I. LOGAN HEIGHTS COMMUNITY CHARACTERISTICS AND HISTORY

A. Logan Heights Neighborhood History

The community of Logan Heights was established in 1867 in an area where Diegueno Indians had lived for hundreds, perhaps thousands of years. It was named after the Civil War General John H. Logan, who is also credited with the creation of Memorial Day - - hence Logan Elementary School and Memorial Charter Academy Middle School. Between the 1880 California land boom and 1920, Logan was the home of San Diego=s premier families. From 1920 to 1970 Logan Heights experienced industrial growth. Demographics changed and out migration of old families to newer residential areas of San Diego occurred. From 1920 to 1926, Logan became the center of San Diego=s African American population and remains a strong 12% of the population. After the 1910 Mexican Revolution, in-migration of Mexican Americans began. The Latino population rose from 2% in 1910, to 13% in 1926, to 15% in 1940 to the current 68% Hispanics in 1999.

The construction of Interstate I-5 and the Coronado Bridge in the 1960's had a major impact on the community, physically dividing it in half. Logan Heights, now frequently called Barrio Logan to honor the Chicano movement, continued to change after 1970. Annual events such as El Dia de la Raza Parade, Cesar Chavez Parade and Chicano Park Day, and its murals under the Coronado Bridge, all reflect strong community pride. The Barrio Logan Redevelopment Plan is now in place and new community developments, since 1996 include:

- A police sub-station at 25th and Imperial
- A City of San Diego Community Services Center at 25th and Commercial
- The Dr. Jack Kimbrough Elementary School, named after the prominent San Diego African-American dentist, which opened in 1997
- The King/Chavez Academy of Excellence, a K-7 Charter school housed at Calvary Baptist Church at Crosby and Kearney, which opened in 2000

In the planning stages are:

- .A commercial center between National and Main Streets, East of Crosby Street. It will provide services not only to residents but to the more than 50,000 employees who spend half of their day in the community.

- A major tenant food supermarket is being sought for a piece of property one block south of the existing branch

- A new elementary school in the Golden Hills area that will ease overcrowding at Kimbrough and Brooklyn schools

- The new San Diego ballpark now under construction in downtown San Diego

B. Logan Heights Branch History

In 1914, Mabel O=Farrell, Principal of Logan Elementary School, and other civic minded local citizens rented a building at 28th Street and Marcy for two years as a site for a library, and the City of San Diego=s fourth branch library opened there in January 1915. When the library outgrew its quarters, a second and larger facility was rented in 1917 near Logan Avenue and 26th Street. The current library building of 3,967 square feet was constructed at the corner of Logan Avenue and 28th Street, and opened in 1927 at a total cost of $17,840 including furniture. Public restrooms were added in the 1970's, and access for the disabled was improved with the building of a ramp with railings and the remodeling of public restrooms in 1994. In the early 1990's, electrical upgrades were made to the building that have made the current technological upgrades possible.

Logan Heights Branch Library, with its dark wood and original 1927 windows, adjacent to the Memorial Academy Middle school and Logan Elementary school, provides a cozy place for the people of Barrio Logan and Logan Heights. Circulation statistics rank Logan in the bottom third of the 33 branches. The collection consists of 43,662 titles with a strong, heavily used Spanish language collection. The children, teens and adults in the community use the branch for family literacy, computer literacy, Internet access and word processing for homework assignments and career development. Juvenile materials constitute 65% of the circulation.

The library serves 9 elementary schools, 1 middle school, 1 alternative school and 1 adult continuing education center as well as 3 preschools, and 3 recreation centers.

C. Logan Heights Unique Traits and Characteristics

Some community traits and characteristics include:

$ The majority of residents are of Hispanic heritage (68%).

- Population characteristics are listed in the following table, but the fastest growing segment of the population are adults between the ages of 18-24..
- An increasingly mobile population as indicated by the increase in renter occupied housing units at 70% versus 25% owner occupied.
- SANDAG predicts increases in population and housing, forecasting a combined 148% increase in population and 183% increase in housing units by 2020 (from 1990).
- The library has bus (1 block) and trolley (4 blocks) access.
- Interstate 5 is within 2 blocks, Highway 94(Martin Luther King Hwy) is within 1 mile.
- The world renowned Chicano Park, with its mural covered pillars underneath the Coronado Bridge, is only 6-7 blocks away
- Major employers in the community include: the recently expanded Convention Center, NASSCO (National Steel and Shipbuilding Co.), KELCO, and Southwest Marine, Post Office, local schools as well as a myriad of mom and pop establishments. (By-products include high traffic as well as the dwindling number of parking spaces available for residents, employees and customers.)
- The 32nd Street Naval Base and its Navy Exchange, Navy Lodge and Navy Gas Station also contribute to the high traffic.

D. Impact That These Traits May Have on the New Library Building and Library Service:

- Community space is needed for continuing education, adult education and parenting classes.
- The community=s heavy concentration of Hispanic population should be taken into consideration in the services and design of the facility.
- AHispanics are significantly disadvantagedCboth in terms of computer home ownership and in knowledge of technology. The divide between Caucasians and Hispanics, in terms of computer ownership and household Internet access, is greater in San Diego than in the nation as a whole. Although an increase in household income appears to eliminate the digital divide for African-Americans, it appears to have less impact for the Hispanic population. Among full-time employees, Hispanics have the lowest rates of Internet connection (78%, or 16% below average for full-time employees). Even though Hispanics make up 25% of the general population, they represent 42% of the unwired population. Finally, two-thirds of Hispanics believed that people rely too much on technology, and one-third without computers do not have them because they do not know how to use them. Cost was the number one reason why African-Americans and Hispanics did not purchase computers or access the

Internet from home.@ (From Mapping a Future for Digital Connections , by the Regional Technology Alliance, February 2001, pg.2)

- $ A computer lab will be required to help residents become computer literate.
- $ The library needs to serve all residents by celebrating diversity with displays and programs involving community members.
- $ The library should function as a clearinghouse and information center to promote educational opportunities, community assistance programs and cultural events.
- $ Separate study areas for literacy and ESL tutoring and continuation school counseling should be incorporated as needed.
- $ There should be appropriate and adequate space for children=s programs.
- $ In addition, the juvenile collection should take into account the growing population of children and the children being brought into the magnet schools from other neighborhoods as well.
- $ Design of the library should mitigate street and industrial noise.
- $ The library should be easily accessible to patrons coming to the library by automobile (parking availability) and other alternative transportation means.
- $ Book and media collections need to take into consideration that a significant number of the population is Spanish speaking. This should include signage in Spanish and English, as well as development of a large Spanish language collection. A transitional collection should be included as well, allowing the community to make their transition from Spanish to English literacy as easily as possible.
- $ Library materials on parenting, naturalization, immigration, basic law, ESL, employment and study guides are needed.

II. COMMUNITY DEMOGRAPHICS AND ANALYSIS

A. Branch Service Area:

The service area designated for this branch is bounded by San Diego Bay on the South, Commercial/Market Streets on the North, Crosby Avenue on the West, and Interstate I-15 /Main Street on the East. According to SANDAG figures, the population of Logan Heights is 28,883 people and encompasses census tracts 38.00, 39.01, 40.00, 49.00, and 50.00.

B. Demographic Analysis:

1. Population

Census Tract	Current Branch	1990	2000	% Change
38.00	Logan Heights	2,046	7,139	248.92%
39.00	Logan Heights	8,142	9,176	12.70%
40.00	Logan Heights	4,585	5,036	9.84%
49.00	Logan Heights	5,231	5,014	-4.15%
50.00	Logan Heights	1,945	2,430	24.94%
Total		**21,949**	**28,795**	**31.19%**

2. Ethnic Population Characteristics

Population	1990 #	1990 %	2000 #	2000 %	% Change
Hispanic	15,755	71.78%	19,524	67.80%	23.92%
White	1,929	8.79%	*4,667	16.21%	141.94%
Black	3,779	17.22%	3,398	11.80%	-10.08%
Asian / Other	486	2.21%	*1,206	4.19%	148.15%
Total	**21,949**	**100.00%**	**28,795**	**100.00%**	**31.19%**

**2000 Census tract 38.00 includes the 32nd St. Naval Base*

3. Age of Population

Age	1990 #	%	2000 #	%	% Change
Under 5	2,392	10.90%	2,361	8.20%	-1.30%
5-9	2,403	10.95%	2,765	9.60%	15.06%
10-14	1,531	6.98%	2,317	8.05%	51.34%
15-19	2,325	10.59%	2,921	10.14%	25.63%
20-24	3,210	14.62%	*5,787	20.10%	80.28%
25-34	4,182	19.05%	*5,162	17.93%	23.43%
35-44	2,447	11.15%	*3,429	11.91%	40.13%
45-54	1,166	5.31%	1,837	6.38%	57.55%
55-64	937	4.27%	**918	3.19%	-2.03%
65+	1,356	6.18%	**1,298	4.51%	-4.28%
Total	**21,949**	**100.00%**	**28,795**	**100.00%**	**31.19%**

**2000 Census tract 38.00 includes the 32nd St. Naval Base*
***Population for 14 and under & 60+ is zero in Census Tract 38.00.*

4. Years of School Completed by Adults Over the Age of 25

	1990	Share
Less than 9th Grade	4,003	39.68%
9th-12th Grade	2,057	20.39%
High School Graduate	1,939	19.22%
Some College no Degree	1,325	13.13%
College Degree	684	6.78%
Graduate Degree	80	0.79%
TOTAL	**10,088**	**100.00%**

5. Income

	1990	2000	%Change
Household Median*	15,484	22,219	43.50%

**Current dollars*

6. Housing

	1990	2000	%Change
Housing Units	5,476	5,605	2.36%
Persons/Household	3.90	4.16	6.67%
Vacancy Rate	6.80%	6.90%	1.47%
Median Housing Value	**67,840**	**120,496**	**77.62%**

B. Occupation & Industry

1. Principal Occupations in 1995

Occupation	Number Engaged
Professional/Technical	5,095
Managerial/Administrative	1,109
Clerical/Administrative Support	3,304
Sales	791
Production/Construction/Maintenance	4,722
Service	1,853
Agriculture/Forestry/Fishing	139

2. Employment Estimates (1990-1995 Change)

	1990	1995	Numeric	Percent
Wage and Salary Employment	14,605	17,013	2,408	16.49%
Self-Employed	612	600	-12	-1.96%
Military	***20,248	16,379	-3,869	-19.11%
Total	**35,465**	**33,992**	**-1,473**	**-4.15%**

****1990 Census on-line figures did not include military population in Census Tract 38.00*

3. .1995 Employment by Industry (excludes self-employed and domestic workers)

Industry	Sites	Employment	Share
Agriculture & Mining	2	84	0.25%
Construction	36	534	1.60%
Manufacturing	45	5169	15.48%
Transportation, Communication & Utilities	21	202	0.60%
Wholesale Trade	82	702	2.10%
Retail Trade	110	699	2.09%
Finance, Insurance & Real Estate	14	39	0.12%
Services	217	1263	3.78%
Government	15	8321	24.92%
Military	3	16379	49.05%
Total	**545**	**33,392**	**100.00%**

III. COMMUNITY INPUT

A. Community Input and Focus Groups

To be supplied by needs Analysis

1. Program Needs

2. Community Architectural Preferences

B. Library Roles

Library roles help determine the products and services offered to the community, and they have an impact on branch architecture. Roles are profiles of the library service emphasized by the community library based on community wants and needs. While a branch will typically offer all types of services covered in the many roles available, it should concentrate on two to four roles to meet the unique needs of the community it serves. Excellence in library service is achieved by matching roles to community expectations and needs. Roles also determine space allocation and to some extent size and adjacencies in the branch. Based on community input to date, the following roles are suggested for the Logan Heights Branch.

1. Cultural Awareness

The library will offer services to help satisfy the desire of community residents to gain an understanding of their own cultural heritage and the cultural heritage of others.

The library will provide in-depth collections of materials and resources in many formats and will offer programs and special displays that reflect the cultural heritage of populations in the library service area.

The library staff will be multilingual. Print materials, media materials, the library's online catalog, other electronic resources, and cultural programming will be offered in the languages spoken or read by the residents of the community. The library may also offer resources and services that promote awareness of cultures in addition to those represented in the community.

Some basic components of a Cultural Awareness Center include:

- Ethnic resource center

- Library catalog, publications, and collections that in the languages of the service population
- Lectures and book discussion groups in the language of the service population
- Performance and exhibit space
- Cultural fairs and exhibits
- Dramatic fairs and exhibits
- Diversity and cultural sensitivity forums

Resource allocation issues

- **Staff** providing Cultural Awareness service need to develop and maintain a knowledge of and sensitivity to various cultures, especially those represented in the community the library serves. Staff should specifically have a good background in literature and the arts. The ability to understand and speak languages spoken in the community is crucial, as are good public relations and organizational skills. Staff needs a good working knowledge of audiovisual equipment. Staff also will require maintenance assistance required to handle frequent meeting room setup and cleaning.
- **The collections and information resources** supporting Cultural Awareness service usually include offerings in many formats and languages. The history, traditions, prominent historical and contemporary figures, and issues related to specific cultural groups should be a focus of in-depth collections. In addition to maintaining a collection of print materials representing the
- The **facility** requires performance and display space including meeting rooms, a gallery, and display spaces. Good acoustics and a stage are required for the meeting facilities. Multilingual signage is required for if the library serves a significant non-English speaking population, or people for whom English is a second language. Facilities that provide participation in arts and crafts should be available. Parking should be available at or near the library to handle all of the traffic generated by a full-capacity meeting room.
- A full range of **technologies** used by performers should be provided. A high-quality sound system capable of accepting a variety of inputs and video display or projection equipment may be required. Theatrical lighting and videotaping and editing equipment may also be provided. Because many

cultural resources are available on CD-ROM and from the Internet, the library should supply multimedia computers capable of sound and of displaying high-resolution graphics. Meeting room facilities should be equipped with adaptive technologies to help the visually and hearing-impaired as well as non-English speaking populations fully participate in meetings and activities.

Design features supporting the role:

- A multi-purpose room that may be adaptable to a variety of performance and cultural activities.
- Space for a collection of print and non-print materials in the language of the population served
- Exhibition and display space to celebrate the culture of the population served

2. Formal Learning Support Center

The library assists students of all ages in meeting educational objectives established during their formal course of study. This may include students in elementary and secondary schools, home schooling, colleges, community colleges, universities, or technical schools, as well as those involved in training programs, literacy or adult basic education, and continuing education courses. The target audience for this role is students attending classes at the schools near the library.

a) Some possible components of a Formal Learning Support Center would include:

- Specialized curriculum-based collections
- Homework help center
- Computer laboratory
- Tutoring
- Group study facilities
- Electronic links to San Diego City School curriculum sites and other educational sites

b) Resource allocation issues:

- The **staff** is knowledgeable about educational programs in the community and works closely with local educators to develop joint programs. Staff has a good knowledge of how individuals in their target audience learn and about the topics they are studying. They work closely with school staff to supplement the formal education program, and have contacts in the community to recruit tutors to help children with their assignments. Staff is also are familiar with educational technology so that they may assist students in their electronic research.

- **Collections** contain materials in all formats and at levels appropriate to the educational level targeted by the library, and the collections supplement, but do not duplicate the collections of the targeted schools. Access to computers and electronic data bases to assist students in their course work is readily available.

- The **facility** is easily accessible and is adjacent to local educational facilities so that students may easily visit the facility after school, at nights, and on weekends. The building has quiet space for individual as well as group study and may provide electronic access for distance education.

- **Technology** required to access electronic information is required. Technology will change over the years, and the building must be designed so that these changes in wiring, power requirements, and service points in the building may easily accommodate technology changes.

c) Design features supporting the role include:

- Group study areas where learners can interact with each other without disturbing other library customers

- Quiet individual study areas

- Electronic work stations easily accessible by staff so that they can offer assistance to learners

- Computer laboratory for accessing electronic information and providing group instruction

- Orientation area for seating from 30-40 students for orientation to the services of the library. The area should have a projector for viewing PowerPoint or video materials. This area might be included in the meeting area.

- Service area to sell supplies such as paper, floppy disks, pencils, etc.

3. Information Literacy

This role helps address the need for skills related to finding, evaluating, and using information effectively. The branch provides training and instruction in skills related to locating and using information resources of all types. Teaching customers to find and evaluate information will be stressed over simply providing answers to questions. The library will provide access to information in a variety of formats and will offer public Internet training and access. The target audience for this program will be school children and adults who need training in how to access information for personal and professional reasons.

a) Some possible components of a Information Literacy Center would include:

- Classroom space

- Special programs on media literacy

- Listening and viewing multi-media computer stations for critical evaluation of resources

- Basic library skills and bibliographic instruction

- Instructional technology

b) Resource allocation issues:

- **Staff** needs to develop and maintain knowledge of how people seek and process information and a skill in evaluating information resources. Staff should have an excellent range of computer skills and familiarity with different types of software products. This role provides an excellent opportunity to use volunteers who want to share their expertise in information literacy.

