

VIII. Interior Considerations

Ambience

The interior space should be welcoming with a sense of orientation and organization. There should be a light and airy feel to the building. The intimacy and charm of the present library should be balanced with supervisory considerations in the new building.

Flexible Space

Flexible space is necessary for present and future space management. The Library should be ready to face changing functions and priorities by maintaining as much flexibility as possible. The “warehouse” look, however, should be avoided. Cozy spaces may be created through arrangements of seating, shelving or display panels. All space should be utilized to the fullest possible extent. There should be adaptable spaces so that areas can accommodate overflow from other areas with little line of demarcation. The public should be encouraged to serve themselves through effective signage.

Integration of Art

The Library should be planned to incorporate original and recommended local art for the interior or exterior. Consideration should be given to art forms for both children and adults.

Supervision

Visual supervision of all reading and study areas by Library Staff at the Circulation Desk is a necessity. A clear view of multiple areas should be the goal. “Nooks” should seem private, but be easily seen by staff. Shelving should be arranged so that the aisles are easily supervised by staff. Separate rooms should have windows or glass panels to facilitate supervision.

Easily Maintained

The Hopkinton Public Library should be designed with easy maintenance in mind. Materials should be durable and of good quality. Wall coverings in high traffic areas should be made of washable material. Waxed finishes, brass and other materials needing polishing should be avoided. Material should be conducive to quiet and comfort in addition to being environmentally safe. Cleaning materials should be environmentally safe as well. A central vacuum system should be installed.

Energy Efficient

- Energy conservation and efficiency should take high priority in the choice of systems.
- Investigation should be done to look into a system to capture and recirculate heat generated by lighting fixtures and people in the building.
- Periodic energy audits should be undertaken to monitor conditions on HVAC and suggest ways to improve efficiency.
- Windows should be operable and of energy efficient glass in all parts of the building.
- UV rays should be screened out for protection of materials.
- Double doors, creating a vestibule, for the public entry should be constructed.

Environmentally Safe

The new facility should be designed to be as environmentally safe for both staff and patrons as possible. If the cost of a particular aspect of the design becomes prohibitive because it is environmentally friendly, the design problem should be reexamined to strike a balance between environmental friendliness and cost effectiveness.

Indoor air pollution should be eliminated or kept to an absolute minimum (below currently accepted standards or those which can be anticipated to be implemented in the future.) Measures to achieve these current standards should include but not be limited to the following:

- Natural, non-toxic, non-allergenic materials should be used throughout.
- No products using formaldehyde should be used.
- No fiberglass should be used in the HVAC system, especially not in ductwork.
- No fiberglass should be used in ceiling panels or anywhere else where humans may come in contact with it or where it may become airborne.
- No asbestos or asbestos-containing products should be used.
- Adhesives must be non-toxic. A low-emitting floor covering adhesive should be used.
- Floor coverings should be biodegradable and have low TVOC emissions.
- As few plastics as possible should be used to minimize emissions.
- Natural fibers should be used whenever possible.
- No sodium or mercury vapor lights should be used inside or out. No halogen lights should be used.
- A/C system and refrigerators should use lowest environmental risk refrigerants available.
- All wiring and equipment should be shielded to prevent radiation-related problems.
- HVAC system should be as noiseless as possible. There should be no aural indication that equipment is “running”.
- All sound (inside and out) should be controlled as much as possible.
- Water pipes (incoming and outgoing) should be of copper, not plastic, and no lead solder should be used.
- Exterior windows should open where feasible.
- There should be increased ventilation where photocopiers and other equipment are used.
- Radon testing should be done and if found, should be mitigated.
- All tests should meet Board of Health requirements.
- No pesticides, fungicides, herbicides, or non-organic fertilizers should be used.
- Ventilation (fresh air exchange rates) should meet or exceed currently accepted standards in order to ensure the health and safety of the public and staff - and to avoid “sick building” syndrome.
- Fumes and airborne particles emanating from construction materials or equipment shall be cleared from the building before occupancy.
- Fire extinguishers should use only environmentally friendly materials.
- The possibilities of minimizing the effects of storm, earthquake and disaster damage should be explored.

Live Load Considerations

The floor should have a live load capacity of 150 lb./sq.ft., and of 300 lb./sq. ft. in Closed Storage. If compact storage is contemplated for the future a live load of 300 lbs. is required.

Storage Areas

There should be plentiful storage areas throughout the building; in particular, Custodial Area, Children's Room, Circulation /Technical Services Room, Meeting Rooms, Staff Lounge, Kitchen.

