Durham Public Library Building Program

Lushington Associates 2010
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Chapter One — Introduction, Library Activities, The People of Durham

Introduction
This program is based on observation of library activities, a complete tour of the existing facility and new library site, meetings with the library director and staff, the Board of Trustees, town council members and an open public focus group. The staff and trustees of the library have engaged in a thorough planning process involving a wide range of town residents in helping to decide how the library should be improved.

Public libraries are resource-rich community centers freely available to children, teens, adults and seniors. The Durham Public library is heavily used by all of these population groups. It is open 38 hours per week including evenings and Saturdays year round; yet it costs the people of Durham less than 2% of their local tax dollars.

Hundreds of people use the library each day. They come for a wide variety of purposes:

- Elderly people come to read the daily paper and magazines and to seek companionship.
- Young adults come to read paperbacks and graphic novels, to enjoy music and videos, do their homework, and meet their friends.
- Consumers come to compare potential purchases using reference materials and online databases.
- Local business people come to find ways to improve their operations.
- Investors come to check on their stock’s performance.
- Mothers and children come for story hours to get a break in their daily chores of caring for young children.
- Students come to do research for their term papers.
- UNH students come for materials not available in their library, particularly children’s and books to read for pleasure.
- People come for genealogical and local historical research.
- Families come to find a video for the weekend.
- Vacationers come to plan trips and find out about their destinations.
People come for a variety of programs of local and regional interest.

**A Typical Day at a Public Library**

When the door opens patrons are waiting to get in to attend a program, to check their email, Facebook, apply for jobs, or make copies. Patrons come in to check the help wanted ads, their financial portfolios, and to catch up with the daily newspapers. People come to the circulation desk looking for the next good read, or perhaps to fill out requests for bestsellers or interlibrary loans. Books, magazines, books on CD, and videos/DVDs are checked out continuously.

Reference questions come in by telephone, email, and in person. Computer questions come in throughout the day. Patrons need help with Microsoft Word, Microsoft Excel, downloading photos, sending email, setting up email, buying and selling on eBay, finding sites, trying to figure out how to get information off sites, and learning how to use the various databases.

Research for school projects, finding summer reading books, and satisfying hobby desires are ongoing. Children are working and reading throughout the day.

Recently, the library has been used for a home office – patrons bring their laptops.

People meet and greet friends or come in informal groups. Libraries are used as a central place for information retrieval between group or club members. Informational flyers on community events are brought here for display, and the public knows they can call the library to find out what is going on. Scholarship applications can also be found at the library. Tutoring occurs if a small corner can be found.

The public uses the library to escape the heat, the cold, or if it is raining. As closing time approaches patrons race to get through their final emails, computer searches, and DVD selections. Over 200 items are checked out from the library each day.

*What’s happening behind the scenes?*

The Director and staff are ordering books, reading reviews, writing purchase orders for materials and building maintenance, and accepting purchase requests from patrons. Boxes of new materials are unpacked, and readied for cataloguing. The library staff handles reference requests and interlibrary loan materials. Book club selections are made and multiple copies of books are secured. There is a constant stream of returning materials from the book drop and circulation desk, which must then be re-shelved. Overdue notices are generated, bills sent out for damaged and missing materials.
The library website is constantly updated as new programs are added. Staff is constantly researching, scheduling, advertising, and setting up library programs for adults and children. Program information also goes out in the weekly newsletter. Research is done on new technologies; once acquired, procedures are devised to implement them. Consultation is ongoing with Trustees, Friends of the Library, town officials, and representatives from local organizations.

The technical services department is processing books, books on CD, and DVDs. This includes cataloguing, as well as physically preparing the items. Materials are also repaired and deleted. Records of all additions and withdrawals from the catalogue are sent to the state library for inclusion in the inter-library loan program.

Staff is also involved in assisting patrons with issues on the public computers, the copier, the public printer, and sending faxes. This means refilling paper, fixing jams, doing quick ad hoc computer lessons, and working out technical quirks on all machinery.

There is also an almost constant volunteer presence in the library; volunteers come with various levels of expertise, and all must be trained, assigned tasks and supervised. Many require careful record keeping of their hours for mandated community service.

The People of Durham
The year-round resident population of Durham is approximately just under 10,000 people.

Educational Achievement for population 25 years and over in Durham
- High school or higher: 97.7%
- Bachelor's degree or higher: 73.3%
- Graduate or professional degree: 41.8%

Service Population
In addition to Durham residents, the library attracts many people living in nearby towns. The library has a reciprocal borrowing arrangement with the towns of Madbury and Lee for children in the Oyster River School District. Durham has reciprocity with the University of New Hampshire library; students are issued cards for DPL which are updated yearly. Durham residents are extraordinarily well-educated. 97% are highs or college graduates, higher than the New Hampshire average. Household income is also higher than the New Hampshire average.
Library Funding

Early in its history, the library operated as part of the University of New Hampshire. This ended in 1997 when it split from UNH to a separate site, with approximately 50% of its funding received from the town. In 2005 this changed to the operating budget being primarily funded by the town with about $20,000-$25,000 provided by annual fund-raising.
Chapter Two — Mission, Library Use and Facilities

Mission Statement
“The mission of the Durham Public Library is to enhance the quality of life in Durham through open access to ideas and information, encourage exploration and learning in people of all ages, and support cultural enrichment by establishing the library as a center of our community.”

Library Use at Durham
During the past years library use has increased steadily. The library is visited over 50,000 times a year and circulates almost 50,000 materials. In addition to its own collections it delivers to the people of Durham materials from other libraries. However, it is open only 38 hours per week and has a very limited staff of less than 4 full time equivalents.
Almost Doubled in Five years
Library Facilities
The library is presently located in Unit H of the Mill Road shopping center in a total of only 3000 square feet. The site is convenient since many people come to the center for other purposes and use the library as a by-product of other activities. There is ample parking. However, this was intended as a temporary space, and the library use has drastically outgrown the size of the facility.
The teen area is tiny and the children’s library has no homework quiet study area and no place for staff to prepare exhibits, process materials or do their office work. There is no children’s story time space. Children’s shelves are overcrowded and there is no space for parents to sit.
There are very few electronic workstations and they are crowded together with little privacy and no comfortable seats.
Adults have few quiet areas to sit and the adult collections are overflowing their shelves so it is difficult for staff to find a place for new materials. The bottom shelves are difficult for older people to access.
Staff service areas are filled with storage functions. Staff eats, pays bills, and works with large piles of books on the only table in the library; this is shared with patrons who are working on their laptops. The “office” is a space created by the last set of stacks, in the back of the room. A small seating area serves as the only comfortable reading space as well as the only meeting space and program space. This severely restricts the number, size and types of activities, meetings and programs that can be offered to the community.
Facility Evaluation

On October 1, 2010, the consultant met with the staff to discuss their facility needs. 

Library Staff: Nancy Miner, Assistant Director; Lisa Kleinmann, Children’s Librarian; Nicole Moore, Library Assistant; Margo LaPerle, Library Assistant; Alix Campbell, Library Assistant; Elizabeth Borgo, Senior Community Service Employment Program.

Needs

- A handicapped accessible building above ground with natural light.
- A high visibility location where people would see the library as they go about their everyday activities such as shopping.
- A “Green building” with Green space around the library and Southwest facing windows.
- A beautiful entrance with natural light 
- Displays for books and media
- More electronic workstations
- A multi function space with a separate entrance and kitchen.
- Small study spaces for 4-6 people each.
- A young adult area which is welcoming; chatty with music, food, and games.
- A children’s office and work area
- A parent space to encourage parent and child book sharing
- A café
- A circulation desk with a secure staff area and wire management
- A staff room with lockers, kitchen facilities and staff bathroom
- Electrical receptacles at 30” height for convenient access
- Book bins to display children’s picture books
- Stack shelving with wide aisles and no bottom shelves on the floor
- Additional storage
- A vestibule weather barrier at the entrance.

Consultant’s Evaluation

- There are insufficient electronic workstations for the public, and both the children’s and young adult areas are overcrowded and inadequate.
- Book stack aisles are narrow and bottom shelves are hard to reach
- Staff work areas are practically non-existent.
- Public service desks are cramped and crowded and there is no space for staff to work efficiently.
- There are no quiet study areas.
- There are no program, meeting or group study facilities.
**Recommendations**

Expand the teen space so that teenagers will be encouraged to use the library for homework as well as for gaming, recreation and social networking.

Expand children’s facilities to provide electronic access for children, create a story time area and a staff work area for children’s staff. Reorganize collections to encourage children to browse by displaying some picture books in bins and create a place for parents to sit and supervise their children.

Add ergonomically designed electronic workstations to encourage electronic access to information. Locate books near electronic workstations distributed in many parts of the library for easy access and privacy.

Add book stacks to eliminate bottom shelves that are difficult to reach for the elderly and to accommodate the expanding collections.

Create efficiently designed staff work areas to improve staff effectiveness and avoid carpal tunnel syndrome and other injuries that might interfere with efficient work.

Expanded areas are needed for:
- Ordering and processing materials
- Interlibrary loan
- Staff work areas
- Book sale activities.
- Meetings
- Tutorials
- Group study activities especially for teens.

**The new Durham Library should be:**

A welcoming comfortable reading place, a place to be alone or with family or friends

A gathering place for small and large groups in warm relaxing surroundings, providing:
- Bigger and better programs, and community organization meetings of all kinds
- A social place for kids after school with computers, study and lots of talking.
- Lively interaction place for small children
- Places for art and community issues and activities
- More space for collections and for electronic resources
- Food or direct access to food
- A place for local history, genealogy and the historic association providing easy access to these resources

Durham needs Facilities that are efficient, accessible and comfortable, and which provide suitable environments for the varying needs of library users.
This new library should be easily accessible to all library users in a prominent location close to the active center of this vibrant community.

**Brief Summary Comparison of Existing and New Capacities and Areas**

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**Suggested Locations of functional areas:**

Adult, children’s and teens on main entry floor in new addition
  
  New materials and Café in old house main floor

Program areas in house or new addition second floor

Non-assignable HVAC functions
Chapter Three – Recommendation and Spreadsheet

In this chapter the space needs for materials, seating, staff services and meeting use purposes based on the population and mission are compared with existing areas and capacities. These needs are then converted into square footage requirements for the building.

Recommendation

Design a library that will be:

- Convenient for the public to find and to park near the library entrance.
- Easy for the staff to operate with service areas convenient to public services
- Comfortable for long-term study with ergonomically designed seating
- Interesting for users to browse well-lighted displays of materials.
- Captivating for Children to browse in picture book bins, to use electronic workstations, listen to stories and view videos.
- Attractive for teens to use electronic workstations and for social networking.
- Useful for lifelong learning with a variety of meeting and group use areas.

Spreadsheet explanations

The spreadsheet shows the approximate capacities and area sizes of the present library compared with future needs. Standard American Library Association formulas are used to calculate space necessary for public library functions and staff support services.
Material storage considerations:
Intensively used browsing collections are often housed in bookstore-type low display shelving combining spine out and cover out display. A relatively small number of materials will need to be displayed in this way since most of them will be out in circulation. This type of shelving may require a square foot of floor space for five volumes.

Children's picture books and CDs with very thin spines that are difficult to read are sometimes shelved in bins that often result in higher circulation rates than conventional shelving. If bins are used, alphabetical separators and bin lettering will be essential as sequencing and finding guides.

Book stack shelving often consists of ranges of shelving 6-7 shelves high spaced 5' to 6' on centers allowing for a 40" or 52" aisle. Some of the existing book stacks are spaced 5 feet on centers with 40” aisles while one stack aisle is 48” wide spaced 6’ on centers. The area size in this program is based on six shelf stacks spaced 6 feet on centers with 48” aisles. An additional shelf can be added in the future. If the building columns are spaced 30 feet on centers, the stack spacing can in the future be reduced to 5 feet on centers and additional stacks added to increase stack capacity.

Percentage of materials in circulation
The percentage of materials in circulation is constantly changing. A library with a collection of 80,000 books that has 20,000 out in circulation will need space to house 60,000 books while a library with 45,000 books and only 3,000 in circulation will need to house 42,000 books. Variations in seasonal circulation should be considered when sizing the stack. When summer reading materials are returned in the fall the library may need many more book spaces.

Re-shelving and room for new materials
Empty space for at least five books must be reserved on each shelf so that materials out in circulation can be returned to their appropriate sequential location in the stack without the time consuming need to shift many shelves to make room for returns. Space throughout the collection must be reserved for additional materials added to the collection to cover new subjects.

Numbers in the materials column do not include materials in process or otherwise unavailable for public use. For standard fiction and non-fiction books we assume 25
books per shelf on average. For thin children’s picture books that number might be as high as 50 books per shelf.

Oversize books are a special problem because if they are shelved with regular sized volumes they will reduce the number of shelves that can be accommodated in each section and thus require more space for the same number of books. For this reason most libraries shelve oversized books in a separate sequence.