- The entire range of the branch's **collections** including books, periodicals, video, sound recordings, television, radio, and online information resources can all be used to help people understand how to find and critically evaluate information. Information literacy training typically happens either informally using the materials an individual has already selected, or in a formal classroom or training setting using materials selected by the instructor for illustrative purposes.

- The **facility** provides a computer lab to accommodate formal training sessions as well as a large meeting space and smaller seminar rooms.

- **Technologies** for teaching purposes should be included in the library including video equipment and computer input video projection units.

c) Design features required supporting the role:

- Large meeting room
- Seminar rooms
- Computer laboratory

IV. OVERALL BUILDING CONCEPT[i]

A. General Requirements

The building must conform to local building code and standards for use as a public building. The specifications of the American Standards Institute, Inc., ***American National Standards for Buildings and Facilities-Providing Accessibility and Usability for Physically Handicapped People***, A117.1-1986 should be consulted and plans must conform to provisions of the American With Disabilities Act of 1990 (ADA) as set forth in the Federal Register.

B. Functional Interrelationships

The library needs to reflect the proper interrelationships between interior spaces. Often it involves subtle visual, acoustic or other factors that exist within libraries. The space adjacency diagram in the program **Appendix D** indicates how to link related functions together. The diagram ensures a comfortable level of staff supervision, separates noisier activities from quiet areas, and provides a clear user orientation and progression through spaces.

The three major forms of traffic within libraries—public movement, staff movement and library materials movement—must each have their own sense of clarity, simplicity and efficiency.

C. Architectural Character

The following section describes concepts that are basic to this program and the philosophy of library design behind it. These planning and design considerations are generally applicable to the entire branch library facility.

The overall planning and design priority of the branch library is to be very supportive and oriented to the public user of the library, while also being efficient, effective and enjoyable for staff. The new library should:

- Take advantage of the location on the school campus, and create a synergy with the surroundings.
- Have the architectural character and power that makes the branch a focus of the community.
- Be a building that is distinctive in appearance yet in harmony with its surroundings.
- Welcome, encourage and attract users of all ages and stimulate their mental activity.
- Welcome, encourage and attract traditional non-users of the library. The building should be attractive and interesting enough to attract many new users because of the power of its presence as a physical destination.
- Take full advantage of the site as a small-scale civic element of the community that may also visibly serve as a "gateway" or "signature" to the Barrio Logan community.
- Welcome users who are traveling by foot or automobile.
- Create a building that is unmistakably public in character and function, yet comfortable and non-intimidating.
- Consider light, books, people and the surrounding space as integral to each other.
- Express symbolically the important value of knowledge and learning.
- Merchandise the products and services of the library by incorporating design features that are successful in retail merchandising. The best practices of successful bookstores should be mirrored in the library's

approach to merchandising its services.

- Solve the paradoxical needs within a library of spatial openness and seclusion by creating the ability to orient oneself within the visible total enclosure, yet not feel anchored to a particular part of it.

- Create a space that allows easy supervision by staff; yet allow users to not have a sense of being left exposed in an impersonal large area.

- Create a gradation of different spaces within the library ranging from open areas of public activity to alcoves of semi-private activity.

- Devise areas that have a sense of intimacy within the overall public setting.

- Design a wide variety of reading areas so that users have many choices to fit their mood or reading environment needs.

- Allow a clear understanding upon entry to the library (and while moving within the library) of the general purpose of each library area.

- Visibly identify staff and places where they can get help.

- The exterior of the library should incorporate design features that take advantage of the unique climate, character and style of San Diego.

- The architectural style should be in harmony with the overall design of the residential, school, and park buildings adjacent to the library. The building must be distinctive yet not offend its neighbors. It. must celebrate the unique background and ethical heritage of its residents.

- Exterior and interior fixtures, surfaces, and equipment should be as vandal proof as possible. For example, many new libraries have been experiencing problems with exposed ground level surface lighting fixtures. The fixtures are being destroyed by vandalism and by accident. Selection of all fixtures must take into account their ease of repair and durability. Care should be taken to protect the site and building from abusive skateboarding.

- Create exterior surfaces adjacent to the library that discourages skate boarding, in-line skating and extreme bicycle activities.

- The interior design should reflect a theme in harmony with the exterior of the building. Interior finishes should create a space that is inviting to users, stand up to the wear and tear of **heavy public use**, and be flexible to take advantage of changes in public library products and services as well as changing technology. ***Public libraries are subject to more use and***

abuse than almost any other type building, and interior and exterior equipment, furniture, fixtures, and surfaces must be able to accommodate this heavy abuse. The exterior, interior, and furniture, furnishings and equipment must be almost indestructible.

D. Patterns of Public Use

A clear understanding of the pattern of public use of a branch library will aid the design team in creating a supportive library environment. The pattern of use in a community library differs significantly from a central library or academic library.

The pattern of use at a community library is generally less structured than that of a main public or academic facility. In many ways, the planning and design of a community library need to be similar to a self-service supermarket or bookstore—the key issues are clear routes of movement and orientation, easy supervision by staff, efficient storage of materials and active enticement of casual users.

Users will come to the community library with different interests as well as different abilities to locate information. Finding a book or a magazine will frequently be at random---by browsing, by the reader searching for books by a favorite author, or by the newness of materials. In many cases the reader will locate books and media without consulting a catalog.

Because of the various patterns of public use, it is vital that the library merchandises its book and media collections. This can be accomplished by: displaying materials in high traffic areas; using back slant shelving, zigzag, and bin displays; and employing other merchandising and display techniques used by successful retailers. This technique should be employed throughout the library and not just in the "Display and Slant Shelving Area."

Casual retrieval of books by customer is often accompanied by a certain amount of sampling in order to make a choice. Having seats and reading surfaces near the shelves will support this need. Therefore, the function of retrieval and an immediate check on whether or not the resource is likely to be of interest should be possible within the same space---this double activity is one of the characteristics of public library use.

However, casual retrieval does not always occur. Some users will seek information for a specific need. Intense and prolonged use of the library's resources can often occur by individuals pursing a personal interest. In this situation the library becomes more analogous to a small-scale research library.

It is also important to note that many readers do not always need the accepted arrangement of a table and chair, particularly if reading only one book at a time. Most people reading a book at home will do so in an armchair, and there is no reason why a library user cannot move from a table a comfortable chair.

The community library also is a social gathering place for people who just enjoy being around other people, or for children on their way home from school. Therefore, the library must also support a comfortable level of casual conversation and quiet interaction in what are traditionally is thought of as very quiet individual spaces. The community meeting and seminar rooms can fulfill this need. By designing these rooms so that they may be easily supervised and acoustically isolated, controllable group interaction activities can take place.

E. Flexibility

Over the next several decades, as has been the case in the past, the SDPL will experience an extensive evolution in collections, services, and user needs. Flexibility must be a major feature of the project's design. However, this does not mean that **every** area of the library needs unlimited (and costly) flexibility.

Traditionally, libraries have relied on creating large open spaces with a minimum of columns, load-bearing walls or other constraints to modification. While there is no reason to abandon this policy, it must be carefully evaluated along with other priorities (such as the need to provide a variety of spatial areas so that the library user can choose an area that best suits their mood or need at the time of use).

The building should be designed on the module principle--interior load bearing walls are not acceptable. The module or bay spacing must be as large as the budget will allow and must take into consideration the standard library-shelving module of three feet. Building columns must be few and unobtrusive as possible.

Attention to the spacing of columns, shafts and other architectural elements will also ensure flexibility and the effective use of space. The standard shelving module is 36" wide and either 10" or 12" deep. All areas (except the Reference Area and the picture books in the Children's Area) should use 10" deep shelving. In addition, 42" aisle width is required between all shelves. All of these spacing factors are summarized in the chart in Appendix B. To disregard these factors and place columns incorrectly by even a few inches may cost the library many crucial linear feet of book storage capability.

The minimum floor-loading requirement throughout the building is a minimum of 150 pounds live load per square feet.

F. See Appendix B for Structural Stack Spacing Diagram

G. Other Overall Flexibility Concerns

The building systems within the library will greatly influence long-term flexibility. Lighting fixtures, air ducts and registers, electrical power, and

communication linkages for terminals should be carefully located throughout the library to permit alternative layouts in the future.

The facility should be planned and wired to accommodate a future small satellite dish and/or microwave communications.

Power grid in section, or fiber optic networks should be utilized to provide the power and communications flexibility required for adjustments to the library's internal layout. A raised floor in areas serving a large number of electronic units should be considered.

H. Storage Efficiency

Shelving layout as well as the height of bookshelves influences storage efficiency. Seven-shelf high units (full height 82") are recommended throughout the Adult and Young Adult Areas, with four-shelf high units (full height 42") suggested for all areas within the Reference Area. The Children's Area is recommended to have four-shelf high units (42") and five-shelf high units (60") throughout. These shelf heights can be used in conjunction with the table below to calculate book storage capacity. No shelf should be less than 10" deep.

Book Storage Assumptions:

Media	Depth of Shelf	Volumes Per Shelf-Foot
Adult Fiction	10”	9.0
Adult Non-Fiction	10”	8.0
Reference	12”	6.0
Bound Periodicals	12”	5.5
Picture Books	12”	20.0
Children's Books	10”	15.0
Display Shelving	12”	2.0

In addition to pure book shelving efficiency, the shelving layout should define reader areas as well as break up large spaces into more intimate spaces. Care must be taken to avoid blocking the view from staff areas to the readers and to avoid heavy traffic among readers. Every attempt must also be made to locate rows of shelving so that the books can be grouped logically according to the library classification scheme.

I. Book Capacity Targets (See Appendix B for calculations):

Books & Media	#	Units	Sq. Ft/Unit	Sq Ft.
Adult				
Circulating	*48,000	265	10.3	2,729
Circulating Spanish	*12,600	70	10.3	721
Reference	650	12	10.3	124
Paper Backs	2,400	6	40.0	240
Display	300	10	10.3	103
Audio CD's	1,500	2	75.0	150
Video DVD's	600	4	50.0	200
Young Adult	1,500	10	10.3	103
Magazines	100	5	15.0	75
Total Adult	**67,650**	**384**		**4,445**
Children's				
Circulating	*15,000	70	10.3	721
Children's Reference	200	4	10.3	41
Curriculum Collection	600	8	10.3	82
Picture Books	*2,000	8	40.0	320
Paper Backs	1,125	3	40.0	120
Magazines	24	2	10.3	20
Audio	300	1	50.0	50
Videos	300	1	50.0	50
Total Children's	**19,549**	**97**		**1,404**
Total	**87,199**	**481**		**5,849**

**20% "In Circulation"*

J. User Seating Preferences

Observation and behavioral research has shown that rarely will more than two people sit at a four or six-person reading table, unless the people know each other. This indicates that small tables and carrels will work better than larger reading tables and the recommendation is for table seating for no more than four people.

Rectangular tables are considered to be generally better for work and concentration, while circular tables are best for conversation. On a rectangular table, a person can more easily mark his or her territory. An exception to this is in the children's area of the library. A good mixture of circular and rectangular tables may be best there because many children like to work together or sit side by side.

Comfortable seating in lounge or casual chairs is very popular with readers, and needs to be included. Care should be taken to make sure that heavy wear areas such as arms and head-rests are made from materials that will take heavy use and can easily be replaced.

Each seat in the library requires access to electrical and data connections. Please see the specifications for electrical and data connections following below in ***Section R-7***.

Seating is not listed for the on-line public catalogs located in the adult and children's areas. Some of these catalogs may have seats, and this decision will be made as schematic design proceeds.

K. Seating Targets

This program suggests the following seating targets within the 15,000 square foot community library. These figures are the total figures for all types of reading areas for adults, young adults, and children within the library as well as seating associated with the reference area and meeting areas.

Seats	# Required	# Seats	Sq. Ft.	Total Sq. Ft.
Adult/Young Adult				
Lounge	14	14	35	490
Nook & Informal Seating	14	14	16	224
Carrel	15	15	35	525
Table (4 Place)	11	44	120	1,320
Young Adult	8	8	35	280
Electronic Units	49	49	45	2,205
Total Adult	**111**	**144**		**5,044**
Children's				
Lounge	4	4	30	120
Nook Seating	4	4	20	80
Carrel	4	4	30	120
Table (4 Place)	7	28	100	700
Electronic Units	16	16	35	560
Total Children's	**37**	**60**		**1,580**
Total Public Service Seating	**148**	**204**		**6,624**

Community Room Areas				
Meeting/Multi Purpose Room	1	300	10	3,400
Centro Cultural	1	16	NA	1,000
Children's Multi-Purpose Room	1	30	NA	400
Seminar Rooms	3	40	15	600
Total Community Seating	**6**	**386**		**5,400**
Total Library Seating	**154**	**590**		**12,024**

L. Staff Control over Collections and Public

A community library of this size must be designed to operate effectively with very limited staff. Budget limitations will preclude the possibility of additional staff. Operating effectively means being able to offer a service-oriented program in which the building does not create unnecessary time-consuming tasks for staff.

Good visibility (yet intimate feeling spaces) not only gives staff a feeling of supervision (and the public a feeling of safety) but it also can make it easier for the public to understand the layout of the building and the location of materials. Directions are easy to give because most sections are visible from any point.

The library's design should promote visual control and supervision by staff. However, the public should feel only a general sense of control without it dominating the experience. It is very important that most, if not all, areas of the branch be visible from the circulation desk. If this is not possible, a closed circuit video surveillance system should be used to monitor areas not visible from the circulation desk. Supervision can be supported through the careful layout of furniture and equipment as it relates to the circulation desk, librarian's desk and entrances/exits.

Public entrances (preferably one) should immediately relate to the staff at the circulation desk. Emergency exits must also be visible by staff in their normal areas, and alarmed to alert staff to unauthorized egress. Visual control should be strong in potentially troublesome areas such as the entrance to public restrooms.

M. Library Security

1. Problem customers or non-customers create a number of problems in libraries including:

- Stealing or defacing materials.
- Causing disturbances or perpetrating anti personnel offenses such a rape, molestation, kidnapping, murder, robbery, drug use and trafficking in illegal substances.
- Vandalizing the building.
- Committing arson.
- Penetrating non-public zones of the library.
- Misusing restrooms.
- Occupying the facility and/or grounds after hours.
- Abusing technology.

2. Solutions to these problems require good space planning and architecture that optimizes visual surveillance. Some specific recommendations include:

a) Entry and Interior Considerations

- One entrance/exit point near the circulation desk or greeter station.
- Good lighting of all areas, including walls and corridors.
- Security sensing/screens/turnstiles/gates.
- Stack orientation that allows maximum supervision, and minimizes remote and secluded spaces.
- Alarmed emergency exits.
- Appropriate fenestration from staff work areas onto public spaces.
- A security code system or electronic access to limit public access to non-public areas.

- Staff lockers and lockable personal drawers at work stations.
- Polices for staff response to various security and emergency scenarios.
- Direct sight lines from service desk to entrance and restrooms.
- Clear circulation patterns.
- Reflective surfaces to augment sight lines.
- Open cubicles to house customer's personal items.
- Motion detectors with alarms in storage areas, ceiling plenums, and mechanical rooms.
- Strategic easily monitored locations for highest-traffic functions such as copiers, children's room entry, computer labs, and popular materials browsing.
- An interior with easy to maintain surfaces, corners, and edges.
- Secure attachment of movable equipment to furniture.
- Sufficient staff to monitor areas of the library open to the public.

b) Exterior Considerations

- Good exterior lighting for parking, staff entrance, and surrounding landscape.
- Vandal proof lighting fixtures.
- Hard surfaces that discourage skateboarding.
- No walls or alcoves that could hide lurkers.
- No secluded patios or alcoves allowing people to sleep at night.
- Surveillance cameras and monitors for areas not directly observable by staff.

- Staff areas located to promote staff surveillance of remote public areas.

- The landscaping should not contain loose rocks or other materials that could be used to vandalize the library.

N. Heating, Ventilating & Air Conditioning (HVAC) Requirements

The following recommendations should be incorporated into mechanical design:

- City staff responsible for maintaining the building must be involved in reviewing the specified equipment with the architect's mechanical consultant in the initial phases of design.

- City staff must review any energy management system specified for compatibility with existing City systems.

- There must be 100% compatibility between the building automation system and the HVAC equipment. No inter-phasing equipment shall be used to communicate between the HVAC equipment and automation system.

- The building automation system must be able to receive information from a pulse meter supplied by the utility company.

- Computers specified to accompany the building automation system must be of the latest technology, and have a local distributor for warranty service. Dumb terminals are not acceptable.

- Systems should be compatible with the latest version of Microsoft Windows, and be accessible via communication software program approved by the City staff.

- All building automation systems must be able to dial out alarms, have a dedicated telephone line, and modem. A dedicated phone line must be available for use by the building automation system, at time of phone installations.

- Only the latest models of HVAC equipment shall be used. If updates to the designed automation system have been made at the time of installation, the newest version of the equipment should be installed.

- City's HVAC staff will consult with the project engineer during the design and construction phase and participate in the final walks through.

