

CHECKLIST *of*
**Library Building
Design Considerations**

7th Edition | WILLIAM W. SANNWALD

FOR REVIEW ONLY - NOT FOR DISTRIBUTION

ALA
Editions
CHICAGO 2024

available at alastore.ala.org

© 2024 by the American Library Association

Extensive effort has gone into ensuring the reliability of the information in this book; however, the publisher makes no warranty, express or implied, with respect to the material contained herein.

ISBN: 978-0-8389-3864-5 (paper)

Library of Congress Cataloging-in-Publication Data

Names: Sannwald, William W., author.

Title: Checklist of library building design considerations / William W. Sannwald.

Description: 7th edition. | Chicago : ALA Editions, 2024 | Includes bibliographical references and index.

Identifiers: LCCN 2022051903 | ISBN 9780838938645 (paperback)

Subjects: LCSH: Library architecture—United States. | Library buildings—United States—Design and construction. | LCGFT: Checklists.

Classification: LCC Z679.2.U54 S36 2024 | DDC 727/.80973 23/eng/20221216—dcundefined

LC record available at <https://lccn.loc.gov/2022051903>

Book design by Kim Hudgins in the Freight Sans, Freight Text, and Chapparral typefaces.

Cover image of San Diego Central Library, San Diego, California; image © Rob Wellington Quigley FAIA.

© This paper meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

Printed in the United States of America

28 27 26 25 24 5 4 3 2 1

available at alastore.ala.org

Contents

<i>Preface</i>	<i>xiii</i>
1. Building, Planning, and Architecture	1
A. Indicators of Dissatisfaction with Existing Facilities	1
B. Institutional Planning Team	2
C. Determining Space Needs	3
D. Joint Use Considerations	6
E. Selecting a Library Building Consultant	7
F. Choosing an Architect	8
G. Client/Architect/Contractor Relationship	10
H. Architectural Design	11
I. Choosing a Contractor	13
J. Recommended Resources	14
2. Building Construction Alternatives	17
A. New Construction Considerations	17
B. Building Addition Considerations	18
C. Conversion of Existing Buildings for Library Use	19
D. Preserving Existing Library Buildings	20
E. Virtual Library Considerations	21
F. Alternatives to Increasing Library Spaces	22
G. Recommended Resources	24

3. Library Site Selection	25
A. General Conditions	25
B. Community Planning Issues	26
C. Location	27
D. Accessibility	28
E. Size	29
F. Environmental Issues	30
G. Safety Issues	31

4. Sustainable Design	33
A. LEED Certification	33
B. Sustainable Sites	34
C. Water Efficiency	36
D. Energy and Atmosphere	37
E. Materials	38
F. Indoor Environmental Air Quality	39
G. Lighting and Daylighting	40
H. Roofs	41
I. Heating, Ventilating, and Air Conditioning	42
J. Recommended Resources	43

5. General Exterior Considerations	45
A. Landscaping	45
B. Parking	47
C. Building Exterior	48
D. Roof	49
E. Bicycle Racks	49
F. Flagpole	49
G. Exterior Signage	50
H. Loading Docks and Delivery	51
I. Outdoor Trash Enclosures	53
J. Outdoor Book and Media Returns and Curbside Pickups	53
K. Recommended Resources	54

6. Interior Organization of Library Buildings	55
A. Public Health Considerations	55
B. Entrance	56

C. Circulation Desk Facilities	57
D. Reference Facilities	59
E. Information Commons	62
F. Collaborative Spaces	64
G. Multimedia Facilities	65
H. Media Production and Presentation Labs	67
I. Special Collections, Rare Books, and Archives	67
J. Reserve Book Room	69
K. Faculty/Graduate Carrels and Study Rooms	69
L. Group, Quiet, and Silent Study Spaces	70
M. Literacy Center	70
N. Young Adult Facilities	71
O. Children's Facilities	72
P. Meeting and Seminar Rooms	73
Q. Convenience Facilities	76
R. Displays	77
S. Public Art	78
T. Interior Signage	79
U. Workroom and Offices	80
V. Staff Lounge	82
W. Friends of the Library	82
X. Library Store	83
Y. Interior Storage	84
Z. Safe and Shelter Rooms	84
AA. Recommended Resources	85
<hr/>	
7. Compliance with ADA Accessibility Standards	87
A. Transportation, Parking Lots, Parking Signage, and Accessible Routes	87
B. Ground and Floor Surfaces	88
C. Curb Cuts	89
D. Ramps	90
E. Stairs	90
F. Lifts and Elevators	91
G. Doors	92
H. Entrances	93
I. Accessible Routes within the Building	94

J. Drinking Fountains	94
K. Toilet Rooms	95
L. Toilet Stalls	95
M. Water Closets	96
N. Urinals	97
O. Bathroom Sinks	97
P. Handrails and Grab Bars	97
Q. Controls and Operating Mechanisms	98
R. Alarms	99
S. Signage	99
T. Telephones	101
U. Fixed or Built-in Seating and Tables	101
V. Assembly Areas	102
W. Building Assistance Facilities	103
X. Service Animals	104
Y. Recommended Resources	105
<hr/>	
8. Telecommunications, Electrical, and Miscellaneous Equipment	107
A. Industry Standards	107
B. General Considerations	107
C. Entrance Facility	108
D. Equipment Room	109
E. Telecommunications Room	110
F. Horizontal Pathways	110
G. Cabling and Outlets	111
H. Wireless	112
I. Workstation Connections	114
J. Workstation Equipment	114
K. Telephone System	115
L. Miscellaneous Electrical Equipment	115
M. Electrical Power	116
N. Recommended Resources	117
<hr/>	
9. Interior Design and Finishes	119
A. General Cleaning Protocols	119
B. Service Desks	120

C. Seating	121
D. Tables	123
E. Plus-Friendly Spaces	124
F. Lighting	125
G. Windows	126
H. Flooring	126
I. Walls	127
J. Color	128
K. Equipment List	128
L. Behavioral Aspects of Space	131
M. Recommended Resources	135
<hr/>	
10. Entrepreneurial and Collaborative Spaces	137
A. Makerspaces	137
B. Coworking in the Library	141
C. Technology Lending Library	142
D. Musical Instrument Lending Library	143
E. Tool Lending Library	143
F. Seed Lending Library	144
G. Open Educational Resources (OER)	145
<hr/>	
11. Shelving, Storage, and Materials Handling	147
A. Conventional Stationary Stacks and Shelving	147
B. Movable-Aisle Compact Shelving	150
C. Automated Storage and Retrieval Systems	151
D. Materials Handling Systems	152
E. Remote Storage	153
F. Storage and Distribution of Electronic Media	154
<hr/>	
12. Building Systems	157
A. Acoustics	157
B. HVAC (Heating, Ventilation, and Air-Conditioning Systems)	159
C. Electrical Systems	163
D. Lighting	164
E. Plumbing and Restrooms	167
F. Elevators and Escalators	169
G. Internet of Things to Monitor and Control Building Systems	169

13. Safety, Security, and Public Health	173
A. General	173
B. External Security	174
C. Internal Security	174
D. Fire Safety	175
E. Disaster Planning	175
F. Public Safety	177
G. Public Health	178
H. Recommended Resources	179