**Seating**
Seating is based on population and activity. The usual ratio is five seats per thousand people.

To determine space for seating these sizes were used:
- Table seat: 30 sq. ft.
- Carrel and Seat: 35 sq. ft.
- Electronic Workstation: 40 sq. ft.
- Lounge Seat: 40 sq. ft.

Many libraries have wireless zones to accommodate user’s laptops in any seat in the library seating areas.

**Meeting Room** capacity was determined in consultation with the staff based on the library's mission, program attendance and community needs.

**Architectural Layout**
To some extent the architectural layout of functional areas and the combinations of functions will affect capacities, so the area required may differ from the general estimates contained in the program.

**Non-Assignable**
Non-assignable space is required for arrival space, walls, elevators, stairs, halls, heating, ventilating and air conditioning, risers, bathrooms and non-library storage. Architectural designs differ in the amount of space for non-assignable functions. A high percentage of non-assignable space may make the building very attractive and spacious. However, the cost may be high. A low percentage of non-assignable space may accommodate more function but it will make the building seem crowded.
<table>
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<th>Existing</th>
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Single story or Multi-story

A multi story library will take up less space on the ground and may be less expensive to construct since the roof area will be smaller. However this saving may not be realized because of the additional area required for elevator and stairs.

If additional levels are constructed it may be useful to locate building utilities and meeting rooms on the non-entry level because the meeting areas may be used less frequently and may not always have to be under staff supervision. Staff technical processing areas may also be located on a non-entry level.

Advantages of locating basic library services on one level

Maximum access to all materials — All materials will be equally accessible if they are all on one level. If materials are on a level above or below the entry level, they will be less used, since more effort will be required to find them.

Public Convenience — Services on one level will enhance public convenience since all services will be seen from the entrance and the public will be aware and have a clear choice of activities. The public is often unaware of services on other levels.

Staff productivity and deployment — Locating public services on a single level will enhance staff productivity since staff can be involved in a variety of public services as they are needed, rather than having main floor staff be swamped with activity while second floor staff are idle. Experienced staff can assist newer staff better if they work in close proximity.

Improved security — security of staff, public and materials is better in a single story library in which all activities are visible from a central service area. Elevators and stairs cannot be monitored by staff and are therefore susceptible to vandalism and dangerous activities.

Site Considerations

Street presence and visibility — The Durham Library needs a street sign that people will see even when they are not actually going to the library because this encourages people to use the library. People passing the library in their everyday activities such as going to work and shopping should notice the library sign.
This sign should be sized and lighted so that people in vehicles driving down the road can be reminded of the library even if they are not going there at that time. Lighting the sign is extremely important because the library is open many hours in the dark and a lighted sign will avoid accidents by making the library entrance drive easy to see from Madbury Road.

**Open or Closed**
The sign should also indicate whether the library is open or closed to save users the inconvenience of driving in to find that the library is closed.
Chapter Four — General Design Considerations

This chapter emphasizes the importance of the library as a community place and discusses design considerations for convenient public use and efficient staff operation, including flexible planning and zoning. A final section on sustainability and green design offers suggestions on these vital design concerns.

A Community Place

Libraries represent the sharing of community resources to create benefits for everyone to enjoy. Libraries encourage people to meet to exchange information, and learn about the world and enjoy one another's company. Older people, teens and families need a place where they can greet one another and meet others to share news and information. A Library is a resource rich community center with information derived from computers, books, magazines and other people.

Library Service Choices and Traffic Flow

The public entrance should be convenient to parking and pedestrian pathways and flow naturally into the interior of the building.

Those who come to the Library will usually fall into one of these groups and the building design must conveniently accommodate all.
The Short-term User
Some users enter with the intention of making only a brief trip, often to return previously borrowed materials. Some wish to pick up reserved materials or get a quick answer. Others wish to browse new books or skim magazines and newspapers. Perhaps as many as one-half of the users fall into this category and stay 30 minutes or less.

The Long-term User
The long-term user comes for extended periods of time to use materials in the Library, search the Internet, or to study. Students will come to study after school or on weekends. These individuals need a quiet environment for their activities. They would especially appreciate small, acoustically separated rooms.

Group Participants
Many people come to the Library as a part of a formal or informal group to participate in a particular activity or program. Because groups can cause traffic problems and create congestion, noise, and confusion, access to meeting areas should be carefully planned to avoid routing through reading or stack areas.

Spatial Relationships from the Entrance
A key design challenge will be the integration of the existing house into the library addition. This visual introduction should invite users to see all the latest library materials with comfortable reader accommodations.

Integrating Children’s, Young Adult, Adult and Circulation Services
Adult fiction and nonfiction collections, children’s services, young adult spaces, staff service areas, and study areas should be in one contiguous area, but sound isolation is important for each. Sound can be dampened by sound-absorbing materials such as book stacks or isolated by glass.

Community Commons and Café
New books, DVDS, magazines should be visible from the entrance with front cover art displayed. Spotlightting would be useful. Newspapers and magazines with large tables and comfortable lounge chairs should also be in this area. Electronic workstations available in stand up mode for quick questions and e-mail retrieval and sitting configurations for longer term use will be here. This area may include a café with beverages and snacks. It might be in the existing house using the kitchen, living room and solarium.
Electronic Commons and Staff Work Areas

Electronic workstations, reference books, and staff assistance should be visible from the entrance. Privacy for the public and general staff monitoring are both design considerations; Staff will consult with users and trouble-shoot terminals so equipment service points should be in close proximity to staff to allow for easy staff access to equipment.

WiFi Zone will be available for users who bring their own computers to the library. Proximity to outlets is imperative for this area.

Young adult and juvenile users should also have easy access to these services.

Electronic workstations should be distributed throughout the building for easy access in various functional areas.

Location of staff work areas is important to efficient operation. Work areas should be close to but acoustically separate from public services. Traffic should not be routed through work areas. Staff security requires at least two exits in staff areas.

Flexible Planning and Design

Libraries are organic buildings, ever growing and changing. The design should incorporate the following concepts to facilitate change:
Vertical access elements such as elevators, stairs, heating, air conditioning ducts and electrical risers should be kept on the perimeter of the structure.

A master plan should be included in the initial stages of planning to accommodate growth in addition to the building being constructed at this time. For example, future expansion in collections, seating, and multi-purpose space should each be shown.

Internal change scenarios should also be discussed, such as the change from material storage to computer workstations. Change scenarios should include furniture and equipment sketches as well as footprint site expansion diagrams.

Wiring for computers requires both power distribution and low-voltage transmission such as telephone lines. These should run in separate conduits and the conduits should be easily accessible for increasing bandwidth. Improved bandwidth delivery systems may require rewiring during the life of the building, so electronic equipment centers and conduits should be designed for ease of rewiring.
Computer workstations should be capable of easy movement throughout the
certainty. Such options as wireless, fiber optic cabling, carpet tile/flat wiring, power
poles, Walker ducts, and floor grids for power should be discussed early in the
planning stage. Wireless systems provide a useful option for new and old
installations. Conduct a wireless evaluation to determine suitability and plan for
future hubs.

Special power and communication centers should be identified and receive special
design attention early in the planning process to assure sufficient power both overall
and per circuit. A library also needs dedicated circuits, telephone transmission
options, filtered, uniform and stable power delivery, ease of equipment exchange for
repair and ease of access to clearly labeled circuit breakers. These special areas will
include:
- Check-out locations
- Reference services
- Staff work areas
- Multi-purpose and meeting rooms
- Security systems
- Electronic Network center.

The Children's Story and Crafts Area should be carefully designed for very
different functions:
- Story hour requires concentration on the story-teller with sound
  separation from other library functions. A puppet stage and curtains for
dramatizations with spot lighting may be helpful.
- Crafts require a floor material that can be easily cleaned and a sink and
counter.

Plan for future furnishings. About 10% of the equipment should be purchased after
the first year of occupancy of the library addition in order to respond to the
changing needs of library users. People will use the new facility differently than they
used the old library, and it will take a year before their preferences will be realized.

Library functions are not always interchangeable and particular functions have
specific design requirements. Uniform design may not allow for functional change
over the life of the building without major alterations. For example stacks in a high-
ceiling area designed as a reading room may require lighting and HVAC
adjustments and may look ugly. Electronic workstations in a low ceiling stack area
may not have adequate HVAC or lighting.
Zones and Boundaries

Flexible open-plan libraries needed different ways to express different functions. Activities requiring zone and boundary definition may include:

- Age-related differences such as young adult, middle school and preschool.
- Noise level functions such as staff service, listening, viewing, and group study.
- High frequency-of-use new materials or low-use older materials.
- Programs and meeting rooms.
- Staff processing, ordering, and maintenance activities.

- Change in function within libraries requires several flexible methods to express functional zones and boundaries:
- Furniture types and sizes, such as widely spaced individual study tables for quiet study and sofas, lounge seats and group study tables for noisier group or conversational activities.
- Colors can indicate bright, noisy children’s activity as opposed to natural, subdued colors for study.
- Bright spot lighting indicates bustling display spaces, while indirect low lighting indicates quieter spaces.
- Low partitions in the children’s room set apart active from quieter areas.
- Glass partitions separate areas acoustically while allowing visual access. Glass should never be used on all four sides of an area because of the echo noise. Acoustical glass is expensive but may be used for group study rooms. Lighting that washes the face of the glass reduces reflections that often obscure areas set behind glass.
- Varying ceiling heights using suspended ceilings can indicate varying activities.
- Lower or higher book stacks and wider aisle spacing differentiate active display areas from the less used book storage stacks.
- Vertical separation of areas by a few very low steps can differentiate functions, but ramps for handicapped access will have to be used.
- Book stacks are useful in blocking sound and defining boundaries.
- Graphics should signaling service points and define their use.
- Passageways without furnishings separate functions.
- Carpet color and pattern variations differentiate function.
- Many zone requirements result from noise differences. Controlling noise in libraries may be achieved in several ways:
- Glass enclosed areas isolate noisy or quiet activities.
- Acoustical ceilings with anechoic foam wedges deaden sound.
Books are excellent at absorbing sound.
Glass reflects sound and results in echoes.
Carpets, cork floors, and upholstered furniture absorb sound.
Noise decreases greatly with distance.

Sustainability and Green Design Considerations

A primary design objective is to require minimal resources to build and operate.

Site Considerations
Locating the library near other everyday uses such as retail shopping is a cost savings in the use of fossil fuel.
Bicycle pathways and racks
Public transportation access to the library location
Building orientation and alignment with the sun path, roof overhangs and window location and sizing should take advantage of natural conditions.

Heating Ventilating and air conditioning
Zoning by task and occupancy conserves heating and cooling cost. For example book stacks require minimal heating and cooling since they are only used for brief periods of time. They may also be insulating devices to temper outside air conditions.
VAV variable air volume registers should be balanced for the various kinds of activities that take place in the building.
The use of cooler outside air from earth tubes to cool the building in the early morning and evening should be a part of the HVAC design and balancing.
Basement heat mass storage with roof solar collectors may be useful.
Monitors and clerestory design instead of skylights because of reduced heat gain.
A roof garden for insulation

Retrieving rainwater for waste disposal.
Renewable materials should be considered for flooring and equipment such as wood, and cork flooring rather than artificial fibers.
Reuse of existing library equipment such as book stacks saves materials.
Local furniture makers save in transporting materials.

Parking lot roof top photovoltaic and solar heat collectors might be connected with car battery rechargers and might power snow melters.
Intelligent lighting controls and reader location to take advantage of daylight and the design of overhangs to prevent heat gain are important elements in library design. Letting users and staff control their own lighting and HVAC may also conserve energy. LED lighting is now available for many library applications such as spot display.

A recent library designed by Jeff Hoover of Tappe Associates for The Kilton Library in New Hampshire incorporated these green design features:

- Fossil Fuel Free
- Ground sources heat pumps supplemented with a wood pellet boiler. Silo outside to store the pellets.
- Radiant floors heat the occupants with radiation from the floor rather than heating all the air space.
- Tall ceilings for enhanced daylight penetration from clerestory windows.
- Low flow plumbing,
- Recycling of 75% of construction waste
- Green info kiosk
- High reflectance roof for reduced heat island effect,
- Natural landscaping
- Bus stop in front of the building
- Special priority parking spaces for low emission vehicles.
Chapter Five — Street Presence, Parking, Entrance Staff Services and Circulation

This chapter discusses street presence, parking and a variety of considerations in designing the entrance and staff service check-out and return areas.

Street Presence — Outside signage
The Durham library should be clearly identified to passing motorists and pedestrians by the provision of a lighted sign perpendicular to the road. The purpose of this sign is not just to locate the library but to remind people of its existence. Traffic at higher speeds will require a larger sign. Another sign with hours should be on the entrance door. It must be flexible and easy to change as hours change. A lighted “open” sign on the road will be appreciated so that users do not drive in find that the building is closed.