- Safe and unobstructed access must be provided to all HVAC units as specified in manufactures' Operation and Maintenance (O&M) Manuals.

- No refrigerant lines shall be installed below grade or within a concrete slab.

- No HVAC ducting shall be installed below grade or within a concrete slab.

- The utility supplier will use natural gas for heating if available at the street.

- AC units 3 ton and over, will use three phase power.

- Maximum amount of unloading and staging from manufacture's equipment should be purchased. This provides the greatest efficiency and comfort by staging based on system demands.

- If a facility will require 50 tons of air conditioning or more, a hydronic system must be installed. A central boiler will be used for heating hot water and a central chiller will be used for the chilled water system. Multiple fan coils or air handlers will be used with this system.

- Whenever practicable, a scroll compressor shall be used.

- If a VAV system of 5 tons and over is used, it must be either chilled water or multiple compressor system with adequate by-pass. Static bypass damper sensors should be used when a bypass damper is used in a multi-zone VAV system application. A Trane VAV control system allows maximum occupant comfort in all types of applications. At the heart of the control system is the DDC microprocessor controller, which allows flexibility and stable control throughout the VAV system.

- All refrigerants shall be CFC safe.

- All refrigerators must be free standing, with no built in units or combination units.

- Only standard sized filters shall be used and installed for easy maintenance and access.

- All thermostats must be covered with a metal locking cover. Do not specify programmable thermostats.

- A system time clock with battery back up must be installed.

- Air balancing of the system should be contracted out separately and not be part of the mechanical contract. The contractor performing the balancing must have their balancing verified by the HVAC Shop as to accuracy.

- The manufactures' representative and/or mechanical engineer must give training on the operation and maintenance of all HVAC equipment to City HVAC Shop staff, as well as a simplified training to library staff.

- O&M technical manuals for all systems and components must be provided to the City HVAC Shop staff responsible for maintaining the building.

- There must be warrantees provided for compressors and/or air conditioning units 5 ton and under, and extended warrantees for units 5 ton and over.

- Building Automation and Control Networks (BACnet) should be considered. BACnet is a protocol for all building automation needs. It allows functions, equipment and controls of all types from a number of different manufacturers to work together, and is the industry standard.

O. Energy Requirements and Sustainable Design

The new library building should take full advantage of northern daylight for natural lighting during daytime hours, and the southern exposure should support a passive solar energy approach to the thermal aspects of the interior environment. Solar collectors should be evaluated for hot water heating. Insulation of floors, walls and ceilings should equal or exceed that required by code to minimize the cost of heating and cooling the building. Sustainable design should be incorporated into the planning of the building as much as the budget allows. Some considerations include:

- Provide windows that open to allow natural ventilation and cooling.

- Use construction materials that are minimally toxic and non-carcinogenic.

- Use recycled construction materials as much as possible.

- Use materials that minimize growth of fungi such as mildew, mold, and bacteria.

- Use nontoxic paints such as certain latex brands that are virtually VOC (volatile organic compounds) free.

- Use all natural carpet, and during and after carpet installation open windows to increase ventilation.

- Choose office furniture made from nontoxic materials such as solid wood, aluminum, or steel. If upholstered chairs are used, they should be covered with natural fabrics such as cotton or wool. No upholstery is to be used on chair arms.

- Place copy machines so ozone emissions go directly outside

- Install fresh air vents at roof level instead of at street level. Stainless steel bird guards should be installed on horizontal ceiling air vents to prevent birds from settling on the grates and polluting the shafts below.

- Provide a high efficiency, air filtration system with pre-filters and final filters. Filters should be easy to replace by library staff.

- Provide ventilation with outside air at a level of at least 20 cubic feet per minute (cfm) for every person in the building.

- Use plants inside to help clean the air. Plants' soil and root systems contain microorganisms that digest organic chemicals. Beneficial plants include bamboo, English ivy, spider plants, golden pathos and mums.

- Use exterior native plants and materials that are drought tolerant in developing the landscape architectural plan.

P. Electrical Requirements

Even with methods to conserve energy, the demand for electrical energy in libraries will continue to increase over the useful life of the building, and electrical systems must provide for future flexibility.

Convenience outlets should be provided for standard electrical equipment: floor vacuums, scrubbers, polishers, clocks, computer terminals, and audio-visual equipment. Outlets away from walls and pillars should be flush-floor mounted and capped. Floor monuments are not acceptable.

Instead of fixed floor outlets, a raised flooring system (such as the SMED System) should be considered in all areas that may need electrical or communications relocation over the life of the project. It is suggested that additional empty conduit be run to areas in the library that may require electrical power or communications equipment in the future. The "sweep" on conduit runs must be gradual enough to accommodate fiber optic and coaxial cables.

An example of a raised flooring system (approximately 3" off the floor), allowing data, power, and other cables to be "buried" under the floor. This type of system provides flexibility and easy relocations of electronic units in the library. If cost does not allow installation in the entire library, the system should be considered for those areas that have the greatest number of electrical units.

Under-floor conduit or ducts are required in public reading areas, circulation desk, and workrooms. **Library staff must review the exact type of system used and locations**. Prior to pouring floors, or enclosing conduit in walls, the architect, contractor, representatives from City's data processing department, and library staff should "walk" the site to make sure that outlets are properly placed.

Every seat and workstation in the library should have access to a duplex receptacle for power, and data communications and/or telephone outlets. All outlets should provide duplex power receptacles, and at least space for four data ports (coaxial, fiber, and twisted pair wires, with a box large enough to accommodate all four types of wire). At minimum a 1" dedicated conduit with a home run from each and every data outlet to the telecommunications room is required, and a ¾" conduit is required for power. Automated systems require dedicated telephone lines.

Convenience outlets should be provided for standard electrical equipment: floor vacuums, scrubbers, clocks, computer terminals, etc. Outlets away from walls and pillars should be flush-floor mounted and capped. Floor monuments are not acceptable.

Each staff workstation should have three to five duplex outlets, and four data communications/telephone outlets.

All cords and cables should be protected and out of site.

Dedicated lines should be provided for equipment requiring them.

A backup power system should be considered.

In addition, the architect's electrical engineer must consult with City of San Diego's Facilities Maintenance Division personnel during the design phase and throughout the project. The electrical shop has developed standards that must be incorporated into the plans and specifications of the library. These standards are attached as **Appendix F**.

Q. Illumination Requirements

Libraries require excellent illumination and control of lighting in both public and staff areas. Lighting is more important to libraries than other public buildings, and its effectiveness will be a major consideration in determining public comfort in the building. Despite its great importance, there are few well-lit libraries in the United States.

Prior to the energy crisis, library lighting, like virtually all-commercial lighting, was steadily increasing in brightness and in foot-candle power. This trend has now been reversed but lighting remains a major concern of library planning.

Fluorescent lights reflected back to the ceiling to create a low-glare ambient light are recommended, although downward task lights at reader areas throughout the library will also be needed. Illumination should be color corrected to be relatively warm in color but not necessarily even throughout the library. If financial reasons make it necessary to compromise on the lighting, then it is preferable to somewhat reduce the intensity of the lighting rather than to use fixtures that produce glare. High intensity light of poor quality is less desirable than low-intensity light of good quality.

Special attention should be paid to lighting over stack areas to ensure flexibility in the future arrangement of shelving, as well as adequate intensity of lighting necessary to illuminate the lowest shelf area. Light fixtures attached to stacks have worked well in library installations. Consider individual lighting for some of the reading tables. The loud ballast hum of fluorescent lights should be minimized through careful specification.

1. Some General Lighting Guidelines;

- Maximize use of day lighting and integrate into electric lighting schemes.
- Provide light colored surfaces. Light colored stack areas are critical.
- Use task lighting at tables.
- Use occupancy sensors for switching fixtures whenever possible.
- Use dimming systems that are coupled to the amount of daylight within the space.
- Increase the reflectance of walls (within contrast ratios).
- Reduce glare by correctly choosing and placing fixtures.

- Have no more than ten different lamp types at the building and site. **Library staff must approve the type and number of lams used in the building and grounds**.

- Reduce the number of decorative and display lights.

- Provide a combination of lighting types. Include both general diffuse (indirect) and direct lighting.

- Avoid large brightness ratios. Because brightness is a function of reflectance and illumination, the brightness level is controllable through good design.

- Provide fixture locations that allow easy lamp replacement. Staff should not have to move furniture and equipment and bring in a scaffold in order to re-lamp light fixtures.

2. Illumination Levels

The amount of light, expressed as foot-candles, needed for a specific task is affected by a number of factors including:

- The tasks to be accomplished. Consider individual and working and reading needs of the staff and customers.

- The ranges in ages of the occupants. Carefully consider whether lighting levels should be specialized for different age groups.

- The accuracy required for the tasks. Carefully consider supplemental illumination in those areas where detailed work is accomplished.

- The reflective ness of the room.

- Colors of interior building surfaces.

- Contribution to the illumination levels from natural sources through skylights, clerestories and vertical windows.

- Contrast ratios between adjacent surfaces and natural sources of illumination.

3. Lighting Levels Should Be Maintained at the Following Levels

- **Reading Areas**. 50 foot-candles average, measured horizontally at desktop, and augmented with task lighting carrels and table where appropriate.

- **Stacks**. 20 foot-candles minimum sustained uniformly at floor level.

- **Small conference or study rooms**. 30 to 40 foot-candles average measured horizontally at desktop.

- **Staff areas**. 50 foot-candles average on desks or worktables measured horizontally at desktop.

- **Large meeting or community rooms**. 40 foot-candles average with all lights on, and with separately controlled lighting for the podium or front of the room.

- **Parking lot**. 0.6 foot-candles minimum measured horizontally on pavement, to achieve a 4:1 average to minimum ratio, and with no spill light on adjacent properties. Lighting must be sensitive to neighbors, have a higher illumination level adjacent to the building and paths, and have a flexible control system that can be adjusted by staff.

4. Light Switching

All general public areas of the building are to be switched from panels at the circulation desk and/or workroom. No switches are to be in general public areas. The switching panel must be readily identified and contain legends to facilitate staff use. The switching panel should use multiple switches to allow variable light volume in each major area and must provide for switches and not just circuit breakers. There should not be automatic on and off switches in the restrooms.

Night lighting and emergency lighting systems should be separate from the general lighting pattern and switched separately. The night lighting should provide for illumination at all times the building is closed to the public. The system should also provide for safe staff egress with a light switch controlling exit routes adjacent to the staff exit.

Lighting fixtures in public areas should be of such type and so arranged that light levels as requested can be achieved regardless of the arrangement of shelving and/or seating.

5. Light Fixtures

The number of different types of lighting fixtures must be kept to a minimum and the ease of re-lamping must be a major consideration in fixture selection. Standard four-foot fluorescent tubes are most desirable.

Fixtures should not be located in areas that are difficult to access. **All fixtures should be located where it is possible to re-lamp the fixture off a ten-foot ladder**.

Fixtures provided must be as vandal proof as possible. Outdoor light fixtures must be "grenade proof" if not "bomb proof."

6. Natural Light

Windows can provide an important psychological benefit to the library as well as supplement lighting needs during the daytime. It is pleasant for readers to look out at the sky, trees and street activity. It is also good exposure for the library if passing pedestrian or auto travelers can look in from the street at night. Areas should be maximized to take advantage of available day lighting. For example, run book stacks perpendicular to the exterior window walls. However, direct sun or glare on books and users is not desired.

Windows should bring northern daylight into the library. In general, they should be located high enough not to interfere with the arrangement of shelving and furniture. Clerestory windows and skylights are also effective although they may bring a higher risk of leakage problems over the life of the facility. Direct sunlight damages books and furniture and should be avoided, although a very small amount of sunlight in non-book storage areas can animate the library space throughout the day.

R. Telecommunications & Computerization[ii]

For libraries today, a high-speed flexible data network is a critical requirement for effective communication. Technology is changing so fast that what was considered cutting edge a couple of years ago might not have the capability to run today's applications. Telecommunications now includes voice, data, and video transmission of information. Building monitoring systems include fire/security, audio, environmental and other intelligent building controls. Information from these systems is carried over a variety of systems including fiber optics, specialized copper data cabling, microwave and radio wave.

The new Barrio Logan will have a useful life expectancy of at least fifty years. Software, hardware and communications equipment has shorter life spans of one to five years. Continuous moves, additions and changes may to be expected to accommodate evolving library needs and programs. A generic structured cabling system, capable of running any voice or data application foreseeable is required to enhance the useful life of the building. The cabling system will probably be required to serve many generations of hardware and software evolutions.

A structured cabling system to serve the building consists of a number of functional inter-related subsystems:

1. Building Entrance Facilities

Building entrance facilities provide the point at which outside cabling interfaces with the inter-building backbone cabling. The entrance facilities may be used for public network services, private networked customer services, or both. The demarcation point between carrier and customer, and over-voltage protection devices are located here. The entrance facilities consist of a termination field interfacing any outside cabling to the inter-building backbone cabling. The local telephone carrier is typically required to terminate cabling with 50 feet of building penetration, and to provide primary voltage penetration.

A locked, dedicated enclosed room is required with plywood termination field provided on two walls. The plywood should be 3/4", with dimensions of 8' high x 39" wide.

2. Equipment Room

An equipment room is essentially a large telecommunications closet that houses the main distribution frame, PBXs, secondary voltage protection, etc. The equipment room is often appended to the entrance facilities or a computer room to allow shared air conditioning, security, fire control, lighting, and limited access.

Following are recommendations concerning the specifications for the equipment room at the new Barrio Logan Library:

a) **Size**. Provide a room of at least 150 square feet of floor space. The rule of thumb is to provide 0.75 square feet of equipment room floor space for every 100 square feet of user workstation area.

b) **Location**. The room should be located away from sources of electromagnetic interference (transformers, motors, induction heaters, theft detection systems, etc.) until interference is less than 3V/m (volt per meter-unit of electrical strength) across the frequency spectrum. The room should be an area that is not subject to floods.

c) **Perimeters**. No false ceilings should be in the room. All surfaces must be treated to reduce dust, and walls and ceilings painted white or pastel to improve visibility.

d) **Limited Access**. Single or double (36" x 80") lockable doors are required to limit access.

e) **Sole Use**. No piping, ductwork, mechanical equipment or power cabling should be allowed to pass through the equipment

room. Unrelated storage should not be allowed in the room.

f) **HVAC**. The room should be maintained 24/hrs. /day, 365 day/yr, at a temperature of 64°-75°F, 30%-55% humidity, with positive pressure.

g) **Lighting**. Light fixtures should be approximately 8 feet high and maintain 50 foot-candles at 3 feet above the floor.

h) **Electrical**. A minimum of two dedicated 15A, 100 VAC duplex outlets on separate circuits are required. Convenience duplex outlets should be placed at 6-foot intervals around the perimeter of the room. Emergency power should be considered and supplied if available.

3. Intrabuilding Backbone Cabling

Within a building, the intrabuilding backbone pathways extend between the entrance facilities, equipment room, and telecommunications closets. In the Logan Branch, the equipment room may be combined with the telecommunications closet. It is recommended that the backbone cabling be an optical fiber cabling system.

4. Telecom Closets

Telecom closets may be combined with the Equipment Room if the distance to a work area is less than 300 feet, or if the floor area served by workstations exceeds 10,000 square feet. The ability to have a combined equipment room/telecom closet is the case for Ocean Beach. However, the City's systems provider, the architect, and the Library must determine this. Recommended closet sizing is 10’ x 11’ for each 10,000 square-foot area served. **Please see Appendix E for a template of the room**.

Power lighting, air conditioning and limited access are required. There is a minimum of three 4-inch fire-stopped backbone sleeves in the floor at the left side of a plywood termination field, which is ideally located near the door. A fire extinguisher is required in the room.

5. Horizontal Pathways

Horizontal pathways extend between the telecommunications closet and the work area. A variety of generic pathway options are available. Choice of pathways is left to the discretion of the designer. The most commonly employed consists of cable bundles run from the telecom closet along j-hooks suspended above a plenum ceiling, fanning out once a work zone is reached, dropping through interior walls or support columns or raceways, and terminating at an information outlet (I/O). Other options include:

a) **Under-floor Duct**: Single or dual level rectangular ducts imbedded in greater than 2.5-inch thick concrete flooring.

b) **Flush Duct**: Single-level rectangular duct imbedded flush in greater than 1-inch thick concrete flooring.

c) **Multi-channel Raceway**: Cellular raceway ducts capable of routing Telecom and Power cabling separately in greater than 3-inch thick reinforced concrete.

d) **Cellular Floor**: Preformed hollows, or steel lined cellar, are provided in concrete, with header ducts from the telecom closed arranged at right angles to the cells.

e) **Trench duct**: A wide, solid tray, sometimes divided into compartments, and fitted with a flat, top with gaskets along its entire length is embedded flush with the concrete finish.

f) **Access Floor**: Modular floor panels supported by pedestals, use in computer rooms and equipment rooms.

g) **Conduit**: Is only used when outlet locations are permanent, device density low, and flexibility (future changes) not required. This is not the case at the Logan Branch.

h) **Perimeter Pathways**: This option includes surface, recessed, molding, and multi-channel raceways.

i) **Flush combination power/telephone, data floor boxes**. A series of floor boxes strategically located by dimension from columns at all critical workstations as determined by library staff and the architect. Boxes need at least two 1" conduits (power and data), with the data conduit running back to the telecommunications closet.