14. Maintenance of Library Buildings and Property	181
A. Regular Routine Maintenance Considerations	181
B. Building Materials	182
C. Graffiti and Security	183
D. Building Systems Preventive Maintenance	183
E. Building Cleaning	185
F. Custodial Facilities	188
G. Groundskeeper Facilities	188
H. Trash Enclosures	189
I. Betterments and Improvements	189

15. Building Construction Process, Change Orders, Occupancy, and Post-Occupancy Evaluation	191
A. Construction Site Meetings	191
B. Change Orders	192
C. Building Acceptance	193
D. Certificate of Occupancy	194
E. Getting Ready for Occupancy	195
F. Moving	195
G. Post-Occupancy Evaluation	196

16. Groundbreaking and Dedication Ceremonies	199
A. Planning	199
B. Event Checklist	202
<i>Bibliography</i>	205
<i>About the Author</i>	223
<i>Index</i>	225

Preface

The first edition of the *Checklist of Library Building Design Considerations* (referred to as the *Checklist* throughout) was published in July 1988 as a 75-page pamphlet by the Buildings and Equipment Section (BES) of the Leadership and Management Association (LAMA), a division of the American Library Association. The author was the chair of LAMA/BES at that time, and the pamphlet was a project that a committee distributed based on a manuscript produced by doctoral students in the School of Library and Information Studies at Texas Woman's University in 1983. The current edition of the *Checklist*, as well as the previous six editions, chronicle the evolution of the library building—and even of librarianship—over a 35-year period.

Good library service depends on three factors: 1) information of interest and value to users, 2) library staff to link users with the information resources of the library, and 3) a method or place to transfer the information from the library to users. This has been true since the first systematically organized libraries in the Middle East dating back to the seventh century BC, and up to the newest library opening today.

During the 35-year history of the *Checklist*, library service has changed greatly. In the 1980s, libraries were primarily places to house collections of print materials, where library users could access the collections with the help of library staff. Gradually libraries changed and evolved. Some print materials (primarily serials) evolved from a paper format to an electronic one, and bibliographic sources such as the card catalog and database search catalogs changed completely to electronic versions. The sharing of collections was enhanced by cooperatives, and a “last copy” policy enabled many libraries to effectively “cull” their in-library collections and use remote storage for materials that would be retrieved only when they were needed. Staff were even more valuable as a source for locating material acquisitions and helping with searches. Some of these changes created space in the library building for “other activities.”

There were now all sorts of other activities to fill the library, based on the needs of the community served by it, and libraries became a place where people could go for a

variety of reasons, some of them not even considered before 1980. An academic library might have, for example, a computer center with banks of computers for student and public use, and a study center that students could use between classes. A public library might have a center for community activities and events ranging from cooking classes to senior yoga sessions. Seminar spaces sprang up in all types of libraries that could be used for small group interactions, study sessions, and civic and cultural sessions. A library might have a “makerspace” where budding entrepreneurs could congregate to create all sorts of materials. These examples illustrate that the library was evolving from its traditional role as a warehouse of materials into more of a social space fueled by interactions and involvement.

And suddenly things changed in 2020. The COVID-19 pandemic made libraries suspend some of their new social activities because of the dangers of face-to-face contact. In some cases, entry into the physical building was curtailed or limited, and spacing inside the building was increased to provide the correct “social distance.” Almost all users’ interactions with library staff became virtual through Zoom, and some form of this virtual communication may continue into the future. And in the meantime, the march toward electronic resources has continued, which allows users to access the library’s collections without even having to enter the building.

In the author’s subjective opinion, one positive aspect of the changes in library buildings over the last 35 years is that they have become more exciting and attractive, not only in the United States but throughout the world. Talented architects and designers have used their skills to create three-dimensional works of art on campuses and in public libraries that invite users in and make them want to stay. Kudos to those administrators who realize that architects can only be as creative as the client allows and who demand and expect exceptional design.

Changes in the Seventh Edition

All sections in the seventh edition of the *Checklist* have been reviewed, revised, and updated, and some of the major changes include:

- ✔ A revised format that continues to preserve aspects of the checklist style of the original publication, but now also includes an in-text narrative that provides introductions to sections, along with explanations.
- ✔ A new section dealing with the relationship between the client (the library and/or its political authority) and the architect and contractor based on a blog published by the California architectural firm of Wagstaff + Rogers Architects.
- ✔ A new list of recommended resources on building planning, including general guidelines and guidelines for academic, public, and school libraries.
- ✔ An expanded treatment of building addition considerations, building rehabilitation issues, and the preservation of existing historic buildings.
- ✔ A section dealing with virtual library considerations, as well as a fuller discussion of alternative library spaces.
- ✔ A new section dealing with site-safety issues.

- ✓ An expanded section dealing with sustainable design and the role that LEED and the U.S. Green Building Council play in helping to plan buildings within the confines of a budget.
- ✓ A brief discussion on how to improve indoor air quality to enhance protection against COVID-19 and other viruses.
- ✓ An explanation of the importance of roofing materials in making the building energy-efficient.
- ✓ Why inviting open spaces are helpful in inhibiting the transfer and spread of viruses.
- ✓ A question as to whether parking should be discouraged by the library.
- ✓ A list of safety equipment and tools if the library does provide a parking lot or garage.
- ✓ A list of different types of recycling containers required for the variety of waste materials created in the library.
- ✓ The chapter on the “Interior Organization of the Library Buildings” has a new introductory section dealing with how to reduce the risk of infectious viruses through increased ventilation.
- ✓ Recommendations for coping with viruses and infectious diseases in meeting rooms and gathering spaces.
- ✓ A new section on safe and shelter rooms to protect users and staff in case of natural disasters or violence in the library.
- ✓ Revisions to the Americans with Disabilities Act (ADA) section, including additional background on the ADA, as well as guidelines to assist libraries in complying with the act’s rules and regulations.
- ✓ A discussion of industry sources and standards for telecommunications, electrical, and miscellaneous equipment.
- ✓ A review of suggested equipment and procedures to reduce the transfer of viruses in interior spaces.
- ✓ A set of protocols for cleaning interior public service spaces and seating.
- ✓ A new section on the storage and distribution of electronic media.
- ✓ Suggested changes for heating, ventilation, and air conditioning (HVAC) to reduce the spread of airborne diseases.
- ✓ An updated discussion of the remote control of building systems, including HVAC, lighting, electrical, irrigation, safety, and others.
- ✓ A discussion of why flexibility in electrical design is needed because of constantly changing library floor plans.
- ✓ A discussion of how the internet of things (IoT) will influence electrical design.
- ✓ A discussion of the benefits of human-centric lighting.
- ✓ A discussion of suggested design and protocols for gender-neutral restrooms.

- ✓ A discussion that addresses the threat posed by people who are intent on doing physical harm to staff and users of the library.
- ✓ A section on the actions that libraries can take to lessen the threat of disease transmission.
- ✓ Additional suggestions on how to improve building cleaning.
- ✓ A new section on library site meetings for the owner (library), contractor, and architect during construction.
- ✓ A new section dealing with change orders during constructions, including what they are, why they occur, and how they should be handled.
- ✓ A discussion of the suggested procedures and protocols needed during ground breaking, dedication, and other ceremonial events to protect against the spread of infectious diseases.