Parking
A parking lot sized to accommodate library programs should be easily accessible from the road with a stop light to assure safety. There should be 3 handicapped accessible van sized parking spaces close to the building so handicapped users do not have to cross traffic to enter the library. Curb cuts of colored concrete should be provided for easy wheelchair access. There should be a covered drop off point so that users and their materials will stay dry while they enter or exit from their cars. An interesting option might be a lightweight photovoltaic cell canopy for cars with electrical outlets for recharging electrical vehicles while they are parked. The photovoltaic cells might also be used to power ice melting devices to keep the lot cleared of snow in the winter. Frequent winter snowfalls require snow plowing so there should be provision for piling plowed snow with out sacrificing lot spaces.

Deliveries, Library Staff Services
Library staff and deliveries will normally use the delivery/staff entrance. It should have a buzzer to alert staff to deliveries, and a small storage room to lock delivered parcels.
Drive-Up Services
Drive-up access may be useful for the pick-up or return of materials. Returns may be handled by using a curbside bin. However, these sometimes present a problem in inclement weather, both for customers as well as for staff attempting to retrieve materials during rain or snow. Return bins should be located under cover if possible. Returns that come directly into the library building must be fire-isolated by building a fireproof room and/or by using a special fire extinguishing device.

Staff attending drive-up facilities should be near the regular circulation desk so that they can work productively while waiting to be available for drive-up service. This requires that the building design locates the drive-up window near the regular circulation desk so that the same staff can provide both services.

After hours book drop
Library users need a place to return books when the Library is closed.
- An easily accessible drive up return slot with a separate non-print return should be considered only if patrons can reach it without leaving their car. People returning materials should be protected from rain and the metal bookdrop itself should be shaded to protect plastic cases from the sun.
- The locked book return must be accessible by the staff with book trucks to transport returns to the library.
- If the return slots go inside the library building, there should be a fire barrier to the rest of the library to prevent smoke or fire damage. Air intake to the rest of the library should shut down in case of fire. A book return into the building should be located near the circulation desk, so that staff can access returned materials without leaving the desk.

The Entrance—Inside
People will come to the library on foot as well as from the parking lot, so the entrance doors need to be positioned to conveniently accommodate both types of use. The library entrance should have weather barriers to prevent wind from blowing directly into the library. It should also have heated air delivery to temper cold outside air.

The inside lobby should be easy to enter, welcoming and encourage users to feel that the library is a special place. The decor of the lobby should show that the library is a friendly place with announcements for library or town events. Displays and art could be located here. Visitors should be able to orient themselves to major services as they exit the lobby and enter the library.
Library Hours Signage
Library hours should be listed on the door. Be conscious of the line of sight of users when they approach the library. Signs hanging on walls to either side of the entrance are seldom noticed by users intent on entering the building.
**The sign must be on the door itself so that users see it as they enter.**

Staff service circulation design considerations

Studies have shown that people entering a building invariably turn to the right when they enter so it may be most useful to locate browsing materials on the right and locate the staff service desk to the left side of the entrance. The service desk may present a formidable and intimidating barrier to library users entering the building because it is a busy, noisy and messy area with materials waiting to be reshelved. There is inevitable clutter that is a natural consequence of hundreds of transactions taking place at a single location. The design of the check-out area should facilitate staff services. The staff must be able to exit the desk toward the exit to remind users to check-out materials. Sound dampening materials on the floor, walls and ceiling of this area should prevent noise from disturbing users.

**Lighting**
Staff activities require high task lighting levels, but glare on the computer screens should be avoided by location of light fixtures. Lighting should be easily adjustable.

**Durability**
The surfaces of this counter receive extraordinarily hard use and will wear out rapidly if veneers are used. Consider using Corian, stone, or granite chips. The surface should resist scratching and be easy to replace when it wears out.

**Flexibility**
- Monitors should be near a telephone for easy diagnosis of problems and for renewals by phone. Computers should be easy to change and routine maintenance and replacement of broken machines should be easy to accomplish with plugs and connectors above the desk surface.
- Monitors may be easily shared with users by mounting them on swivel bases.
- Shell design of counters with mobile under counter units is useful for flexibility since it facilitates easy change of drawers, shelves, files and other under desk components while retaining the basic transaction desk shell.
- Movable staff workstations at the desk may be useful to reconfigure the desk depending on the level of activity. Staff seating should be included.
- Bi-level design with separate levels for public and staff
Circulation Functions
The staff service area should be designed to facilitate several distinct and different activities. Surfaces should be durable but warm:

Lend and Return
One of the most active services is to lend and return books and other materials. As a library improves its physical facilities, circulation of materials is likely to increase; therefore, the circulation area should be designed to accommodate at least fifty percent more activity than the current circulation of materials.

Lending Area
A bi-level design with counters for the public (34” high makes it ADA compliant) and the staff (30” high). Circulation desk activities include checking out materials, collecting of fines and fees, taking reserves and answering circulation-oriented telephone questions, picking up interlibrary loans and reserves. Monitors on swivels need to be shared with the public.

Self-check-out machines may be available nearby.

Material display at check out
Display units on the customer side of the desk will give library users the opportunity to browse through popular recently returned materials, brochures or flyers while waiting for check-out. This can be accommodated in various ways, such as:

- Sloping display shelves built into the patron side of the desk.
- Sloping display units placed near the check-out locations.

Care must be taken to avoid blocking or obscuring exits with display units.

Parcel shelves
Library users may need a place to rest their purses, parcels and other hand baggage while checking out library materials. Security of personal belongings is a special consideration. Shelves should not be too wide because of the risk of hurting small children and because of handicapped regulations for wheelchair access.

Reserves and interlibrary loan materials
Materials reserved for users and materials borrowed from other libraries and being loaned to other libraries need to be stored in this area waiting to be picked up by users.

Return area and Deliveries
This is where library users drop off their returned library materials upon entering the building. They may also want to give book donations to the library at this
location or elsewhere. Deliveries and mail will also be dropped off here

- Provisions should be made for quick and easy staff check-in of materials so users are not delayed waiting for a cumbersome check-in procedure.
- It may be helpful to provide a slotted return drop for users to place their books for later check-in. The drop may lead to a depressible book truck to minimize material damage. This truck must be emptied frequently and should be easy for staff to retrieve materials or to replace with another truck.
- The lighting should be task lighting so that staff can quickly sort returns.

Registration
This first contact with a new patron provides an opportunity for orientation to library services. The patron’s interests and preferences, an explanation of library services, and a brief tour can be a part of this experience. These activities require a chair and writing surface to fill out registration forms.

Service Area Storage
Beneath and behind the service desk should be a variety of mobile or fixed adjustable modular units. These can be used as flexible storage spaces for forms, books, machines, and supplies. This will help to keep the top of the counter clear of all clutter. In addition, the desk area should have:

- Wire management J channels to hold wiring off the floor.
- Form dispensing slots and boxes.
- Wiring should be concealed behind a panel.
- File drawer and pendant side file.
- Pencil drawer.
- Cash register or drawer.

A storage wall behind the circulation desk can be created by using built-in shelf standards recessed into the wallboard. These provide a variety of shelf support brackets to accommodate storage of materials on the wall while allowing for book trucks to be placed underneath the shelves for easy access by the staff.

General information area
A section of the desk for answering the telephone, short questions, and directing people to the appropriate library function.

Book Truck Storage
Book trucks located behind the counter will make presorting convenient for the staff. Sorting at the desk can save time and effort.

Book Truck Browsing
For easy browsing book trucks loaded with newly returned materials may be placed near the areas where they will be reshelved. Each book checked out will save the
library reshelving time.

Theft Detection
Equipment must be located near the library exit and close to a staff location so staff can remind users of the need to check-out theft-guarded materials. This can be done if the check-out location is near the exit door and staff can easily come out from behind the check-out counter.

Staff Work Area
It is vital to have a unified service area for public convenience and staff productivity. In this area near the entrance staff will be involved in processing reserves, overdue materials, interlibrary loans or registrations. The area should be private and sound-isolated for efficient concentration. The multiple functions that take place call for detailed attention at the schematic phase of design.
Facilities will include:
- Electronic workstations
- A work counter with storage above and below
- Operable windows with curtains or blinds for adjustable privacy
- Visual access or an intercom or call button to the public desk so staff can be called to assist at busy times.
- Adjacent to staff work area, Assistant Director and Director’s offices.

Public copier
A photocopier and sorting shelf should be here for public use.

Summary of Circulation Area Design Considerations:
- There should be at least four electrical outlets for each staff station.
- Include “j” channels for wire management below the surface.
- Use grommets or slots for wiring to drop below the surface.
- Consider the new projected daily volume of check-out, return and registration in a larger and more attractive building.
- Determine the number and type of check-out terminals.
- Consider ease of replacement and maintenance of terminals.
- Place electrical and data wiring receptacles above working surfaces for access.
- The location and configuration of computers should be flexible for staff and public convenience.
- Hide computer and printer wiring behind a panel.
- Install a bi-level height-adjustable counter with counter heights of 29"-39").
• Ensure accessibility for children and people with disabilities.
• Seats for the public are useful for registration as well as for extended transactions at the lower part of the desk.
• Identify the checkin location to sort recently returned materials and put them on book trucks designated for various library locations.
• Library users like to browse through recently returned materials.
• Identify a location for staff monitoring of future theft detection equipment.
• The staff will need to be able to process reserves and interlibrary loans for the public in this area.
• The staff will need to be able to process overdues, sort mail, collect, record and keep cash in this area.
• Consider the location of self check-out machines in relation to staff monitoring, and servicing of equipment.
• The after hours book drop and interlibrary loan delivery should be convenient to the circulation area.
• Although most book donations are received elsewhere, the public will occasionally drop materials here.

Chapter Six – Community Commons

This chapter discusses design considerations for customer service, new materials browsing, and the library living room and magazine area.

Comfort and Community

Nancy Miner from the library staff suggested that these two words sum up what we are trying to achieve in a new library for the people of Durham. As library users enter the building they should have an immediate sense that it is a place unique to this community and intended to be a comfortable living room for everyone in the community. Comfort in libraries means comfortable cozy seating with living room
type lighting. Community might be expressed in evoking the historical spirit of the town. Oyster river Gundalow boats., scenes from the history of the town and a New Hampshire sense of country.

Library Living Room and The Commons Café
A much appreciated library service is a commons café area with tables where users can sip a cup of coffee, chat with their friends and browse in newspapers, magazines, books and videos. Nearby users should also find quiet reading spaces. Comfortable lounge chairs lighted with floor lamps, with low side tables and large tables with table lamps to read newspapers may help impart this feeling. This part of the library may be the existing living room and kitchen.

Community Bulletin Board
Wall display of community events may take the form of a flat screen monitor and/or a cork bulletin board with flyer distribution shelves below. In addition monitors throughout the library might display “This Week in Durham” events calendar as a screen saver. Links to university, sports and local arts organizations should be available. A nearby display case could feature local art or history.

Customer service
The library staff is the heart and soul of quality service so a staff member should be available near the entrance to the building. They will assist with checking materials out, give advice on finding the right book and direct library users to the children’s staff or to computers or other library services.

Identifying staff reader's advisors will help users to find immediate assistance. Customers want a conversation with a staff member allowing time for the customer to explain what they need. This service may take place at the circulation or at the previously mentioned self-service kiosk. There should be a shelf for advisory books and tools than can be used by staff and customers at the service desk.
New Materials Browsing
A person entering this part of the library should feel as if he or she is in a fine bookstore with a variety of materials. Covers should be attractively displayed. People entering the library will normally turn to the right and, therefore, if possible, the browsing area should be to the right of the entrance.

This is the busiest part of the library. Much of the borrowing is done in this area with customers eagerly seeking the latest book, video or CD/DVD. It should contain a library of ever-changing paperbacks, a selection of art and large format picture books, recently returned materials, and a new book, video, CD/DVD and audio book browsing section. Materials should be displayed on shelving no lower than 10" and no higher than 54" to give an open, uncluttered appearance.

Research based on video analysis of how people behave in stores explains the necessity of having wide, 48" aisles in the browsing area. In this busy part of the library, the wider aisle width prevents people from bumping into one another or feeling unpleasantly crowded.

A density of five books per square foot in the browsing area rather than the 10 for spine out shelving in the larger book stack should be the rule. There needs to be display shelving for front covers. Publishers make these front covers attractive to customers so we need to show them.

