

SIXTEEN ACRES BRANCH LIBRARY

1187 Parker Street
Springfield, MA 01129

FACILITIES REPORT

12/2/96

BUILT: 1966
SQUARE FOOTAGE: 6,331

**CAOLO & BIENIEK
ASSOCIATES, INC.**
435 Cottage Street
Springfield, MA 01104



FIG. 1

TOWSLEY ASSOCIATES, INC.
32 Knollwood Drive
East Longmeadow, MA 01028

E. M. SULLIVAN CO., INC.
2 Weston Street
Wilbraham, MA 01095

UNIVERSAL ACCESSIBILITY BARRIERS

(Accessibility requirements are based on the Americans With Disabilities Act & 521 CMR Architectural Access Board)

SITE: ADA 4.1.2 Two existing accessible spaces and isles need to be indicated by striping. The existing sign poles indicating the spaces need to be straightened.

RAMPS: ADA 4.8 The existing ramp at the front entrance is not accessible because it is too steep. A new 5' 0"± ramp is needed at the front entrance. The side egresses from building should also have 5' 0"± ramps from the landings to provide accessible means of egress. See figure 2.



FIG. 2

DOORS: ADA 4.13.7 The interior and exterior vestibule doors consist of two 30" doors which do not provide a 36" clear opening. All doorways into toilet rooms, offices & work areas needed to be enlarged to 36". See figure 2.
ADA 4.13.10 The interior and exterior vestibule doors require new door closers/openers to meet the 5 pound push/pull force requirements.

ADA 4.13.9 All doors in the building require accessible hardware including handles, levers, closers and locks.

COOLERS: ADA 4.15 An inaccessible drinking fountain is located in the entry vestibule. The fountain is correctly located in an alcove but the unit is not manufactured to provide the proper knee space at when installed at 36" above the finish floor.

TOILETS: ADA 4.16 No accessible toilet rooms exist in the building. Two public toilet rooms are located directly off the library space that are very limited in square footage and have no accessible fixtures. The existing doorways and space inside the ways are extremely limited due to the building structure and mechanical equipment. A private toilet room exists adjacent to the employee break room that is also too small with no accessible fixtures.

ALARMS: ADA 4.28 A security alarms exist in the work that requires an visual signal.

SIGNS ADA 4.3 No accessible signage exists in the building. Each room requires a sign with a written tactile description, grade 2 Braille description and accessible symbol.

SEATING: ADA 4.32 Computer tables are not the proper height and do not provide the required 27" knee space, however, these tables are adjustable. A minimum of 5% of all seating and tables are required to be accessible. Counters located in the work room are inaccessible because they are under 27" high.

COUNTER: ADA 4.32.4 The existing check-out counter does not provide a 30" high x 36" wide accessible area.



FIG. 3

CONTROLS: ADA 4.27 All controls, switches, dispensers, etc. are required to be no higher than 54" from the highest operable point to the floor. See figure 3. The following items do not comply:

- thermostat
- electrical panel
- fire extinguishers

STACKS: MASS 12.2.6 The existing book stacks are spaced 36" apart in most areas but have several books projecting into the aisle which does not provide the 36" minimum clearance required by code. Other areas have stacks that do not provide the minimum 36" clearance. Several book displays are also placed too close together not providing the 36" clearance.

- MAT:** MASS 25.4 The existing floor mats in the vestibule and library are required to be anchored to floor. The vestibule has a recessed slab for the installation of a floor mat, however the mat is not in place. This condition causes the thresholds at the doors to be too high for accessible access. A new mat at the proper size and thickness should be installed to make the entrance accessible.
- SINKS:** MASS 30.9 The existing sink in the work area is not accessible. The counter should be 34" high with a 30" wide open space under the sink that is 29" high. New fixtures are required that can be operated with a closed fist.
- KITCHEN:** MASS 32.3 Wall cabinets in the work room and break room need to be lowered to 51" from the bottom of the cabinets to the finish floor,
- MASS 45.1 A kitchenette unit is located in the employee break room which requires new accessible handles on the faucet. Existing wall mounted cup and paper towel dispensers also needed to be lowered to 54" above the finish floor. No accessible lockers exist in the bank of wall lockers in the kitchen area.
- CLOSET:** MASS 34.2 The existing closet in the employee work room is not accessible. The hanger pole should be a maximum of 54" above the finish floor.