What These Changes Imply for Designing Libraries Today

- ✓ Flexibility is key in planning a building. A new library building is designed to last for at least 20 to 30 years without major renovations, and during that time period, the services and functions of the library will change. Thus it is important to have few fixed walls and spaces, and to have HVAC, lighting, and electrical systems that can be easily repositioned.
- ✓ Know the products and services your stakeholders want and need, and have the building designed to satisfy those needs. The mission of all types of libraries is constantly changing based on the changing needs of users, and it is vital to understand those needs because function should drive design.
- ✓ Have windows that open to enhance natural ventilation; the best way to prevent the spread of diseases is fresh air. For a period, buildings were “tight” to preserve heat loss and gain, and while this is still important, it does not rank as high as human health.
- ✓ “Sustainable design,” or ecologically friendly design, will become more important than ever, and libraries will have to do a cost-benefit analysis of implementing sustainable design, weighing its costs against its benefits.
- ✓ Think about how your patrons will interact with library staff. The methods of staff-to-patron interaction changed during the pandemic, and several of those changes won’t be reversed completely.
- ✓ Monitor developments in artificial intelligence (AI) and their possible impact on libraries and library buildings. AI can be either a disruptive or a promising development for libraries.
- ✓ Balance the cost of the real estate, construction, and sustainability required to provide parking for individual cars.

Thanks

I would like to thank Anna Tatar and Margaret Kazmer, former colleagues at the San Diego Public Library, who always performed at the highest level of library professionalism, and who, along with Helga Moore, were instrumental in developing San Diego's new Central Library. Without their efforts, there would not be a new main library in San Diego. The new Central Library is on the cover of this edition.

I also appreciate the support I received from Patrick Hogan and Rachel Chance at ALA Editions. Publishing with ALA Editions has been a pleasure over the years, and I hope to continue this mutually productive relationship for many years to come.

FOR REVIEW ONLY -
NOT FOR DISTRIBUTION



Building, Planning, and Architecture

Building a new library or renovating an existing library building is one of the most significant decisions that any institution can make. Significant because it requires money, time, expertise, and patience. Funding is the key, and if sufficient funds are not available there is no building project. Some building projects require decades, from the realization of the need for an improved library building to the dedication of the new facility. Most of that delay is due to difficulties in obtaining financing or to a lack of political will on the part of decision-makers. Knowing what the library needs to meet its information mission, and translating those needs into a physical space, is the duty of the planning team that will guide the building project, so select the best team possible. And make sure you have a team, and not just a collection of talented individuals. Finally, patience is necessary because you will have setbacks, you will encounter people you find irritating, and unexpected events will occur that may not always be pleasant. But when the ribbon is cut for the new facility, all the irritants you experienced will disappear and you will rejoice in helping to make the new facility a reality.

A. Indicators of Dissatisfaction with Existing Facilities

There are triggers that signal that it is time to consider remodeling an existing library building or constructing a new one. The need for a new or renovated space is not always obvious because library staff and users are in the building daily, and the need for improvement is not noticeable if you are familiar with it. Some of the indicators of the need for a change include:

	YES	NO	N/A
1. Has the mission of the library changed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the population served by the library increased or decreased?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Have the demographics of the population served by the library changed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Has the library formed a partnership or alliance with another institution that requires a change in the physical building?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	YES	NO	N/A
5. Are there problems with the physical condition of the building (outdated systems, inflexible floor plans, ADA problems, difficulty in installing technology)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Does the existing building hinder the delivery of good service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is there enough space for the products and services the library offers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Has the mix of products and services offered by the library changed, causing a need to reevaluate the physical space?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Does the physical building have the required infrastructure to accommodate current and future technology?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. In order to accommodate the growth of library collections, have seats been exchanged for stacks? This tends to be less likely for most libraries, as bound volumes are being exchanged for electronic serials and e-books.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Is the library considering storing its book collections in compact shelving or in an off-site storage facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Is the atmosphere of the library pleasing for customers and staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Why and what is the need to increase physical security and/or safety for users and staff?			
<i>Comments:</i> _____			

B. Institutional Planning Team

The planning process is key to the final success of the building project, and planning works best with the talents and experience of a wide variety of stakeholders. It is usually best to keep the planning team small, but inclusive of major stakeholders.

	YES	NO	N/A
1. Has an institutional library planning team been formed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Who are the members of the library planning team? Is/are there			
a) A representative of the legal owner (university, school city, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) A library representative?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) User representatives (faculty, students, citizens, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Other representatives with technical skills such as engineering, legal, financial, architectural, buildings, and so on?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Representatives of the local or the campus building department? Having building officials as part of the committee may eliminate the need for changes made later because the planned building does not meet the local codes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Others (Friends of the Library, library committee members, and so on)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

YES NO N/A

3. Will the architect hold a charrette for all members of the library planning team? A charrette is essentially a design workshop where designers, residents, developers, city officials, university representatives, planners, and other stakeholders come together to envision what the planners hope a new library will accomplish.
4. What roles will members of the library planning team play:
- a) Advising (gathering and disseminating information about the project)?
- b) Innovating (suggesting new ideas or new ways to tackle old problems)?
- c) Promoting (“selling” the project to interested stakeholders)?
- d) Developing (assessing and developing ideas for practical implementation)?
- e) Maintaining (ensuring that an infrastructure is in place so that the team can work with maximum efficiency)?
- f) Linking (coordinating all work roles to ensure maximum cooperation and interchange of ideas, expertise, and experience)?
5. Who will be the spokesperson and chief contact for the institution on the project? It is *vital* that only one person speak and make decisions for the institution during all stages of the building process.
Comments: _____
6. How will conflict be resolved on the building project?
Comments: _____

7. Who will make the final decisions on design, space allocations, costs, and change orders?
Comments: _____

C. Determining Space Needs

The role of libraries is changing from the storage and access of library materials to serving as an interactive center for information, experiences, and knowledge. This change from a static center to a dynamic hub modifies the spaces required to support the new role.

For example, according to OCLC, print circulation in U.S. academic libraries has declined by 74 percent since 2004.¹ The decline of print collections, the use of compact shelving and/or book retrieval systems, the growth of electronic media, concern for healthy building hygiene, changes in the role the library plays in the campus or community, and many other factors make planning for the size and function of future library services challenging.

YES NO N/A

1. Have the library staff and administration met to decide the mission and long-term vision of the library? Space allocations and needs should be based on the vision and mission of the library.

YES NO N/A

- 2. Has a library building consultant been hired to help the library with its planning?
- 3. Has a building program been prepared that details the space needs, adjacencies, and unique functions and features of the proposed building?
- 4. Has the library building consultant prepared the building program, or advised staff on preparing the program?
- 5. What will be the useful life of the new building? Most building changes should accommodate the library for a period of approximately twenty years.

Comments: _____

- 6. If a building change is planned that is an interim solution, how will this impact future needs?

Comments: _____

- 7. What existing programs will be discontinued in the new building?

Comments: _____

- 8. What new programs will be added in the new building (services like makerspaces, labs, artificial intelligence, and so on)?

Comments: _____

- 9. What will be the growth or decline of staff over the next twenty years?

Comments: _____

- 10. How will the service population change over the next twenty years?