6. Cabling

A star topology structured cabling system should be used. Each work-area telecommunications outlet must be connected to a cross-connect in a telecommunications closet. All cables from a floor or area in the building therefore run back to one central point for administration. Each telecommunication closet must be star wired back to the equipment room for the building.

One of the first choices faced in planning or developing a structured cabling system is the type of media to be used.

a) **Unshielded Twisted Pair** (UTP) – 4-pair, 24-Gauge, 100 Ohm copper cable. Unshielded twisted pair cables closely resemble telephone cables but are enhanced for data communications to allow higher frequency transmissions. Category 5 cables and connection hardware are required. They are rated up to 100 MHz, and are designed to handle any current copper-based application for voice, video, or data.

b) **Shielded Twisted Pair** (STP-A) –2-pair, 22-gauge, 150 Ohm copper cable. Shielded Twisted pair systems provide high performance as a result of shielding. If used, Category 5 is required.

c) **Single-mode and multi-mode optical fiber cables.** The highest performing structured cabling systems use fiber optics, and this is the choice of the Library. As the cost of the electronic devices used with fiber systems decreases, more and more fiber systems are being installed. Fiber offers many advantages over copper-based systems. There is no electromagnetic interference (EMI) or radio frequency interference (RFI). Fiber also offers a much greater bandwidth than copper cables, allowing more information to be carried on each fiber. If the budget allows, fiber should be used to the workstation. However, if fiber to all workstations is not within budget, wiring to all work stations should be at a minimum Category 5 unshielded twisted pair (UTP5) conformant with Ethernet standards and capable of providing TCP/IP protocol support.

7. Telecommunications Outlet

Each seat in the library shall have a minimum of four information outlet ports, and two power outlets. **Every seat in the library should be considered as a workstation and equipped with a telecommunications outlet**. At minimum a 1" dedicated conduit with a home run from each and every data outlet to the telecommunications room is required, and a ¾" conduit is required for power. Cabling outlets required are:

a) **Voice**. 100 ohm UTP for Voice, T568A or T568B wiring.

b) **Data**. 100 ohm UTP 4-pair, 150 ohm STP 2-pair, or 62.5/125μm fiber for data.

This mockup illustrates the type of box for power and data required at every seat in the library. A 1" dedicated conduit with a home run from each and every data outlet to the telecommunications room is required, and a ¾" conduit is required for power

8. Work Areas

The work area components extend from the telecommunications outlet to the station equipment. Work area wiring is designed to be relatively simple to interconnect so that moves, new equipment, and changes are easily managed. Work area components include:

a) **Workstation Equipment**. Includes computers, data terminals, telephones, television receivers, etc.

b) **Patch Cables**. Modular cords, PC adapter cables, fiber jumpers, etc.

c) **Adapters**. Baluns, etc. Adapters must be external to the telecommunications outlets.

9. Wireless Alternative

Wireless local area networks have available for more than a decade, but high prices, poor reliability, limited bandwidth, and the lack of standards have limited their deployment. Recently costs have decreased and reliability has increased due to infrared technology, which has now been replaced by radio frequency technology. Bandwidth also has increased, and now is as high as 10.0 Mbps. The new standard, designated IEEE 801.11 HS, was published in early 2000, and calls for a standard for 11 Mbps (Megabits Per Second; a million bits per second) bandwidth within the 2.4-GHz band.

A wireless network may be a sound choice for the library, and should be seriously considered in the design development stage. What should be considered is a wired building backbone with from hubs to the desktop.

This will provide flexibility in adding or relocating workstations, as needs change.

S. Public Address System

A public address system is an essential part of the library's communication equipment. It will be used to provide a channel for emergency messages or announcements and for clearing the building of users at the close of each day.

Microphone input should be provided at the circulation desk, and speakers should be located in all parts of the library.

T. Doors and Windows

Doors should be equipped with a high quality closing mechanism to keep noise levels at a minimum, and allow easy exit and entry. Emergency (panic) doors need to be alarmed and monitored at the circulation desk.

Operable windows should have secure locking devices, have insect screening, and be as vandal resistant as possible.

The maintenance personnel at the City of San Diego may have specific guidelines for doors and frames, storefronts, windows, hardware, and keys and keying in City buildings. The architect must meet with representatives from the City early in the project to obtain their requirements. Involvement of the people who will be maintaining the building must continue throughout the project to insure that the equipment and materials specified are easily maintainable by personnel assigned to maintain the building.

U. Fire Safety & Security

Malicious vandalism, including fires, has become an increasing hazard in libraries. The building must have adequate protection. Fire detection systems, including heat and smoke detectors, should be used throughout the facility. The alarm system should be connected directly to the fire department for immediate response, and have a communicator to allow monitoring by an alarm company.

A zoned overhead sprinkling system is required. Fire damage is a serious potential through the book drop. Immediate freeze-drying of the collection can mitigate any water damage to books.

Fire extinguisher/hose cabinets, alarm control panels, sprinkler valve systems, and other elements which require periodic inspection and/or testing should be placed where they are easily accessible to authorized personnel without disrupting library activities or becoming an attractive nuisance to teenagers.

To reduce opportunities for breaking and entering after hours, a night lighting system should be provided as well as glass breakage sound detectors and/or

infrared motion detectors. A security system to monitor unauthorized entry into the building is required.

A television monitoring system is required, with monitoring stations at the circulation desk and the guard's desk adjacent to the entry. All public areas of the building as well as outside locations should be monitored by the television system.

A book theft detection system is required in the building. Such systems at the entry/exit area have usually proven cost-effective in libraries, even in small branches. However, it is important to incorporate these systems into the interior design and/or architecture of the facility in order to minimize their intrusiveness on public users.

Care must be taken not to locate anything metallic or magnetic close to the book theft detection system. If metal studding is used in the building, wood studding should be used in the immediate vicinity of the book theft detection system. Computer terminals and any other equipment that emits an Electro-magnetic signal also should be located away from the theft detection system.

V. Graphics & Signage

Graphics and signage should be incorporated as an integral part of the building's design. Signage should be worked out with the layout of service areas so as to emphasize and reinforce to the public user the logical arrangement of functions and spaces within the interior. Sign requirements include:

- All signs must meet ADA requirements.
- Classification numbers at the end of stacks or in any location must identify each shelving area and should be attractive yet easily modified by staff without losing graphic integrity.
- All signage throughout the building should be able to be modified by library staff with minimum expense and effort.
- Signs should be proportional to distance from users and all signs must be sequentially positioned to facilitate self-service.
- Signs should use terminology consistently.
- Signs must be reasonably vandal proof.
- Signs must be positioned and designed to avoid injuries.
- The exterior monument sign identifying the library must be positioned so that it is easy to read when approaching the library.

- For the Logan Branch Library, signs should be both in English and Spanish.

W. Artwork & Display Areas

Opportunities for community artwork should be provided. Wall cases or freestanding museum cases with internal illumination should be provided in the library. They should have a depth of at least 18 inches and should also have an internal electrical outlet.

Displays and exhibits are best located in an area through which everyone will have to pass, and therefore where everyone will see them. The ideal location for the displays is therefore usually between the entrance and the circulation desk. The displays can make the entrance to the library one of the most inviting, cheerful, colorful and dynamic areas of the building.

One or more walls in the library should receive special treatment to serve as a gallery for art display or exhibits. In the Community Room as well as in the Centro Cultural, walls should accommodate a picture hanging system along with a flexible lighting system to illuminate the pictures.

Wall space for community announcements, posters, etc. should also be provided. A wide range of free local publications should also be accommodated in built-in flexible storage racks in high public traffic areas within the library.

X. Public Art

Public Art is an important part of the City's Branch projects, and an artist must be considered as part of the design team. The following guidelines define the general scope of services for professional artists:

- The artist, as sub-consultant to the architect, shall be an equal member of the design team and integral to the overall design and development of the project, including but not limited to: the site plan, landscaping, hardscape, seating elements, fencing, sidewalks, furniture, architectural details, color, and visitor circulation.

- In consultation with the design team, the artist may also identify exterior and interior opportunities for site-specific artwork for the facility.

- The artist, as a member of the design team, shall participate in community presentations.

- Artist shall review the architects design documents at key milestones during the project.

- Artist shall prepare renderings and cost estimates of site-specific artwork, as needed.

- Artist, as a member of the design team, shall participate in design review and value engineering sessions with City staff.

- Artist shall have the opportunity to attend pre-bid and pre-construction meetings.

- Artist shall provide on-site construction installation oversight of the project.

Y. Parking and Access

Parking needs require 80 parking spaces for the library. A guideline approved by the City states "a minimum of one parking space per 200 square feet of building space with an addition of one space per 80 square feet of meeting room space". With public taste in vehicle usage shifting to mammoth sized vehicles, **all of the parking spaces need to accommodate full sized vehicles**.

Access to the parking area should be carefully worked out to maximize pedestrian and driver safety.

If possible, a passenger drop-off zone should be provided, as well as handicapped parking as specified by City code near the main entry to the building.

An oversized parking stall with ramp access to the building should be reserved for a library delivery truck, maintenance van or other City vehicle.

V. ASSIGNABLE VS. GROSS SQUARE FOOTAGE

Appendix A lists square footage requirements for assignable areas within the library project and some non-assignable spaces. Non-assignable spaces are listed in order to give a recommendation on size. All spaces are listed in Net Square Feet (NSF). It is important to distinguish between the terms net square feet and gross square feet. The total area in a building, the area on all floors enclosed by the outer walls of the structure, is known as the building's gross area. It can be divided into "assignable" and "non-assignable" space. Net square footage, sometimes referred to as assignable space, is the amount of usable space in the building.

Assignable space can be defined as "the sum of all areas (measured in square feet) in the building, assignable to, or useful for, library functions and purposes. It includes space for readers and reading areas, book-stack or related storage areas or the book collections and other library materials, working spaces for staff, space for services to readers (including the on-line catalogs), public service desks, copying equipment, aisles between book-stack ranges and library furnishings, and similar spaces."

Non-assignable space, on the other hand, is defined as "those areas or rooms of the library necessary for the general use and operation of the building but not serving specific

library functions." Examples include foyers, vestibules, corridors (but not aisles in book-stacks or among other furnishings), stairs, elevators, toilets, janitor room or closets, ventilation ducts, and mechanical equipment areas.

Non-assignable space also includes space required for general storage for supplies, seasonal displays and so on. Specific needs for non-assignable space will be directed largely by architectural requirements, which will vary from library to library.

For estimating purposes, it is assumed that twenty percent of the building will be classed as gross or non-assignable space. The space needs that can be estimated for collection space, user seating space, staff work space, meeting room space, and special use space will be eighty percent of the building.

Please see **Appendix A** for the attached spreadsheet that indicates square footage for all of the spaces in the library.

VI. DETAILED LIBRARY REQUIREMENTS

First Floor

A. Entry/Community Services

1. Public Entry

The entry must be inviting and be easily recognizable from outside by the public visitor. With the schools on both sides of the library, and all of the activities in the park, the entry must stand out and call attention to the library.

There should be a large exterior well-lighted sign identifying the library and the library's address that is visible from passing cars from all street locations. The sign should not accessible from the ground to protect it from vandalism.

The Library's hours of service should be prominently displayed on a sign at the entrance to the building.

The entry should be directly linked to the public parking for the library as well as offer easy access to pedestrians on the street. Disability access should be provided.

Having only one public entry is **strongly preferred** although two may also be explored depending on the constraints posed by the project site. A separate entry is required into the meeting room complex when the library is closed however.

The entry doors must be easily accessible by children and the physically challenged. Doors must be easy to open for all and quiet in operation.

If an outside book return is not installed, there must be an outside book return slot into the building for returning materials after hours. The book-drop must be located in a fireproof room.

The entry area must include an electronic book-theft detection system. The theft detection equipment must be successfully incorporated into the project's interior design or architecture in order to minimize its obtrusiveness to the user. Electronics and wiring provided should provide the flexibility to change brand and type of theft detection system if needed in the future. Electronic equipment and steel (studding, etc.) must be located so that it does not impact the theft detection system.

An express checkout (self-check station) to allow library users to check out books and media should be provided either near the entry or at the circulation desk. The copier should be near the door, but protected by the theft detection system. It should not be close to the sensing areas of the theft detection system because it may disrupt the system.

A guard standing desk should be adjacent to the entry into the library. The guard should be able to monitor conditions in the building through a closed circuit television station.

Once inside, the visitor should be immediately oriented to the major areas of the library. In particular, the visitor should be able to distinguish the different locations for Adult Services vs. Children's Services, the Reference Area vs. the Informal Reading Area, as well as the Circulation Desk and the Community Meeting Areas. Signage as well as good design should facilitate this orientation.

The entry provides access to the second floor through the stairs and elevator which need to be adjacent to the entry.

The entry should serve as a transition to the relatively quieter areas within the building. The library should give users a feeling of welcome and incentive to explore the library's collections and services.

There should be an area provided to allow recognition of donors.

2. Community Display/Exhibit Area

An area for free community information should be provided that contains a large tack board surface for group announcements, etc. There should also be organized racks for various size handouts, free newspapers and pamphlets, tax forms, etc. The architect needs to work with library staff in detailing this area.

This area should also provide a display wall that contains a community map with graphic displays of area agencies, facilities, service points, etc.

Additional wall display surface for a community calendar is required. The display should be a graphic calendar that may be updated with a marker.

Some form of active visual display relating to the library should also be visible from the entry area as a way to graphically entice the library user. For example, new library materials and announcements of upcoming events could be actively illustrated by a timed automatic slide system projected to a darkened entry wall.

Display cases and wall spaces for community art, exhibits or other forms of display should also be provided and have a minimum depth of 2' and minimum width of 8'.

The community meeting room complex should be designed to supplement the Community Display/Exhibit Area by being located near the display cases as well as offering additional wall surface for special displays.

3. Public Support Area

One public pay telephone that is accessible to handicapped adults as well as other users should be provided. The phone should be located in a sheltered outdoor area instead of indoors. The advantage of an outdoor location is its 24-hour availability to the community.

One drinking fountain that is accessible to handicapped adults as well as other users should be provided.

B. Reader Service Area

4. Circulation Counter & Work Area

The circulation counter & work area is primarily to provide space for staff, equipment and users involved in record-keeping operations which enable the library to process borrowed materials. It is completely separate from the Information/Reference Desk used by the librarian to assist users.

The circulation counter should not physically overpower the entry area. Many people do not have an immediate need for the services offered there and want to move further into the library without feeling they have to pass some sort of "guard" position.

Design the circulation counter as a single unit that can successfully be staffed by one person (although able to accommodate three or four staff). Staff performing the different functions at the circulation counter should

be able to see one another, and move freely from one area to another to insure the best possible public service. The circulation counter should provide space for three computer terminals, with expansion to four, to handle the functions described in statements below.

Staff should be able to supervise most public service areas of the library from the circulation counter.

There should be adequate space between the computer terminals and the security system to prevent them from interfering with the physical and electrical operation of the other. Care must be taken to make sure that the computer terminals do not interfere with the operation of the book theft detection system. Wiring and cable should be easily accessible, and the wiring should be under the desk out of view and out of casual contact by the staff.

The flooring material adjacent to the circulation counter should be a surface that will minimize the noise of book trucks, yet be easily maintained, wear well, and be safe during wet weather. Book trucks should be able to move easily over the floor area. Flooring for staff behind the desk should also be comfortable for people standing for long periods of time. The Library recommends Robbins Sports Surfaces ***Pulastic 2000***. It is practically indestructible and easy on the staff at the desk.

The circulation counter should be a minimum of 25 feet in length with a raised counter top. It is required that commercially available, modular prefabricated 36" wide circulation counter units are provided to support the various functions indicated below. Modular units are typically 32" (seated), 39" or 42" high (standing height), 36" wide, and 30" deep. The desk itself may be custom made, but it must accommodate the dimensions of the selected modular components. Space should be allocated for at least eight modules, with one at least one of them being accessible for people with disabilities. The surface of the counter must be suitable for writing with a pen and paper.

The height and width of the circulation counter should be appropriate for the various functions, with a usual recommendation of 30" deep and 32", 39", or 42" high. The height preference is determined during schematic design when library staff has an opportunity to provide input to the desk. Some staff prefer to sit at the desk while others prefer standing. **However, at least one circulation module should be a 29" high ADA/consultation module with recessed front.**

The circulation counter should reflect the natural sequence of functions that need to be accommodated at the counter, with book return and checkout functions closest to the entry/exit. Other functions include

overdue fine payment, borrower library card registration and reserve materials storage/pick-up. Many of these activities occur simultaneously with a given patron. Type and location of the modules will be determined during schematic design.

Flexibility should be provided to adapt the circulation counter to a "pass around" theft detection system if desired.