New Materials Display Furniture and Equipment
The most sought after materials in libraries are the newer materials. Wide aisles and easy to reach shelves are important to the large number of customers that flock to the library for these new materials. Display systems with interchangeable units will provide for flexibility in displaying books and media:

- Tilted bottom shelves so titles can be seen without bending down
- Zigzag displayers that show front cover as well as spine titles
- Tilt-and-store displayers with older magazines stored under slanted shelves
- Book stop displayers that combine book support and display
- Stepped back shelves that allow browsing in two display layers
- Pyramids of smaller boxes on top of larger ones
- Dumps that are movable slanted boxes placed near the checkout counter
- LED lighting underneath shelves so as to light the shelf below
- Acrylic see-through displayers floor or wall mounted
- Bins for thin format media with colorful front covers such as DVDs, audio books and CDs.
Plan ahead and anticipate new media collection growth so that shelving or display units purchased to accommodate the first years worth of new media can be modularly sequenced as the collection expands.

Librarian selected displays. Librarians encourage people to pick books that will be useful in their lives; relevant to cultural interests; issues of local importance; or provide entertainment and give pleasure.

Sequencing Books in a collection have a relationship to one another and are sequenced on shelves for people to find them easily. Spinners accommodate a large number of materials in a small space but users often find it difficult to find a particular book in these circular towers.

Wide Aisles and No Low Shelves
Book stacks spaced 6' rather than the conventional 5' on centers make it more comfortable for people to browse in the stacks without bumping into one another. People with disabilities and the elderly will not use shelves lower than 8” above the floor.

Lighting
Library materials are the the most important decorative element in the library. Attracting people to materials and helping users find what they want are facilitated by good lighting. Lighting and graphics display materials dramatically and create a clear understanding of subjects and sequencing. Use directional louvers and reflectors that direct light on the books. Luccalight LED lighted shelves should be considered for new book and magazine displays.

Design Considerations
- A sequential arrangement of materials will be helpful to customers and staff trying to find a particular book.
- These materials should be arranged alphabetically by author for fiction and numerically by classification number for nonfiction so that customers and staff can easily find a book.
- Circular tower spinners are difficult to sequence and should be avoided.
- Sloping display shelves will impart an inviting atmosphere.
- Lighting should emphasize materials not aisles.
- Colors should be elegant, comfortable and relaxing.
- Material displays should permit views of both front covers and spines.
- Genre shelving for special interest materials may be placed in the browsing area.
- A choice of comfortable seating near the browsing area offers people a
welcome opportunity to sit and read comfortably.
• Open standup height shelves close to the browsing area give people an opportunity to enjoy reading a few paragraphs to decide whether or not they really want to take a book home with them.

Magazine and Newspaper Area
Magazines are used in two different ways:
• Many library customers come into the library to browse in paper editions.
• Other customers wish to consult magazine indexes to look for articles on a particular subject.

Electronic access requires electronic workstations and printers.

Newspapers also create a special problem because of their flimsy large format and the tendency of users to tear out employment ads. Locating previous days' papers behind a service desk limits use and availability but secures the papers. Electronic access reduces the need for duplicate copies.

Considerations for displaying and accessing magazines and newspapers:
• Sloping displays for current magazines with storage underneath for one year's back issues keeps current and older issues together
• The Oblique hanging file system keeps daily and weekly newspapers with one month's back issues stored together.
• Copy center-with sorting counter facilitates access.

Seating choices should include electronic workstations, comfortable lounge chairs with support for back and shoulders and convenient side tables to accommodate books and bags as well as oversize 4”x6’ tables with comfortable ergonomic chairs on casters. Tables should have electrical and low voltage transmission plugs below the surface or in the center of the table.
Chapter Seven — Reading, Study and the Electronic Commons

This chapter discusses general design considerations for the reading, study, electronic commons and local history and genealogy areas.

Reading and Study
Libraries are centers for information and ideas so information service should be immediately available to all who enter the library. Students from elementary grades through graduate school and independent learners use the library for research. People seek information on subjects relating to personal and business interests. They select materials on a range of topics such as career changes, job searches, crafts and hobbies, home repair, financial investment, health, gardening, arts and literature, science and technology.

Electronic Self Services Kiosk
There will be a prominently located kiosk with several stations to supply a variety of services visible from the circulation desk:

- Downloading of materials onto user’s flash drives
- Self checkout
- Stand up access to email/Internet
- Located with clear sight lines so staff can monitor customers
- Designed for easy modification
- A catalogue computer
- A computer to download audio and ebooks
Studies show that library users are willing to return to a librarian when the transaction has lasted for several minutes rather than just a few seconds. It often takes time to understand what the customer wants. A setting that is comfortable and inviting encourages staff to spend time with the user, and will be most conducive to satisfactory service. The reference interview requires staff to spend some time defining customer's questions and discussing solutions. Staff and customers should both be able to look at the same computer screen to select together. Accommodations that include comfortable chairs for both staff and customer are essential to the effectiveness of this service.

At busy times, when there are lines of customers waiting, efficient reference service requires computers for staff to quickly respond to questions.

In most libraries these contradictory requirements will depend on the particular time of day. Libraries can be both very busy and relatively quiet. For these reasons the service desk should be designed both for quiet conversation and quick service. Height adjustable service pods that adjust from sitting to standing use may be ideal.

The multiple functions that take place call for careful consideration at the schematic phase of design. The likelihood of change in this area means that flexibility and ease of alterations are major design considerations. The following considerations should govern decisions about the location and design of this area:

**Easy Access**
- Staff visible to people entering the area with non fiction nearby.

**Lighting and Climate Control**
- Glare free lighting should allow long periods of use with minimal eye fatigue.
- Temperature and humidity designed for long term use and separate control.

**Flexibility**
• Staff should be able to move to the bookshelves to answer questions.
• At slow times staff and customers may sit together for a conversation.

**Service Area**
• Height adjustable workstation for sitting or standing
• Shelving for ready reference books, with nearby resting places to open books
• Mobile staff seating on comfortable ergonomic chairs.
• ADA compliant mobile workstations with file drawers, and shelves.
• Small book truck for interlibrary loan service or "hot topics"
• Clear sight lines down the stack aisles from this location.
• Fax and copier nearby.
• Glass topped slots to display brochures and handouts for customers.
• Glass desk top for schedules and other daily information.
• Hands free phones for answering telephone questions.

**Electronic Commons**
Visible from the service desk will be electronic workstations that may be used for a variety of purposes:
• Computerized reference sources such as encyclopedias and databases.
• ADA compliant stand up as well as sit down electronic workstations
• Collaborative electronic workstations with two mobile chairs.
• E-Panels with flat screen monitor and keyboard at the end panel of book stack ranges for customers to search for resources.
• Computers distributed conveniently throughout the library
• Customers should be able to download information to storage devices.

**Reading and Study Areas**

Often one of the nicest spaces in a library is the reading room with natural light streaming in from tall windows.
Designing this area will present a special acoustical problem since people will want quiet while staff will need to assist customers with their searches. Staff and public will be using computers for long periods of time; glare free controllable lighting, stable temperature and comfortable seating is essential.

Indirect natural light will be an asset in this area, but heat gain from skylights must
be controlled. People sitting in reading and study areas may be chilled after several hours as their body cools even if they were initially comfortable.

It is useful to remember that most adults come to libraries individually and prefer individual accommodations that define the customers space with sides that come to the edge of the writing surface. Tables with low dividers or even surface patterns on the tables may be used to define reader space.

Library users vary widely in their seating and study preferences. Comfortable lounge chairs will attract some users and others will prefer study carrels or large tables so there should be a choice of seating types:

- Oversize 4’ by 6’ Tables with ergonomic chairs such as the UNO chair from Turnstone (steelcase) This chair has excellent lumbar support. It is mobile and flexible and has been selected for excellence of design by the Museum of Modern Art.

- Study carrels at the far end of stack aisles and with readers visible to staff.
- Small group study areas
- Lounge chairs

Local History and Genealogy
The materials should be readily available in a closed area monitored by the staff and located close to a service desk. The door to the room should have a glass panel for surveillance.

Archival materials require a climate controlled area. Small packaged climate control units are available for this purpose.

The Durham Historical Society needs a cube at least 3’x4’ for 3D objects (uniforms, dresses, other paraphernalia) and a flat glass-enclosed wall display case for maps etc...
In addition to closed access climate control this room should have:
Large table with 8 chairs
  • Electronic workstation
  • Adjustable steel shelving for 1000 books
Chapter Eight — Material Storage
In this chapter collection management and storage are discussed

Material Storage – Browsing the Stacks

Library materials should be stored in a large continuous book stack area with convenient public access and clear staff sight lines. This area can be made attractive by:

- Displaying the front cover of an especially interesting book on each eye-height shelf in each section. A piece of tape marking the limit of book space for shelving staff on each eye-height shelf can reserve this display space for a single book.
- Combining a book support with a cover displayer on an eye-height shelf
- Occasional empty open shelves for resting books give customers an opportunity to glance at several books before selecting one.
- Task lighting directed at the books, not the aisles, makes browsing the stacks easier.
- Sliding pullout shelves to rest books allow convenient stand up browsing.
- Wider aisles will encourage use. The standard handicapped accessible aisle width of 40" may be too narrow. Ranges should be spaced 72" on centers; this will leave an aisle 52" wide if 10" shelving is installed.
- For library customers who are an aging population, low bottom shelves are increasingly difficult to reach and should be abandoned in favor of a 6 shelf high pattern of easily accessible shelves.
- Lighting the lower shelves is easier with lighter colored, resilient flooring such as cork or vinyl instead of carpeting and light fixtures placed above the aisles and directed towards the books.

Dewey Finder subject signs that stick out into the aisles help users find particular subjects with their unique subject numbers. They are far more effective than end panel signs since they locate subjects right where they are in the stacks.
Recommending a useful book to a customer is a highly individual task that has a major impact on the reader's feeling about customer service at the library. The reader will spend hours of time over several weeks reading the book. Librarians should have the opportunity to walk into the bookstack and discuss with the reader the relevance of a variety of reading choices. Many customers do not need a lengthy interview, but providing the setting and opportunity for this to happen is an important design opportunity. Therefore, the service desk should be located close to the book stack and should include reader seating so that the opportunity for consultation is part of this setting.

The Book stack Area in Sequence

The bookstack includes materials selected by the library staff over a period of time and carefully screened to supply the best current information on a wide variety of topics.

Displays in the stacks.
Display shelving for the front cover display of materials can be interspersed throughout the collection as well as in the browsing area. Shelf inserts, or acrylic book displayers placed in every other 3 ft. section of stacks at browsing eye-height, are attractive and inform customers about subjects. End panel display units throughout the book stack area have the twin virtues of displaying attractive front covers, while graphically signaling the subjects in each range.

E Panels. Electronic end panels incorporate flat screen computers and keyboards into the design of book stack. End panels are useful to lookup other books in the stack or obtain other book information such as reviews to help decide between two similar titles.
Book Stack Design Considerations

- Stack aisles should be visible for supervision and staff assistance.
- The numerical sequence of the ranges should be apparent to customers approaching the stack end panels.
- Stacks should have a single continuous pattern numerical sequence. Any break in the pattern such as wall shelving at right angles to free standing shelving will be confusing to the reader.
- As the collections change and grow materials will need to be shifted to make room for new subjects and for changes in the relative size of subjects. Leaving room for these shifts will save time in the future.
- A standard section of book stacks is three feet long. Six sections connected together form a standard range 18' long.
- A double-faced section has an average maximum capacity of 240-260 volumes if five shelves on each side are used with space left for shelving returns. Reference or bound periodicals are wider so only 200-250 will fit in each double-faced section.
- Book stacks require a floor live load bearing capacity of 150 pounds per square foot. Stacks must have web uprights to prevent collapse. High-density stacks require 300 pound per square foot live load capacity.
- Tall art and oversized books will require 12" deep shelving. If tall books are kept in sequence each 3 foot long five shelf section will accommodate 200-250 books per double-faced section. To maximize capacity oversized books can be removed from their regular sequence and shelved in a separate stack area. Catalog entries and signs for their special location will be helpful.
- Book stops prevent books from being pushed back off the shelves, but also result in wider books sticking out into the aisle especially in the art area.
- Canopies are unnecessary and often create light shadows from overhead lighting.
- A 30-foot structural column module permits 6-foot on center stack ranges to be converted to 5-foot on center ranges to increase capacity.
- Flexibility for the storage and display of a variety of books and media may
be achieved by selecting a book stack storage system with a variety of shelf types that fit on the same vertical frame standards. For example bins for DVDs, sloping display shelves, tiered shelves for cassettes, inverted bracket shelves for loose periodicals, divider shelves, etc.

- Movable step stools in the aisles are useful to help people to reach tall shelves but be careful to provide space so they do not become a tripping hazard.

The design can easily become a sterile factory-like unattractive area. To avoid this some of the following design considerations may be helpful:

- Small bench seating perches within the stack will be useful resting places for customers to browse briefly while choosing a title.
- A choice of electronic work stations, study carrels, table or lounge seating interspersed throughout the stack will be helpful.
- Digital end panels with flat screen monitors and keyboards interspersed throughout the stack make it easy for customers to find their materials.
- Front cover display at eye-height spotted occasionally throughout the stack.