ACCESSIBILITY COST ESTIMATE

SITE:	Accessible parking:	\$1,000.00
RAMPS:	New ramp at front entrance:	\$1,000.00
	Ramps at side egress:	\$1,500.00
DOORS:	Wider vestibule doors:	\$3,500.00
	New accessible hardware:	\$5,500.00
	Widen interior doors:	\$5,000.00
COOLERS:	New water cooler:	\$500.00
TOILETS:	Two accessible toilet rooms:	\$7,500.00
ALARMS:	See electrical section	\$1,000.00
SIGNS:	New signage throughout building:	\$500.00
SEATING:	New accessible tables & chairs:	\$500.00
COUNTER:	New accessible check-out counter:	\$1,500.00
CONTROLS:	Relocate existing controls:	\$500.00
STACKS:	Relocate stacks and displays:	\$1,250.00
MATS:	New recessed vestibule mat:	\$500.00
SINK:	New accessible sink in work room:	\$500.00
KITCHEN:	New Accessible fixtures:	\$300.00
CLOSET:	Lower existing closet pole and shelves:	\$250.00
	Total:	\$27,300.00

As a result of the required renovations to bring the entire building into code compliance, much of the existing program space (reading, book stack spaces, etc.) would be lost. For example, the existing public toilet rooms would require approximately 500 additional square feet of the existing program space to be renovated into accessible toilet rooms. Also, to provide the minimum clear access between all book stacks and to all computers, check-out counters and displays, an

additional 3,000 square feet would be required from the program space. We recommend a minimum 5,000 square foot addition to the building be constructed which would provide accessible program space throughout the building, accessible toilet rooms and additional space for much needed mechanical equipment up-dates. This addition would approximately cost \$850,000.00. The existing meeting room could also be renovated into approximately 750 square feet of accessible program space at a cost of \$50,000.00.

MAINTENANCE ITEMS

MECHANICAL: The existing mechanical room is very small in relationship to the size of the equipment. Insulation on several ducts is ripped or falling off and should be replaced.

EXTERIOR: The existing exterior trim consists of metal panels and one continuous wood band. The painted or stained wood trim is good condition but should be painted or covered with metal in the near future to prevent deterioration.

WINDOWS: The existing aluminum storefront windows and frames are in good condition except for the insulated panels. Several panels are broken and all of them are faded.

VINYL: Vinyl base around the interior is falling off the interior masonry walls. The vinyl base is a tripping hazard and should be reinstalled.

LEAKS: Several ceiling tiles are stained due to leaks throughout the building. These leaks could be from the plumbing systems but are probably roof failures indicated by the amount and locations of the stains. The access hatch to roof was locked at the time of the survey. see figure 4.

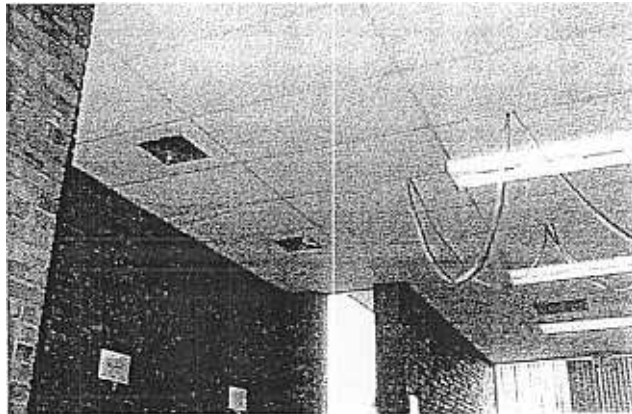


FIG. 4

WIRING: Several covers are missing at the junction boxes for the computer panels.