Immediately adjacent to the book return unit and within the circulation counter, staff will sort the books for return to the shelves. This activity requires space for mobile book trucks that must be moved from this area to the various book stacks.

A locking cash drawer and cash register should be provided within the circulation counter for the storage of overdue fines and other library funds.

As part of the circulation counter, space for registration of new borrowers (getting a library card) should be provided. A typewriter and proximity to the circulation computer terminal is needed for this function. Kneehole seating, along with adequate writing space for patrons registering for a library card at the desk should also be included.

Storage space for materials that people reserve in advance must be provided. The reserve materials will be picked up at the circulation counter. Approximately 200 volumes of books as well as additional space for videos or tapes should be provided. The storage space can be incorporated into the counter or in shelving that is within the circulation counter area. Items that arrive from inter-library loan requests will also be placed here for customer pick-up.

5. Sorting Shelf Area

Sorting shelves are required very near the circulation counter and accessible only to staff. The sorting shelves should be able to accommodate not only books but also audio-visual materials.

Two double faced 82" high, 36" wide adjustable shelving units should be provided (a shelving capacity of approximately 600 books).

There should also be space for four book trucks in the area.

Sorting shelves should be adjacent to each other to facilitate the sorting of books. A staff member will take unsorted books to the shelf, place them on the shelf in order, and pull them from the shelves and place them on the book truck in Dewey Classification Order in order to return them to the public shelves in the library.

6. Public On-line Catalog Area

Provide five On-line Public Access Catalog (OPAC) terminals at workstations, staggered to enhance noise control and privacy. The terminals require both power and dedicated data phone access. The Library will provide the terminals but will require the stations either built in or as part of the furniture package. Workstations should be formed of interchangeable pieces that can be arranged in many ways.

At least one of the units should be accessible to people with disabilities. Equipment should include:

- An adjustable table for computer. To hold necessary equipment, the top should be minimally 60" in width and no more than 30" deep, and be able to be configured to have all equipment within easy reach for persons with disabilities. It is preferable to have a readily adjustable table.

- At least one of the computers should have a large screen monitor for low vision users.

- The Keyboard at the low vision station should have a large letters on the keys.

- One of the terminals must be voice controlled.

Building power routes and conduit runs should be flexible enough to accommodate any future changes in technology, and to provide future additional OPAC terminals. Electrical cords and cables should be protected, out of sight, surge-protected, and have adequate room for ventilation.

Task oriented lighting should be available at the workstations.

7. Photocopy Alcove

Provide one photocopier with an adjacent document storage rack. This is a large machine that will accommodate significant public use. A public coin operated fax machine may be provided under contract in this area. This machine is in addition to a fax machine that may be located in the staff workroom. Secure storage space should be provided for photocopier and fax supplies.

The machine should be located in a semi-enclosed alcove for acoustic control. The photocopier's location should not be isolated so that people waiting to use it will be in an area of interest. Ideally a seat from another area should be nearby for people that may have to wait to use the equipment.

Since staff must frequently assist users in making copies, clearing paper jams, etc., both machines should be reasonably close to the Circulation Desk.

A coin/cash card driven printer is also located in this area. This allows library customers to print from electronic units in the building, and pay for their copies at the electronic unit.

8. Display & Slant Shelving

The display & slant shelving should occupy one of the most prominent and heavily traveled areas in the Library, and should use all of the techniques of a successful retail store, including lighting, to merchandise the library's book and media collections. Materials to be displayed include hardback books, paperback books, videos, audiotapes, and compact discs. Slant, zigzag, and display bins may be used in this area, and informal seating should be located nearby.

This area should accommodate the equivalent of 300 units of books and/or media on ten single-faced 60" shelving units or their equivalent in a furniture display unit. Flexibility should be provided to change the types of shelving and adjust layout as needs at the branch change.

9. Exhibit Area

This area is located in the lobby adjacent to the book display area. It is a flexible space that may accommodate all types of exhibits from children's art work to traveling exhibits.

10. Friends' Storage/Work Area

This area should be readily accessible to the public because it is the place where book sales will be held. The space should contain a workstation and workspace much like the space in the staff workroom, as well as shelf storage space for the Friends Book Sales. Ten single faced shelving units should be provided as well as a desk, work table, and a safe.

C. Reference Area

11. Information/Reference Desk

The desk should be located so that people can see it almost immediately after they enter the library and be located near the Reference area, and close to the Reader. The desk should be separate, but not far from the circulation counter in a location that supplements the staff viewing angles from the circulation counter. Almost all-public areas of first floor of the

library should be in view from either the circulation counter or reference desk.

An OPAC (On-line Public Access Catalog terminal) should be provided at or immediately adjacent to the Desk.

A 200-volume reference book shelving unit should be provided immediately within the Information/Reference Desk. This is for ready reference materials that are controlled and used by the reference librarian

12. Reference Book Stack Area

Provide for 550-book capacity. Since these are non-circulating volumes, a 20% "in-circulation" book reduction factor should not be used in calculating shelving needs.

Eight single faced 42" shelving units (with counter-top surfaces) are required in this area.

13. On-line Reference Area

The library requires three computer terminals to access computerized databases and the Internet. Space, power and communications conduit for supporting the two terminals should be provided in the initial construction, with the possibility of adding more terminals in the long-term future.

The space for these units should be a large carrel or desk large enough for two people to work side-by-side at the terminal. The desk space should also provide space for a printer and note taking.

D. Computer Resource Center

The library should be wired for cable television and sound, and be linked to an existing or future City fiber optics system. This is required not only for the computer lab, but also for all other electronic workstations in the building.

Fiber optic cable is the long-run preferred connection to all workstations and is highly recommended. However, if fiber to all workstations is not within budget, wiring to all work stations should be at a minimum Category 5 unshielded twisted pair (UTP5) conformant with Ethernet standards and capable of providing TCP/IP protocol support.

The reason why fiber is recommended is that bandwidth for twisted pair copper data cable will not likely exceed 100 megabits per second (100 MBPS), which is the current standard for so called fast Ethernet. Optical fiber supports rates of up to 200 MBPS, and as new standards evolve, this rate is expected to increase. Future equipment will require the faster speed only available from fiber.

Because audio and visual technologies of the multi-media area are rapidly changing (as well as the nature of the library's responsibilities for them), emphasis should be placed on flexibility. For example, the rapid evolution of video equipment and video recordings over the last few years will make video a major component of the library's collection.

It is vital that great care be taken in order to insure that the location of equipment and power and data outlets match. The outlets required at each work station were described above.

All of the furniture and equipment listed should be included as part of the buildings and/or furniture equipment bid packages.

14. Computer Lab

Provide 35 electronic workstations that function as independent stand-alone computers for word processing, spreadsheets, and databases, as well as connections to local, national, and international network services. The Library has been successful in receiving donated access to the Internet through local cable providers. Two printers can serve the workstations. Workstations will also access audio and video information.

The lab should have an instructor's workstation linked to all the other workstations in the lab, a video projector, a screen. Three single faced book shelves and cabinets with lockable storage are also required.

The lab should be located in an acoustically isolated area adjacent to the reference area. If the lab is in an enclosed area, glass doors and walls are required in order to supervise the lab.

E. Community Room Areas

15. Twenty Person Seminar Rooms

The first floor seminar room should seat approximately 20 adults. The room should have a large table with 20 conference chairs, chalk and tack boards, and display space. Space for a 32" screen television monitor should be in the room.

The room should be wired for computer presentations and teleconferences. Conduit should run from the rooms back to the workroom. Conduit should also be run from a control panel location in the seminar room to locations where the television, electronic bulletin boards, and computers will be located. Storage space in the form of wall cabinets or closets is required along one end of the room.

All of the equipment and wiring in the room (except built in cabinets) should be part of the buildings and furniture equipment bid packages.

16. Community Meeting Room

The community meeting room should be designed for a wide range of functions, including group work activities, individual or group tutoring, story telling, lectures, concerts, community meetings, film and video presentations, theatrical performances, and art exhibits. Flexibility is the key to accommodate all these activities. The room should be able to accommodate a seated audience of approximately 300 people.

The room should be wired for cable television, and have a large screen television/data projector, as well as chalkboards, tack boards, and display boards. Floor jacks for an A-V connected movable podium should be included, and lighting should be controllable in intensity with full darkening of the room available for visual presentations. Art rails or picture moldings should be provided for exhibitions, along with a flexible lighting system to illuminate the exhibits.

The room should be wired to receive cable TV from the local Cable Company, as well as any telex and fiber optic signals from the City. The room should also be wired to receive signals from a satellite dish, which should be included as part of the library construction project.

The room requires an overhead AV projector for video and computer presentations, a large screen that may be raised and lowered for presentations, and a five-speaker surround system built into the walls. The room must be able to be darkened on the brightest days for any type of video presentation. The screen must be visible from all parts of the room.

The meeting area and supporting public restrooms and telephones should be accessible at night without violating the security of the library.

A portable stage should be available that does not hinder the flexibility of the room. All of the equipment and wiring in the room should be part of the buildings and furniture equipment bid packages.

17. Audio/Visual Closet

The audio/visual closet may be part of the meeting room, but it should serve both the meeting and/or seminar room.

Equipment includes an AV receiver, DVD player, and cassette, and all equipment should be on a "rack." Security provisions need to be made as part of the design.

Ease of access for maintenance and replacement should be built into the design of the closet.

18. Kitchen

The Kitchen is to provide a place for the preparation of light snacks to support meeting room activities. It is not to be used to prepare meals or major refreshments.

The Kitchen requires a deep double sink with garbage disposal, a microwave oven, a 19 cubic foot refrigerator/freezer, and stove with four burners and oven, and cabinets for storage.

All of the equipment and wiring in the room should be part of the buildings and furniture equipment bid packages.

19. Storage

The closet should accommodate thirty 72" folding tables, 300 table chairs that are used in the meeting room, and portable audio-visual equipment, as well as portable stage units, if provided. The library prefers Mity-Lite table brand because it is the only table we have found that is easy for staff to move. Tables and chairs for the room should be specified in the furniture package.

20. Restroom Facilities

The restrooms will service the adult portion of the first floor of the library, as well as the Meeting/Multipurpose Room

The men's restroom should include two toilets and one urinal, while the women's restroom should include three toilet stalls. Both restrooms are to be handicapped accessible. The restrooms should have floor drains as well as moisture-resistant floors, walls and ceiling finishes.

Both rest rooms should be accessible from the Meeting/Multipurpose Room without requiring that the remainder of the library be opened. This will allow public use of the rest rooms even if the library is closed during evening community events in the meeting rooms.

F. Staff Support Areas

21. Librarian's Office/Conference Room

The office serves as a functional office as well as a small conference room for library staff. Therefore provide space for a four-person table as well as a separate desk and file storage cabinet. The desk unit may be a workstation built into one of the walls of the office. Two sections of wall shelving (42" or 60") should be provided, as well as one three-drawer letter sized locking file cabinet.

Access should be provided directly from public areas near the circulation desk.

22. Work Room

The workroom is the heart of the staff support areas. It is the place where staff performs the "back of the house" activities, and where books and other items are received from the branch delivery. Books and magazines to return to the public shelves are sorted in this area. Minor mending of books takes place, which requires one 60" bookshelf plus a worktable. Typing and other business chores not done at the circulation desk and which require space and quiet concentration are done here.

The work room provides storage for a variety of materials, including paper supplies, office supplies, special holiday book collections not kept on regular shelves throughout the year, special display materials, poster paper and art supplies for making displays, small equipment items, etc.

Furniture and equipment to include in the room includes:

- Three workstations with telephones, computers and printers are required. At least one, possibly more of the workstations should be desk-height, and one should be handicapped accessible.

- An additional terminal on a table for check-in and checkout of books. The central worktable should also be available for filing, simple book mending, checking, sorting and other activities.

- Receiving/delivery or mailing of books occurs here, which requires an outdoor access, a delivery table with a paper dispenser and storage space for small boxes, labels, etc. The San Diego Public Library has a model of the worktable that is recommended at the North Park Branch Library. The architect designed the worktable with consultation from clerks from three branches, and it works well.

- Eighteen sections of 3' wide full-height open adjustable single faced shelving should be provided.

- At least 18 linear feet of enclosed cabinets and counter top is required.

- A utility sink is required within this room.

- Include a wall-mounted safe for fine revenues and other library funds.

- Provide 4' wide doors to this room with kick plates and closures. Also ensure there is an outside door that provides convenient access to delivery trucks.

- A fax machine is required.

23. Staff Lounge/Kitchenette

The room needs to be pleasant with a lot of natural light. It should offer staff a place to rest and refresh themselves. The room requires:

- Twenty small lockers for staff valuables.

- Twelve lockers large enough to accommodate a full-length coat.

- Kitchen cabinets for the storage of supplies, dishes, and silverware.

- A three or four-person round table as well as a recliner chair and/or couch.

- A kitchenette that should include a double deep sink (with garbage disposal), under-counter refrigerator/freezer, stovetop with two burners, and small microwave oven all within easy reach by the staff.

24. Staff Restroom

Provide one unisex restroom. The restroom should have floor drains as well as moisture-resistant floors, walls and ceiling finishes. If possible, a shower may be provided for staff to use after break time exercise sessions.

25. Janitor Closet

The janitor closet should include a floor sink, 24" deep, shelving for cleaning and restroom supplies, a mop, broom and brush rack, space for a vacuum cleaner, a buffing machine, a janitor's cart, a mop bucket on casters and a ladder.

The closet should have a floor drain as well as moisture-resistant floor, wall and ceiling finishes.

26. Temporary Storage

The area should accommodate library equipment and materials in transit from the branch to another location. It should not be regarded as an "attic" for the branch library.

The room should have shelving on one wall for storage of smaller items, and floor space for storage of large bulky items such as sofas or worktables.

Doors into the room should allow for passage of large, bulky items, and the room should be located so those items may easily be moved onto delivery trucks.

Storage may be an outside "shed" much like the storage facility at Carmel Valley Branch.

27. Mechanical/Electrical Spaces

This space should be easily accessible to City buildings staff, and provide sufficient space to conduct maintenance and repairs, as well as access for replacement of equipment. The space must have adequate ventilation, temperature control, and freedom from dust.

City buildings staff should be consulted early on in the design process so that they have participation in the design of these spaces, and their continued involvement is required throughout design.

The space and equipment housed in the room should be understandable to library staff so that they can handle any emergencies arising in building systems.

28. Telephone Telecommunications-Computer Closets

This space houses the computer and telephone equipment that is needed to run the computer and telecommunications in the branch.

San Diego City data processing staff should be consulted early on in the design process so that they have participation in the design of these spaces.

The space must have adequate ventilation, temperature control, and freedom from dust. A description of telecom requirements is given in the section of this program dealing with telecommunications.

G. Children's Area

The children's area can develop a lifelong bond between children and books. For this reason, every effort must be made to make the space as inviting, exciting and friendly to children as possible.

The children's area is targeted for children from pre-school age through sixth grade. It will be used by individual children as well as by organized groups (such as school classes or youth organizations). Children will most typically use the

area for leisure reading, pursuit of special interests and hobbies, and as a resource area for school assignments. The library will sponsor a variety of curriculum related programs during the year that will entice children and teachers to the library. In addition to children, some adults will use the children's area; parents or teachers and adults with limited reading skill level.

The area must be accessible from the main entrance and children must pass the circulation desk to reach their section without walking through adult areas. The area should be visually and acoustically separated as well as far removed from the adult area as is practically possible. It is preferred that staff at the Circulation Desk should have a clear view into the children's area.

The area should be entirely carpeted to control noise and encourage the children to sit on the floor to examine books.

29. Children's Special Environment

This area may be developed in several ways. Commonly, durable colorful floor furniture may create the informal area, or some sort of custom-made special environment may be fabricated. This is an opportunity for the architect to use creativity after listening to community interests. Some examples of environments used in other libraries include a tree house, a "sardine can" with sardine shaped pillows, a ship, and a window seat around a reduced size picture window.

The environment should be designed for comfortable use by as many as thirty children attending a story hour.

30. Children's Area Staff Desk

Locate the children's staff desk as centrally as possible, surrounding it with activities that require the most help and guidance from staff. The desk should be large enough to accommodate a computer terminal. The desk should be adjacent to the children's OPAC Terminal, which is used by the librarian both for reference and for instructing the children in its use.

The desk should be located close to the children's encyclopedia/reference area.

31. Children's Reference Area

A 200-volume reference collection should be provided requiring four 42" single faced shelving units. The shelving units should have counter tops, with space for a dictionary stand.

32. Children's Book Stack Area

Six thousand volumes should be shelved in this area. Shelving height should not exceed 60 1/2" for both easy access as well as visual control. Shelving units consist of five shelves. All shelving should be 10" deep except for 12" deep shelving for the picture books. The top of the low shelving units should be used for vertical display of picture books.

33. Children's Picture Books

Storage for 1,500 books is required in book bins and/or shelving. Pre-school children use picture books as their introduction to reading.

34. Children's Curriculum Collection

The 600 volume curriculum collection consists of books and media that support the instructional program of the San Diego City Schools t. Multi-copies of school related materials will be available to assist teachers and students in pursuing their educational objectives.

