirculation pump. The water heater supplies hot water to all kitchen/pantry sinks and toilet room lavatories. The existing water heater appeared to be new and installed within the past four years.
7. The existing toilet room fixtures are outdated and in poor condition.
8. The building is equipped with existing roof drains. The condition of the roof drains and associated piping is unknown as this was not accessible during the time of the site visit.



9. The existing piping insulation is old and likely contains asbestos

Recommendations

1. Remove all existing piping and insulation and replace with new. Consult with an asbestos abatement specialist to remove all asbestos safely.
2. Remove and replace existing wall hydrants with new frost proof vacuum breaker type hydrants.

3. Existing underground sanitary piping should be professionally scoped with camera and recorder to determine the condition of the piping is in useable condition or if piping should be replaced with new. Replace with new underground service if determined piping is not usable.
4. Remove and replace existing domestic water service with new larger service as required. If building fixture count, fixture types and usage is to remain as currently exists, existing piping to be inspected and reused if determined piping is in useable condition.
5. Existing gas service may need to be upsized, pending on further development of the HVAC, plumbing and any potential emergency generator systems. In addition, investigate the secondary gas meter and piping to determine if system is still operational or has been taken out of service. Coordinate with gas company as required. Remove any gas piping not in service.
6. Remove and replace existing gas train vents, provide additional as needed for new mechanical equipment.
7. Remove and replace existing sump pump with new duplex sump pump, basin and basin cover.
8. Reuse existing water heater and recirculation pump with new. Provide breakout cost to provide new water heater and recirculation pump to match existing.

Fire Protection

Existing Conditions

1. Per structural engineer's report, the existing building is constructed of concrete frames and slabs with masonry bearing walls and piers. The building is not equipped with a sprinkler system.

Recommendations

1. Provide sprinkler protection above and below ceilings in addition to all combustible concealed spaces. Any attic spaces to be fully sprinklered.
2. If attic cannot be heated, a dry sprinkler system will be required for sprinklers at high ceiling areas or areas where potential for freezing exists, to avoid any potential for pipes freezing. A wet sprinkler system may be utilized for the lower floors where piping is to be installed within heated spaces.
3. A hydrant flow test is required to be performed by the City, or recent test done by the City within the last 12 months shall be provided. It is assumed a 6" to 8" Fire Service will

be required to accommodate the flow/pressure requirements of this building. We do not anticipate the need for a fire pump; however, we do anticipate larger pipe sizes for mains and branches. Calculations will need to be performed to determine if city water supply can satisfy the sprinkler demand.

4. A location for a new Fire Service will need to be determined during design phase.

APPENDIX – PATRON SURVEY



HELP US OUT! - Faneuil Branch Patron Survey

THE BOSTON PUBLIC LIBRARY

<https://www.surveymonkey.com/s/FaneuilBranch>

SURVEY CLOSES 10/18/14

Employing its background of more than 30 years of experience in library planning and design, Tappé Architects, Inc. is working with the City of Boston and the Boston Public Library to better understand **the needs of the users of the Faneuil Branch**.

This survey is specifically focused on the potential improvements to the **Faneuil Branch** of the Boston Public Library and how it can better serve its neighborhood.

What are some of the things you might be able to do at an updated Faneuil Branch?

All ages will **find traditional information** in books, audio/visual material, magazines, **access digital information**, **borrow** material and **take classes**. Students of all ages can learn to **improve skills** with technology, **practice** a language, or **listen** to a speaker. Kids can **hear** a story, **read**, **learn** and **have fun**. Teens will meet each other, **do homework**, **collaborate** and **talk**. Students of all ages will be able to **study** alone or in groups. Everyone can be studious or **be creative** or **relax** in a comfortable chair with a good book, a magazine or **use a computer**.

You can help us make the Faneuil Branch become the best it can be, by answering a few questions.

Yes

No

Prior to today, have you visited a library (in the Boston Public Library system or elsewhere) in the past year?

- a. If Yes, How often did you go to a library? Would you say...
- ☐ more than 3 times per month ☐ less than once a month
- ☐ about 2 or 3 times a month
- ☐ about once a month
- b. How long do you typically stay?
- ☐ less than 1hr ☐ btwn 1hr & 2hrs ☐ btwn 2hrs & 4hrs ☐ more than 4 hrs
- c. Which library did you visit?
- | | | |
|--|--|--|
| <input type="checkbox"/> Central Library | <input type="checkbox"/> Faneuil | <input type="checkbox"/> Parker Hill |
| <input type="checkbox"/> Adams Street | <input type="checkbox"/> Fields Corner | <input type="checkbox"/> Roslindale |
| <input type="checkbox"/> Brighton | <input type="checkbox"/> Grove Hall | <input type="checkbox"/> South Boston |
| <input type="checkbox"/> Charlestown | <input type="checkbox"/> Honan-Alston | <input type="checkbox"/> South End |
| <input type="checkbox"/> Codman Square | <input type="checkbox"/> Hyde Park | <input type="checkbox"/> Uphams Corner |
| <input type="checkbox"/> Connolly | <input type="checkbox"/> Jamaica Plain | <input type="checkbox"/> West End |
| <input type="checkbox"/> Dudley | <input type="checkbox"/> Lower Mills | <input type="checkbox"/> West Roxbury |
| <input type="checkbox"/> East Boston | <input type="checkbox"/> Mattapan | |
| <input type="checkbox"/> Egleston Square | <input type="checkbox"/> North End | |

- ☐ If you visited a Boston Public Library Branch other than Faneuil Branch, why?