LIGHTING: All of the light fixtures covers are missing throughout the building. Also two of the four fluorescent bulbs have been removed from all of the light fixtures in the entire building. The fixture covers should be reinstalled to eliminate the lighting "bright spots" and provide a more consistent foot candle level throughout the library. See figure 4.

MASONRY: The interior & exterior masonry on the building is in good condition. A small amount of repointing is needed at the HVAC fan unit enclosures at the rear of the building. See figure 5.

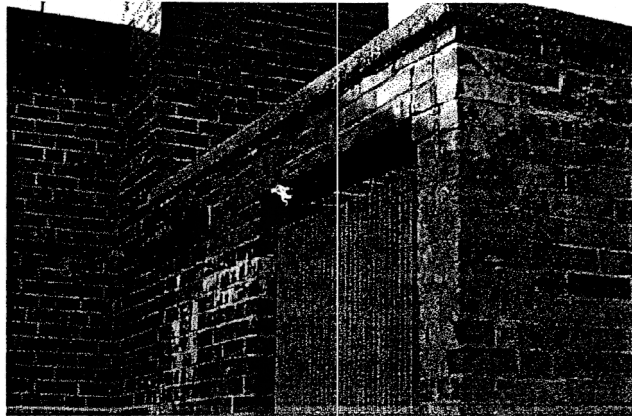


FIG. 5

MAINTENANCE COST ESTIMATE

MECHAN:	Replace insulation:	\$500.00
EXTERIOR:	Repaired & covered with metal trim	\$5,000.00
WINDOWS:	Replace insulated panels:	\$3,000.00
VINYL:	Replace vinyl base:	\$500.00
LEAKS:	Repair roof leaks:	\$2,500.00
WIRING:	Repair wiring:	\$500.00
LIGHTING:	Replace bulbs and fixture covers:	\$3,500.00
MASONRY:	Repair masonry:	\$750.00
	Total:	\$16,250.00

BUILDING CODE

(Building Code requirements are based on the Fifth Edition of the Massachusetts State Building Code 780 CMR)

ASBESTOS: The existing 8"x8" floor tile in the library may be asbestos tile and several pipes in the mechanical room appear to have asbestos insulation. These areas should be tested.

EXITS: Illuminated existed signs need to be installed at all the means of egress in the building.

BUILDING CODE CORRECTION COST ESTIMATE

EXITS:	Install illuminated exit signs:	\$750.00
	Total:	\$750.00

MECHANICAL ITEMS

HVAC SYSTEM

- A. The building is heated by a cast iron oil-fired boiler. An air handling unit located in the boiler room provides the heating, air conditioning, and ventilation requirements for the building. In the main Reading Room, air is delivered through below slab ductwork to floor registers to provide heating and cooling. In office spaces, the air is supplied through a duct system above the ceiling. The temperature control system for the boiler should be upgraded.

The boiler should be equipped with an outdoor reset control to control the boiler water temperature in relation to outside temperature. The control system for the air handling unit should be checked to determine if adequate outside air is provided when the building is occupied. A minimum of 15 CFM per person when the building is occupied is required. The electric baseboard radiation in the Lounge should be replaced with hot water baseboard with a separate zone valve and thermostat.

- B. Since a gas main is provided outside the boiler room, the present oil burner should be removed and a combination gas/oil burner installed so the library can take advantage of the least expensive fuel. Since the buried oil tank is 30 years old, consideration should be given to removing and replacing the tank. The new tanks ~~could be placed~~ above grade in an enclosure outside the building. The HVAC system has to be air balanced to insure adequate air is provided for ventilation.

PLUMBING SYSTEM

- A. A backflow preventer has to be installed in the cold water make up to the boiler (code violation).
- B. The tankless heater in the boiler should be discontinued so the boiler does not have to operate during the summer months. Electric point-of-use hot water heaters should be installed.
- C. A pressure reducing valve has to be installed at the water entrance if the pressure is above 80 psi (code violation).
- D. Pipe discharge of relief valve at tankless heater down to 12" from floor (code violation).