35. Children's Audio Storage Area

Audiocassettes and/or compact discs should be on display racks. Provide storage capacity for 300 audiocassettes and/or compact discs. Software may be stored in spinner units that are available from a number of library furniture vendors.

36. Children's Listening Station

Provide two standing listening stations with headphones for two children. Investigate Lift Systems furniture stations.

37. Children's Video Storage Area

Provide storage for 300 videos in either VHS or DVD format. Software may be stored in spinner units that are available from a number of library furniture vendors.

38. Children's Video Watching Station

Provide two standing viewing stations with headphones for two children. Investigate Lift Systems furniture stations.

39. Children's Paperback Area

This area should accommodate up to 1,125 volumes in open racks. Three spinner paperback racks with four-side exposure are needed. Racks are available from a number of library furniture vendors.

40. Children's Periodicals & Back Files

Display and storage space for 12 titles should be provided. One single faced 60 1/2" magazine display shelf, with back file storage under each shelf is required.

41. Children's Miscellaneous Storage Area

Two miscellaneous storage bins and/or shelves should be provided for quiet puzzles, word games or other non-book materials that may be acquired.

42. Children's Table Seating Area

The seating should be provided as a mixture of a variable height four-person reading tables, with some of the tables at full size. The seats should not be concentrated all in one area but should be easy to supervise from the staff desk. Four tables accommodating sixteen children should be provided.

The seating arrangement should encourage easy rearrangement into a small story-hour group on the open carpet area of the Children's area. Seating for up to 50 children should be possible in this situation. This area may be combined with the Special Environment area.

43. Children's Lounge Seating

Four lounge seats should be provided in this area.

44. Children's Nook Seating

Very informal, nook seats should be scattered through the area. Four seats are required.

45. Children's Carrel Seating

Five carrels should be provided for upper elementary age children.

46. Children's Display Area

Provide extensive tack board wall surfaces throughout the children's area (for educational posters, etc.).

The atmosphere of the children's area should be warm and inviting. Graphics and displays help facilitate this.

47. Children's Homework Center

Twelve computer workstations with one printer are needed, and the printer may be located at the children's librarian's desk. These terminals require both power and dedicated data phone access. The library will provide the package. The homework center should be adjacent to the reference book collection.

48. Children's Public On-line Catalog

Provide four On-line Public Access Catalog (OPAC) terminals at workstations that are staggered to enhance noise control and privacy. At least one of the units should be accessible to people with disabilities. Task oriented lighting should be available at the workstations. Workstations should be formed of interchangeable pieces that can be arranged in many ways.

Building power routes and conduit runs should be flexible enough to accommodate any future changes in technology, and to provide future additional OPAC terminals. Electrical cords and cables should be protected, out of sight; wiring surge protected, and has adequate room for ventilation.

49. Children's Rest Room

Two children's unisex toilets built to ADA specifications.

Second Floor

H. Informal Reading/Special Features Area

This is the primary area in the library to merchandise the collections and provide for leisure reading or study. It is an important area of introduction to the library for infrequent users or former non-users, and provides a means to make converts from those who may not be familiar with the library facilities. The location must be convenient for public to come and go without disturbing the more quiet reading areas.

An adult should be able to move to any of these areas from the first level without passing through any other service area. The areas should be used as a sound buffer between noisier activity and the more quiet areas further inside the library.

A staff member at the Circulation Desk or the Librarian's Desk should be able to easily view activities in each of these areas.

50. Very Informal Reading Nooks

These areas can range from small seating nooks or small carrels interspersed in the book stacks to small alcoves created by the architecture or interior design of the library.

In general, the fourteen nooks should be scattered throughout the library to give users a wide choice in seating location and environment.

51. Informal Reading Area

This area should contain comfortable individual lounge seating for eight people. Materials used should be attractive and durable, and accommodate a wide variety of user sizes. The area should be located near the current periodical display area and supplement the very informal reading nooks.

Durability of the chair is critical. Upholstered fabric **should not** be used on arms or in areas where there is the potential for "early" wear out of the material. Usually the library does not replace chairs over the life of the building. Cushions must be replaceable without major surgery to the chair.

The furnishing layout should be adaptable to future needs.

52. Paperback Area

This area should accommodate up to 1,200 volumes in four spinner paperback racks with four-side open exposure.

53. Current Periodical Area

The current periodicals are a popular collection used heavily for informational and recreational reading. The shelving for this area should maximize the display potential of periodical cover art by using display shelving that has a sloping shelf inserted above a flat shelf on which the more recent issues of the magazine are kept.

Current magazines will be housed on slant shelving. Each single faced unit contains up to 20 magazines. Five single faced units are required for a capacity of 100 titles. The slant shelves should either be "flip up" or else have a flat horizontal shelf underneath for storage of limited back files. Space should be built to house ten newspaper titles. Newspapers on "sticks" are also housed in this area.

Back files of periodicals will be accessed through the on-line terminals that have access to services such as the Information Access database.

I. Multi-Media Area

Both the DVD and CD collections should be located near to the Young Adult stacks and seating.

54. Video Storage Area

Storage for 600 DVD's is required. The storage units should allow browsing the collection. The units may be spinning carrousel type units readily available from library furniture vendors.

55. Video Viewing Bars

Provide two, two-place video viewing bars. Each station should consist of a DVD Player and two sets of headphones. The stations should be able to be controlled and programmed at the station, and have an internal theft alarm. The Stations should have a control system that allows monitoring of the Stations from the circulation desk. Investigate the Lift System Bars.

Each station should allow for easy replacement and repair of the compact disc player and audio cassette player. Units should conform to the standards for automobile sound systems, so that replacement is easy and economical.

Conduit should run from the audio stations to a control location in the workroom. This allows future flexibility in providing signals from playback units in the workroom and/or from satellite communications

56. Compact Disc Storage Area

Provide storage for 1,500 compact discs on display racks. Storage units may be spinning carrousel type units readily available from library furniture vendors.

57. CD Listening Bars

Provide two, two-place listening stations. Each station should consist of a compact disc player and/or an audio cassette player. Each station requires two headphones. The stations should be able to be controlled and programmed at the station, and have an internal theft alarm. The Stations should have a control system that allows monitoring of the Stations from the circulation desk. Investigate the Lift System Bars.

Each station should allow for easy replacement and repair of the compact disc player and audio cassette player. Units should conform to the standards for automobile sound systems, so that replacement is easy and economical.

Conduit should run from the audio stations to a control location in the workroom. This allows future flexibility in providing signals from playback units in the workroom and/or from satellite communications

J. Adult/Young Adult Area

It is recommended to have an integrated circulating book stack collection that houses adult and children non-fiction as well as adult fiction books. This encourages children and young adults to seek their reading levels independent of age classification. Culturally disadvantaged adults may also gravitate to easier reading materials without feeling self-conscious.

As indicated in an earlier section of this program, a duplex power outlet and data communications node is required at every seat. Young adults need the guidance and supervision of the staff more than older adults do. This dictates that they be located near the circulation counter or the reference desk. For the protection of quieter readers, the young adult area should at least be separated by bookshelves

The young adult area may be spatially defined as a “corner” of the adult section, and a special stack area and seating contains a fluid space for young people to define their area.

This young adult area provides a transition between the Children’s Area and the Adult Services Area. The transition for young adults occurs over time and often the individual will retain the need for both collections for a while. The area should therefore be located at a point convenient and attractive for the older

children using the Children's Area and the young adult who uses the Adult Collections occasionally.

58. Integrated Circulating Book Stacks

Book stacks should be included as part of the building construction bid package.

Provide storage for 40,000 circulating book volumes in the library. This means that the branch storage capacity is adequate to house a collection of 48,000 adult and integrated children's books. This assumption is based on the library's experience that 20% of the library's collection is in circulation at any one time.

Books should be shelved on standard 10" deep shelving that is 84" inches high with seven adjustable bookshelves in each 3-foot wide section. For purposes of calculating space, a single full-height section of these books will contain approximately 150 books. An aisle width of 42" should be provided in this area in order to exceed the ADA handicapped access requirement of 36" aisles.

Bookends should be part of the shelving system, and should be the "right size" to accommodate various sizes of materials. The bookends should be able to "slide" for easy rearrangement of books on the shelf.

Shelving should not be designed as one tightly grouped stack area or as a confusing series of continuous alcoves. Instead provide an organized intermingling of reading spaces and book stack spaces as a way to create the most supportive setting for the largest number of users. An emphasis on creating a "personal world" within a vast space brimming with resources is most appropriate.

An indirect but clear view of the reading spaces within this zone should be provided from the circulation and/or reference desk.

Quick-use stools should be provided at some shelves to support reader browsing and sampling immediately within stacks.

Shelves must be arranged to allow easy interpretation of catalog number direction. Incorporate adjustable lettering so that as book collection locations change staffs can easily update-numbering system for bookshelves. Drop in slots at the end of stack sections is recommended.

Stacks should allow flexibility to expand and change shelving units from conventional to display units.

59. Adult Table Seating

Staff at either the reference and/or circulation desk should be able to easily view each seating area in order to monitor customer use.

Ten four-place rectangular and one six place round tables are required with seating for 46. Seating should be comfortable, attractive and inviting. Fabrics, if used, should be sturdy and soil resistant, and easily cleaned. Chair arms should not be upholstered fabrics. Fabrics, if used and we do not recommend them, should be porous enough to breathe, and be able to absorb and evaporate moisture. Upholstered parts of the chair, if used should be easily removable for cleaning, and replaceable if necessary. Arms are not desirable on the chairs that will be used at tables. Furniture should be designed for easy repair or replacement of parts. Furniture should be designed and constructed for user safety, and free of projections that could snag clothing.

Table chair seating with sled bases is highly recommended for carpeted areas. Chairs should be able to be pushed close to tables and carrels, and chairs without arms are recommended in this area.

A few seats appropriate for people with disabilities should be provided. All chairs should be easy to get in and out of-especially for senior citizens.

60. Adult Lounge Seating

Lounge seating for at least eight adults should be located near the magazine collection. Many of the comments relating to adult table seating apply to the Adult Lounge Seating Area.

Each seat should have access to power and to data lines and task lighting should be considered for each seat.

61. Adult Carrel Seating

Carrel seating for fifteen adults should be interspersed throughout the Library. Many of the comments relating to Adult Table Seating apply to the Adult Carrel Seating Area.

Each seat should have access to power and to data lines and task lighting is required for each carrel.

62. Young Adult Seating

Eight young adult seats should be provided, in a variety of formats. It may be desirable to enlist the aid of a student committee to select seating.

63. Young Adult Book Collection

The 1,500-volume collection should contain many paperbacks, and they may be stored on spinner paperback racks as well as standard shelving.

64. Seminar Rooms

The two second floor seminar rooms should seat approximately 10 adults each. The rooms should each have a large table with 10 conference chairs, chalk and tack boards, and display space. Space for a 32" screen television monitor should be in the room.

The rooms should be wired for computer presentations and teleconferences. Conduit should run from the rooms back to the workroom. Conduit should also be run from a control panel location in the seminar room to locations where the television, electronic bulletin boards, and computers will be located. Storage space in the form of wall cabinets or closets is required along one end of the room.

All of the equipment and wiring in the room (except built in cabinets) should be part of the buildings and furniture equipment bid packages.

65. Restroom Facilities

The restrooms will service the second floor of the library, as well as the Centro Cultural.

The men's restroom should include one toilet and one urinal, while the women's restroom should include two toilet stalls. Both restrooms are to be handicapped accessible. The restrooms should have floor drains as well as moisture-resistant floors, walls and ceiling finishes.

K. Centro Cultural

The Centro Cultural will be a centerpiece for Mexican American culture and Logan Heights community history. It will also contain the Spanish language book collection. The area will provide a venue for rotating exhibits and permanent displays. It will be a location for receptions, cultural programming, and civic gatherings.

66. Centro Cultural

The Centro Cultural room should be designed for a wide range of functions, including group work activities, lectures, concerts, community meetings, film and video presentations, theatrical performances, and art exhibits. Flexibility is the key to accommodate all these activities. The

room should be able to accommodate a seated audience of approximately 75 people.

The room should be wired for cable television, and have a large screen television/data projector, as well as chalkboards, tack boards, and display boards. Floor jacks for an A-V connected movable podium should be included, and lighting should be controllable in intensity with full darkening of the room available for visual presentations. Art rails or picture moldings should be provided for exhibitions, along with a flexible lighting system to illuminate the exhibits. Some fixed display cases should be provided for both permanent and temporary exhibits.

The room should be wired to receive cable TV from the local Cable Company, as well as any telex and fiber optic signals from the City. The room should also be wired to receive signals from a satellite dish, which should be included as part of the library construction project.

The room requires an overhead AV projector for video and computer presentations, a large screen that may be raised and lowered for presentations, and a five-speaker surround system built into the walls. The room must be able to be darkened on the brightest days for any type of video presentation. The screen must be visible from all parts of the room.

All of the equipment and wiring in the room (except built in cabinets) should be part of the buildings and furniture equipment bid packages.

In addition to the folding chairs and tables, six lounge chairs and table with four chairs are required.

67. Storage

The closet should accommodate six 72" folding tables, 75 table chairs that are used in the Centro Cultural, and portable audio-visual equipment, as well as portable stage units, if provided. The library prefers Mity-Lite table brand because it is the only table we have found that is easy for staff to move. Tables and chairs for the room should be specified in the furniture package.

68. Kitchen

The Kitchen is to provide a place for the preparation of light snacks to support meeting room activities. It is not to be used to prepare meals or major refreshments.

The Kitchen requires a deep double sink with garbage disposal, a microwave oven, a 19 cubic foot refrigerator/freezer, and stove with four burners and oven, and cabinets for storage.

All of the equipment and wiring in the room should be part of the buildings and furniture equipment bid packages.

69. Spanish Language Book Collection

Provide storage for 10,000 Spanish language circulating book volumes Centro Cultural. This means that the branch storage capacity is adequate to house a collection of 12,600 adult and integrated children's books. This assumption is based on the library's experience that 20% of the library's collection is in circulation at any one time.

Books should be shelved on standard 10" deep shelving that is 84" inches high with seven adjustable bookshelves in each 3-foot wide section. For purposes of calculating space, a single full-height section of these books will contain approximately 150 books. An aisle width of 42" should be provided in this area in order to exceed the ADA handicapped access requirement of 36" aisles.

Bookends should be part of the shelving system, and should be the "right size" to accommodate various sizes of materials. The bookends should be able to "slide" for easy rearrangement of books on the shelf.

Shelving should not be designed as one tightly grouped stack area or as a confusing series of continuous alcoves. Instead provide an organized intermingling of reading spaces and book stack spaces as a way to create the most supportive setting for the largest number of users. An emphasis on creating a "personal world" within a vast space brimming with resources is most appropriate.

L. Outdoor Spaces

70. Outdoor Landscape Equipment Closet

This area may be incorporated with the janitor closet if access to the outdoors is convenient and direct. It must be secure to prevent theft and vandalism. Individual irrigation control boxes should also be secure from vandalism. This closet should also include control equipment for automatic sprinklers used in the project's landscaping.

The landscaping should consist of low maintenance and drought resistant plants.

71. Secure Outdoor Courtyard(s)

It is desirable to have outdoor courtyard(s) for users. Courtyards can be located adjacent to the adult casual reading area, the children's area, or the community meeting room. With Southern California's climate, these

areas can offer overflow capacity and a pleasant option for users on most days.

The courtyards ideally should emphasize filtered light/shade areas. Bench seating should be included in these areas. The reasons that courtyards are not used are because they are not designed for user comfort on sunny and/or windy days.

Courtyards should not be used for solving facility-exiting needs because the courtyard must be secure. Courtyards should not act as a direct route for any entry or exit to or from the library.

72. Outdoor Surplus Book Storage

An outdoors, secure area attached to or adjacent to the building should be provided for storing book sale books, and as a location for equipment being sent out for repair or replacement. It may be combined with the Temporary Storage detailed above.

Approximately 100 square feet of area is required. The area should not be visible from interior reader areas or from outside of the library and should be an aesthetically pleasing part of the Library complex.

The area that works best is at the Carmel Valley Branch Library, and it should be used as a model.

73. Enclosed Outdoor Trash Bin Area

The area should have convenient sidewalk access from staff areas in the library, and convenient street access to facilitate pickup.

The area should be flexible to accommodate different types of trash containers that may be needed for recycling.

The space should be large enough to accommodate two three-yard Dumpster, and two-33 gallon trash cans. Another Dumpster may be required in the Loading Dock area.

74. Library Parking

Parking at the branch may be shared with schools staff and visitors, and space for at least 125 cars should be provided for library users. Shared parking to support the extensive meeting and community complex must be carefully designed. All spaces should be for regular size cars. Parking for disabled persons should be near the main entry of the building.

A method to control parking should be planned for possible future installation. Parking control may be necessary if the library begins to

experience problems with non-library users parking in the library lot. The control system should involve gates and some sort of card or token that may be given to library users.

If parking is not very close to the entry, some short-term spaces should be provided very near the entry for people that may be returning relatively heavy and awkward loads of books, films and other library materials.