Comments: _____

- 11. What changes will take place in the size of the collection over the next twenty years? Will it increase or decrease? Will this cause a growth or decline of shelving?

Comments: _____

12. What will be the mix of the collection over the next twenty years? Will print and media be replaced by electronic collections?

Comments: _____

13. What will be the growth or decline of the library's seating requirements over the next twenty years?

Comments: _____

14. What technology will be required to support library programs over the next twenty years?

Comments: _____

15. In estimating the size of the new building, consider the following space-planning tools:

- a) *Space estimating.* How much library space is needed to support current and future programs? Plan to add up all the library spaces that will be needed based on the programs and activities that the library wants to undertake in the new building. The total of all spaces equals the ideal size of the new building or expansion.

Comments: _____

- b) *Benchmarking.* What is the size of the library buildings in similar institutions? It is valuable to have a database of 10 similar libraries that may be consulted not only for facility size, but also for other measurable aspects of library space. If you can't measure it, you can't manage it.

Comments: _____

- c) *Standards and guidelines.* What do library association, regional, state, and other guidelines and standards call for as far as space guidelines?

Comments: _____

- d) *Budget.* What can the library afford? This is sometimes the deciding factor.

Comments: _____

D. Joint Use Considerations

The benefit of joint use is that efficiencies may occur when two types of libraries combine, like the San José State University Library and the San José Public Library. Generally, most joint use facilities function well if they are planned to accommodate the needs of both libraries. In many cases, the genesis for joint use comes from political leaders rather than library staff.

	YES	NO	N/A
1. Is there another organization and/or department on the campus or community that might offer synergy to the library by sharing facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is there another library or other organization that might offer potential synergy for a joint use facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Do the missions of the libraries considering a joint facility have enough commonalities to enhance the chances of success?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are there possible efficiency and cost savings by having a joint facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Can the quality and quantity of service be improved for both libraries through a joint facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. If a joint facility is agreed to, has a joint interagency agreement been negotiated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Have the following factors been considered in the agreement:			
a) <i>Governance?</i> A written agreement is strongly recommended, and the agreement should list the parties entering into the agreement. The agreement should provide a clear demarcation of responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) <i>Funding?</i> Make sure that the financial responsibilities of each party are placed in the agreement; include not only capital costs, but operational expenses as well.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) <i>Ownership of assets?</i> In the agreement, define the ownership of assets (assets can include items such as equipment and book collections), and come to terms with how ownership will be decided if the agreement is terminated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) <i>Hours of operation?</i> The agreement should list the hours of operation of both libraries, and if either partner has restrictions on use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) <i>Staffing?</i> The local staffing requirements for both types of libraries should be met because the combined facility is two libraries sharing a common space, and each library may require different certification or licensing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) <i>Volunteers?</i> Some libraries rely on youth and parent volunteers, and the other library may not use as many volunteers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) <i>Collections?</i> Care must be taken to develop collections that are responsive to the needs of both libraries' sets of users.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) <i>Changes?</i> How will changes in any of the above policies be determined? The agreement must be flexible enough to allow modifications as conditions change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

YES NO N/A

- i) *Termination of the agreement?* If for some reason a termination is desired in the future, the agreement should list the terms of termination.

E. Selecting a Library Building Consultant

The role of a building consultant is to translate the space needs of the library into a document that the architect can use to design a building. The document created is the building program, and it is like a “cookbook” for the architect. Building consultants document the library’s needs, and architects translate those needs into spaces.

YES NO N/A

1. Is there someone on the staff who has the necessary planning knowledge and experience of the functional needs and requirements of library buildings? If not, a library building consultant should be retained.
2. Has the consultant been retained at the very start of the building planning process so that he or she can take part in every step of the project?
3. Is the consultant listed in the Library Consultant List (www.libraryconsultants.org/index.html)?
4. Does the consultant have broad and diverse technical experience in planning new library buildings, renovations, and additions, and the conversion of other buildings into library buildings?
5. Does the consultant have the organizational and record-keeping skills needed to document and respond to key events and activities during the project?
6. Does the consultant have the personal characteristics, experience, and skills necessary to assist a library in its unique planning and building needs?
7. Does the consultant have the written and verbal communication skills required to interact with all stakeholders?
8. Does the consultant have the political skills necessary to listen and respond to the concerns of all who may have a stake in the building project?
9. Does the consultant have the ability to explain a point of view and to persuade others of the importance of carrying out the consultant’s recommendations?
10. Will the consultant provide advice on the selection of the architect and other members of the building’s technical planning team?
11. Is the consultant’s schedule flexible enough for him or her to be available for meetings with the library’s planning committee when required?
12. Is the consultant available by telephone, surface mail, or electronic communication to answer questions and provide guidance when his or her physical presence is not required?

F. Choosing an Architect

Architects configure the client's needs, wants, and dreams into built space for library users and staff, and the architect may also be responsible for creating an architectural symbol for the library. The building consultant and architect will be part of a library's life for two to four years, and the following should be considered in architect selection.

	YES	NO	N/A
1. Does the library staff play a major role in the selection of the architect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the group responsible for selection of the architect developed selection criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Does the architectural selection process include:			
a) Announcement of the proposed project in an official publication used by the client organization, or in the general press?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Issuance of requests for proposals and/or information?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Submittals by interested architectural firms?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Provision of standardized forms so that a uniform evaluation of architectural firms can be used during the evaluation process?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Evaluation of the firms based on the selection criteria developed by the group responsible for selection of the architect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Interviews with the "short list" of firms that the selection group has decided best meets the selection criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) A tour of the site or facility organized prior to the final selection of the architectural firm? It may be appropriate for the tour to be arranged prior to the short-listing process, or it may be considered more appropriate to delay the tour until after a short list is determined.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Ranking of the top firms to identify the best-qualified ones?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Selection of the top-ranked firm based on the interview discussions and the selection criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Notification of unsuccessful firms, and a debriefing as to why they were not selected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. While not necessarily recommended, does the selection process involve:			
a) A limited or open architectural competition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) A design/build competition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Bidding among various competitors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the architectural firm an individual, partnership, corporation, or a joint venture?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Will the person who presents for the architectural firm be involved in the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is the architect or architectural firm registered to practice in the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the architect of record registered to practice in the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

YES NO N/A

9. Are all key personnel and sub-consultants from the architect's office who are involved in the project identified?
10. Are the architect's support team members identified: the landscape architect, civil engineer, structural engineer, acoustic engineer, mechanical engineer, electrical engineer, ADA compliance officer, and any other key specialists involved in the project?
11. Does the architectural team have the required support equipment—CAD, 3D modeling, renderings in-house, and so on?
12. Are all members of the architect's support team part of the firm, or does the architect retain them as sub-consultants?
13. Can the architect's organization provide enough resources to devote sufficient time and energy to the project?
14. Does the architect have experience in working with public agencies?
15. Does the architect have prior experience in designing libraries? In some cases, it may be advantageous to have an architect who has not worked on a library building.
16. If the architect has not worked with libraries, does the architect have a plan to become knowledgeable about the library's needs? This may require a library building consultant, preferably one retained by the client.
17. Is the architect an empathetic listener, one who is willing to understand the library's needs?
18. Will the architect place the library's needs before design considerations?
19. Does the architect's workload allow the firm to devote adequate time to the project?
20. Does the architect have solid reference reports from past clients?
21. In projects completed by the architect:
- a) Did the projects come in at or under budget?
 - b) Did the projects come in on time?
 - c) What was the extent of change orders in number and dollars?
 - d) If there were change orders, has it been determined whose fault they were? (Not all change orders are the architect's fault.)
 - e) What litigation has occurred against the architect?
 - f) What litigation has occurred against the architect's former clients by the architect?
22. Does the architect have the written and verbal communication skills required for interacting with all stakeholders?
23. Does the architect have the political skills necessary to listen and respond to the concerns of all external and internal building-project stakeholders?