Audiovisual/Non-Print Area

This function might be near the entrance for public convenience and close to teen services since teens are avid customers of these materials. Audio and videocassettes, compact discs, DVDs, computer disks, audio books, and other audiovisual materials will be displayed and shelved here. This will be a bright, eclectic area showcasing the range of media available in the library.

- Clear signage designating each collection and many subject dividers with alphabetic subdividers will be very helpful for browsing and reshelving.
- Formats will vary greatly in size and shape so a system with a variety of flexible display and storage capabilities is necessary. CDs and DVDs, for example, will be displayed in racks while larger sets of audio cassettes with manuals or other written material will be stored on conventional shelving.
The small size of these materials makes security an important design consideration. If possible, staff control and visual supervision should be maintained by locating this area close to the circulation desk.
Chapter Nine - Children's Area and Teen Services

This chapter discusses design criteria for these functions.

Children's Library Facility Planning

The Children's services area should provide space for a full range of services and activities to promote and encourage learning, reading, and the enjoyment of books and other materials. The design and appearance of the Children's Room will make a lasting impression upon the child. There will be plants and pleasant outside views. The area should express warmth and friendliness and suggest to parent and child that this is the place to come in order to satisfy educational, information and recreational needs.

Services and materials in this area must meet the needs of a range of library users, from the curious infants to the developing preteen with rapidly changing interests. It must also serve the needs of parents, childcare professionals, teachers, psychologists and others who will use the children's collection to support their work with children.

Design Options

Children's facilities are often designed with playful concepts. Creative treatment of ceilings, doors, windows, and furnishings should provide a strong immediate message that this is a special place. However, libraries are special places in themselves. Images and words encourage children's imagination. These items themselves should be the decoration of the children's room.

A large train can contain picture books bins as cars in the train, but it should look more like a picture book bin than a freight train. A children's low platform overlooking the picture book train can hint at the captain's deck of an ocean liner, but trying too hard to make it into an actual ocean liner can look cute and corny and be boring in time. Furnishings and equipment should encourage children's imagination to make them what they will. The platform can be a deck, a balloon floating in the sky or a space station depending on the child's imagination.

The character, and history of the community should be expressed by distinctive images. The Oyster River Gundalows might be an example. Classic and durable images should grace the walls of the children's areas they should flow naturally from the library's function to stimulate the imagination and offer children a variety of materials and ways to experience these materials.
Height
Children grow at varying rates and psychologically change with chameleon-like speed so close attention should be paid to these characteristics in the design of the room. Adult designers should try walking around on their knees to get some sense of how children will experience these spaces. Sixty-inch high book stacks can seem like dark caverns to four-year-olds. Conversely, any opportunity to give children some height in the room will be welcome. Innovative designs in children's playscapes should give some clues to how children respond to height. A small low platform with padded mats to soften the inevitable falls will be a valued place in the room, like reading in a tree house. (note: These playscapes should be easily changeable or removable if the space needs to be redesigned for other use.)

Displays
Changeable displays and seasonal decorations are an important aspect of the Children's Area. There will be tackable display walls in different parts of the room, as well as display cases.

Lighting
Controlled, natural lighting as well as indirect and diffuse ambient lighting will impart a quiet and cozy atmosphere by avoiding glare, but special adjustable spot lighting for materials and displays should provide strong visual punctuation for materials.

Openness and Quiet
Spatial density and the degree of openness in the Children's Area present something of a design problem. The need to monitor children can conflict with the child's need for privacy. At the same time, research into the advantages and disadvantages of design options has produced somewhat contradictory and ambiguous results. Studies have shown that spatial density tends to increase aggression among preschool children. At the same time, open areas tend to result in running and cross-room talking. Children may seek relief from over active open areas in quiet alcoves. Research has also shown that activity areas with partitions tends to increase cooperative behavior. The answer may be low dividers between activity areas with higher dividers and increasing privacy for older children. Furnishings and dividers should always be low enough so that children can see and be seen by staff.

Vestibule entrance
This area may include a display of children's art and community events. From the entrance there should be a clearly organized orienting view of other children's service areas. There should be direct access to the story room and performance space.
from the entrance.

Developmental Areas
The Children's Room will have several distinct areas arranged to invite children and their care providers to move through the space and the service it supports in accordance with the child’s conceptual development. Because of the wide range of ages and things done here, there will be a noticeably different ambiance for these areas within the larger area. Transitional areas between each of these spaces will house services common to both age groups such as the computer internet access area between preschool and elementary school. Visual access by staff is mandatory.

Each of the areas listed below should serve as an imaginal landscape of the developmental period. The space should invoke a sense of containment for the projection and experience of the child’s own imaginal field— a real field of dreams that encourages and supports a variety of imaginative feelings.

The sequence of areas should facilitate a successively more introverted relationship to the materials than the previous area, so that the preschool child will be engaged with parents and staff while the intermediate and teen will work more independently.

Infant, Toddler and preschool Area: This is a noisy, whimsical area for children two to five years old. A large bulletin board for children will be visible from the entrance. Furnishings should have no sharp corners.

There are several collections of books in the preschool area:
- Picture books in bin shelving with alphabetical labels on each bin and shelves below.
• Board books in colorful cubes.
• Big books will be housed in a sloping shelf display.

Seating will include:
• Oversize chairs for parents to read stories to their children,
• Small tables and chairs (two sizes)
• Low floor tables with cushions.

Parenting, professional and reference area  Parents, teachers, childcare and home school providers in addition to children will use this active but quiet area. It will contain:
• Reference and parenting collection near tables.
• Collaborative electronic workstations for parent or librarian and child
• Tables and chairs.
• Large oversized chair and a half for an adult and child to sit together

Elementary Schoolers, Intermediate Browsing/Reading: A discussion with older children complaining that children's rooms were designed for little kids, and there was no place for them, suggests that a great effort should be made to differentiate this part of the room from the preschool spaces. This part of the Children's Area will suggest a more contained behavior and more directed activity. It will include:
• Book stacks with wide aisles for juvenile fiction and nonfiction books
• Display racks for new emergent readers books with bins for DVD’s.
• Display shelving for magazines and paperbacks.
• A variety of seating and table heights.
• Electronic workstations.

Study and homework area will include:
• A quiet area with low individual carrels for study
• Computers for database and Internet searching.
• Copier with sorting counter.
• Group study areas for four people each.

Children's Multi Purpose Area for story telling and crafts
This is where story hours, craft activities, puppet shows, creative dramatics, parenting programs, discussions, author talks, book groups and video viewing take place. The room should have acoustical separation to keep noise from entering other areas of the building. Folding tables and storage for chairs and tables will be useful. The story area may be carpeted and should include stackable chairs and
The activity area for crafts will have:

- Easily cleaned flooring
- Sink, counter, storage for materials

Multimedia, audio visual facilities These facilities are for viewing and listening to videos, music and audio books individually and in small groups, playing with games, puzzles, toys and computer games. They will include computers with printers on lock-and-roll storage carts

Restroom and related facilities There will be a unisex restroom for children located within the children's area and convenient to the program room. The room will include a toilet, sink and changing table. There will also be a water fountain located nearby.

Staff work Area

The Children's service desk should be visible upon entering the children's area and should provide good supervision of the entire area. It will have sections for public service, including answering questions. There will be staff work locations at the desk, with computers, a printer, and a telephone. A large display calendar will list children's events for the month. The desk will include an alternative material checkout location for busy times of the day.

Staff work and storage areas should be in close proximity. The staff work area will have electronic workstations with Internet access, a printer, and an art/craft design space with sink, design table and counter for laminating equipment. Storage will hold posters, prints, mobiles, flannel boards, puppet tree and office supplies. The staff area will have operable windows and curtains, blinds or shades to adjust the privacy of workers within the staff work area.

Office The Children's Area Office must provide good supervision of all children's activities. The staff should, however, be able to adjust privacy in the office by closing blinds on windows and the door. The office will include dividable space for the Children's Librarian. There will be a workstation which should allow observation of children’s areas. Working materials will be kept in storage cabinets, and adjustable book shelves.

Other Desirable Features
Coat racks for children should be available near the multipurpose area as well as distributed throughout the area for convenient access to seating.

Restroom nearby with staff supervision

Bicycle racks and stroller space near the entrance to the library should be protected from the rain and snow.

Flexibility and Mobile furnishings

In the children's area there is the need to reconfigure the area for special programs or weekly displays. Flexibility will be enhanced by:

- Mobile multimedia display units with flat screens, books, display board and display shelving for quick set up of topics
- Low shelving on Darnell ball-bearing casters,
- Sled-based chairs or chairs on casters that will glide easily. Children may occasionally play bumper chairs, but the need for flexibility outweighs occasional discipline problems.

- Wireless wheelbarrow electronic work stations with two wheels and two legs afford the opportunity for rapid relocation while retaining some stability.
- Electrical and low voltage receptacles distributed throughout the area wall plugs at 36” height with childproof guards.
- Light fixture locations designed for task flexibility.
- Acoustical adjustability by movable acoustical partitions and sound dampening materials.

Design Result

The overall result of the children's area design should be an intriguing combination of creativity, function, and flexibility. Children should be engaged by areas that stimulate their imagination while suggesting a variety of behaviors. Alternating busy and quiet environments should offer children a choice. The area should be easy to change both for short-term display and long-term changes in function as children change. Parents and other care givers should have an opportunity to sit with children to read to them and enjoy their reading skills. There should be an opportunity for individual consultation with children for teaching and discussion.
Teen Services

The teen services design should be edgy, modern and technical with electronics prominently featured. It should be highly flexible anticipating the need for almost constant change. It should be at least five percent of the total library area.

 Teens need space for social activities as well as space for age appropriate materials and studying. Teens should feel that the library welcomes them, and provides opportunities for them to socialize as well as study quietly. Locating teen services is often a puzzle. A location close to reference services provides the incentive to study but a separate location requires additional staffing. Placing teens close to or in the children's area would be discouraging to many teens. Close proximity to the attractive display of new materials, especially music, would be welcome.

 Teens come to the library for several widely differing purposes. They will alternate between these very different sets of activities:

- They come to meet friends. This is a behavior pattern is common to this age group. A booth to seat up to four teens with a flat screen display will be useful.
- An area designed for acoustical dampening of conversation, perhaps including a small coffee and snack service area would be enjoyed by many teens.
- Teens often study in small groups so study areas for 4-6 people would be welcome.
- Music is very important for teens, especially music they can share.

 These conflicting uses require careful acoustical design to allow noisy and quiet activities within this space, which in turn will be acoustically separated from other areas.
Service Areas

*The social networking area*
A booth to seat up to four teens with a flat screen display will be useful. Oversize tables with mobile chairs. This area should emphasize constantly changing popular video, audio, books, and magazines on a flexible linear display system so that particular titles can be easily located. It should also include an art display area, bulletin boards easy to move around, comfortable lounge seating with low tables, mobile viewing and listening stations with easily repaired or replaced equipment. Teens would appreciate a location near a food service area.

*The study area*
This area should include:
- Oversize study tables with four chairs each.
- Individual electronic workstations.
- A place for coats and back packs.

This young adult area may have to be expanded and should be located and designed for considerable future flexibility.

Teen Design Considerations

Ask teens what they want
- Alternate study and social areas
- Flexible size and furnishings
- Music opportunities
- Community board for events
- Homework help
- Large tables for interactive work
- Group study rooms
- Acoustical dampening
- Furnishings from Linea or other teen suppliers
- Special lighting effects
Chapter Ten — Multipurpose and Meeting Rooms

Multipurpose and Meeting Rooms

This area should be able to be closed off from the rest of the library and have its own separate entrance and access to rest rooms for evening functions when the rest of the library is closed.

The Multipurpose Program Room

The 100 seat program room may be used for a wide variety of activities including:

- Lectures by guest speakers
- Book discussions
- Video and film programs
- Musical concerts and other performing arts programs
- Children's and Teen programs
- Computer programs

Kitchen Facilities
Microwave, stove, oven, refrigerator sink and serving counter, storage. Kitchen facilities might be located near the staff kitchen/lounge area.

Coat racks
Mobile coat racks

Podium
Mobile lighted podium with sound and light controls. Locate the podium at the front of the room far from the entrance so latecomers can be seated with minimum
disturbance.

Storage
Lockable storage closet for easy access to:
- Mobile racks for stacking chairs and folding tables
- Coat racks
- Mobile lighted podium with sound and light controls

Screen
Ceiling mounted retractable screen to accommodate large video and computer output images

Cable Connection
Multiple cable hookups to local cable network supplier from outside the building into the room are needed. Two should be located on opposite sides of the room and one should be in the audiovisual control room.