The book delivery van needs special parking requirements and ramp entrance into the building.

75. Bicycle Racks

The racks should be close to the entrance of the building, but not interfere with entry or exit of users.

Provision should be made to park at least 15 bicycles.

If there needs to be more than one entry (not desirable), bicycle racks should be adjacent to both entries.

76. Outdoor Book Deposit

Provide pads for two large capacity book returns made from stainless steel. Bro-dart and Gaylord make units that may be considered. The deposits should have a fire-resistant chute, and an anti-theft guard to prevent "fishing" out of previously deposited materials. The deposits should have an access door at the rear. One of the deposits should be for video returns. A receiving cart should fit in the unit. Staff should be consulted about specifications and final selection. This may be a future item, and not part of the initial building project.

VII. APPENDICES

A. Barrio Logan Branch Building Program Spread Sheet

B. Structural Stack Spacing Diagram

C. Seating and Collection Sizes Spread Sheet

D. Space Adjacencies Diagram

E. Telecommunications Room

F. City of San Diego, Facilities Maintenance Division, Electrical Crew

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[i] Sannwald, William . ***Checklist of Library Building Considerations***, 3rd. Ed. (Chicago: American Library Association, 1997).

[ii] *Anixer.* ***EIA/TIA 569 Standard. TIA/EIA 607 Standard. TIA/EIA 568 Standard***. Anixter Corporation Product materials

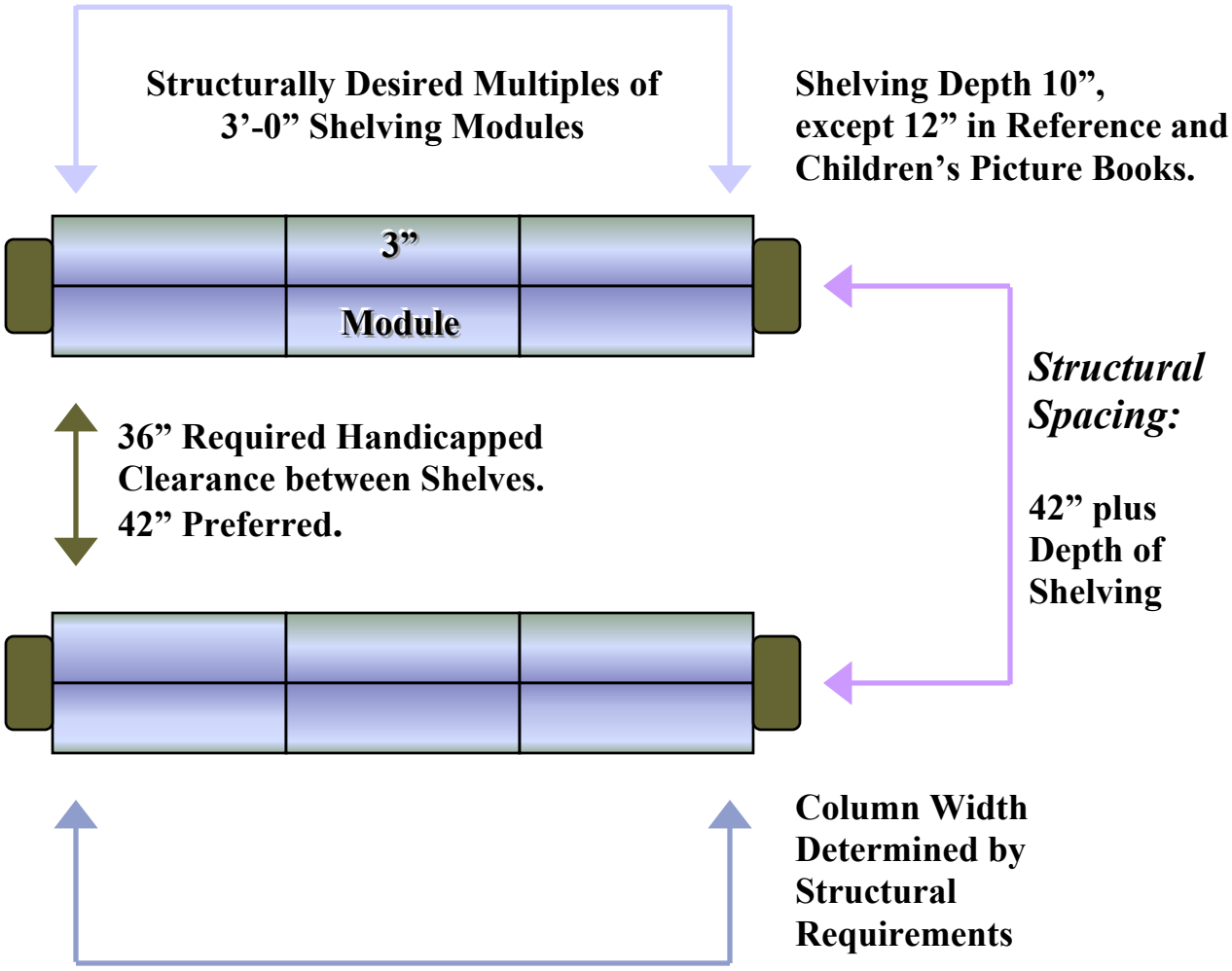
LEVEL 1	Assignable SF: (program)	Assignable SF: (actual)	Non-Assignable SF: (actual)
ENTRY/ COMMUNITY SERVICES			
Community Display/ Exhibit Area	100		
Public Support Area			
Public Entry			150
Total:	100	100	150
READER SERVICE AREA			
Circ. Counter & Work Area	380.6		
Sorting & Shelf Area	41.2		
Public On-line Catalog Area	225		
Photocopy Alcove	88		
Display & Slant Shelving	103		
Exhibit Area	650		
Friend's Storage/ Work Area	283		
Total:	1770.8	2084	
REFERENCE AREA			
Information/ Reference Desk	131.2		
Reference Book Stack Area	266.4		
On-line Reference Area	135		
Total:	532.6	492	
COMPUTER RESOURCE CENTER			
Computer Lab	1380.9		
Total:	1380.9	988	
COMMUNITY ROOM AREAS			
20 Person Seminar Room	300		
Community Meeting Room	3000		
Audio/ Visual Closet	85		
Kitchen	100		
Storage	300		
Men's Restroom			222
Women's Restroom			228
Total:	3785	3800	450

STAFF SUPPORT AREA			
Librarian's Office/ Conf. Room	176.6		
Work Room	701.4		
Staff Lounge/ Kitchenette	200		
Temporary Storage	200		
Staff Restroom			70
Janitor Closet			50
Phone/ Telecommunications Room			135
Mechanical Room			70
Electrical Room			70
Book Deposit	25		
Machine Room (elevator)			72
Total:	1303	1522	467
CHILDREN'S AREA			
Special Environment	100		
Staff Desk	131.2		
Reference Area	41.2		
Book Stack Area	721		
Picture Books	82.4		
Curriculum Collection	82.4		
Audio Storage	50		
Listening Station	30		
Video Storage	50		
Watching Station	30		
Paperback Area	120		
Periodical's	20.6		
Miscellaneous Storage	16		
Table Seating Area	700		
Lounge Seating Area	120		
Nook Seating	80		
Carrel Seating	120		
Homework Center	420		
Public On-line Catalog	140		
Multipurpose Room	300		
Girl's Restroom			64
Boy's Restroom			83
Janitor			35
Total:	3354.8	3573	182

	Assignable SF: (program)	Assignable SF: (actual)	Non-Assignable SF: (program/actual)

INFORMAL READING/ SPECIAL FEAT.			
Very Informal Reading Nooks	224		
Informal Reading Area	280		
Paperback Area	240		
Current Periodical Area	75		
Total:	819	698	
MULTI-MEDIA AREA			
DVD Carrousels	200		
Watching Station	30		
CD Storage	150		
Listening Station	30		
Total:	410	209	
ADULT/ YOUNG ADULT AREA			
Staff Desk	130.3		
Book Stacks	2729		
Table Seating	1200		
Carrel Seating	525		
Young Adult Seating	280		
Young Adult Book Collection	103		
Seminar Rooms	300		
Public On-line Catalog	270		
Electronic Stations	360		
Men's Restroom			145
Women's Restroom			145
Janitor Closet			30
Total:	5897.3	6133	320
CENTRO CULTURAL			
Centro Cultural	1000		
Storage	200		
Kitchen	100		
Spanish Language Book Collec.	1201		
Total:	2501	2411	
GENERAL CIRCULATION			
Total			1409
TOTAL	21854.4	22010	2978

Structural Stack Spacing



Structural Spacing:

Total Shelving Module Width plus Column Width.

Collection & Seating Spaces
Logan Heights Branch

Books & Media	#	Units	Sq. Ft/Unit	Sq. Ft.
Adult				
Circulating	48,000	265	10.3	2,729
Circulating Spanish	12,600	70	10.3	721
Reference	650	12	10.3	124
Paper Backs	2,400	6	40.0	240
Display	300	10	10.3	103
Audio CD's	1,500	2	75.0	150
Video DVD's	600	4	50.0	200
Young Adult	1,500	10	10.3	103
Magazines	100	5	15.0	75
Total Adult	**67,650**	**384**		**4,445**
Children's				
Circulating	15,000	70	10.3	721
Children's Reference	200	4	10.3	41
Curriculum Collection	600	8	10.3	82
Picture Books	2,000	8	40.0	320
Paper Backs	1,125	3	40.0	120
Magazines	24	2	10.3	20
Audio	300	1	50.0	50
Videos	300	1	50.0	50
Total Children's	**19,549**	**97**		**1,404**
Total	**87,199**	**481**		**5,849**

Seats	# Required	# Seats	Sq. Ft.	Total Sq. Ft.
Adult				
Lounge	14	14	35	490
Nook Seating	14	14	16	224
Carrel	15	15	35	525
Table (4 Place)	11	44	120	1,320
Young Adult	8	8	35	280
Electronic Units	49	49	45	2,205
Total Adult	**111**	**144**		**5,044**
Children's				
Lounge	4	4	30	120
Nook Seating	4	4	20	80
Carrel	4	4	30	120
Table (4 Place)	7	28	100	700
Electronic Units	16	16	35	560
Total Children's	**35**	**56**		**1,580**

Collection & Seating Spaces
Logan Heights Branch

Seats	# Required	# Seats	Sq. Ft.	Total Sq. Ft.
Community Room Areas				
Meeting/Multi-Purpose Room	1	300	10	3,400
Centro Cultural	1	16	N/A	1,000
Children's Multi-Purpose Room	1	30	N/A	400
Seminar Rooms	3	40	15	600
Total Community Areas	**6**	**386**		**5,400**
Total Library Seating	**152**	**586**		**12,024**

Space Adjacencies
Logan Heights Branch

First Floor

Potential Courtyard

E. Community Room Areas

15. 20 Person Seminar Room
16. Meeting Room/Multi-Purpose Room
17. Audio Visual Closet
18. Kitchen
19. Storage
20. Restroom Facilities

Public Entry

A. Entry/Community Services

1. Public Entry
2. Community Display/Exhibits
3. Public Support Area

F. Staff Support Areas

21. Librarian's Office/Conference Room
22. Work Room
23. Staff Lounge/Kitchenette
24. Staff Restroom
25. Janitor's Closet
26. Temporary Storage
27. Mechanical/Electrical Spaces
28. Telephone/Computer Closets

SECURITY

G. Children's Area

29. Special Environment
30. Children's Area Staff Desk
31. Reference Area
32. Book Stack Area
33. Picture Books
34. Curriculum Collection
35. Audio Storage
36. Listening Stations
37. Video Storage
38. Watching Stations
39. Paperback Area
40. Periodical's & Back Files
41. Misc. Storage Area
42. Table Seating
43. Lounge Seating
44. Nook Seating
45. Carrel Seating
46. Display Area
47. Homework Center
48. Public On-Line Catalog
49. Restroom Facilities

D. Computer Resource Center

14. Computer Lab

C. Reference Area

11. Information/Reference Desk
12. Reference Book Stack Area
13. Online Reference Stations

B. Reader Service Area

4. Circulation Counter
5. Sorting Shelf Area
6. OPAC Stations
7. Photocopy Alcove
8. Display & Slant Shelving
9. Exhibit Area
10. Friends Storage & Work Area

L. Outdoor Spaces

70. Landscape Equipment Closet
71. Courtyard
72. Book & Equip. Storage
73. Trash Bins
74. Parking
75. Bicycle Racks
76. Outdoor Book Deposit

April, 2002

Space Adjacencies
Logan Heights Branch

Second Floor

H. Informal Reading/Special Features Area

50. Reading Nooks
51. Informal Reading Lounge Seats
52. Paperbacks
53. Current Periodical Area

I. Multi-Media Area

54. Video Storage Area
55. Video Viewing Bars
56. Compact Disc Storage
57. CD Listening Bars

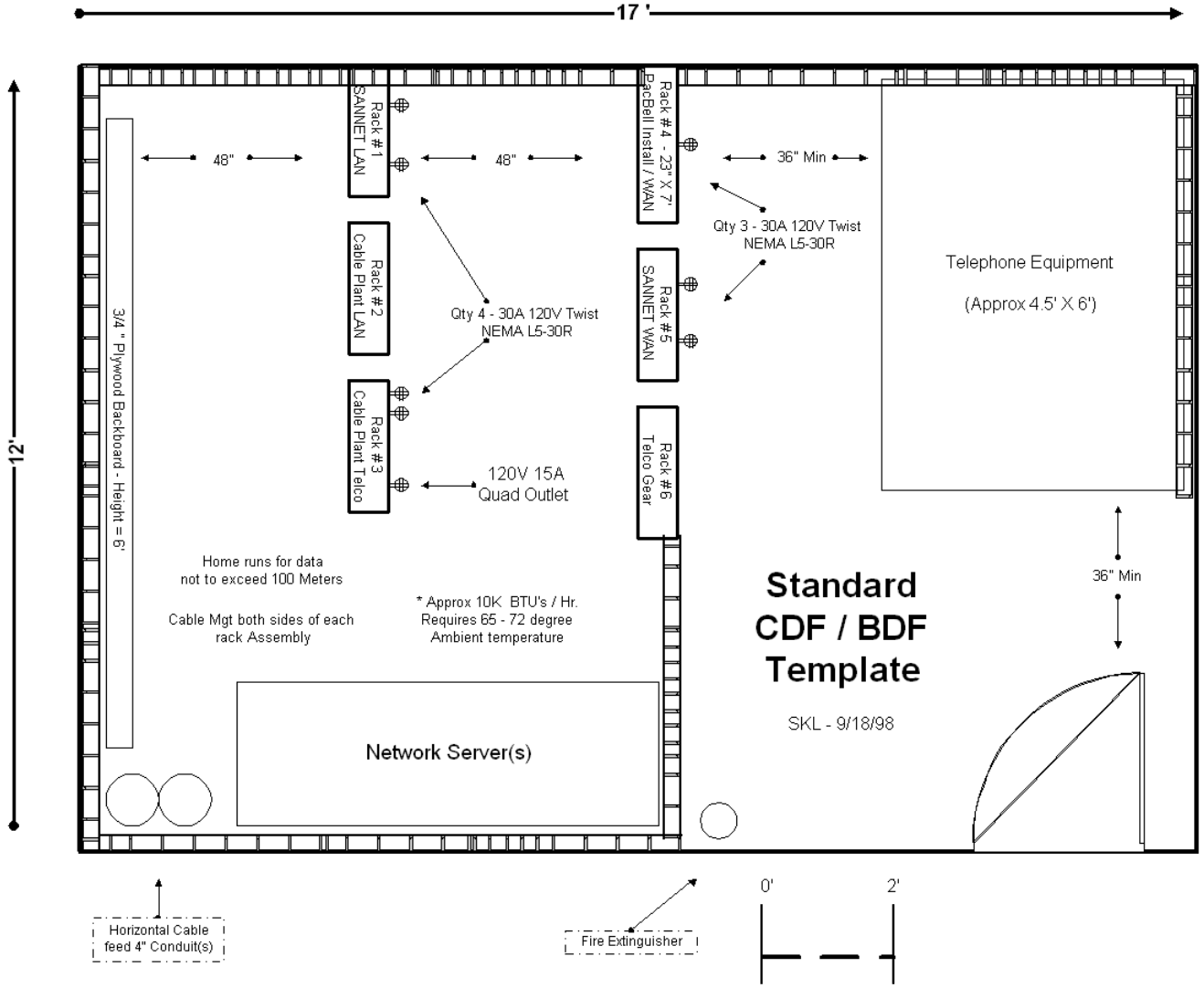
J. Adult/Young Adult Area

58. Integrated Circulating Book Stacks
59. Adult Table Seating
60. Adult Lounge Seating
61. Adult Carrel Seating
62. Young Adult Seating
63. Young Adult Book Collection
64. Seminar Rooms
65. Restroom Facilities

K. Centro Cultural

66. Centro Cultural
67. Storage
68. Kitchen
69. Spanish Language Book Collection

Telecommunications Room
Logan Heights Branch Library



Appendix F
City Of San Diego Electrical Standards

The City of San Diego Electrical Crew has suggested the following standards for all electrical work in the branch library:

1. CONDUITS

1.1. P.V.C.

1.1.1. All conduit in the ground shall be P.V.C. schedule #40, at least 3/4 inch or larger in diameter.

1.1.2. All P.V.C. shall be buried below ground level and NEVER be in concrete slab or concrete floor.

1.1.3. All stub-ups in P.V.C. shall be changed to E.M.T. in walls. Exceptions are outside block walls can be P.V.C., no flexible conduit shall be used.