About the Author

William Sannwald is a full-time faculty member in the Fowler College of Business at San Diego State University and works as a library building and administrative consultant. He was an assistant to San Diego's city manager and was the city's manager of library design and development from 1997 to 2004. Prior to that, he was city librarian of the San Diego Public Library. He has worked in public libraries in Illinois, Minnesota, Michigan, and California. Sannwald received his bachelor's degree in economics from Beloit College in Wisconsin, an MBA degree from Loyola University in Chicago, and an MALS degree from Dominican University in Illinois. He has presented papers at national and international conferences and is the author of a number of books and articles on library architecture and management. The San Diego chapter of the American Institute of Architects presented him with their highest award, the Irving Gill Award, for his contributions to library architecture, and he received the San Diego design community's Ruocco Award for his contributions to urban architecture. During his career, Sannwald has been involved in the construction of more than fifty library buildings as either a consultant or owner's representative in the United States, Great Britain, Angola, Greece, and the United Arab Emirates. He was elected to the International Federation of Library Systems' Standing Committee for Library Buildings and Equipment for 2007–2011.

Sannwald teaches a variety of upper division undergraduate and MBA courses in the management department at San Diego State University's Fowler School of Business. He was selected as the most influential management professor and received the Outstanding Faculty Award in the Business School. In 2017 he received the Teaching Excellence Award from his peers. In 2022, he was selected as the first Glazer Outstanding Lecturer Fellow, which includes a generous stipend funded through private gifts.

Index

#

3D printers, 138

A

academic libraries

accessibility in, 28

decline of print circulation at, 3

recommended resources for, 15

Access Board, U.S., 105

accessibility, 28–29, 87–105, 149, 167

acoustics and noise, 52, 70, 71, 76, 82, 121, 127, 157–159

ACRL TechConnect, 137, 139

ACRLog, 62

adapted vegetation, 35, 36, 37

adaptive technology, 63, 100–101, 103

additions, 18–19, 170, 195. *See also*

renovations

advising, role of, 3

aesthetics, 21, 64, 133

AIA/ALA Library Building Awards, 11

air conditioning. *See* HVAC systems

air quality, 39–40

alarms, 48, 68–69, 99, 173

Allen County (Indiana) Public Library, 138

American Association of School

Librarians (AASL), 16

American Institute of Architects' Honor

Award, 20

American Libraries, 133–134

American Library Association (ALA)