The program will specify particular areas in Section X, but in general storage space for the following should be kept in mind:

- Custodial maintenance supplies
- Office supplies
- Book processing supplies
- Craft and program supplies (especially in Children's Room)
- Boxes for return of equipment in need of repair
- Sale books (storage and sorting area)
- Meeting room chairs, tables
- Catalogs, manuals, instructions
- Departmental files
- Administrative files
- Furniture, shelving, equipment and fixtures not in current use

Electronically Functional

The library building is not only a community center, but a site for people to access electronic information. Therefore, the Hopkinton Public Library building should be able to accommodate whatever the electronic needs of the future will be.

The following should be considered:

- Entire building should be wired to provide maximum flexibility in access to power. A structured wiring system in which the cabling will rarely need to be changed is preferred.
- There should be as few connections as possible between the wall plate and patch panel.
- Cellular decking/trench cable system in areas needing highest flexibility should be considered.
- Access floor system (computer floor) should be considered in computer areas.
- Conditioned power lines for computers, telephones and other sensitive equipment.
- Capacity for data and voice telephone lines, cable television lines, internal data cabling.
- Hollow spaces should be left in walls to accommodate future wiring.
- All desks, all furniture in work areas for the public and staff should have the capacity to be wired to accommodate power for telephone and other cabling.

- Terminal locations should have dual outlets: fourplex grounded and one data cable.
- Electrical plan should fit furniture placement and facilitate any future furniture placement.
- One is never more than 2 ½ feet away from power.
- Provide expandable space in public areas, near power, to later provide electronic information tools.
- All public work stations should be large enough to accommodate a computer and a printer; or there should be space for LAN equipment including a printer.
- Circulation and public service desks should be provided with power for computers and power for additional uses.
- Main door should be electronic for both entering and exiting the building, but operated manually from both sides of the door.

There should be electrical power and data cabling available for patrons' laptops in study and lounge areas. The program for specific areas will note equipment needed. Wiring for that equipment should be done during construction. There should also be provision for wireless technology.

Device Connectivity

Given the rapid pace of change in telecommunications and networking technology, the design team should propose suitable options for connecting computer and video devices that are available at the time of construction. The options will likely include high-speed data cable and a variety of wireless technologies. The intent is to allow maximum flexibility for using library-owned and patron devices, such as computers, throughout the library.

Telephone/Intercom System

There should be a telephone system with internal intercom and at least eight incoming lines (six voice, one fax, and one data) with the capacity to expand in the future. Locations for telephones and modems will be shown in the program for assignable areas. Wiring should be done during construction. Accommodations for cordless phones could be made, if budget permits.

Media

Secure space is required for the necessary storage of equipment such as overhead equipment, slide projector, public address system, screens, audio players, monitors, VCRs, DVD players, cameras, digital projection equipment and assistive technology devices for the handicapped.

Public space with power sources is necessary for display and for public playback equipment. Browsers for audio cassettes, CDs, videos, DVDs and software also require floor space in both children and adult areas.

ADA Compliant

All aspects of the facility should be fully accessible to the disabled, meeting or exceeding ADA Standards. Barrier-free design benefits all users by improving the overall safety and usability of the building.

The main entrance should be accessible with nearby handicapped parking available.

All aisles, service counters, carpeting, floor levels, stairs, handrails, signs, doors, security gates, fixed seating, rest rooms, water fountains, controls and operating mechanisms, safety alarms, public telephone, parking, etc. must comply with the ADA requirements.

The following are available for reference:

- *The Americans with Disabilities Act (ADA), Titles 3 and 4*, U.S. Department of Justice, 1992.
- Foos, Donald D. and Pack, Nancy C., *How Libraries Must Comply with the Americans with Disabilities Act (ADA)*, The Oryx Press, 1992.
- Massachusetts Architectural Access Board. *Regulations*. Boston: The Board, 1996.

Acoustics

Noise is a special concern in a public library building. Measures should be taken to eliminate or greatly minimize noise traveling from one open area to another. Carpeting, ceiling tile, design of building, furniture arrangement and other solutions should all be used to reduce noise. The Quiet Areas, Historical Room, the Reading Rooms and the Meeting Rooms will require special attention. (See individual areas for more detail.)

Lighting Requirements

- Natural light should be utilized whenever possible, but care should be taken in placement of computer screens. Daylight is desirable where people will sit. These areas should be sunny and pleasant.
- No sodium or mercury vapor lights should be used inside or out.
- Good quality fluorescent lights with UV sleeves and electronic ballasts should be used.
- Lighting may be attached to shelves in display areas.
- Lighting in all areas of the building, including book stacks and storage areas, should exceed accepted standards and should approximate the qualities of natural light as closely as possible.
- There should be generous exterior lighting on pathways, driveways, in all areas of the parking lot and around the building.
- A secure location should be chosen for the central lighting switch box convenient to staff at the Main Circulation Desk.