1.2. E.M.T. CONDUIT

1.2.1. All wiring inside the building shall be in E.M.T. conduit.

1.2.2. All E.M.T. connector, coupling, and other fittings shall be steel compression type.

1.2.3. No BX or MC cables allowed.

1.3. RIGID CONDUIT

1.3.1. All conduit must be exposed on rooftop.

1.3.2. All conduit must be exposed below 4 feet of finish grade on walls.

1.4. FLEXIBLE STEEL CONDUIT

1.4.1. Only on motor connection and fixture tails, not over 6 feet in length.

2. BOXES

2.1. Any exposed wiring device box shall be cast iron only. No cast aluminum.

2.2. All light fixture junction boxes shall be cast iron only. No cast aluminum.

2.3. All outside outlets shall be in a recessed stainless steel box with a flush, lockable cover and a 20 G.F.I. receptacle.

2.4. Inside wiring device boxes and junction boxes shall be at least 4" square by1 1/8" deep.

2.5. Electrical, phone, and data floor boxes shall be brass type with screw cap only. All brass covers shall be flush with the floor. Floor monument are not acceptable.

2.6. Flat wiring shall not be used.

3. WIRE

3.1. All wiring shall be stranded, copper THHN type, including all #12 A.W. wire.

3.2. Minimum wiring size shall be #12 A.W.C. stranded. EXCEPT for control circuits shall be #14 A.W.C. stranded wire.

3.3. One neutral for every one circuit pulled. No sharing on neutral wires anymore.

4. MARKING AND NAMES PLATES

4.1. Name plates: Furnish and install a minimum size of 1" high and 3" wide by 3/32" thick matte black (for normal power) and red (for emergency power) laminated phenolic nameplates with 1/4" white characters engraved in the plastic for all items of electrical equipment including, but not limited to switchboards, panelboards, automatic transfer switches, motor control centers, feeder circuit breakers, relays, time switches, disconnect switches, exposed pull or junction boxes, and all control equipment. Name plates shall be attached with 2 cadmium-plated screws. Adhesive attachment will not be acceptable. Punch strip tape type name plates with card holders in any form are prohibited.

4.2. Provide wire marker on each conductor in electrical panel pull box, outlet, and junction box. This includes all disconnects an connections. *If more than one neutral conductor is present, mark each related circuit and panel number.

4.3. Label outside of all cover plates of wiring devices and junction boxes with circuit and panel number. Each branch circuit device cover plate shall be labeled (engraved or silk screen) to indicate the branch circuit and panel number. Devices shall include, but not be limited to, the following: toggle switches, dimmer switches and receptacle.

5. GROUNDING

5.1.1. All raceways shall include a full size green insulated ground wire terminated at each outlet box, device enclosure, etc. and connected back at the panelboards, switchboard or cabinet on the appropriate ground bus.

5.1.2. The green insulated ground (bond) wire shall be spliced together within the outlet box. A green insulated bonding jumper shall be provided from the splice to the box body. Attachment to the box body shall be provided using a tapped #10-32 x 3/8" screw minimum. A green insulated bonding jumper shall be provided from the splice to the receptacle ground screw even with self grounding receptacles.

6. DEVICES AND COVER PLATES

6.1. Wall switches - 20 AMP 120v/277v Specify one of the following brands:

6.1.1. Hubbell 1221-G

6.1.2. Bryant

6.1.3. P&S 1221-G

6.2. Duplex Receptacle - 15 AMP - 20 AMP 120v/277v Specify one of the following brands:

6.2.1. Hubbell - (20 AMP) #5362 (15 AMP) #5362

6.2.2. B. Bryant - (20 AMP) #5362 (15 AMP) #5362

6.2.3. P&S - (20 AMP) #5362ALA (15AMP) #5362 ALA

6.3. 15 ampere receptacles are acceptable for convenience outlet unless equipment requires a higher ampacity.

6.4. All receptacles and switches on emergency power shall be RED.

6.5. Connect all wires in clamp/back holes of wiring devices.

7. HAND DRYER

7.1. Install at least one hand dryer 2000 watts in each restroom. City standard is the World Hand Dryer.

7.2. Pipe chase use Fastair thru the wall units.

8. EXIT SIGNS

8.1. All exit signs shall be Atomic 20 year life with polycarbonate lens. City standard is Permex exit sign.

8.2. L.E.D. exit signs are good, but the battery only last 3 to 5 years.

9. EMERGENCY BATTERY SYSTEMS

9.1. Do not use main inverted battery type system (i.e. Scripps Library) because of the major problem with the life and cost of the battery. Use only single independent battery pack systems, at least 5 year battery warranty (i.e. Rancho Bernardo Library).

10. LOW VOLTAGE SYSTEM FOR TITLE 24

10.1. Avoid low voltage programmable systems (i.e. Malcolm X. Library). If a system must be installed use it for only large rooms over 5000 feet, in all other areas use normal switching. Use Tork Timeclock 7200KL. Also, all software manuals and training to program the system must be given to Facilities Maintenance Electrician no later than final walk thru. Brand name system Neel.

11. LIGHT FIXTURES

11.1. General Conditions

11.1.1. Reduce the number of decorative and display light fixtures where possible.

11.1.2. Light fixtures shall be high quality, long lasting, be from a major manufacturer, be made in the U.S.A., with easy to replace lamps. The number of different types of fixtures must be kept to a maximum of six fixtures throughout the interior and exterior of the building, and the ease of re-lamping must be a major consideration in fixture selection.

11.1.3. All fixtures should be reachable for re-lamping and repair from a 10-foot ladder.

11.1.4. Standard 4-foot fluorescent fixtures are most desirable in the general area.

11.1.5. Metal Halide, indirect light fixtures are great in high ceiling areas.

11.1.6. Recessed floor cans with P.L. lamps are good in restrooms.

11.1.7. Do not use low voltage light fixtures.

11.2. OUTSIDE LIGHT FIXTURES

11.2.1. All outside light fixtures shall have polycarbonate lenses, vandal resistant screws. City standard is Kenail 5010, 3826.

11.2.2. Install light fixtures for library sign, book drop and all outside door openings.

11.2.3. Wall mounted light fixture shall be used for general outside area for security and safety.

11.2.4. Library shall be well lit inside and out.

11.2.5. Avoid small light fixtures in steps, use pole or wall lights.

11.2.6. Avoid tree lights that are mounted above the ground (i.e. Pacific Beach Library).

11.2.7. Avoid in ground lights (i.e. Mira Mesa Library). If it is necessary use only brand name City standard Hydrel.

11.2.8. Avoid low voltage light fixtures.
11.2.9. Heavy duty mounting shall be needed for all outside light fixtures.
11.2.10. Parking lot pole light are necessary in all parking lots.
11.2.11. We encourage wall mounted light fixtures on the building.

12. TIME CLOCKS

12.1. All time clocks shall be City Standard Tork 7200kl. Astronical, 40 amp contact.
12.2. Outside lights shall be on photocell in series with time clock (on with photocell, off with clock). Lighting contractor will be necessary if more than 2 circuits for outside lights. Install hand, off, automatic switch for testing during the day for outside lights.
12.3. Do not install programmable time clock (problem with different clocks).
12.4. Inside lights shall be on lighting contractor controlled by separate time clock or switches.

13. LAMPS

13.1. Provide a spare case of lamps for every type used, including M.H., incandescent, H.P.S., L.P.S. and fluorescent lamps. Provide no later than final walk thru.
13.2. Avoid incandescent lamp.
13.3. Low-pressure sodium lamp are use only in parking lot lights.
13.4. When possible install 130 volt lamps
13.5. Standardize with 4 foot fluorescent energy 35 watt cool white T-8 lamps.
13.6. Use brand name electronic ballast, 5 year warranty.
13.7. Reduce the number of decorative and display lamps.
13.8. Provide fixture location that allows easy lamp replacement, this is a major problem.
13.9. Brand name lamps are a must.
13.10. Outside lamps shall be high pressure sodium, (general lighting) fluorescent (signs) and metal halide (for security).

14. CONDUITS, RACEWAYS AND BOXES

14.1. Flexible conduit shall have a green ground wire. It shall only be used for motor connections, fixture tails, fishing down existing walls or runs of 6' or less. In damp locations metallic or non-metallic sealtite may be used.
14.2. Conduit Supports
14.2.1. Conduit shall not be supported from other conduit.
14.2.2. Conduit shall be supported within 3 feet of any kind of fitting and at every outlet or junction box, panel, etc. This shall apply to both horizontal and vertical runs.
14.2.3. Where conduits are run individually, they shall be supported by approved straps, clamps, and hangers. No perforated straps or wire hangers of any kind shall be used.
14.2.4. Conduit run above suspended ceilings shall be supported from the building structure independently and shall be run with sufficient clearance from the ceiling system to permit the tiles to be removed and to allow full access to the space above.
14.2.5. Roof top conduits (rigid steel) shall be neatly grouped and installed parallel to

the building lines. Support conduit on minimum 2" x 4" redwood sleepers at minimum 5' spacing.

14.3. Home runs shall be a minimum of 3/4" conduit. ½" can be used to supply a single termination (e.g. conduit going from switch box to single light fixture).

14.4. All insulation in AWG sizes 10 and below shall be impregnated with color according to the following:

14.4.1. 480/277 volts 208/120
14.4.2. Phase "A" Brown Black
14.4.3. Phase "B" Orange Red
14.4.4. Phase "C" Yellow Blue
14.4.5. Neutral Gray White
14.4.6. Ground Green Green
14.4.7. Where color other than black is not an integral part of insulation use 3M No. 35 tapes in the same color code to identify both ends of conductors No. 8 and larger. Use other colors as required to identify control or other special circuits. Ground conductor shall have green insulation for 1/0 or smaller conductors, green tapes on other colors of insulation are NOT acceptable.

15. Light fixtures commonly used by the City of San Diego:

15.1. Indoor

15.1.1. Four foot fluorescent surface mount wrap - LB232GEB, Lithonia.
15.1.2. Eight foot fluorescent surface mount wrap - 2TLB232GEB, Lithonia
15.1.3. 2x4 troffer, 3 lamp - 2GT332A12 (voltage) GEB, Lithonia
15.1.4. Recessed down light, compact fluorescent, double twin tube, Halo, No. H274 120v, trim #400
15.1.5. Bathroom wall mount, Kenall, shorty forty, No. 8140

15.2. Indoor/Outdoor

15.2.1. Compact fluorescent - Kenall, two lamp No. 3714
15.2.2. Compact fluorescent - Eclipse 26 watt CMK series
15.2.3. Ceiling mount fluorescent - Kenall, No. 3826

15.3. Outdoor Security Lighting

15.3.1. High pressure sodium (HPS) - Kenall, 50 watt, No. 5010
15.3.2. High pressure sodium (HPS) - Kenall, 50 watt, No. 5300 (Ceiling mount)
15.3.3. In ground - Hydrel Only (Tree lights)

16. SWITCHGEAR AND ELECTRICAL PANELS

16.1. A. Supply 10% spare breaker space in all panels and copper bus.

16.2. Provide 10% more ampactiy for electric panel above calculated load requirements.

16.3. Provide on 3/4 inch conduit for each three spares or spaces in all flush mounted power or lighting panelboards. Route conduit to accessible space above ceiling.

16.4. All panels shall have bolt on breaker, copper buss, and full size neutral ground bar.

16.5. Main Switch and all circuit breakers shall be supplied with a name plate adjacent to each device as specified under "Marking and Name plates".

16.6. Fusible Switches: (heavy duty) switches, with fuses of classes and current ratings indicated. See Section "Fuses" for specifications. Where current limiting fuses are indicated, provide switches with non-interchangeable feature suitable only for current limiting type fuses. Each fusible disconnect switch shall be equipped with a blown fuse indicator module.

17. Fuses

17.1. Fuses shall be class "RK" rejection type.

17.2. Fuses serving motor loads shall be dual element with a minimum time delay of 10 seconds at 500 percent rating. Fuses shall be current limiting time delay type with interrupting capacity of 200,000 ampere RMS symmetrical minimum.

17.3. Fuses shall be Bussman or Gould "low peak", only.

17.4. Provide spare fuses in the amount of ten percent of each size and type installed, but not less than three; delivered to the Owner upon final acceptance of the project. Provide and install fuse cabinet in the electrical room for storing these extra fuses.

18. Transformers

18.1. Attach incoming and outgoing conduits to the transformer case with approximately 18 inches of flexible conduit to reduce noise transmission. Provide separate grounding jumper when using flexible conduit.

18.2. Maintain a minimum of 1'-0" free air space between transformer and walls.

18.3. All transformers shall have name plates showing its rating, circuit number it is fed from and panel it is feeding.

18.4. Install transformers on seismic style vibration isolator pads (feet).

19. Generators, Motors, Controllers and Fire Alarms

19.1. Generator KW rating must be at least 10% more than calculated load for future use requirements. "Kohler" generators only. Documentation and repair manuals shall be supplied.

19.2. Motors shall be "energy efficient" with sealed bearings.

19.3. Programmable logic controller (PLC): The contractor shall furnish, to the City a licensed copy of the software for the PLC. If the project requires a PLC, the contractor shall furnish to the City a laptop computer for programming the controllers. The computer shall be a minimum of a "NEC Versa 2200C Notebook" (Pentium 75mhz with 16 megs of ram and 800 meg hard drive) or equivalent.

19.4. Fire Alarms: Use only Edwards, Notify, or Simplex fire alarms.

20. DESIGN, SUBMITTALS AND FINAL WALK-THRU

20.1. DESIGN

20.1.1. The architects' electrical engineer must consult with the City of San Diego's Maintenance personnel during the design phase and through out the project. The City staff have developed standards that must be incorporated into the plans and specifications. Please route thru READ, Facilities Maintenance Electrical Crew M.S. 20, Phone 525-8524.

20.2. SUBMITTALS

20.2.1. All electrical submittals shall be reviewed thru Facilities Maintenance Electrical crew. All comments will be in writing within five days. This is very important to us in Maintenance so that we get the item that is equal or spec. Out. Especially light fixture, switches, receptacles, and electrical equipment.

20.3. FINAL WALK THRU, MANUALS AND DOCUMENTATION

20.3.1. All manuals and training on all electrical system shall be done at this time, which includes, but not limited to: testing of emergency systems, time clocks, lights, and exhaust fans. Provide one set of blue prints, spec book, and submittal.

20.3.2. The Contractor shall furnish operation and maintenance manuals for each electrical system and for each piece of equipment. The complete manual, bound in hardback binders, or and approved equivalent shall be provided to the Owner's Representative. The number of copies shall be as indicated in Division 1. One manual shall be furnished prior to the time that the system or equipment tests are performed to the electrical shop in care of:

City of San Diego
Real Estate Assets Department
Electrical Crew, Suite A, Bldg 38
San Diego, CA 92102

20.3.3. The remaining manuals shall be furnished before the contract is completed. The following identification shall be inscribed on the cover; the words "OPERATING AND MAINTENANCE MANUAL," the name and location of the building, the name of the Contractor, and the contract number.

20.3.4. The manual shall include the names, address, and the telephone numbers of each Subcontractor installing equipment and systems, and of the local representatives for each item of equipment and each system. The manual shall have a table of contents and be assembled to conform to the table of contents with tab sheets placed before instructions covering each subject. The instruction sheets shall be legible with large sheets of drawings folded in. The manual shall include, but not limited to, the following:

20.3.4.1. System layout showing components.
20.3.4.2. Devices and controls.
20.3.4.3. Wiring and control diagrams showing operation and control of each component.
20.3.4.4. Sequence of operation describing start-up, operation, and shutdown.
20.3.4.5. Functional description of the principal system components.
20.3.4.6. Installation instructions.
20.3.4.7. Maintenance and overhaul instructions.
20.3.4.8. Lubrication schedule including type, grade, temperature range, and frequency.
20.3.4.9. Safety precautions, diagrams and illustrations.

21. Training:

21.1. User staff and maintenance personnel shall be thoroughly trained (minimum of 4 hours) in the use of each system or major piece of equipment installed. This training shall be provided as a part of the Contractors bid to supply the system or equipment. Additional training requirements, shall be as specified in the subsequent sections of Division 16.

21.2. It shall be the responsibility of the Contractor to provide equipment with the proper electrical characteristics for the electrical service provided. All necessary electrical components to provide a complete system shall be furnished.

22. For questions contact:

City of San Diego
Real Estate Assets Department
Electrical Crew, Suite A, Bldg 38
San Diego, CA 92102
619.525.8524