website, 179

American Society of Heating,

Refrigerating and Air-Conditioning Engineers, 178

Americans with Disabilities Act (ADA),

47, 50, 51, 87–105, 124, 167

animals, service vs. companion, 104–105

Anixter, 108, 110, 117

architects

awards for, 20

change orders from, 9, 192

charrettes held by, 3

as creators of works of art, xiv

vs. library consultants, 7

post-occupancy evaluation of, 197

proposals from, 11–13

relationships with, 10–11, 191–193

selection process for, 8–10

sub-consultants of, 9, 45, 78

architectural design, 11–13, 17–21, 26, 159

archives, 67–68

Archtoolbox, 169

art, public, 78–79

assembly areas, 74, 102–103

assistive listening systems, 101, 103

Association of College and Research

Libraries (ACRL), 15

atmospheric elements, 131–134

auditoriums, 124, 187

automated storage and retrieval systems

(ASRSs), 23, 132, 151–152

awards and honors, 11, 20

B

Baker, Susan, 31

Ball, Stephen J., 133–134

bariatric furniture, 124–125

bathrooms, 72, 76, 82, 95–97, 125, 127,

167–168, 188

behavior, disruptive, 63, 173

behavioral aspects of space, 131–134

benchmarking, 5

Berendes, David, 85

betterments and improvements, 189

bicycle racks, 34, 49

bio-hackerspaces, 139–140, 141

blind or visually impaired persons, 63,

89, 99, 104

book drops, 53–54, 93, 174

book trucks, 58, 59, 81, 130

book-retrieval systems, 23, 132, 151–152

books

donated, 82

electronic, 21, 22, 147, 154–155

rare, 67–68, 174, 175

reserves, 69, 152

Braille, 63, 91, 92, 95, 100

Braunschweig University of Art, 20

Brown, Paul, 85

brownfield sites, 25, 35

Bryan, Cheryl, 16

budget considerations, 5, 11, 17, 21, 78, 167,

192, 195

Buhr Remote Shelving Facility, 23

building consultants, 4, 7, 8, 9, 14

building maintenance, 181–189

building materials, 38–39, 182

building systems, 157–170, 183–185

buildings, existing

conversion of, 19–20, 24

indicators of dissatisfaction with, 1–2

preservation of, 20–21

renovations to, 1–2, 15, 18–21, 170,

199

buildings, new

alternatives to, 17, 18–24

atmospheric elements of, 131–134

awards and honors for, 11, 20

as blank canvases, 17

construction process for, 191–197

groundbreaking ceremonies for,

199–204

- buildings, new (*cont'd*)
 post-occupancy evaluations of, 196–197
 pride of ownership of, 18
 recommended guides for, 15
 site selection for, 25–31, 34
 twenty-year useful life of, xvi, 4–5
 Buildings and Equipment Section (BES),
 xiii
- C**
- cabing and wiring, 58–59, 107–111, 116, 117
 California Department of Public Health
 (CDPH), 119–120
 California Digital Library, 24
 carbon dioxide, 40, 160
 carpeting, 89, 123, 127, 186
 carrels and study rooms, 69–70, 71, 101–102,
 116, 122, 166, 187
 catalogs, 22, 60, 72, 102, 142, 143, 144, 154
 Centers for Disease Control and Prevention
 (CDC), 55–56, 85, 121, 124, 181
 ceremonies, groundbreaking, 199–204
 certificates of occupancy, 194
 chairs and seating, 64, 72, 101–102, 103,
 121–123, 124
 change orders, 9, 11, 191, 192
 charrettes, 3, 16
 checkout, 57–58, 65, 67, 102, 120, 153
 children's facilities, 72–73, 76, 124
 circulation desks, 57–59, 102, 120–121,
 158
 Clean Water Act, 35
 cleaning protocols, 119–120, 137, 179, 181,
 185–189
 client/architect/contractor relationships,
 10–11
 clocks, 77, 129
 Clovis–Carver Public Library, 173
 collaborative spaces, 64–65, 70, 141–142
 collections
 decline of print, 3
 planning considerations for, 5, 6, 17
 shelving and storage of, 2, 23, 84, 147–155,
 186–187
 special, 16, 67–69, 154
 weeding of, 22
 color, use of, 72, 127, 128, 134, 183
 community notices, 77
 community planning issues, 1, 26–28
 companion animals, 105
 computer labs, decline of, 62
 conference rooms, 71, 73–75, 124, 128, 141–142,
 166, 187
Constructing Library Buildings That Work
 (Schlipf), 15
 construction managers, 11
 construction process, 191–197. *See also*
 buildings, new
 construction staging areas, 18, 29
 consultants
 on feng shui, 134
 on library building, 4, 7, 8, 9, 14
 on telecommunications systems, 107
 who are sub-consultants of architects, 9,
 45, 78
 contractors
 post-occupancy evaluation of, 197
 relationships with, 10–11, 191–193
 selection process for, 13–14
 controlled digital lending, 155
 controls and operating mechanisms, 95, 97,
 98
 convenience facilities, 76–77. *See also*
 restrooms
 conversions of existing buildings, 19–20, 24
 cool roofs, 41, 42, 162
 core facilities, 139
 cost estimates, 11
 COVID-19
 2020 response to, xiv, 21
 and ceremony planning, 199–200
 cleaning protocols for, 119, 137, 179, 185
 curbside pickups during, 53
 and disease transmission, xvi, 39–40,
 121–122, 159–160, 173, 178–179, 185
 and meeting rooms, 73–75
 recommended resources on, 85, 135
 and seating upholstery, 121
 social distancing due to, xiv, 64, 73, 120,
 121–122, 123, 178
 vaccination requirements for, 55, 200
 and ventilation, xvi, 39, 55, 73, 126, 135,
 159–160, 178
 coworking spaces, 141–142
 “Creating a Safe Campus” (Baker), 31
 Crema, Leonora, 15
 curb cuts, 89–90
 curbside pickups, 53
 custodial rooms, 188
 customers. *See* patrons
- D**
- daylighting, 41, 164, 165
 decibels, 99, 158
 dedication ceremonies, 199–204
 delivery and loading dock areas, 51–52, 54
 Demco, 15
 Department of Energy, 164
 Department of Justice, 105
 design
 sustainable, xvi, 33–43
 universal, 11–13
 “Design Guidance for Building Safe Rooms”
 (Brown), 85
 “Design Thinking” (Ball), 133–134
 design workshops (charrettes), 3, 16
Designing Libraries for the 21st Century
 (Hickerson et al.), 15
 desks, service, 57–62, 102, 120–121
 developing, role of, 3
 digital lending, controlled, 155
 digital libraries, 23, 24, 154–155
 Digital Public Library of America, 24, 154
 dignitaries, 202
 disabilities
 adaptive technology for, 63, 100–101, 103
 and the Americans with Disabilities Act,
 47, 50, 51, 87–105, 124, 167
 and desk height, 58, 60
 disaster planning, 31, 84–85, 175–177, 179
 “Disaster Preparedness and Recovery”
 (ALA), 179
 disease transmission, xvi, 39–40, 121–122,
 131, 159–160, 173, 178–179, 185. *See also*
 COVID-19
 disinfectants, 181, 185
 displays, 77–78
 dogs, as service animals, 104–105
 donations, 82
 doors, 51, 56, 92–93, 94, 108, 109, 158
 downstream processing, 140
 drinking fountains, 72, 74, 76, 94–95, 100,
 167, 186
 duplex outlets, 109–110, 116, 164
 dust control, 181
- E**
- e-books, 21, 22, 147, 154–155
 eGranary Digital Library, 23
 electric vehicles (EVs), 35
Electrical Construction & Maintenance
 (journal), 107
 electrical outlets, 49, 75, 81, 107, 109–110, 111,
 116, 163–164
 electrical systems, 58–59, 107–117, 150,
 163–164, 174, 185
 electronic media storage, 154–155
 elevators, 51, 77, 91–92, 124, 159, 167, 169
 emergencies, 84–85, 99, 103, 124, 126, 129–130,
 174–179
 emotional support dogs, 105
 employees. *See* staff
 energy efficiency, 33, 37–38, 40–42, 49, 125,
 162–163, 165, 169
 entrance facilities (EFs), 108–109
 entrances, 49, 56, 87, 89, 93–94, 165, 181, 193
 entrepreneurial spaces, 137–141
 environmental considerations, 19, 20, 25, 30,
 33–43
 Environmental Protection Agency (EPA), 119,
 135, 181
 equipment lists, 128–131
 equipment rooms, 108–110, 111
 escalators and stairs, 90–91, 169
 Espresso Book Machines, 142
 evaluations, post-occupancy, 196–197
 evaporative coolers, 42, 162
 events, 199–204
 Ex Libris, 155
 expansions, 17, 18–19, 170, 195. *See also*
 renovations
The Experience Economy (Pine and Gilmore),
 133, 135
 exterior considerations, 39, 45–54, 80, 166,
 174, 183, 189
- F**
- facilities maintenance, 181–189
 faculty carrels, 69–70, 122