- ☐ If you visited a library other than a Boston Public Library, which one and why?



<https://www.surveymonkey.com/s/FaneuilBranch>

What kinds of spaces would you like to see more of in an improved Faneuil Branch? (pick up to 4)

- ☐ Children's room
 - ☐ Space for children's story times & programs
 - ☐ Special area for preschool age children & their parents
 - ☐ Teen Space
 - ☐ Library computers I can use
 - ☐ Space for using my own technology (e.g. laptops, tablets)
 - ☐ Meeting Rooms for community groups
 - ☐ Informal meeting and networking places
 - ☐ Other, please specify _____
 - ☐ Spaces for individual study
 - ☐ Consulting/Tutoring rooms for 2 people
 - ☐ Group collaboration rooms (for 4 or more)
 - ☐ Quiet reading room
 - ☐ Variety of comfortable seating places
 - ☐ Collections Spaces (books, audio/video, magazines)
 - ☐ Listening/viewing stations
 - ☐ Outdoor reading area
 - ☐ Gallery/exhibition space

What Works? – What Doesn't? – What's Missing?

What features/services of the current Faneuil Branch Library do you feel should be **retained** in a renovated Library?

1 _____
2 _____

What shortcomings of the current Faneuil Branch Library ought to be **avoided** in renovated Library?

1 _____
2 _____

Relative to library spaces, can you identify **initiatives or innovations** you have seen/heard of/read about in other libraries that ought to be considered for an improved Faneuil Branch Library?

1 _____
2 _____

Listed below are some of the reasons why people use the public library. For each reason we'd like you to tell us if that is why you use the library. I USE THE LIBRARY...

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- d. to find information that I need
- b. to bring children so that they can do school work
- c. to bring children so that they borrow materials
- d. to bring children to library programs
- e. to read newspapers and magazines (print or digital)
- f. to browse and borrow materials
- g. to do research for my job or my business
- h. to study or to do research for school papers and projects
- i. to do research for personal projects that are not for school or work
- j. to attend library programs and exhibits designed for adults
- k. as a place to go to, to sit quietly and read, or to be around other people
- l. to use the library's meeting room
- m. to use a library computer to access digital information for work, research, or enjoyment
- n. to use free wireless/wi-fi
- o. to learn how to use technology or take a computer class
- p. to attend literacy or other classes
- q. Other, please specify



HELP US OUT! - Faneuil Branch Patron Survey

THE BOSTON PUBLIC LIBRARY

<https://www.surveymonkey.com/s/FaneuilBranch>

r. Of all the reasons you use the library, which one is the single most important? _____ ("a" thru "p")

When using a computer in the library, do you primarily access library holdings or information on the internet?

☐ Library Holdings ☐ Internet ☐ Both equally ☐ Unsure

How do you typically travel to the Library?

☐ Drive ☐ Walk ☐ Bus ☐ Bike ☐ Other

Very Important
Important
Unimportant

As the Boston Public Library plans Faneuil Branch improvements, it needs to understand your needs so that it can prioritize its services. Identify how important you think the services below will be to you and your household in the future.

Very Important
Important
Unimportant

- Providing preschool children with picture books, story hours, and learning materials.
- Providing students, both children and adults, with the books, magazines, Internet access, and other services they need to do their school work.
- Providing information needed to answer personal & household questions.
This could include, for example, information about how to fix things around the house, hobbies, health issues, or the quality and prices of home appliances.
- Providing specialized collections of books, magazines & computerized information needed for research or write books.
- Providing business information to businesses in your community.
This could include, for example, information about sales or marketing, worker safety, environmental protection, or setting up a new business.
- Serving as the hub of the community - a place where organizations or clubs could hold meetings or present concerts and lectures.
- Providing people with information about their community.
This could include, for example, information about local government, issues or laws about local community services such as health clinics or daycare.
- Providing adults who are NOT students with the materials and services they need to better themselves or to learn a new skill.
- Providing a comfortable place to go when they need someplace outside of their house or apartment to read or think or work.

Yes
No

General Questions – Patron Demographics

- Are you currently a student attending school or taking classes? _____
- What language do you speak at home? _____
- How many children age 17 and under are living in your household? _____
- How many people over the age of 65 are living in your household? _____
- Gender
☐ Female ☐ Male
- Age Range
☐ 0 – 19 ☐ 20 – 39 ☐ 40 – 55 ☐ 56 – 70 ☐ Over 70

Thanks for your input! You can also participate in the survey on-line at:
<https://www.surveymonkey.com/s/FaneuilBranch>