Data Transmission
- Data transmission line for digital display to overhead video projection
- Connection with laptop computer to receive and project Internet information from a wide area network (WAN)
- Connection for computer to access library local area network (LAN) to project information from library databases
- Transmission at a high baud rate
- Telephone connection modem compatible
- Data transmission lines and electrical receptacles for electronic work stations to be set up and put away and stored in the storage room nearby

Sound
- Presenters at the podium will use speakers emanating from the podium.
- Film/video speaker system located at the front of the room
- Volume control at the podium for control by the speaker.
- Stage platform microphone outlets for additional microphones for group discussion on stage
- Wireless microphone capability
- Audio facilities for the hearing impaired should include headphone jacks and additional amplification capabilities related to handicapped accessible areas.

Lighting Systems
Electrical panels should deliver sufficient power for the future. Lighting in this room should include:
• Audience area lighting
• Side wall washer lighting for art display
• Emergency battery-supplemented EXIT lights

Meeting Rooms
There will be a meeting rooms to seat 20 another to seat eight people and four smaller group study/tutorial rooms to seat 4 each. Each room should be equipped with white boards, mobile chairs and tables, electrical receptacles convenient to the table and data transmission. Windows in doors will make it easy to monitor the rooms.

Design considerations for multipurpose and meeting rooms

• Kitchen and serving facilities may be shared with staff room
• Storage for tables and chairs
• Acoustics should accommodate musical performances, speeches, discussion groups and projection of films or video. Considerable flexibility and adjustability of acoustics may be necessary for these different requirements.
• Wired for data delivery, CATV outlets and wireless hub
Chapter Eleven - Administration and Staff Work Areas

Design considerations for staff work, administrative technical service and staff lounge areas.

These areas house behind the scenes functions that are necessary to support successful and efficient public services. Limited staff make it imperative that these staff areas be grouped together and located close to public service areas and the entrance to the library. At the Durham Library are several staff work areas:

- The circulation work area should be adjacent to the circulation desk and near the entrance to the library.
- The children's work area should be adjacent to the children's service desk.
- The technical services and administrative work area, which are necessarily close to the circulation area.

The following recommendations apply to all of these work areas.

Safety and Security

Safety and security of staff, materials and equipment should be a primary consideration in locating work areas. Work areas should not be dead-ended enclosed space where staff may be confined or isolated with patrons. Staff should have access to automatic dialing 911 equipment near their work stations.

Workstations

The arrangement of work spaces, the location of equipment, and most importantly in the design stage, acoustical dampening, lighting and color scheme, should promote productivity and attention to detail over relatively long periods of time.

Natural lighting from windows should be augmented by task-oriented lighting from lamps and fixtures. These should have flexible switching patterns.

Space for individual expression, such as areas for green plants and wall space for posters and decorations, is helpful where work is unrelieved by the variety and the immediate satisfaction of public contact.
Cork bulletin boards or a tackable surface should be placed at workstations so that staff can easily refer to schedules, procedural memos and other temporary notes. All work areas will have coat space and individual half- or box-lockers for employees' personal possessions. Other factors in workstation design include:

Climate Control
This is essential for staff who spend long hours at workstations. In so far as possible, staff should be able to control their own climate where possible.

Lighting
Natural lighting from windows is important for the morale of the staff. Natural light should be augmented by task-oriented lighting from lamps and fixtures. These should have flexible switching patterns. Under shelf lighting should be avoided. While glare can be a major problem, dim lighting can cause the operator to strain to read a CRT screen or paper documents on the desk. Adequate lighting during the day may be completely inadequate in the evening. Because proper lighting is relative, adjustability in task lighting at the workstation is important. Workers are more productive when they can adjust the intensity, location, and the angle of light in their work area.

Comfort
The seating, work surfaces, and other furnishings must be comfortable and provide good support, especially to the sacro-lumbar area, for staff who must sit at the workstations for long periods of time.

Adjustability
All aspects of the workstation should be adjustable and adequate for staff with special problems, e.g. back problems, eye glasses, different heights. This flexibility is critical because staff differ in size, bodily configuration, and work preferences.

Seating
The staff member should be able to adjust the height of the seat and the backrest. Furthermore, the backrest and seat pan should be laterally adjustable so that the user can move the backrest fore and aft and change the seat deflection from flat to a somewhat backward angle. All adjustment levers must be readily accessible and easy to use - staff should not have to turn chairs upside down to make adjustments. Hydraulic mechanisms are necessary where two or more people use the same workstation. Armrests should be adjustable and removable. The chair itself should move and swivel to allow the worker to perform a wide range of activities. Chairs should be designed for simple maintenance, including
replacement of upholstery and mechanical controls.

Desks and Work Surfaces
Ideally library workers should have desks and work surfaces that can be adjusted from 22" to 45" from the floor. Normal desk height is 26" to 30." The flexibility to raise the work surface to counter height permits workers with a back injury to use a keyboard or library materials while standing. Kneehole space should be available so chairs can be out of the way when not needed.

At minimum, the work area must include an adjustable keyboard pan which enables a sitting worker to maintain their upper and lower arms at a 90-degree angle (upper arm vertical, forearm horizontal) and their wrists at 10 to 20-degrees from horizontal. A tilting keyboard pan would also help improve the wrist angle. Lack of adjustability may be a major cause of repetitive motion syndrome in those working at keyboards.

The ideal work area is 60 inches wide but should be at least 30 inches wide to permit opening books or use of documents or other media. Leg clearance should be at least 24 inches wide and 16 inches deep. Space for book trucks at each workstation is imperative and these booktrucks should be on all plans.

Computer Equipment
The librarian's role in the Information Age demands increased reliance on computers and related technology. Librarians create, maintain, and search local and remote databases; they use word processing equipment to write reports, letters and other documents; they use spreadsheets and other productivity software to plan budgets and manage the organization.

Local area networks and connectivity are important aspects of a library's use of this technology. Design features must reflect the need to power and connect equipment in each workstation as well as between the different departments. J-channels, ramps, grommeted openings for bundled cables, and power poles will be important design features.

The workstation will need room for a variety of hardware, including some bulky equipment like printers and paper supplies, and storage devices such as hard disks and CD-ROM disc systems. Shelving for manuals and supporting documents is also important.

Screens
Placement of the monitor is also a primary concern. The screen should be approximately 18 inches from the worker's eyes and as low as possible. The screen should never be above normal eye level. In the best situation, the user will be able to raise, lower, tilt, and swivel the screen to suit their individual physical requirements.

Visual fatigue can be minimized by correct lighting. Artificial or natural light that is too bright can cause glare or a "washout" effect. Monitors should not be placed next to windows. When this is necessary the screen should be at a right angle to the plane of the window. Polarized glare screens may be helpful while blinds can also control reflected glare.

Cost
Purchasing workstations of this quality may be an expensive investment on the part of the library. However, staff productivity and public comfort should become high priorities in library planning. Libraries who specify expensive marble check-out desks and wasteful atrium spaces should not be reluctant to also spend money on user comfort. All equipment does not need to be in place on the day the new library opens. It can be phased in and purchased over a period of years.

In some cases, prevention of repeated motion syndrome injuries to staff resulting from poor ergonomic design and the resulting loss of time may more than compensate for the cost of an ergonomic chair and workstation.

Technical Services

Location of this area is important to efficient operation. It may well serve to supervise a public service area if appropriately located. It should be close to an exterior door for deliveries and mail.

Acquisition and processing functions for library materials in both print and non-print format, including receiving and processing periodicals are all accomplished here. This area should be a large, flexible, open area. However, traffic to frequently used areas should not be routed through staff work areas.

Counters for receiving and shipping and a system for storing and distributing materials will be provided. A 36" high work counter will serve as a receiving and processing location. 29" high workstations on the perimeter of the area will have cabinets above and knee-holes below.
Ample electrical outlets will be provided at mid-wall height.

There will also be file cabinets, and wall shelving. Book truck space for maneuvering heavily loaded trucks should be included beside each workstation. There may be several book trucks in this area in various stages of processing. Plans should include book truck locations.

Technology Support

Network/Server room - Servers, CD towers, and other electronic and communications equipment should be located in this general area with special considerations given to:

- Acoustical dampening
- Wiring access to outside and inside the building
- Air-conditioning appropriate for equipment

Administrative Offices

Electronic workstation design concerns discussed earlier should be followed when designing workstations in administrative offices. Administrative offices consist of:

The Library Director's Office should have a large outside window:
- Electronic workstation with ergonomic chair
- Large desk with upholstered chair, two visitors' chairs, coat rack,
- Credenza, side files and shelving
- Large work counter for projects with project shelving above

Assistant Director office
- Visitors' chairs and coat rack
- Large work counter for projects with project shelving above
- Electronic workstations with printer, sorting table, and ergonomic chair.
- Filing cabinets.
- Book shelves.

A central shared area will include:
- Electronic workstation
• Copier, fax, side files, scanner
• Lockable storage cabinets for office supplies
• Coat closet

Staff Lounge

This area should be as comfortable as possible so that staff may relax and enjoy their meals with relief and privacy from their service duties. It should have natural light and operable windows. It must be acoustically isolated from public service areas. The staff restroom should be in this area. Furnishings will include:
  • Refrigerator
  • Microwave oven
  • Table and chairs
  • Telephone
  • Sink with counter, and drawers for utensils
  • Fan ventilation to remove food odors quickly
  • Outlets for electrical appliances, laptops, etc.
  • Staff bathroom. This is important for morale as well as personal hygiene.
Chapter Twelve — Graphics, Lighting, Chairs
In this chapter we suggest some design characteristics for graphics and lighting that will make the library easier to find and use. Chair comfort and ergonomic basics are also discussed.

Graphics

Exterior Graphics

The Durham Public Library is a multi-service community resource for individuals. Unlike town halls, police stations and fire stations, citizens are coming to libraries for their own particular individual needs and not for emergencies or mandated governmental purposes like paying taxes. Libraries are also competing for an individual's time with recreational, entertainment as well as educational places. For these reasons a library's external signage assumes great importance. In our busy modern lives external library signs serve as a constant reminder of the library's availability to help people with their everyday informational and educational needs as well as helping people find the library.

Public libraries receive public funding as a benefit to citizens for many purposes. Their effectiveness in serving people depends to a great extent on their ability to get people to come in the front door. We live in a world of media hype. Our streets are flooded with signs that seek to get people to spend money. Libraries are valuable free community resources that need to compete for attention in this media frenzy or find themselves ignored.

The Durham library should be clearly identified to passing motorists and pedestrians by the provision of a lighted sign perpendicular to the road. The purpose of this sign is not just to locate the library but to remind people of its existence so it should be sized to compete with other street signs. Another sign with hours should be on the entrance door or immediately outside the door in the direct line of sight. This sign must be flexible and easy to change as hours change.

Wayfinding in Libraries

A library is to a great extent a self-service operation, but the wide variety of services and materials offered by libraries require explanation and guidance. Graphic signs help patrons find their way to a particular book with minimal staff assistance. Lighting, furnishings and colors work together with graphics to assist patrons in
differentiating among services. For graphics to work effectively they must be planned early in the design sequence to coordinate with furnishings, colors and especially lighting. The following guidelines should be helpful in planning graphics:

- Library Hours should be posted on the front door of the library, directly in the line of sight of people entering the building and right where people look. Exceptions to these hours such as special holiday schedules should also be posted here.
- In selecting size consider background and distance. One-inch high letters for every 50 feet of visibility would call for two-inch high letters on a sign designed to be seen 100 feet away.
- Speed of vehicular traffic should also be considered in determining exterior sign size.
- Consider how the sign compares with the background. A dark background sign with light white letters is easier to read and avoids the glare reflected from a light background.
- Use a simple, direct, familiar type style that is easily obtainable and easy to read such as Helvetica.
- Graphics can be esthetically pleasing as well as functional, and should be designed to coordinate with the architecture and furnishings.
- Location, colors, furnishings, lighting and graphics can be helpful in affecting behavior and locating materials. They should all be coordinated at an early planning stage, not after construction is completed.
- Avoid negative signs, especially large permanent ones that are difficult to enforce such as "No food in the library".
- Fliers, posters, maps and directories may be more useful than signs.
- Standard height center point is 54".
- Use capitals and lower case rather than all upper case.
- Never stack letters one on top of the other
  
  Don’t stack letters this way:
  
  O
  S

- Arrow panels used to indicate directions should be produced separately from letter panels so that letter panels can be changed without changing arrows.
- Exterior signs should be lighted, include hours open and should be perpendicular to traffic. Signs intended to be noticed by people in cars may have to be larger than normal. Outdoor signs are useful reminders of a library’s availability, not just its location.
- User categories such as teens or children should be identified and destinations charted in preparation for specifications. Plan by:
  
  user category
user destination
traffic flow
decision points where patrons pause or turn

- Projected signage using laser beams can be very effective in locating a library building during the evening.
- Signs located on the front of busy counters such as the circulation or reference desks become quickly invisible when library patrons are standing in front of the desk. Instead use signs raised above the desks.
- ADA requirements for type and placement of signs should be consulted.