- Farley, Luke J., 192
- Federal Communications Commission (FCC), 115
- Federal Emergency Management Agency (FEMA), 35, 84, 85, 179
- feng shui, 134
- fire safety, 38, 169, 175, 185
- fixed seating, 101–102, 103
- flagpoles, 49–50
- flooring, 59, 88–89, 126–127, 138, 186
- flush-outs, 40
- fountains, drinking, 72, 74, 76, 94–95, 100, 167, 186
- freight elevators, 51, 77, 169
- Friends of the Library groups, 82–83, 202
- funding, in joint use, 6
- furniture
 - chairs and seating, 64, 72, 101–102, 103, 121–123, 124
 - for plus-sized users and staff, 124–125
 - tables, 52, 68, 75, 101–102, 123
 - upholstery for, 121, 123, 128
- G**
- gaming, 66, 142
- gender-neutral restrooms, 76, 168
- Gilmore, James H., 133, 135
- glasses and goggles, 137, 141
- governance, in joint use, 6
- grab bars and handrails, 90, 91, 96, 97–98
- graduate carrels, 69–70, 122
- graffiti, 48, 183
- Green Building Council, 33–34, 38, 43
- green roofs, 41
- greenfield sites, 25, 36
- greywater, recycled, 36, 37
- groundbreaking ceremonies, 199–204
- groundskeeper facilities, 188
- group study spaces, 70, 71
- gun violence, 31, 85, 173, 175
- H**
- hallways and lobbies, 186
- hand sanitizer, 179
- handrails and grab bars, 90, 91, 96, 97–98
- hardscaping, 46–47
- Hauke, Petra, 19, 24
- health, public. *See* public health
- heat islands, 36
- heating. *See* HVAC systems
- height recommendations, 101, 102, 149
- Hewlett Foundation, 145
- Hickerson, H. Thomas, 15
- historic buildings, 20–21
- HMC Architects, 25
- horizontal expansions, 18–19
- horizontal pathways, 110
- Hubbell-Premise, 107, 109, 110, 117
- Hughes, Hilary, 16
- Human Rights Campaign Foundation, 168
- human-centric lighting (HCL), 165
- humidity control, 40, 42, 65, 68, 109, 153, 160–162, 178
- HVAC systems
 - and air quality, 39–40
 - considerations for, 159–163
 - and COVID-19, xvi, 39, 55, 73, 126, 135, 159–160, 178
 - maintenance of, 184
 - and ozone depletion, 37–38
 - and public health, 55–56, 178
 - for remote storage sites, 153
 - sound levels of, 159
 - and sustainability, 42
- hybrid work schedules, 178
- I**
- IGI Global, 21
- indoor air quality, 39–40
- industry standards, 107
- infectious disease transmission, xvi, 39–40, 121–122, 131, 159–160, 173, 178–179, 185. *See also* COVID-19
- information commons, 62–63
- injuries, avoiding, 52, 73, 80, 153
- innovating, role of, 3
- inspections, 194
- Institute for Human Centered Design, 105
- institutional planning teams, 1, 2–3, 7
- Interim Standards for Small Public Libraries* (PLA), 15
- interior design and finishes, 12, 65, 119–135
- interior organization, 55–85
- internal security, 174–175
- International Federation of Library Associations (IFLA), 24
- International Sign Association, 54
- internet of things (IoT), 169–170
- i+s* magazine, 168
- J**
- joint use considerations, 6–7
- K**
- Kazmer, Margaret, xvii
- kitchens, 74, 82, 187
- Kroski, Ellyssa, 16
- L**
- labs, 62–63, 67, 139–140
- land, selecting. *See* site selection
- landscaping, 31, 35, 36, 37, 45–47, 174, 183
- Latimer, Karen, 24
- LCETED Institute for Civil Engineers, 169
- Leadership and Management Association (LAMA), xiii
- LED lighting, 41, 164
- LEED certification, 33–34, 43
- Legorreta, Ricardo, 20
- lending libraries, 23, 142–144
- librarians. *See* staff
- libraries
 - academic (*see* academic libraries)
 - digital, 23, 24, 154–155
 - joint use of, 6–7
 - lending, 23, 142–144
 - mission and vision of, 1, 3, 6
 - public (*see* public libraries)
 - role of, 3
 - school (*see* school libraries)
 - as shelters, 84–85, 176
 - virtual, 21–22
- Library Building Awards, 11
- library building consultants, 4, 7, 8, 9, 14
- Library Consultant List, 7, 14
- library service, evolution of, xiii–xiv
- Library Spaces for 21st-Century Learners* (Sullivan), 16
- library stores, 83–84
- Libris Design Project, 150
- lifts and elevators, 51, 77, 91–92, 124, 159, 167, 169
- lighting, 31, 40–41, 74, 125, 134, 164–166, 174, 184–185
- linking, role of, 3
- Lippincott, Joan K., 15
- literacy centers, 70–71
- loading docks and delivery, 51–52, 54
- lobbies, 186
- location considerations, 27–28. *See also* site selection
- lounge areas, 82, 83, 157, 187
- lounge chairs, 64, 66, 122, 123, 125
- M**
- maintaining, role of, 3
- maintenance considerations, 181–189
- “Make a Plan” (FEMA), 179
- makerspaces, 16, 137–141
- Makerspaces in Practice* (Kroski), 16
- Managing Facilities for Results* (Bryan), 16
- materials, sustainable, 38–39, 182
- materials handling systems, 152–153
- McAllen Public Library (Texas), 20
- McMillan Pazdan Smith Architects, 31
- media production labs, 67
- meeting rooms, 73–75, 84, 102–103, 187
- meetings, on-site, 191–192
- “Mitigating COVID-19” (Berendes and Raspberry), 85
- molecular biology labs, 140
- Moore, Helga, xvii
- movable-aisle shelving, 150–151
- moving, to new spaces, 195–196
- multimedia facilities, 63, 65–67
- musical instrument lending libraries, 143
- N**
- National Association to Advance Fat Acceptance (NAAFA), 135
- “National School Library Standards” (AASL), 16
- native plants, 35, 36, 37
- natural disasters, 31, 84–85, 175–177, 179
- Navitas Capital, 169
- Nelson, Sandra, 16
- New Libraries in Old Buildings* (Hauke et al.), 24
- The New Planning for Results* (Nelson), 16

New York City College of Technology, 62
 New York Public Library, 20, 22
 Niess, Robert, 24
 noise considerations, 52, 70, 71, 76, 82, 121,
 127, 157–159

O

obesity, accommodating, 124–125
 Occupational Safety and Health
 Administration (OSHA), 168
 OCLC, 3, 24, 159–160
 ODA Architecture, 45
 offices and workrooms, 80–81, 128, 158, 187
 open educational resources (OER), 145
 Opening the Book, 15
 openness vs. seclusion, 12, 71, 175
 outlets, 49, 75, 81, 107, 109–110, 111, 116,
 163–164
 outsourcing, 22
 OverDrive, 154
 ownership of assets, 6

P

panic rooms, 85
 parking, 29, 35, 47–48, 87–88, 166, 185
 patience, need for, 1
 patrons
 improving the experience of, 133
 with service animals, 104–105
 trainings for, 67, 140, 141
 who are blind or visually impaired, 63, 89,
 99, 104
 who are plus-sized, 124–125
 workstations used by, 62–63, 65, 108,
 111–112, 114–115, 116, 165
 personal items, 81, 82, 188
 pest control, 68, 182
 Pew Research Center, 147
 PHCP Pros, 167
 Pine, B. Joseph, 133, 135
 planning
 community issues in, 1, 26–28
 for disasters, 31, 84–85, 175–177, 179
 for groundbreaking ceremonies, 199–201
 need for flexibility in, xvi
 recommended resources on, 14–16
 roles in, 3
 teams for, 1, 2–3, 7
 plants, native, 35, 36, 37
 plumbing and restrooms, 72, 76, 95–97, 125,
 127, 167–168, 184, 188
 plus-friendly spaces, 124–125
 post-occupancy evaluations, 196–197
 power outlets, 49, 75, 81, 107, 109–110, 111, 116,
 163–164
 “Practice Guide to Running a School Library
 Design Charrette” (Hughes), 16
 preservation of older buildings, 20–21
 print, preferences for, 147
 print circulation, decline of, 3
 privacy concerns, 64, 71, 81, 108, 121, 168, 170
 promoting, role of, 3
 public art, 78–79

public health, 55–56, 119–120, 178–179. *See also*
 COVID-19
 public libraries
 accessibility in, 29
 contractor selection by, 13
 in converted buildings, 20
 recommended resources for, 15–16
 Public Library Association (PLA), 15–16
 public safety, 31, 177–178
 public transportation, 28, 29, 34, 47, 56, 87–88
 punch lists, 193

Q

QR codes, 77, 124
 quiet study spaces, 70

R

radio frequency (RF) surveys, 113
 rainwater, 36, 46, 47, 49
 ramps, 48, 87, 89–90
 rare books, 67–68, 174, 175
 Rasberry, Catherine, 85
 reading rooms, 67–68, 158, 186
 recycle bins, 53, 186, 187
 recycled content, as building materials, 38, 39
 recycled greywater, 36, 37
 reference desks, 59–62, 102, 120–121
 remote storage, 23, 153–154
 renovations, 1–2, 15, 18–21, 170, 195, 199
 requests for proposals (RFPs), 8, 14, 78
 rescue assistance areas, 103–104
 reserve books, 69, 152
 restrooms, 72, 76, 82, 95–97, 125, 127, 167–168,
 188
 RFID tags, 142, 143, 151, 152–153, 154
 Rogers, Eric, 10
 roles, on planning teams, 3
 roofs, 36, 41, 42, 49, 162, 183–184
 room capacity, 73, 103
 roving staff, 62, 120