- It should be possible to turn off the lights in the building from one point near the entrance. There should also be an option to turn lights on and off selectively in different parts of the building. Daylight sensors should be used.
- There should be close coordination between lighting and function:
 - Large-type book areas require intense light, either natural, artificial or both.
 - A/V and computer areas require low, non-glaring lighting.
 - Stacks - high intensity, fixed lighting. (Specialist required.)
 - Seating areas - task lighting, attention paid to ambience and color.
 - Maintenance - functional, high intensity lighting.
 - Avoid mixed colors in any one type of lighting.
 - Lighting should be easily accessible to maintenance for changing lights and repairs.

Planners should compare the reflected ceiling plan with the furnishings layout to determine how effectively various user and work stations are lit. (Anders Dahlgren, *Planning the Small Public Library Building*. American Library Association, 1985.)

HVAC

The HVAC system should be driven by the design and should provide climate control for the benefit of books, electronic systems and people. Each requires different temperatures and humidity. A compromise condition should be decided upon and then changed infrequently. Fluctuating temperatures are damaging to paper. A stable temperature provided by an HVAC system will preserve the Library's books and periodicals.

- Designers should follow standards in the *American Society of Heating, Refrigerating and A/C Engineers (ASHRAE)* handbook for comfort. The ASHRAE new comfort zone is recommended for libraries.
- HVAC should be sized properly for the new facility.
- Zoned heating and cooling should be designed.
- The Historical Room will require humidity control as well as climate control.
- Ease of use should mark the operation of controls. Public thermostats should be able to be locked. Separate control of heating and A/C in the meeting rooms should be possible.
- HVAC should be on programmable 24-hour 365-day timers.
- No fiberglass should be used in HVAC system, especially not in ductwork.
- HVAC system should be as noiseless as possible; there should be no aural indication that equipment is "running".
- Refrigerants should have the least environmental risk.
- Instruments readable from inside to measure outside temperature and humidity should be available.
- All filters should be located for easy cleaning and replacement.

Security System

Security of all staff and patrons should have high priority in design:

- Layout of shelving should take into consideration lines of sight from staff work stations.

- Service desks should provide lines of sight throughout the building.
- All areas should be supervisable.
- Landscaping should keep staff security in mind, i.e., no high bushes close to entrances.
- Lighting which promotes security should be in all areas.
- Panic buttons should be installed on all public service desks.
- Alarms for emergencies such as heat failure, flooding, etc. should be installed.
- All outlets should be child-proof.
- A video security system should be installed.

Provision for a book security system may be made at this time.

Door contacts and motion detectors together are effective for intrusion alarm. The alarm should be wired directly to the police station. Proposed configurations should be approved by that department.

Fire Protection

The fire alarm system should be wired directly to the fire station with approval obtained. Smoke detectors should be throughout the building. Consultation with the Fire Department for recommended systems, including sprinklers, should be undertaken.

The sprinkler system should be designed carefully over book stacks and computer work stations so that water is directed to correct areas.

Fire doors should be held open by devices that automatically close in the event of fire. Fire extinguishers should be provided in all areas.

Floor Treatments

Sound control and easy maintenance along with environmental considerations all have high priority.

Natural, non-toxic, non-allergenic materials should be used throughout the building.

Carpeting must be first grade commercial carpet and have anti-static protection.

Carpet tiles could be considered for their flexibility, i.e., for replacement of worn areas or wiring changes. However, they are more expensive. The installer is important whether carpet tiles or carpeting is selected. The specs should require that the installer has done the same size job and the carpet has been in place four or five years.

Durable and easy to clean materials - not carpeting - should be used in toilets, work areas, kitchen, custodial areas, closed storage, entry area and craft area of the Children's Room.

Signage

- All signs should comply with ADA requirements.
- Signage style should coordinate with interior decor.
- Lettering, color and style should be of one type.
- Hours and services should be on a weather-tight, changeable outside sign.
- The signs at the ends of stacks should be able to be changed easily.
- Permanent signs should be attractive and easily discernible to everyone.
- Prepare a directory which reflects the final library interior plan.
- A lighted, vandal-proof sign, visible from all major approaches, should be erected to identify the library.
- If a flag pole is decided upon, a lighted pole should be considered.

Expansion Plans

Provisions for future expansion should be made at the beginning of the design process. The building design should permit easy expansion – even beyond the long-term planning horizon of 2030.