**In the Book Stack — Dewey Finders**

The library book stack often occupies 50% or more of the total space in public libraries, yet it is often difficult for users to find their way around these multiple sections and ranges of books. 80% or more of the people who enter libraries make no contact with library staff and are unacquainted with the intricacies of the arrangement of the thousand of books in the stacks.

Dewey Finders make it much easier for users to understand the meaning and sequence of materials by placing notched sign holders at strategic locations throughout the stack. These can be seen from a distance so that users can walk rapidly to the area of their interest without swiveling their heads and trying to read the small type in the thin spines of books.

Dewey Finders also speed up the re-shelving process and rapidly assist librarians in directing users to the materials they want.

Lighting
Louis Kahn, one of the greatest of modern architects, wrote that libraries are about books, people and light. How the library is lighted can make the difference between a bland gray industrial look and an exciting glorious space in which the materials become the decoration and people have a marvelous choice of sunlit reading and study spaces and cozy comfortable individual study carrels.

Here are some ideas about lighting that may be useful in achieving a beautiful and functional library:

Walk towards natural light. Place windows in the direction of travel as people walk around the building especially in the book stack area. Do not walk down stack aisles towards a blank wall. If windows cannot be placed, position book displays or flat screen monitors so that people have something to look at.

[Nicole Moore from Durham has some useful thoughts on library lighting. “Library lighting should be inviting and make reading and other work a simpler task.

Natural light should be utilized whenever possible to bring the outdoors in, evoking the sense of calm and peace which a library should provide and saving energy as well. Large panels of glass should be able to keep the inside warm in winter while still allowing lots of light in.

South-facing windows tend to have the longest hours of light but can also be problematic, often allowing in very harsh light, requiring expensive shades to lessen it at certain times of day. South-facing windows are also difficult to keep looking clean, with such intense light coming through for such long periods of time. Finding a way to utilize the southern sun without it being in people's faces is a challenge.

On the other hand, indirect light from the north, west and east can be wonderful much of the day. People are often drawn to it, while shying away from the glare of harsher light. There is sunrise and sunset to consider from eastern and western windows, but we are not open during sunrise hours, and in the new building, there will be enough alternative seating so people can simply avoid the few seats where sunset sun is strong for a short time in the late day. In our current location, we have a real problem in the late afternoon or evening when the sun sets, as we have only one seating area with huge windows which get very hot requiring that we draw the shades. The glare also makes seeing the computer screens at the front desk almost impossible. In our new location, it is important to have our computer work areas out of any direct sun at all.
In areas where electrical light is needed, recessed ceiling lighting which has good longevity and does not hum the way our current lights do will be important. The warm glow of lamps in some reading areas will be welcome. Lamps are homey and beautiful, inviting people to sit a while and read.

If a reading room is made on the front (north) side of the existing house, and those huge pine trees are to remain, good lighting will be needed as it is very dark in those rooms.”

**Controlling Sunlight**

Be careful of direct sunlight. It is unpredictable and difficult to control. Ultraviolet light from the sun damages paper and bindings. Use overhangs and awnings to control direct sunlight. New products, such as high E windows and fritted glass, are available that filter sunlight and reduce the heat gain that formerly made perimeter window seats unusable in hot summer days. Avoid direct skylights over staff work or user locations.

Indirect natural sunlight is wonderful for library users and should be introduced into all library areas except perhaps the program rooms. Consider clerestory windows set back from the side walls to bring natural indirect light into the middle of the library. On the top floor roof monitors may also be useful in bringing natural light into the interior.

**Controlling Glare**

In many libraries designed before energy conservation large numbers of fluorescent lamps were placed in the ceiling to mimic the effect of skylights. People in these libraries suffered from glare, which often produced headaches. At Durham the bright children’s room ceiling is an example of this problem. Select lenses for light fixtures that will diffuse light and prevent glare. These can be simple egg-crates or more directional parabolic units. Parawedge louvers minimize ceiling brightness and ceiling reflections, but provide very directional lighting, and do not eliminate direct glare. They come in many sizes. The larger 2” squares are not as useful in limiting glare as the smaller 1” squares.

**Indirect and Spot lighting**

With the advent of low energy consuming high intensity discharge lamps, lighting engineers began to recommend indirect lighting using the ceiling to reflect and
diffuse uniform high levels of light. Since the light was reflected from the ceiling, the light rays struck the reading surfaces from many directions and were diffused to all but eliminate glare. However the brightly lighted ceiling contrasts with the relatively dark furnishings and books. The uniform diffused light produces a bland and dull effect on the materials and furnishings. Indirect light intensity depends on the color and distance of the ceiling from the light source as well as the brightness of the lamps.

In some areas of the library where a variety of tasks are performed in close proximity it will be useful to consider a system that will deliver uniform indirect light over the entire area. This can be accomplished by installing indirect lighting fixtures under a white reflective ceiling so that the light will shine up and be diffused by the ceiling over a wide area. This indirect light strikes the viewing surfaces from many angles thus diffusing glare and providing a comfortable reading level for most tasks.

If the light source is hidden from view there will be no glare from the light source to disturb long-term users. This follows Frank Lloyd Wright’s dictum “Hide the luminaires”. Computer screens will also be protected from annoying reflections. An excellent example of this type of indirect lighting is the computer room in the Science Industry and Business Branch of the New York Public Library at 42d Street and Madison Ave. in New York.

The disadvantage of this indirect system is that the ceiling becomes the brightest object in the room, and the rest of the room may be darker and less interesting as a result.

Spot lighting of exhibits of interesting books throughout the library will add to the color and interest of the browsing experience.

Lamp choices

- Fluorescent lamps provide high light output for low cost, burn for over 10,000 hours and provide a useful selection of colors.
- High Intensity Discharge (HID) lamps provide even higher light output than fluorescent and an equal lamp life but a lesser range of color choices.
- Incandescent lamps burn for less than a 1000 hours and provide lower light output than the other two types. These can be spot or flood lamps. They burn hot resulting in heat gain. The lamps should be well ventilated for longer lamp life.
- LED lamps have long life and consume least power.
Lamp color
Natural full spectrum lighting should be used as a health benefit as well as making the library more attractive.
Color rendering Index (CRI) of 75 is preferred.

Book Stack Lighting
It is possible to light book stacks indirectly. However, the narrow book spines and small type are often difficult to see in dim light.
Direct lighting of book stacks with fixtures that run parallel to the stack ranges and are hung from the ceiling will dramatize the materials and may result in more use of materials. The 30/30 stack light designed by Sy Shemitz of New Haven delivers 30 foot candles of illumination measured vertically 30 inches from the floor and meets California energy consumption standards for lighting.

LED lighting may be useful for book display purposes.

Sustainable design Concerns and operating cost
The California standard for energy consumption for lighting is a maximum of one and a half watts per square foot of space.
Consider heat gain from lighting in air conditioning and heating control.
Maintenance, ease of replacement, and fixture cleaning as well as energy efficiency (electronic ballasts), life of lamps, and initial and replacement cost should be considered in selecting and locating fixtures.
Costs for electricity and maintenance will increase, so select fixtures, lenses and lamps that are easy to clean and replace and burn cool for longer life. Use low intensity light in non-reading areas, such as traffic aisles. Control glare and reflection by diffusers, louvers and light locations. Let users control task lighting. Use table and floor lamps. White ceilings and white walls will increase light, especially in small rooms. Limit light intensity variation in small rooms or in contiguous areas. LED’s burn longer and require less energy per lumen output than many other types of lighting.

Visibility
Visibility in a room is affected by the size of the room, color and contrast within the room as well as the brightness of lamps. Select incandescent lamps for concentration (very narrow spots) or spreading of light (flood lamps), and for color rendition. Locate fixtures to minimize ceiling brightness and ceiling reflectance caused by light striking the viewing surface at a 45-degree angle. This is especially important in computer areas.

Floor coverings
Light colored reflective floor materials increase light on bottom shelf compared to carpeting. Cork floors are reflective and absorb sound.

Lighting and Graphics
Light fixture locations must be coordinated with location of graphics to assure that light does not obscure signs. This can only be achieved by planning graphics and lighting at the same time during the project. Too often graphics planning comes too late to coordinate with lighting.

Layered Lighting
Layered lighting combines ambient and task lighting:

**Ambient Lighting** - A low level of ambient lighting will provide for general illumination. This ambient lighting will be low-glare, and accomplished by perimeter luminaires as well as hanging lamps that indirectly reflect light from a white ceiling.

**Task Lighting** - Non-glare task lighting is directly related to functions such as illumination of displays, reading surfaces, and lounge seating. This can be accomplished by floor or table lamps or recessed ceiling fixtures. Task lighting should be as adjustable as possible including long, flexible electrical wires.
attached to ceiling fixtures that may be easily relocated when functions change. Task lighting should be capable of being controlled by the user, with lamps on swivel arms.

**Wall Wash Display Lighting**
Perimeter, ceiling-mounted wall wash book display lighting fixtures should be installed at least three feet out from the walls and include elliptical reflectors in order to cast light all the way down the wall. The Elliptipar fixture is ideal for this function.

**Lighting Standards**
The Illuminating Engineering Society Handbook suggests the following levels of maintained lighting intensity (taking light loss factors into consideration) Foot candles measure the light falling on a surface equivalent to the number of candles placed one foot from the lighted surface:
- Public Service desks — 50 foot-candles average measured horizontally
- Staff areas — 50 foot candles average measured horizontally at the desktop.
- Small conference room — 30-40 foot candles measured horizontally at the desktop with dimmers for AV.
- Large multi-purpose room — 40 foot candles average with all lights on separately controlled lighting from the front of the room. Lighting dimmable to 2-foot candles for note taking during AV presentations.
- Reading areas — 30-40 foot candles measured horizontally at the desktop.

These figures do not always translate into visual acuity. Factors such as glare from bright lamps, light-absorbing materials on the floor and walls, and contrast can dramatically effect people's perception.

**Marketing Materials**
In the browsing area where the front covers of books, DVDs, videos and CDs are featured. It may be advisable to supplement the indirect light with dramatic spot lighting of materials just as in bookstores.

**Meeting room Lighting**
In meeting rooms light dimmers will be especially useful to vary the intensity of light depending on the program content. The controls for these should be mounted near the stage or speaker area in the front of the room and there should be separate light controls for:
- Stage or podium
- Audience
- Aisles
Theatrical lighting is expensive and requires elaborate ceiling racks and special wiring. The fixtures produce considerable heat and thus require special cooling.
**Workstation, Table and Seating Choices**

People need a wide range of choices in seating because people come in different sizes and shapes and use libraries in different ways. A sedentary 200 pound person coming to the library for several days of genealogical research has different needs than a restless 100 pound teen coming to listen to the latest CD.

Stand up work stations will be useful for quick location of materials in the library or for a brief reference question. They should be available at the entrance and in the stack area. Hi-lo work stations can be adjusted to either a sitting or standing configuration.

Individual study carrels can be located so as to be visible down the stack aisles so that a person selecting a book has ready access to a place to read it. If carrels are located far from supervision, they should be single carrels spaced far apart to discourage talking.

Larger 4'x6' tables are more likely to be used by four people than small 3'x5' tables which are too cramped for disparate users.

Alcove arrangements with low shelves on three sides of the table are highly desired by many library patrons for privacy and to separate user groups.

Study rooms are essential in the children's and teen areas for collaborative study and teaching.

Oversize collaborative electronic workstations with two chairs and one monitor will be useful near the reference desk for assisting patrons unfamiliar with searching and for doing complex searches.

**Library Seating Design Considerations**

A library chair is the most important piece of equipment in the library. It should be the first priority for equipment expenditures and there should be no compromise with comfort and durability. Library patrons will sit for hours of intensive study and their comfort will determine their level of satisfaction with the library study experience. If libraries want to distinguish themselves from bookstores chair comfort can be an important factor in that distinction.

The following information may be of value to those making decisions about chairs and seating in the library.
Comfort
Chair comfort is not simply a function of hard or soft surfaces. In fact, hard surfaces shaped carefully to human bone structure may be more comfortable than rectangular slabs of foam. Chairs that afford patrons the opportunity to both move within the chair and to move the chair itself will be preferred over handsomely sculptured stiff shapes such as the Barcelona chair.

People spend a great deal of time in library chairs. Therefore, chairs should be extremely comfortable and conform to the human body. Ergonomically designed chairs not only conform to the curve of the back, but also provide side-to-side support for the lower back. It is important to get in and out of a chair with ease. Pregnant women and older people may experience difficulty getting out of low lounge chairs. People vary in size, so a variety of chair designs may be useful. Woven fabric tends to be more breathable and comfortable than vinyl.