S

safe rooms, 84–85, 177
 safety and security
 alarms for, 48, 68–69, 99, 173
 from attackers, 177
 and disaster planning, 31, 84–85, 175–177,
 179
 for emergencies, 84–85, 99, 103, 124, 126,
 129–130, 174–179
 from fires, 38, 169, 175, 185
 general considerations for, 173–175
 and graffiti, 183
 of parking lots, 48
 and public safety, 31, 177–178
 rescue assistance areas for, 103–104
 of shelter rooms, 84–85, 177
 and site selection, 31
 safety glasses, 137, 141
 San José Public Library, 6, 173
 Schlipf, Fred, 15
 school libraries
 accessibility in, 28–29

CONTENTdm used by, 24
 recommended resources for, 16
School Library Designing (blog), 16
 seating, 64, 72, 101–102, 103, 121–123, 124
 secluded areas, 12, 71, 175
 security. *See* safety and security
 seed lending libraries, 144
 The Seeing Eye, 104
 self-checkout, 57, 58, 65, 120, 153
 self-service, 12, 79, 120, 121, 152
 seminar rooms, 71, 73–75, 124
 service animals, 104–105
 service desks, 57–62, 102, 120–121
 shelving and storage, 2, 23, 84, 147–155,
 186–187
 shootings, 31, 85, 173, 175
 sidewalk appeal, 45
 signage, 50, 54, 76, 79–80, 88, 95, 99–101, 103
 silent study spaces, 70
 sinks, 97, 182, 187, 188
 site meetings, 191–192
 site selection, 25–31, 34–36
 “The Six Subsystems of a Structured Cabling
 System” (Anixter), 117
 size considerations, 29. *See also* site selection
 Smale, Maura, 62
 smoking, 39
 social distancing, xiv, 64, 73, 120, 121–122,
 123, 178
 solar panels, 30, 38, 41, 49
 sound levels, recommended, 158
 sound-masking systems, 158
 space estimating, 5
 space planning, 3–5, 14–16
 speakers, at events, 201, 203
 special collections, 16, 67–69, 154
 special libraries, resources for, 16
 spokespersons, 3
 stacks. *See* shelving and storage
 staff
 hybrid work schedules for, 178
 injury to, 52, 73, 80, 153
 parking spaces for, 47–48
 personal items of, 81, 82, 188
 psychological preparation of, 195
 roving vs. desk, 62, 120
 safety of, 31, 48, 84–85, 173–179
 training for, 54, 132, 170, 176, 177
 value of, xiii
 who are plus-sized, 124–125
 workstations used by, 58, 71, 80–81, 114–
 115, 116, 164, 195
 staff areas
 elevators in, 77, 124, 169
 entrances to, 49, 56, 165
 kitchens in, 82, 187
 lighting of, 166
 lounges in, 82, 83, 157, 187
 noise considerations for, 52, 82, 158–159
 visibility of, 12
 staffing requirements, 6, 18
 staging areas, 18, 29, 52
 stairs and escalators, 90–91, 169

stakeholders, xvi, 2–3, 9
Standards for Distance Learning and Library Services (ACRL), 15
Standards for Libraries in Higher Education (ACRL), 15
Standards Reference Guide (Anixter), 108, 110
 star topology, 111
 Stavros Niarchos Foundation Library, 20
 Steelcase, 64
 storage
 interior, 84, 147, 149, 151–152
 remote, 23, 153–154
 stormwater management, 36, 37, 49, 52, 53, 89, 90
Structured Cabling Standards and Practices (Hubbell-Premise), 117
 study rooms and carrels, 69–70, 71, 101–102, 116, 122, 166, 187
 Sullivan, Margaret, 16
 Sunon Global, 65
Sustainable Cities & Society (journal), 19
 sustainable design, xvi, 33–43

T

tables, 52, 68, 75, 101–102, 123
 task lighting, 123, 125, 164, 165
 Tatar, Anna, xvii
 teams, for planning, 1, 2–3, 7
 technology lending libraries, 142–143
 teens, areas for, 71–72, 124
 telecommunications systems, 107–117
 telephones, 100–101, 115, 128, 129
 temperature settings, 40, 68, 109, 153, 162
 termination of agreements, 7
 Texas Woman's University, xiii
 text telephones (TDDs), 100, 129
 thermostats, 42, 160, 163
 toilets, 37, 95–97, 125, 167–168, 184, 188
 tool lending libraries, 143–144
 traffic patterns, 12, 64, 148, 158

training

 for library users, 67, 140, 141
 for staff, 54, 132, 170, 176, 177
 transgender individuals, 76, 168
 transportation, public, 28, 29, 34, 47, 56, 87–88
 trash enclosures, 53, 188–189

U

Under Construction (newsletter), 192
 universal design guidelines, 11–13
 University of Michigan, 23, 201
 University of Nevada at Reno, 138
 upholstery, 121, 123, 128
 upstream processing, 140
 urinals, 37, 97, 167–168
 U.S. Access Board, 105
 U.S. Department of Energy, 164
 U.S. Department of Justice, 105
 U.S. Green Building Council, 33–34, 38, 43

V

vaccination requirements, 55, 200
 variable-speed drive (VSD) motors, 42, 163
 vegetation, adapted, 35, 36, 37
 vendors, 15, 154
 ventilation
 and air quality, 39–40
 and COVID-19, xvi, 39, 55, 73, 126, 135, 159–160, 178
 See also HVAC systems
 vertical expansions, 18–19
 virtual events, 200, 202
 virtual libraries, 21–22
 virus transmission, xvi, 39–40, 121–122, 131, 159–160, 173, 178–179, 185. *See also* COVID-19
 visually impaired persons, 63, 89, 99, 104
 voice over Internet Protocol (VoIP), 115
 volunteers, 6, 71, 80–81, 82, 176

W

Wagstaff + Rogers Architects, xiv, 10
 walls, 48, 127–128, 182, 183
 water
 efficient use of, 34, 36–37, 46–47, 167
 as feng shui element, 134
 stormwater management of, 36, 37, 49, 52, 53, 89, 90
 water closets, 95, 96
 water fountains, 72, 74, 76, 94–95, 100, 167, 186
 weeding, 22
 Werner, Klaus Ulrich, 19
 wheelchairs, 88, 91–96, 98, 101–103, 124
 Whole Building Design Guide (WBDG), 15, 51–52, 54
 windows
 cleaning of, 182, 187
 and lighting, 13, 48, 126
 security of, 126, 161, 174
 and ventilation, xvi, 55, 66, 73, 126
 wireless networks, 107, 112–114
 wiring and cabling, 58–59, 107–111, 116, 117
 work schedules, hybrid, 178
 workrooms and offices, 80–81, 128, 158, 187
 workstations
 electrical power for, 111, 114, 116, 164
 for patrons, 62–63, 65, 108, 111–112, 114–115, 116, 165
 for staff, 58, 71, 80–81, 114–115, 116, 164, 195

X

xeriscaping, 46

Y

young adult facilities, 71–72, 124

Z

Zoom, service through, xiv, 21, 178