ENGINEER'S CONSTRUCTION COST ESTIMATE

A.	Upgrade temperature control system for boiler and air handling unit:	\$6,000.00
B.	Installation of combination gas/oil burner and related controls:	4,000.00
C.	Addition of hot water baseboard to replace electric heat in the lounge:	3,000.00
D.	Balance HVAC system:	2,500.00
E.	Removal of existing buried oil tank and installation of new above ground tanks, including containment enclosure:	10,000.00

F.	Installation of backflow preventer in cold water make up to boiler:	900.00
G.	Electric point-of-use hot water heaters:	1,500.00
H.	Gas piping to boiler:	1,800.00
I.	<u>New pressure reducing valve at water entrance:</u>	<u>1,000.00</u>
	TOTAL:	\$30,700.00

ELECTRICAL ITEMS

ELECTRICAL EQUIPMENT EVALUATION/CODE COMPLIANCE

- A. The electrical panels located in the boiler room and near the circulation desk are in violation of the Massachusetts Electric Code, Article 110-16. Three feet of clearance is required in front of electrical panels.

The panels in the boiler room should be relocated. The shelving in front of the panel near the circulation desk should be moved.

- B. The electrical service equipment should be replaced because it is in questionable condition and no UL approved replacement parts are available.

GENERAL ILLUMINATION

- A. The existing lighting in the stacks area are 2 x 4 surface mounted fixtures which have been retrofitted to contain 2-T8 energy saving fluorescent lamps. These fixtures are in poor condition and the lenses are missing. These should be replaced with energy efficient fluorescent 2 x 4 troffers and stack lights.
- B. In the main stack area perimeter and in the children's area, incandescent fixtures are used. These fixtures are not energy efficient, are seldom used, and can be eliminated.
- C. Exterior lighting consists of some HPS and some incandescent flood lighting. This lighting is adequate but incandescent lighting can be replaced for better energy efficiency.
- D. Wall mounted occupancy sensors are currently in use in the office areas and rest rooms. These should be replaced with ceiling mounted units to eliminate problems with obstructions.
- E. Compact fluorescent fixtures are being used in the rest rooms. These fixtures are in good condition and can remain.
- F. Office and children's areas are retrofitted fluorescent fixtures which are either open or have damaged lenses. These should be replaced.
- G. Lighting should be switched from light switches, not from the panel.

FIRE ALARM SYSTEM

- A. This system does not meet Massachusetts Building Code requirements for use Group A-3. The number and location of pull stations, horns and detectors is not correct. The signaling devices should be audio/visual and should be voice

type. The rest rooms have no signaling devices. ADA requirements are not met for pull stations and audio/visual devices type and height.

We recommend a complete fire alarm system replacement with pull stations at every exit. Smoke and heat detectors shall be installed for sensing. Strobe lights and speakers for a taped message shall be installed for fire alarms as required by the building code.

EMERGENCY LIGHTING

Egress lighting is provided by emergency down lights at the three exits. This is insufficient to adequately provide 1 foot candle per square foot as required.

We recommend that the new fixtures described in item 2 should have emergency ballasts to provide proper emergency lighting levels. The exit signs should be replaced with LED type fixtures with battery backup and down light.

TELEPHONE SYSTEM

The existing telephone system should be modernized. Additional outlets are required in the office areas and circulation desk area for data.

ENGINEERING ESTIMATE

A. Service Equipment, Feeders and Panels	\$18,620.00
B. Lighting, Emergency Lights and Exit Signs	\$28,400.00
C. Fire Alarm System	\$14,250.00
D. Telephone System	\$10,700.00
E. Branch Circuit Wiring	\$16,840.00
Total	\$88,810.00

TOTAL COST FOR BUILDING IMPROVEMENTS

ACCESSIBLE RENOVATION COST INCLUDING ADDITION	\$919,800.00
MAINTENANCE RENOVATION COST	\$16,250.00
MECHANICAL RENOVATION COST	\$30,700.00
<u>ELECTRICAL RENOVATION COST</u>	<u>\$88,810.00</u>
TOTAL	\$1,055,560.00