Adjustability
Seat height is adjustable usually with a gas cylinder lever on the side of the chair. The cylinder should be easy to replace when it malfunctions. Lower back lumbar support should be firm and adjustable up and down. The seat back should move with the body and be adjustable back and forth for different tasks. An electronic workstation should be equipped with a chair that supports the back in an upright position, while a lounge chair in the magazine reading area should recline and support the back as the reader’s body moves. Chairs should accommodate to movement of the body. The chair should flex and support the body as it moves within the chair.

Durability and Cost
Library chairs tend to last many years in regular use, twelve hours a day, seven days a week. It is difficult to get an inexpensive chair that will hold up and still be handsome over that span of time. Hundreds of people will use the chairs each day; therefore, it is important to select fabric, materials and structure that will last a long time. Wood frames should be carefully examined for their construction before a decision is made as to their durability. The Eustis Chair with epoxy injected gluing system is an example of wooden chair durability.

Lounge Chairs
A stressless reclining chair and footstool with a curved foam back is an extremely comfortable chair that can be easily adjusted to fit any size person, and it is relatively easy getting in and out. A spare set of cushions can be purchased and
installed if the upholstery is damaged.

**Task Chairs**
Mobile task chairs for electronic work stations are available in a wide variety of price ranges. The Charles Perry designed UNO chair from Steelcase (Turnstone) is adjustable in height, flexes and moves with the user.

![Task Chair](image)

The Herman Miller Aeron chair is an ergonomic design classic and is the standard chair used in the Science, Industry and Business Branch of the New York Public Library. It has a ventilated seat and back to prevent heat buildup. The Steelcase Criterion chair has a back that moves in and out for lumbar support while working at a computer. The Leap chair by Steelcase has a height adjustable lumbar support for the lower back.

**Carpet Compatible Design**
To move chairs easily on carpeting, they should be on casters or with a runner on the bottom so that they can glide easily. Heavy wooden four legged chairs are harder to move and difficult to pull back from a table when standing up. They may also damage the carpet. They often tip over when they are tilted back. Two position wooden chairs with increased stability and two position bases are available.

**Maintenance**
Select easily replaceable gas cylinders for height adjustment. Upholstery that can be replaced by simply unscrewing the seat or back. Button/sling backs or velcro on some lounge seating permits even faster replacement. Darnell casters on chairs facilitate easy movement.

Green design considerations
Local manufacturers using local materials are major green design considerations to avoid shipping costs, limit fuel consumption, conserve natural resources and put local labor to work. Identify local craftsmen who will take pride in using the library as a showcase for their work.
Floors
Carpeting is the preferred library flooring material for its acoustical absorbency. It should be low pile (less than 1/4" high), looped through the backing for durability under heavy book trucks and have a minimum face weight of 25 ounces per square yard.
- Install different color/pattern carpeting in heavy use areas and plan to replace these areas more often than light use areas.
- Carpet tile may be useful for flat wiring access in small areas.
- Mixed tweed colors will look better than solid colors when dirty.

Entrance mats should allow dirt to drop below the walking surface and should be easily removable for frequent cleaning.

Cork floors are durable and sound absorbent and have a high reflectance to increase light on the bottom shelves of book stacks.

Functional Area Sheets
Name of area: Community Commons/Periodicals Dimensions: 710 Sq. Ft.
Activities People will Browse in new materials, and enjoy conversation and light food. Display and promotion of high-demand, high-interest new books, magazines and audiovisual. People will look, browse, and select items to borrow or read in the library. Seasonal, special topic promotional displays

Occupancy
Public 18

Major design features and ambiance of area
This is prime retail space. Graphics highlight major subjects and types of materials. Shelving should be uniform, flexible, highly attractive with clean lines and dramatic intense lighting. Hardcover books, paperbacks, compact disks, videos, and other new materials should be displayed, with front covers showing. There should be a community bulletin board display. A variety of seating configurations and a standing browsing counter will allow convenient access. A food service area will provide a welcoming ambience.

Furnishings & equipment
90 linear feet of shelving for new, large print, newspapers and magazines materials Lighted display shelving for new books, dvds, magazines, newspapers shelves from 10” above the floor to no more than 50” high so they are easily accessible by elderly and handicapped users
6 lounge chairs with tables in alcove arrangement
2— 4’ x 6’ tables for 4 with table lamps and comfortable mobile chairs
4 individual study carrels with low sides
Food storage, kitchen, sink, dishwasher, refrigerated display case
Counter
Trash container

Seating - 18
8 table seats, 6 lounge chairs, 4 carrels

Proximity to
Entrance/Circulation, lobby
Distant from quiet study

Name of area  AV/Large Print  Dimensions 350 square feet

Activities
Browse materials

**Occupancy**

6 people

**Major design features and ambiance of area**
Dvds will be easier to browse if they are placed in bin units with subject guides. Spotlighted display shelving may be LIFT brand. Audio Books and large print can be shelved on standard book stack shelving. Large print materials must be easily accessible for older readers.

**Furnishings & equipment**
4 Bin units for dvds to hold 500 dvds each
12 sections of double-faced shelving 5 shelves high
   60 shelves with one shelf of slanting or zig zag display in each section

**Seating**
None

**Proximity to**
Community commons area
Name of area  Fiction and Non Fiction Bookstacks  Dimensions  1050

Sq. Ft.

Activities
Browsing, reading in circulating book collection

Occupancy
Public  15  Staff

Major design features and ambiance of area
Well-defined with good signage and a sequential layout.
It should be easily supervision from staffed areas.
Good lighting will make it easy to find materials.
Comfortable seating should be convenient to materials.
Handicapped accessible with ranges six feet on centers.
The floor capable of holding a live load of 150 pounds per square foot.
Dewey Finder signage system will aid in finding books.
Standup E panel PACs will be accessible throughout the stacks.
There will be 12" deep shelves for art books and oversize.
Study carrels near windows at the end of every other range of shelving,
so that users are easily visible down the aisles.
Study tables will be placed so that they can be easily seen by the staff.

Furnishings & equipment
500 shelves on 42 double faced three foot long shelf sections
8 ranges each 18’ long — Arranged in 6 sections each double faced. Each section will have 12 shelves.
Ranges spaced six feet on centers.
4 two foot long small book trucks One truck at the end of every other stack range.
Flat screen public access terminals on every other end panel throughout the stacks for easy access.

1 four person 4’x6’ study table,
4 individual study carrels with low sides. A carrel located at the end of every other stack range

Seating  8 chairs

1 four person 4’x6’ study table with 4 chairs
4 individual study carrels with low sides

Materials 500 shelves to hold approximately 14,000 books
Stack ranges 18’ six sections long 6 feet on centers and six shelves high

Proximity to  Electronic commons/Reading
**Name of area** Electronic Commons and Reading  
**Dimensions** 840 Sq. Ft.  
**Activities** Answer questions for people of all ages, in house and by telephone and E-mail. Provide reference and directional help. Provide reader’s advisory services. Monitor and instruct in use of electronic resources. Patrons will study, read, consult on line and print reference materials and databases.

**Occupancy**  
Staff 2  
Public 20

**Major design features and ambiance of area**  
This area for study, reading and information should be inviting and handicapped accessible. It should be visually controlled from circulation desk. There should be an information/reference sign above desk. Computers, printers, and user conversations contribute to noise which should be acoustically dampened. Many electrical floor outlets and low voltage data transmission lines will be needed. Lighting should be high intensity with low glare.

**Furnishings & equipment**  
Modular “shell” Information desk 4 feet long, 36” wide and 29” high with mobile file units, drawers and shelves and 1 printer, 1 scanner, electronic staff workstation with ergonomic seating at Information desk  
Corner towers at the desk to store 20 ready reference books  
Chair for the public with kneehole at the reference desk accessible for disabled persons  
Portable telephone with data transmission capability  
2 small book trucks  
2 collaborative electronic work stations  
6’ wide with 2 chairs each for mediated searching with the public.  
Atlas Case; Dictionary stand  

- Copying machine and sorting shelf,  
- Brochure display racks book truck, Clock, wastebaskets, and telephones  
- 10 electronic work stations with mobile chairs  
- 1 oversize 4’x6’ table for 4 persons with mobile seating  
- 4 study carrels with low sides and mobile chairs

**Seating**  
Total of 20  
- 10 electronic workstations  
- 2 oversize collaborative electronic workstations  
- 1 oversize 4’x6’ tables for 4 persons each  
- 4 study carrels with low sides and mobile chairs

**Materials**  
Books 50

**Proximity to** Book stack
Name of area | Local History | Dimensions | 200 Sq. Ft.
--- | --- | --- | ---

Activities
Researching local history and genealogy, people, events, official records, genealogical records, using books, newspapers and photographs.

| Occupancy | Public | 4 | Daily uses: | 6 |

Major design features and ambiance of area
A quiet area for long term use with ample light and controlled temperature and humidity.
Ultra violet light protection for materials
Security camera
Controlled environment with separate thermostat and humidifier

Furnishings & equipment
10 sections single faced 12” deep steel wall shelving for 50 shelves (no wooden shelving because of possible damage to books)
1 map case
4-drawer lateral file with locks
large table to seat 4
1 electronic work station
Clock
Wastebasket

Seating
5 total seats

Materials
50 shelves for approximately 1250 books

Proximity to
Distant from children’s area, new books, circulation
## Name of area | **Young Adult** | **Dimensions** | 500 Sq. Ft.

### Activities
- Teenagers find materials of interest, browse, relax, gather, talk
- Use computers for word processing, to get information of interest, homework, book reports and other research assignments.

### Occupancy
- Public 8

### Major design features and ambiance of area
- This area should be easily expandable.
- It should have a relaxed, casual atmosphere for browsing, reading, study.
- It should be visible from circulation area but have the appearance of privacy.
- It should be acoustically isolated from adult reading and study with sound dampening materials on walls, floor and ceiling.
- There should be tackable wall surfaces for a bulletin board with graphically interesting displays.
- This area should have a wireless hub for laptops.

### Furnishings & equipment
- Flexible display shelving for 1800 books, CDs, DVDs
- Five magazine titles on tilt and store shelving
- Tackable wall surfaces for posters and student art
- 4 Electronic work stations with mobile chairs
- Four person banquette

### Seating
- Total of 8 4 electronic work station and Banquette for 4

### Materials
- 30 shelves of materials

### Proximity to Circulation
- Accessible without going through Children’s area.
- Adjacent to browsing, media areas. Visible from staff desk.
<table>
<thead>
<tr>
<th>Name of Area</th>
<th>Picture/ E Books</th>
<th>Dimensions</th>
<th>300 Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activities</strong></td>
<td>Parents and children select materials, browse, and read</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupancy</strong></td>
<td>Public 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Major design features and ambiance of area</strong></td>
<td>Child safety considerations such as rounded corners and protected electrical receptacles should be incorporated in the design. Open activity space for children defined by picture book bins and shelving. Children will select picture books. Parents will read with children. Sound absorbing materials are essential. Lighting should emphasize the colorful book covers. Visual and acoustical separation from children's study area is essential.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Furnishings &amp; equipment</strong></td>
<td>4 mobile bin units with shelves below for 500 picture books each. 20 wall shelves for easy readers. Board books</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Seating</strong></td>
<td>4 total 1 small table with 4 chairs</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Materials</strong></td>
<td>4 mobile bin units. 20 shelves for materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Proximity to</strong></td>
<td>Entrance to Children's Room, story area and crafts, restrooms. Away from quiet areas, Teens and adult</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Name of Area: Children’s Fiction/Non Fiction
Dimensions: 890 SF

Activities: Children and parents will browse, look for particular books

Occupyance: Public 8

Major design features and ambiance of area:
This area should have task lighted book stacks in one uniform pattern for easy finding of materials.
It should have good visibility from staff service area.
There should be wide aisles and subject signage.
Displays may be interspersed within the stacks.
Alcoves will have seating for 4 in each.

Furnishings & equipment:
6 ranges 66” high shelving to hold 300 shelves
   double faced sections spaced 6 feet on centers, 5 shelves high
   Each range 15’ long — 5 sections 10 shelves double-faced book stacks in each section

2 tables with 4 chairs for each table,

Seating:
   8 seats
   2 tables for 4

Materials:
300 three foot long shelves

Proximity to:
   Children’s Service Desk
Name of Area  Children’s AV and EWS  Dimensions 400 SF

Activities  Children and parents will browse, look for particular books

Occupancy  Public 8

Major design features and ambiance of area

- Good visibility from staff service area.
- Displays may be interspersed within the stacks.
- Alcoves will have seating for 4 in each.

Furnishings & equipment

- 8 electronic work stations
- Magazine display rack for 5 titles
- Paperback display shelving for 500 paperbacks

- 20 display shelves for media
- 2 media display units for Dvds, CDs and audio books
ERROR: stackunderflow
OFFENDING COMMAND: ~

STACK: