library facilities master plan
September 2009
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Appendix:
- JCL Library Branches detailed report
- JCL MEP detailed report on Antioch, Cedar Roe, Corinth, and Oak Park
Facility planning has long been a practice in the Johnson County Library (JCL). As the existing facilities plan (1991-2010) comes to end, a new plan is essential. In 2008, the Library Board directed staff to develop a new twenty year plan as part of the board’s new strategic plan, Experience Johnson County Library, 2008-2012. The purpose of the new facilities plan is to assess existing facilities and propose new facilities for the next 20 year period for the Johnson County Library and to provide the governing Board with a workable plan for achieving facility goals. The plan addresses building standards, service models, branch types, locations and describes changes in the community that will affect the need for library service.

Specific goals for the plan include:
1. Assess existing buildings for condition.
2. Assess existing facility locations in relation to current population distribution and needs.
3. Assess changes in demographics and potential growth and development in the library district through 2030.
4. Affirm or develop building standards and service models for library service.
5. Propose new facilities needed in the next 20 years to address growth and development in the library district.
6. Incorporate the County library system in the overall county Strategic Facilities Master Plan.

The planning process set out to gather community input through focus groups throughout the district and through online surveys. Staff and other stakeholders were interviewed and surveyed.

This document outlines the history of Johnson County Library. Furthermore, it establishes the number, size, capacity, and locations needed for JCL facilities to provide the people of Johnson County with the quality of service that residents of a major metropolitan area should expect. The service models described in this report build upon the standards developed in 1992 to create a minimum set of standards adapted for today’s use and adaptive for future trends of use throughout Library institutions. Using peer analysis based on the Public Library Data Service for 2007, JCL ranked 15th of 17 peer institutions on square foot/capita. Also, in comparison to the 50 percentile of its peers, JCL is circulating at nearly twice the rate, visits are 28% higher, holdings are 50% higher, non-print holdings as a percentage of the total is 46% higher, and the number of computers is 57% higher.

JCL provides stellar services in space that ranks near the bottom in comparison to its peers. This explains why many of the older JCL branches are characterized by feeling cramped, little space for display of new materials, few spaces to work in a group or quietly alone, materials have to be removed from the shelves to accommodate new materials, and the spacing of the shelving and the density of the books on the shelves is too high for convenient customer service and ease of use.
The impact of not having implementable facility standards means JCL will continue to struggle in the cultural and informational offerings they contribute to the community. To bring Johnson County Library’s capacity to meet the educational and literacy needs of its patrons, this plan identifies the following projects:

- Replace the existing three types of libraries with four types that will better serve growing communities, and build on the strengths of each library and its relationship to the community it serves over time.

- Consolidate and/or replace aging and undersized libraries in the System’s aging Northeast area into new, larger, and properly located libraries to serve the needs of this area’s diverse population. This will allow shifting annual operating funds from use on operating buildings beyond their useful life to buildings needing regular maintenance, refreshing, and modifications to reflect ever-changing needs.

- Construction of three new libraries in the severely underserved areas of Monticello, Blue Valley North, and Aubry/Stilwell.

- Relocation of the Desoto, Lackman, and Spring Hill branches to sites that allow a building of the size needed for the areas they serve.

- Expansion of the Shawnee branch by finishing the shelled basement space.

- Construction of a new Central Services Building that is centrally located in the County in which it will more effectively and efficiently serve the library system from a less expensive building. In addition, it will relocate select central library services that are not required to be in a branch or the Central Resource Library, freeing up space for public service in those facilities.

- Expansion of the Gardner branch as master planned for its current site.

COST AND SPENDING IMPLICATIONS

The total cost of the implementation of the plan across the 20-year time frame ranges from approximately $150-$160 million in projected actual dollars at today’s costs. Library debt begins to diminish in 2013-2014 with significant decline in 2020-2021 allowing some of the new costs to be absorbed in the existing mill levy. However, increases will be needed to accommodate increased operating costs and some debt costs.

Achieving the library expansion program described in this plan will enable Johnson County Library to increase the educational and cultural resources available to the public. At a time when the knowledge economy represents the best opportunity for coming generations, education and information are community assets worthy of significant investment that build a community of choice.
INTRODUCTION
This Facilities Master Plan was commissioned by the Johnson County Library to develop a Facilities Master Plan for the next 20 years. This report analyzes and defines the system wide requirements for library space to house public, staff, collections, seating, and program spaces. It recommends the total number of library facilities and the corresponding programmed square feet. The recommendations reflect the demographic and economic circumstances of the service area through the year 2030. The report also establishes a deferred maintenance list for the existing facilities along with recommendations on additional improvements to existing facilities.

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SOURCES USED
In order to determine the required space allocation for the public library, a variety of sources of information were used. PGAV/MS&R/LPA used their best professional judgment where information was not available or current. The recommendations are also based on comparative statistics from peer communities with a size and profile similar to those of the Johnson County Library. For comparative purposes, statistics on Johnson County, Kansas (service area population of 378,797 excludes the area served by the Olathe Public Library) are also included.

The sources used in the preparation of this report are:
• Experience Johnson County Library Strategic Plan
• Current usage statistics and patterns
• Goals that will put the Library no lower than the 50th percentile in most categories of service
• Market Segmentation and Service Area Study – Johnson County Library 2009, Civic Technologies
• Current and projected population data from Mid-America Regional Council (MARC)
• Johnson County Library Service Area Demographic Profiles 2006, CERI Inc.
• Annual Reports
• U.S. Department of Education, National Center for Education Services, Federal Cooperative System for Public Library Data, and the Public Libraries Survey
• Interviews with Staff
• Interviews with City Leaders
• Focus Groups
• JCL Facilities Feasibility Study 2002, Donna Lauffer
• JCL Facilities Plan 1991-2010
Goals and Guiding Principles

GOALS OF THE INITIATIVE
• Create a plan that facilitates implementation of the goals of the “Experience Johnson County Library Strategic Plan 2008-2012” which are:
  • Provide service that creates a rewarding patron experience.
  • Create a sense of Place that engages patrons.
  • Serve the underserved segments of the County.
• Improve the public’s access to libraries across the entire county.
• Achieve parity in access between urban and suburban areas.
• Rebuild and renew aging infrastructure.
• Incorporate sustainability features throughout the master plan.
• Incorporate advanced technology to reduce operating costs and improve the patron experience.
• Provide a platform for future service changes.
• Build on the strengths of each library and its relationship to the community it serves.
• Establish 4 branch types that can serve the communities over time.

GUIDING PRINCIPLES FOR THE FACILITIES MASTER PLAN
• Improvements through renovation, conversions, rehabilitation, expansion, and new construction will be made over the next 20 years to ensure that the Johnson County Library will be able to continue to provide first-class services.
• The location for each branch will be reviewed and chosen to improve and strengthen the geographic distribution and equity of access:
  • This will include extending and strengthening library service into areas with no or inadequate service based on current and projected growth within the county.
  • Provide new libraries where there is severe inadequacy of space for the population served – both now and in the future.
• Libraries will be designed to operate within the limitations of annual budgets. Where possible and practical, the energy performance of each library will be improved. In addition, the layout of the libraries should reflect the need to operate each facility within their respective staffing budget allocations.

• Assess that certain facilities within the library’s system have reached the age of obsolescence. Recognize the magnitude of reinvestment to return them to viable working order and keep them in operation is no longer economically justifiable, therefore they need to be replaced.

• Assume change. The master plan does not assume we know what tomorrow looks like—or tomorrow’s library, for that matter. The programmatic requirements for each branch type allow flexibility in the allocation of space for seating, collection, staffing and meeting. We don’t know everything now, but we’ll know more tomorrow. Toward that end, each project will maximize flexibility. To this end, the projects will house state-of-the-art technology in so far as budgets allow.

THINGS WE CAN KNOW FAR IN ADVANCE
• Comparative standards for public libraries.
• Circulation and use patterns of the branches.
• Overall population trends and demographic changes.
• The type of materials the residents of Johnson County enjoy and check-out.
• The type of programs that are heavily used.

THINGS WE CAN’T TELL FAR IN ADVANCE
• Specific demographic shifts within each service area.
• Impact of industry-wide trends in publishing—especially the advent of electronic readers and digital access to content.
• The overall community’s economic capacity.
Purpose of this Report

This report establishes a set of recommendations that, if followed and economically supported, will provide the required space for the Johnson County Library to provide the citizens with library service that places the system in the upper quartile of peer library systems through the year 2030. This facility master plan:

• Recommends four distinct types of branches to serve the county. These four types can be matched to the demographic shifts and population growth that is likely to occur over the next 20 years. In addition, each type can be expanded, as needed, to reflect localized increases in the service population that may not have been anticipated.
• Provides a defensible guide to enable the JCL to construct and maintain, over time, a first-class library system that will provide services reflecting the needs of the community, based on standards, past usage, peer comparisons, and library trends.
• Recommends a schedule, scope, and budget for each library building.
• Provides a condition survey for each library and makes recommendations for which library buildings should be remodeled, expanded or removed from the system.

LIBRARY ATTRIBUTES

The following is a list of overall goals that should be considered for the renovation, remodeling, and new construction library projects.

The system-wide development of branches will be based on:
• The Central Resource Library will be a central reference and resources library with central administration, book processing, and technology services. It may be used as a branch library for the surrounding community but it’s role is not to be a branch library.
• The branch libraries will be tailored to each service area and will be viewed as local assets whose collections and services reflect the needs of each of these communities.
• Although books and appropriate seating will define each library’s primary personality, computers are playing an increasingly important role in the lives of Johnson County residents. We recommend that a balance between print and digital resources be carefully discussed and realized. Achieving this balance will help JCL become cutting edge technologically, while honoring the traditions of the library.
• Libraries should have state-of-the-art technology, including wireless, downloading of audio books, media content creation, and user laptop connections. Where possible, the buildings should include device-charging stations.
• Each library should have a dedicated teen area, making the library an inviting place to hang out. This goal reflects the fact that nearly 10% of the service population is within this age group.

• Library buildings will be designed with flexibility for varying emphases depending on the makeup of the population and will be able to change as the demographics of the neighborhood demand.

• Each library should have a meeting room equipped to hold multimedia, distance learning, live performances, and special events. All meeting rooms should allow maximum flexibility in arrangement and technology application.
• The library facilities should have adequate on-site parking for library users and staff.
• Collaborative work rooms for community groups and children to do group homework assignments should be incorporated.
• Separate spaces for pre-school, elementary, and pre-teen areas, including a children’s computer workroom if at all possible, should be included. At the very least, children, teens, and adults should have separate computer areas.
• Study rooms that can be used for homework, group meetings, and literacy tutoring should be included.
• Public art display, with an emphasis on local and regional artists, should be incorporated.
• Library should provide inviting reading areas, including traditional quiet rooms.
• Special features and equipment for individuals with physical limitations should be provided. All facilities should be ADA compliant.
• Each library should provide ease of access to materials (e.g., lower shelving, better lighting, face-out of materials, and wider aisles). Whenever the use of retailing techniques is employed, the evidence points to higher circulation rates.

• The physical condition of each library will be evaluated and improved to ensure that the building envelope’s integrity and systems are compliant with current standards for efficiency and incorporate sustainable features, including carbon neutrality, where at all possible.
Nationally, patrons are rediscovering that libraries are major community-based learning centers—not just limited to the traditional role of the library. Similar to the explosion of library construction at the turn of the 20th century, communities across the United States today have recognized the essential role the library plays in families and the workforce and are building new libraries. Library Journal reports that in 2007 4,546,548 square feet of new or renovated libraries were built in the United States, accounting for an investment of $1,132,225,651, or $3.71 for every person in the United States.1 This spending has increased 43% since 2002. These new buildings are being conceived and realized as places that support individual user groups, designed with retailing techniques in mind, constructed to enhance the experience for young and old alike, and achieving communities’ forward-thinking goals of flexibility and energy conservation.

This master plan, if fully realized, will enable the JCL to meet the ever-increasing demands of its patrons. Since its founding in 1952, JCL has a history of rapid growth in library usage. In 1952, the service population was 104,000 people. This service population circulated 116,000 items, or just over 1.1 items per person. By contrast, in 2007 the service population had risen to 378,797 (400% increase) with a circulation of 15 items per person or 6,142,000 items (1500% increase.) From 2000 to 2007 the population increased 16%. This rate is 250% higher than the national average of 6.5 items per capita (Americans checked out 2 Billion items in 2008.) The population of Johnson County Library’s service area is projected to increase 47% from 2007 census of 378,797 to 595,987 in 2030 (MARC).

1 Library Journal, December 2007
Below is a comparison of JCL computer use with national libraries:

National: 66% of public libraries offer free wireless access.
JCL: 100% of all branches offer free wireless access.

National: 74% of libraries report their staff helps patrons understand and use e-government services, including enrolling in Medicare and applying for unemployment.
JCL: 100%.

National: 73.4% of libraries provide technology training to library patrons.
JCL: During the 2007-2008 fiscal year, the library provided formal computer training to 561 library patrons.

National: With the number of Internet computers available to the public climbing for the first time in several years, one in five libraries report that there are consistently fewer computers than patrons who wish to use them throughout the day.
JCL: Each day 425 computers are used by people.

Students and others continued to flock to public libraries in 2007 seeking greater access to computers and the Internet. Meanwhile, financial support lagged.

In a 2007 study, 73 percent of public libraries reported that they were the only source of free public access to computers and the Internet in their communities. Surveyed libraries said the three Internet services most critical to their community were online educational resources and databases for K-12 students (67.7 percent), services for job-seekers (44 percent), and computer and Internet skills training (29.8 percent).

Technologies that are essential include:

• Adaptive technologies for visually impaired.
• Extensive self-check for adults and children. In July 2009 60% of all check out was done using a self-check station. It is probable, with strategic placement and higher quantity of units this percentage could increase to over 75%--not uncommon in some metropolitan areas. Of course, the variation in branch size and demographic configuration likely will result in a slightly lower number for JCL.
• Separate computers for children, teens, and adults with specifically tailored software, table heights, and seating.
• Wireless access points both inside and outside the library and its immediate surrounding area.
• Incorporation of patron checked laptops or e-books.
• Multimedia computers for individual or group design and media production (e.g., video production and workrooms for producing oral histories and multimedia homework reports by school children).
• Podcasting workspace.
• Multilingual interactive language computer/software stations.
• Automated delivery of reserve books at pick-up windows.
• Touch-screen learning kiosks that can be linked to content from local museum and educational partners.
• Webcasting of events, lectures, and learning programs.

The new and renovated libraries are being planned to be flexible and will accommodate technology that is up-to-date. Of course, the very nature of technology means that it is out-of-date very soon after being installed. However, if the buildings are designed flexibly, then JCL can make adjustments on-the-fly, budgets permitting. The technologies planned will enable the library to meet growing demands for learning, literacy, and language access.
Evolution of the Library

The public library has changed considerably over the past 100 years. Buildings themselves, however, have not evolved as quickly as the services and technologies provided. Over the past ten years, public library use patterns have changed. For example:

- The number of people visiting a library nationally has increased by 61% from 1994 to 2004, coinciding with the increased availability of the computer both at home and in the library. Today, there are 4.6 visits per capita annually. There were 1.8 billion visitors who checked out more than 2 billion items in 2004.
- The number of books checked out has risen, on a per capita basis from 5.59 in 1990 to 7.0 in 2003. This is an overall 28% increase including a 44% increase in the circulation growth of children’s materials.
- Attendance at children’s programs increased 42% from 1994 to 2004.
- Recent studies in Florida and Ohio provide a compelling case for the return on public investment in libraries. Every dollar of public support spent on Florida’s public libraries produced an increase of $9.08 in gross regional product and an increase of $12.66 in total state wages. A similar study of nine public library systems in southwestern Ohio reported an annual economic impact nearly four times the amount invested in their operations. Other data in the report describes how public libraries build a community’s capacity for economic activity and resiliency.

As an illustration, the following comparison reveals key differences between the late 20th century library and the 21st century library:

20th: Book lending was the main line of business.  
21st: Books, and multimedia.

20th: Tried to be responsive to those who ask for service.  
21st: Actively seeking out ways to serve by being out in the community and assisting the community in creating content.

20th: Had computers only for looking up books.  
21st: Computers for Internet access, digital information sources, and content production.

20th: Provided access to excellent content to in-person visitors.  
21st: Provides round-the-clock remote access to content over the web.

20th: Academic in operating style.  
21st: Community-engaged style of operating, plugged-in, aware, with a leadership role.

20th: Operated in isolation to the communities they served.  
21st: Everybody’s partner—serves through connection to other groups and institutions.

20th: Kept the schools at arm’s length.  
21st: Aggressively seeks opportunities to work with schools.

20th: Sort of a municipal ivory tower.  
21st: A community connecting point.

20th: Attracted mostly “bookish” types.  
21st: Draws the most diverse range of people you can imagine.

20th: Stable, slow to change.  
21st: Evolving, different tomorrow than today, planning for change and improvement.

20th: Quiet, contemplative, monastic.  
21st: Energetic, collaborative, multi-service.

Library and the Community

Successful libraries respond to their communities, creating services that are specifically tailored to their needs. As institutions, they are reasserting themselves as important centers of learning and community focus and engagement. It is clear that the staff are much admired and respected for what they do with what they have to work with. As the only institution in the county that serves the mind of the entire population one individual at a time, the library can enhance its service to the community with changes in its physical structure and an increase in funding. The library, its board, and staff actively seek input from its customers. From this information, the library strives to keep its services and materials as tuned in as possible to the needs of the community. It is this proactive relationship with its customers that distinguishes the library. JCL listens to its customers—and with adequate space, they can build a good community through:

- Providing more space for materials, programs, and training options for patrons.
- Breaking down boundaries between the have and have-nots—thus leveling the playing field.
- Nourishing creativity through spaces that encourage interaction and hands-on teaching and learning. This is especially critical for program spaces for children.
- Opening minds by providing, in a neutral setting, materials that individuals can use to discover new worlds and possibilities for their work and family life in a non-judgmental environment.
- Returning high dividends on the investment. This includes the economic benefit of a better-educated citizenry with increased skills to discover new job opportunities, learn to read, or expand their awareness and horizons.
- Building communities through strong branch libraries that are locally in tune with the needs of the neighborhoods they serve. What better place for school age children to hang out than at the local library—a place that is safe, fun, and educational?
- Making branches friendlier through community events and designs that encourage family participation in learning activities—which will require more meeting rooms.
- Offering a content-rich collection that is inclusive of the needs of all citizens—not just a select few. Doing this requires space.
- Demonstrating excellence in environmental stewardship in building design and operations.

Service Needs

1. **Collection space:** To house the library’s basic print and non-print collection.

2. **Seating**
   - Reader seating space: To provide a variety of comfortable seating for library patrons to use the library’s resources in-house.
   - Technology seating: Within the overall seating requirement, no less than 20% of all seats will be hard-wired for computer access. Each library will also have the highest available bandwidth wireless access. This requires that at least 75% of seats in new libraries have electrical plug-in access so that patrons can use laptops—or in the future, depending on funding, on-site loaner laptops. Besides personal computers, study rooms will be wired for multimedia production.

3. **Staff space:** To provide staff workstations as needed to support the library’s various routines and operations (e.g., circulation, technical services, public services, and administration).

4. **Programming/meeting space:** To accommodate library programming for the general public, meetings of the Library Board and/or staff, as well as meetings of other community groups.

5. **Special use space:** To house those pieces of unique library furniture or special library functions that have not been accounted for in previous types of space (e.g., photocopiers, pamphlet files, microfilm readers, public typewriters, gallery or exhibit spaces, janitorial spaces, and loading and receiving).

6. **Non-assignable space:** To house those spaces that must be provided to support a functioning building but cannot be assigned directly for library purposes (e.g., vestibules, restrooms, stairwells, furnace rooms, thickness of walls, and columns).

These six program spaces collectively make up the library. It is the services, programs and materials—contained within these spaces—that connect the broader goals of the library to the community.
Today JCL’s System consists of 12 branch libraries, the Central Resource Library, and the Support Services Building. The image below represents a chronology of JCL branches to date.

**Chronology of Johnson County Libraries**

**Branch Names**

**Northeast Area**
- Antioch
- Mission
- Prairie Village
- Cherokee
- Cedar Roe
- Central Resource
- Corinth
- Oak Park
- Support Services Building

**Northwest Area**
- De Soto
- Lackman
- Lenexa
- Shawnee

**Southeast Area**
- Blue Valley
- Leawood Pioneer

**Southwest Area**
- Edgerton
- Gardner
- Spring Hill

**Major Renovation/Construction**
- Original Building
- Interim Building
- Current Building

Johnson County is unique in that it has two library systems that serve the needs of its residents, Olathe Public Library (OPL) and Johnson County Library (JCL). JCL shares its online catalog with Olathe Public Library. Materials are shared and transported between the two library systems. As shared catalog services expand in the Kansas City area, Johnson County Library will explore similar arrangements with other area libraries. Additionally, as technology develops, the Library will continue to explore ways to connect and develop collections with other libraries locally, throughout the state, and nationally.
One of the most important steps in making an assessment of a library’s space needs (in total square feet) is the determination of the library’s service population—the population of the library’s service community is the metric against which the viability of existing library facilities will be based on and recommendations to consider expansion of or construction of new facilities will come from. While per capita measures are not the sole tool to establish service goals, they remain one of the most reliable and useful tools available for calculating recommendations regarding individual program needs within a library’s broader range of services. In order to accurately assess square footage requirements for each service area, an analysis was done of the current service areas. This research yielded the following:

<table>
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<th>Branch</th>
<th>Total Gross Square Feet (GSF)</th>
<th>GSF as a % of Total</th>
<th>(2007) Service Population</th>
<th>% of Total Population</th>
<th>GSF/Capita (Service Area)</th>
<th>(2030) Projected Service Population</th>
<th>% of Total Population</th>
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<tr>
<td>Antioch</td>
<td>24,650</td>
<td>8.52%</td>
<td>38,426</td>
<td>10.14%</td>
<td>0.64</td>
<td>35,640</td>
<td>5.98%</td>
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<td>Administration</td>
<td>2,697</td>
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<td></td>
<td></td>
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<tr>
<td>Blue Valley**</td>
<td>24,368</td>
<td>8.43%</td>
<td>75,712</td>
<td>19.99%</td>
<td>0.32</td>
<td>167,183</td>
<td>28.05%</td>
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<td>Cedar Roe</td>
<td>16,492</td>
<td>5.70%</td>
<td>13,058</td>
<td>3.45%</td>
<td>1.26</td>
<td>12,216</td>
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<td>Central Resource</td>
<td>80,007</td>
<td>27.66%</td>
<td>41,741</td>
<td>11.02%</td>
<td>1.92</td>
<td>34,738</td>
<td>5.83%</td>
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<td>Shared services</td>
<td>6,452</td>
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<tr>
<td>Administration</td>
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<td></td>
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<tr>
<td>Corinth</td>
<td>20,495</td>
<td>7.09%</td>
<td>43,102</td>
<td>11.38%</td>
<td>0.48</td>
<td>43,343</td>
<td>7.27%</td>
</tr>
<tr>
<td>De Soto</td>
<td>3,630</td>
<td>1.26%</td>
<td>6,062</td>
<td>1.60%</td>
<td>0.60</td>
<td>15,872</td>
<td>2.66%</td>
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<tr>
<td>Edgerton</td>
<td>2,982</td>
<td>1.03%</td>
<td>2,062</td>
<td>0.54%</td>
<td>1.45</td>
<td>2,777</td>
<td>0.47%</td>
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<td>Gardner</td>
<td>13,544</td>
<td>4.68%</td>
<td>17,869</td>
<td>4.72%</td>
<td>0.76</td>
<td>30,550</td>
<td>5.13%</td>
</tr>
<tr>
<td>Lackman</td>
<td>17,843</td>
<td>6.17%</td>
<td>38,711</td>
<td>10.22%</td>
<td>0.46</td>
<td>41,406</td>
<td>6.95%</td>
</tr>
<tr>
<td>Leawood Pioneer (New)</td>
<td>19,016</td>
<td>6.57%</td>
<td>34,202</td>
<td>9.03%</td>
<td>0.56</td>
<td>33,770</td>
<td>5.67%</td>
</tr>
<tr>
<td>Oak Park</td>
<td>17,118</td>
<td>5.92%</td>
<td>34,732</td>
<td>9.17%</td>
<td>0.49</td>
<td>47,273</td>
<td>7.93%</td>
</tr>
<tr>
<td>Shawnee**</td>
<td>17,670</td>
<td>6.11%</td>
<td>28,304</td>
<td>7.47%</td>
<td>0.62</td>
<td>116,822</td>
<td>19.60%</td>
</tr>
<tr>
<td>Spring Hill</td>
<td>3,004</td>
<td>1.04%</td>
<td>4,816</td>
<td>1.27%</td>
<td>0.62</td>
<td>14,397</td>
<td>2.42%</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>274,056</td>
<td>90%</td>
<td>378,797</td>
<td>100%</td>
<td>0.76</td>
<td>595,987</td>
<td>100%</td>
</tr>
</tbody>
</table>

Non-Library Partners (JCCC & FOL) | 9,675
Support Services | 5,498
Grand Total | 289,229

**includes Monticello and Stilwell areas**

From this, it can be seen that there is a wide disparity in total gross square foot per capita—ranging from 0.32 GSF/capita in Blue Valley to 1.45 GSF/capita in Edgerton. Besides this analysis within each service area, it is known that patrons frequent more than one library for different purposes. Because of the complexity of analyzing these "multiple visits" it was decided to limit the service analysis by service area—and assume that the multiple visits would even out over the system.
JOHNSON COUNTY POPULATION
This plan is based on the needs of Johnson County population through the year 2030. For 2007, a population of 378,797 is used. As projected by the Mid-America Regional Council in their 2002 Long-Range Population Forecast, the population of Johnson County (excluding Olathe) is expected to increase as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>% Increase over 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>449,245</td>
<td>11%</td>
</tr>
<tr>
<td>2020</td>
<td>524,609</td>
<td>29%</td>
</tr>
<tr>
<td>2030</td>
<td>595,987</td>
<td>47%</td>
</tr>
</tbody>
</table>

Although per capita measures enable a community to see how it compares with other peer communities, they should be viewed with some caution because no two communities are exactly alike. Because facilities planning should meet the community’s long-term needs, the library’s service population should represent a projection of the service community’s size. Therefore, this program plans for a library through the year 2030. These recommendations are tailored to reflect quantitative measures of specific areas, such as technology workstations, browsing collection areas, and meeting rooms.

CALCULATING LIBRARY SIZE
The United States has no universally accepted standards for establishing space needs for a public library. Generally, public libraries have relied on community based planning—tailoring services to the specific needs of the community. Many communities compare services to other similarly sized libraries as a reference point. The specific recommendations of this report are based on professional recommendations, known service demands and usage patterns, and input from the staff and the public (during public information sessions.) Therefore, specifics of the community will determine the service size and boundaries.

JOHNSON COUNTY AREAS
As part of the strategic planning process, JCL and PGAV representatives meet with City Planning Departments to discuss 20 year demographic and development trends and outlooks across JCL. The following observations provide a summary of these conversations.

Northeast Area

The Northeast area includes the communities or Westwood, Roeland Park, Mission Hills, Fairway, Merriam, Mission, northern portions of Overland Park and Prairie Village.

The NE area is served by the oldest of the branch libraries in the JCL system. The area is served by the “essential” Antioch Branch at 8700 Shawnee Mission Parkway, the “sleepy” Cedar Roe Branch at 5120 Cedar, the “cosmopolitan” Corinth Branch at 8100 Mission Road, and the “essential” Oak Park at 9500 Bluejacket.

These branches provide vital program services to the Northeast including Early Childhood Literacy, Tax Aid, Homework help, and Adult Education and ESL (JCCC partnership). Because of their close proximity to Interstate 35 and convenient access, these branches are highly used by citizens from surrounding communities including Wyandotte and Jackson County.

The NE area is characterized by stable first ring suburban development with aging housing stock population. Population Growth Projections for the area for the next 20 years are essentially flat. Northeast area communities are characterized by affordable housing which is popular with first time home owners and families with small children. There is an increasing older population and the highest percentage of ethnic diversity in Johnson County, making the Northeast one of the most vibrant communities in the area.

Promising redevelopment initiatives in the Northeast area should be evaluated for their potential and given careful consideration for future JCL planning. Initiatives include the mixed use-urban redevelopment of Downtown Mission with their East Gateway and the Downtown and West gateway redevelopment initiative. These ventures call for a much higher urban density and population projection that doubles the current population for Mission. Additionally, the redevelopment initiative in Merriam Village will also increase residential density in an urban mixed-use setting. Aggressive plans for bolstering public transit in the northeast are gaining momentum in closing major east-west public transit connectors along Shawnee Mission Parkway and Johnson Drive connecting to the Kansas City, Missouri Country Club Palazzo District and the KCMO Max transit System with Johnson County’s.

Southeast Area

The Southeast area includes the communities of Leawood and Overland Park.

The SE area is served by the “dynamic” Blue Valley Branch at 9000 W. 151st and the recently expanded “elite” Leawood Pioneer Branch at 4700 Town Center Drive.

The SE area is characterized by stable first ring suburban development in the north with continued development of incorporated outlying properties largely within the incorporated areas of Overland Park. Population growth projections for the SE area for the next 20 years are significant with population in the Blue Valley area increasing by nearly 30% from 75,712 to a projected 167,200 in 2030. The existing Blue Valley Branch is inadequate to serve the burgeoning population within the service area. Existing residential density in the northwest corner of the Southeast area suggests the need for an additional branch is essential to meeting community library needs.

Future development within the area is projected to occur along the 175th street and 199th street corridors in the years ahead. As population continues to increase, additional service branches south of 175th street and ultimately in the new Aubry/Stilwell service area will need to be considered.

Redevelopment initiatives in the older established areas of the SE area should be evaluated for their potential. In particular, careful consideration for future JCL planning shall include the City of Overland Park’s Vision Metcalf plan which envisions higher density mixed-use urban redevelopment of the Metcalf corridor from Shawnee Mission Parkway to I-435 with an increased reliance of public transportation along this essential community spine. The Metcalf/I-435 Core will continue to increase as an important commercial/ employment and life style hub in the County. Additionally the City’s plans for the continued redevelopment of Old Downtown Overland Park might provide JCL an opportunity to consider branch or central services to serve the heart of the JCL service area.
Northwest Area

The Northwest area includes the communities of Shawnee, Lenexa and DeSoto.

The NW area is served by the “suburban” Shawnee Branch at 13811 Johnson Drive, the “family oriented” Lackman Branch at 15345 W. 87th St. in Lenexa, and the “homey” DeSoto Branch at 33145 W 83rd St.

The NW area is characterized by stable first ring suburban development within the cities of Mission and Lenexa east of I-435 and continued outlying suburban development in communities west of I-435, in particular development in western Shawnee surrounding a core at K-7 Highway and Johnson drive, and westward along 87th parkway in Lenexa. Population growth projections of the area of the next 20 years are significant in the Monticello service area and moderate in the West Lenexa and DeSoto Service areas. The burgeoning residential density in the Monticello service area which is projected to increase from 29,100 in 2010 to 73,1125 in 2030 justifies the construction of an essential service branch to serve the large number of young families in this community.

Promising development initiatives within the NW area include the City of Lenexa’s plans for the Lenexa City Center at 87th Street Parkway and I-435. The center of population of Lenexa will shift westward in the years ahead making the City Center Site an important mixed use urban life style hub of community residents. The city is exploring a new Civic Center concept in partnership with community stake holders including JCCC, JoCo Parks and Recreation, Lenexa Parks and Recreation and the Johnson County Museum. This provides an interesting opportunity for JCL to consider a replacement facility for the poorly sited and undersized Lackman Branch to the heart of a vibrant mixed-use urban development.

The City of DeSoto anticipates moderate growth. JCL should recognize the continued importance of the K-10 corridor and consider residential and commercial development and library needs in this community in the years ahead.

Southwest Area

The Southwest area includes the communities of Edgerton, Gardner and Spring Hill. The SW area is unique within the JCL system due to its geographic separation from the heart of the JCL system by the City of Olathe. I-35 does provide an effective link between community residents and other JCL Libraries including the Central Resource Library.

The SW area is serviced by the “aspiring” Gardner Branch at 137 E. Shawnee, and the tiny “community center” Edgerton Branch at 319 E. Nelson and the “essential” Spring Hill Branch at 109 S. Webster.

The SW area is characterized by growing suburban development and continues growth on larger acreage in outlying areas. Population growth projections within the area are moderate with the growth of population in the Gardner service area roughly doubling form its current 16,600 to a projected 30,500 in 2030. The undersized Gardner branch will face continued pressure as this population grows. Population increase within the Edgerton service area is stable with flat projected growth. The Spring Hill population is projected to essentially triple from 5,100 to 14,390 placing increased demand on the very small branch in this community.

Development initiatives in the SW area include continued residential density in Gardner, as well as a potentially significant impact from the new Gardner inter-model freight hub on 1000 acres at Waverly Road and 191st Street.
COUNTY LIBRARY COMPARISON
Using the projected service population of 595,987 for the year 2030, we have made a comparison of the projected size of the Johnson County Library with peer cities in the U.S. (with populations in the range of 500,000–750,000). We should always keep in mind the risks associated with these comparisons. For instance, the library is being planned for ten years hence and on a service model that is designed and extrapolated from current known trends and future speculations based on a desired service model. The comparable cities are all based on today’s service model in their respective communities.

Using the average of 0.61 square feet per capita—a measure that we feel is at the bare minimum—the system will need 363,552 square feet—an increase of 119,625 (+49%) for a population growth of 47%.

PEER LIBRARY COMPARISON
The following peer analysis is based on the Public Library Data Service for 2007 which collects comparable data nationwide. The library jurisdictions shown in this chart are of comparable service populations that straddle Johnson County in the year 2030. On page 19, a more refined list of libraries is presented. These libraries are recognized as peer libraries.

JOHNSON COUNTY LIBRARY RANKING AMONG PEER LIBRARIES (500,000–750,000 POPULATION)

<table>
<thead>
<tr>
<th>POPULATION</th>
<th>TOTAL SF/CAPITA</th>
<th>RANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleveland Public Library (OH)</td>
<td>478,403</td>
<td>1.71</td>
</tr>
<tr>
<td>Toledo-Lucas County Public Library (OH)</td>
<td>448,229</td>
<td>1.18</td>
</tr>
<tr>
<td>Cincinnati and Hamilton County (OH)</td>
<td>806,652</td>
<td>1.13</td>
</tr>
<tr>
<td>Saint Louis Public Library (MO)</td>
<td>353,837</td>
<td>1.11</td>
</tr>
<tr>
<td>Milwaukee Public Library (WI)</td>
<td>602,782</td>
<td>1.06</td>
</tr>
<tr>
<td>Cuyahoga County Public Library (OH)</td>
<td>629,334</td>
<td>0.99</td>
</tr>
<tr>
<td>Nashville Public Library (TN)</td>
<td>575,261</td>
<td>0.90</td>
</tr>
<tr>
<td>Columbus Metropolitan Library (OH)</td>
<td>832,963</td>
<td>0.89</td>
</tr>
<tr>
<td>Lexington Public Library (KY)</td>
<td>270,789</td>
<td>0.68</td>
</tr>
<tr>
<td>Dayton Metro Library (OH)</td>
<td>472,712</td>
<td>0.67</td>
</tr>
<tr>
<td>Columbus Metropolitan Library (OH)</td>
<td>838,357</td>
<td>0.66</td>
</tr>
<tr>
<td>Atlanta-Fulton Public Library (GA)</td>
<td>988,337</td>
<td>0.64</td>
</tr>
<tr>
<td>Memphis Public Lib. &amp; Information Center (TN)</td>
<td>813,309</td>
<td>0.64</td>
</tr>
<tr>
<td>Charlotte &amp; Mecklenburg County</td>
<td>871,432</td>
<td>0.62</td>
</tr>
<tr>
<td>Johnson County Library</td>
<td>378,792</td>
<td>0.61</td>
</tr>
<tr>
<td>St. Louis County Library District (MO)</td>
<td>873,490</td>
<td>0.51</td>
</tr>
<tr>
<td>Louisville Free Public Library (KY)</td>
<td>693,604</td>
<td>0.45</td>
</tr>
</tbody>
</table>

This reveals that JCL is, on a square foot per capita comparison, at near the bottom of its peers. For this reason, we cannot recommend going below 0.61 square feet per capita—the average for today’s system.

The chart below illustrates the JCL ranking against the 50th percentile of selected peer cities (with populations between 500,000–1,000,000) for key library performance measures.
JCL COMPARATIVE DATA AMONG PEER LIBRARIES
An examination of library use data reported to the National Center for Education Statistics (NCES) offers suggestions for future collection growth goals at the Johnson County Library.

State library agencies across the country are mandated to gather statistical information each year from the public libraries in their state, and for a generation now the NCES has organized an effort including all of the state library agencies to coordinate those data-gathering practices. Through this voluntary program, all of the state library agencies have agreed to gather certain specified data elements, each according to a uniform definition. The intent has been to foster the consistency needed to enable the comparison of these key data elements from libraries across the country. Each year local libraries submit their report forms to their state library agency. The state library agencies aggregate these reports into a state-level database. And the state databases are forwarded to the NCES, where they are aggregated into a combined national database, which is eventually posted on the Internet.

The Johnson County Library has identified 15 libraries it considers to be peer institutions. These libraries are similar to Johnson County Library in terms of population served, roughly bracketing the library’s current and future service population (against the current library’s service population ten are larger and five are smaller; against the project service population, three are larger and twelve are smaller). More importantly, this group is distinguished by operating in a similar demographic and socio-economic composition:

Alameda County Library (Fremont, CA)...................522,431
San Mateo County Library (San Mateo, CA)...........275,506
Santa Clara County Library (Los Gatos, CA)..........412,132
Jefferson County Public Library (Lakewood, CO).....532,608
Cobb County Public Library System
(Marietta, GA)......................................................701,335
Dekalb County Public Library System
(Decatur, GA).......................................................650,682
Gwinnett County Public Library System
(Lawrenceville, GA)............................721,575
Anne Arundel County Public Library
(Anne Arundel, MD)............................................506,620
Dakota County Library (Eagan, MN)...................363,514
Hennepin County Library (Minnetonka, MN).........761,637
Cuyahoga County Public Library (Parma, OH)........589,298
Arlington Public Library System (Arlington, TX)....362,805
Fort Bend County Libraries (Richmond, TX).........422,962
Chesterfield County Public Library
(Chesterfield, VA).............................................281,300
Henrico County Public Library (Richmond, VA).....279,600
Charts on the following pages use the most recent NCES data available (for the year 2006) to produce scatter diagrams for these 15 libraries and the Johnson County Library. A blue trend line is calculated, indicating the approximate “middle” of this data set. A vertical dashed line is placed along the X-axis at the projected service population for Johnson County (roughly 595,987). The point where the trend line and the dashed line intersect is an indication of what this small sample would suggest is the “expected” result for the data element in question.

For example, an examination of data from this peer sample group leads to a finding that a service population correlates with a book collection of about 1,350,000 volumes (Figure A1), 115,000 audio recordings, and 100,000 video recordings (Figure A4). A similar examination of the number of computer terminals provided for patron use suggests an “expected” inventory of 490.

This is not to say the Johnson County Library should necessarily establish its essential service goals for collection development at these levels. If these measures are accepted as the “expected” level of service, it is important to consider whether the library should meet, or possibly exceed, those expectations.

Examination of another data element offers an illuminating perspective. The Johnson County Library has long subscribed to a service goal of providing 3.0 volumes per capita systemwide. Figure A6 reveals that an examination of data from the library’s peer group suggests the “expected” result for volumes held per capita would be somewhat less than 2.0 for a library serving 595,987 population. This is an indicator that the Johnson County Library has adopted an assertive posture with regard to its collection development goals, certainly in response to demands generated by the demographic of its service community and suggests that, in a similar fashion, the library should consider collection development goals that are more assertive than those suggested by the “expected” levels of service indicated by these analyses.
From these statistics, we can state the following in comparison to the 50 percentile of its peers:
• JCL is circulating at nearly twice the rate
• Library visits are 28% higher
• Holdings are 50% higher
• Non-print holding as a percentage of the total is 46% higher
• The number of computers is 57% higher

What is critically important to understand is that these stellar service statistics are being done in space that ranks near the bottom in comparison to its peers. This explains why many of the older JCL branches are characterized by:

• The libraries feel cramped
• There is little space for display of new materials
• There are too few spaces to work in a group or quietly alone
• In most cases, materials have to be removed from the shelves to accommodate new materials
• The spacing of the shelving and the density of the books on the shelves is too high for convenient customer service and ease of use.
Collaborating with JCL managers, the PGAV study team developed a consistent service model to describe and structure branch library service options. The goal was to define a series of branch library “types” each representing a different level of service. The branch types could be used to match service levels to different neighborhoods and communities in the county and deploy library services county-wide in a systematic manner.

By defining an optimum resource and service inventory for each branch type, the space needs assessment methodology described previously was used to estimate the space needs of each branch location. The space needs estimate becomes the yardstick against which JCL’s existing branch facilities can be assessed.

The current JCL branches have evolved into roughly three broad varieties – a small branch, a medium-sized branch, and a larger branch. The entire system is anchored by the resources housed in the Central Resource Library. As the current system was examined, the study team agreed that a three-tier approach provided a sound framework to fashion suitable responses to the variety of needs found in the different communities across the county.

Specifically, the recommended branch library service model for JCL was founded on the notion of:

- a small branch meant to serve a community of about 15,000 (Type 1)
- a medium-sized branch to serve a community of 30,000 (Type 2)
- a larger branch to serve a community of 45,000 to 50,000 (Type 3)

In turn, the underlying question then becomes: what collections, services and resources should be housed and made available in these respective branch “types”?

As these three branch models were examined more closely, it became apparent that some parts of the county supported smaller populations today. It is likely that those areas – mostly in the southwest corner of the county – are likely to remain smaller in the years to come. To provide a suitable branch service model for these smallest communities in the county, it was determined to fashion a fourth branch type – the “legacy” branch – that would be roughly 5,000 square feet in area. With the establishment of resource and service inventory goals for each branch “type,” the space needs for each type can be calculated using the space needs assessment methodology described elsewhere in this report.

For the calculation in this situation, however, a small adaptation is applied to the methodology. The broad scheme of branch library types recommended here is intended to provide the Johnson County Library with an additional level of flexibility to enhance the Library’s opportunity to respond to local community needs by creating an additional category of “tailoring” space. This new category reserves a portion of space – set at 7.5% of the gross area of the building – for additional resources or features that will serve to further “tailor” the menu of services available at that branch.

For example, if the space needs assessment methodology recommends a building of 15,000 square feet, this adaptation would reserve 1,125 square feet for expanded collections or features that further respond to the particular needs of the branch’s service community. In a community with a large proportion of Hispanic residents, for example, this space could be devoted to additional materials – print and non-print, alike – in Spanish, or English-as-a-second-language collections. Or, if current use patterns document an inordinately high level of non-print use, this space could be used for an expanded non-print collection. In a community where the socio-economic conditions limit the number of households that have computers and high-speed Internet access, the “undefined” space might be used to support an expanded inventory of computers for public use.
<table>
<thead>
<tr>
<th>Collection space</th>
<th>TYPE 1</th>
<th>TYPE 2</th>
<th>TYPE 3</th>
<th>LEGACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volumes to hold</td>
<td>35,000</td>
<td>70,000</td>
<td>105,000</td>
<td>10,500</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>2,975</td>
<td>5,950</td>
<td>7,761</td>
<td>945</td>
</tr>
<tr>
<td>Magazine titles (display)</td>
<td>50</td>
<td>75</td>
<td>100</td>
<td>25</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>50</td>
<td>75</td>
<td>100</td>
<td>25</td>
</tr>
<tr>
<td>Magazine backfiles</td>
<td>50</td>
<td>75</td>
<td>95</td>
<td>25</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>25</td>
<td>38</td>
<td>48</td>
<td>13</td>
</tr>
<tr>
<td>Non-print to hold</td>
<td>7,000</td>
<td>14,000</td>
<td>21,000</td>
<td>2,100</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>700</td>
<td>1,400</td>
<td>1,680</td>
<td>210</td>
</tr>
<tr>
<td>Web PCs + OPACs</td>
<td>20</td>
<td>36</td>
<td>42</td>
<td>7</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>800</td>
<td>1,440</td>
<td>1,680</td>
<td>280</td>
</tr>
</tbody>
</table>

Reader seating space

<table>
<thead>
<tr>
<th>Seating @ tables, carrels, lounge</th>
<th>TYPE 1</th>
<th>TYPE 2</th>
<th>TYPE 3</th>
<th>LEGACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seating @ tables, carrels, lounge</td>
<td>41</td>
<td>64</td>
<td>88</td>
<td>18</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>1,230</td>
<td>1,920</td>
<td>2,640</td>
<td>540</td>
</tr>
</tbody>
</table>

Staff work space

<table>
<thead>
<tr>
<th>Service desk + workroom stations</th>
<th>TYPE 1</th>
<th>TYPE 2</th>
<th>TYPE 3</th>
<th>LEGACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service desk + workroom stations</td>
<td>6</td>
<td>10</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>825</td>
<td>1,375</td>
<td>2,000</td>
<td>550</td>
</tr>
</tbody>
</table>

Meeting room space

<table>
<thead>
<tr>
<th>Multi-purpose room</th>
<th>TYPE 1</th>
<th>TYPE 2</th>
<th>TYPE 3</th>
<th>LEGACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-purpose room</td>
<td>50</td>
<td>75</td>
<td>120</td>
<td>0</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>600</td>
<td>900</td>
<td>1440</td>
<td>0</td>
</tr>
<tr>
<td>Storytime room</td>
<td>0</td>
<td>0</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>0</td>
<td>0</td>
<td>525</td>
<td>0</td>
</tr>
</tbody>
</table>

Special use space

<table>
<thead>
<tr>
<th>Percentage of gross area</th>
<th>TYPE 1</th>
<th>TYPE 2</th>
<th>TYPE 3</th>
<th>LEGACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of gross area</td>
<td>12.5%</td>
<td>12.5%</td>
<td>12.5%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>1,896</td>
<td>3,447</td>
<td>4,704</td>
<td>674</td>
</tr>
</tbody>
</table>

Nonassignable space

<table>
<thead>
<tr>
<th>Percentage of gross area</th>
<th>TYPE 1</th>
<th>TYPE 2</th>
<th>TYPE 3</th>
<th>LEGACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of gross area</td>
<td>27.5%</td>
<td>27.5%</td>
<td>27.5%</td>
<td>27.5%</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>4,551</td>
<td>8,272</td>
<td>11,288</td>
<td>1,618</td>
</tr>
</tbody>
</table>

"Tailoring" allowance

<table>
<thead>
<tr>
<th>Percentage of gross area</th>
<th>TYPE 1</th>
<th>TYPE 2</th>
<th>TYPE 3</th>
<th>LEGACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of gross area</td>
<td>7.5%</td>
<td>7.5%</td>
<td>7.5%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Units Sq.ft.</td>
<td>1,517</td>
<td>2,757</td>
<td>3,763</td>
<td>539</td>
</tr>
</tbody>
</table>

Special allowances

<table>
<thead>
<tr>
<th>Entry lobby</th>
<th>TYPE 1</th>
<th>TYPE 2</th>
<th>TYPE 3</th>
<th>LEGACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry lobby</td>
<td>275</td>
<td>325</td>
<td>400</td>
<td>225</td>
</tr>
</tbody>
</table>

GROSS AREA RECOMMENDED

<table>
<thead>
<tr>
<th>TYPE 1</th>
<th>TYPE 2</th>
<th>TYPE 3</th>
<th>LEGACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,443</td>
<td>27,899</td>
<td>38,028</td>
<td>5,620</td>
</tr>
</tbody>
</table>
branch service models

Type 1 branch - Recommended service and resource inventories

In a Type 1 branch, the core goal is to provide a modest collection of largely high-demand items. A larger, more diverse collection is provided at the Central Resource Library for more demanding research. For print materials, a collection of roughly 2.25 print items per capita becomes a suitable target. A modest magazine collection of 50 titles will be available, all of which are expected to be retained in back files for, on average, one year. A non-print collection should be provided equal to 20 items held for every 100 items in the print collection (this is somewhat higher than the current systemwide average of non-print to print holdings, reflecting the demand the library experiences from its patrons). A computer network station inventory roughly comparable to today’s inventory in a medium-sized branch is recommended for a Type 1 branch in the future.

Because use patterns in a branch differ between a branch library and the Central Resource Library – specifically, there tend to be fewer patrons at a branch library who spend long, extended stays than is the case at the Central Resource Library – the seating needs at a branch are more moderate. The core service needs are estimated here at roughly half the inventory that would otherwise be required in a “stand-alone” library.

Staffing protocols are based on a single-desk public service configuration, and includes the following inventory of work stations:

• one station at a customer service desk or circulation desk
• one station for trouble-shooting and support of patron self-service check-out
• one station for general clerical activities in a workroom
• one workroom station for sorting / shelving
• one workroom cubicle for the assistant branch manager
• one office for the branch manager

A Type 1 branch will have a single meeting / programing room – a multi-purpose room to seat up to 50. This room will have a flat floor and moveable seats, providing the maximum possible flexibility to support a wide variety of moderate-scale programs and events.

As shown in Figure B1, the space needs based on the menu of resources and services to be provided in a Type 1 branch ranges from a low of 11,300+ square feet to a high of 19,400+ square feet. Within that range, for the purpose of discussions regarding planning, the recommended area needed for a Type 1 branch is 15,500 square feet. Of that, roughly 1,000 square feet will be reserved to tailor the collections and services to the needs of the specific community in which the branch is located.
<table>
<thead>
<tr>
<th>Collection space</th>
<th>Units</th>
<th>Optimal</th>
<th>Moderate</th>
<th>Low</th>
<th>Recommend</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Books</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0 vol per sq.ft.</td>
<td>35,000</td>
<td>2,975</td>
<td></td>
<td></td>
<td>2,975</td>
</tr>
<tr>
<td>Mod: @ 11.5 vol per sq.ft.</td>
<td>35,000</td>
<td>2,587</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 13.0 vol per sq.ft.</td>
<td>35,000</td>
<td>2,288</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Periodical display</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 1 title per sq.ft.</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>@ 0.5 sq.ft. per title per 1.0 yrs retained</td>
<td>50</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td><strong>Non-print</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0 items per sq.ft.</td>
<td>7,000</td>
<td>700</td>
<td></td>
<td></td>
<td>700</td>
</tr>
<tr>
<td>Mod: @ 12.5 items per sq.ft.</td>
<td>7,000</td>
<td>560</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 15.0 items per sq.ft.</td>
<td>7,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Public network stations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 50.0 sq.ft. per PC</td>
<td>20</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod: @ 40.0 sq.ft. per PC</td>
<td>20</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 35.0 sq.ft. per PC</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td>700</td>
</tr>
<tr>
<td><strong>Reader seating space</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 35.0 sq.ft. per seat</td>
<td>41</td>
<td>1,435</td>
<td></td>
<td></td>
<td>1,230</td>
</tr>
<tr>
<td>Mod: @ 32.5 sq.ft. per seat</td>
<td>41</td>
<td>1,333</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 30.0 sq.ft. per seat</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
<td>1,230</td>
</tr>
<tr>
<td><strong>Staff work space</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 150.0 sq.ft. per station</td>
<td>6</td>
<td>900</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod: @ 137.5 sq.ft. per station</td>
<td>6</td>
<td>825</td>
<td></td>
<td></td>
<td>825</td>
</tr>
<tr>
<td>Low: @ 125.0 sq.ft. per station</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>750</td>
</tr>
<tr>
<td><strong>Meeting room space</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program room 1 (type 2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 10.0 sq.ft. per seat (+ stage)</td>
<td>50</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Storytime room 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 15.0 sq.ft. per seat + 75 sq.ft.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Special use space</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 17.5% of gross building area</td>
<td>3,362</td>
<td>2,141</td>
<td></td>
<td></td>
<td>1,389</td>
</tr>
<tr>
<td>Mod: @ 15.0% of gross building area</td>
<td>3,362</td>
<td>2,141</td>
<td></td>
<td></td>
<td>1,389</td>
</tr>
<tr>
<td>Low: @ 12.5% of gross building area</td>
<td>3,362</td>
<td>2,141</td>
<td></td>
<td></td>
<td>1,389</td>
</tr>
<tr>
<td><strong>Nonassignable space</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 32.5% of gross building area</td>
<td>6,244</td>
<td>4,282</td>
<td></td>
<td></td>
<td>3,055</td>
</tr>
<tr>
<td>Mod: @ 30.0% of gross building area</td>
<td>6,244</td>
<td>4,282</td>
<td></td>
<td></td>
<td>3,055</td>
</tr>
<tr>
<td>Low: @ 27.5% of gross building area</td>
<td>6,244</td>
<td>4,282</td>
<td></td>
<td></td>
<td>3,055</td>
</tr>
<tr>
<td><strong>&quot;Tailoring&quot; allowance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0% of gross building area</td>
<td>1,921</td>
<td></td>
<td></td>
<td></td>
<td>1,517</td>
</tr>
<tr>
<td>Mod: @ 7.5% of gross building area</td>
<td>1,921</td>
<td>1,070</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 5.0% of gross building area</td>
<td>1,921</td>
<td>1,070</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Special allowances</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entry lobby</td>
<td>275</td>
<td>275</td>
<td>275</td>
<td>275</td>
<td></td>
</tr>
<tr>
<td><strong>GROSS BUILDING AREA</strong></td>
<td>19,488</td>
<td>14,548</td>
<td>11,384</td>
<td>15,443</td>
<td></td>
</tr>
</tbody>
</table>
Type 2 branch - Recommended service and resource inventories

In a Type 2, branch the core goal is to provide a collection of largely high-demand items. The essential goal is to develop a collection roughly twice the size of that found in a Type 1 branch. For print materials, a collection of roughly 2.25 print items per capita becomes a suitable target – 70,000 volumes. In comparison with a Type 1 branch, the magazine collection should grow, albeit modestly, to 75 titles. A backfile collection for all of these titles should be maintained for, on average, one year. A non-print collection should be provided equal to 20 items held for every 100 items in the print collection.

A computer network station inventory of 36 stations is recommended for a Type 2 branch. A reader seating inventory of 64 places is recommended for a Type 2 branch. Because the branch will offer wireless connectivity, many of these seats will also be available as points of access to electronic information resources for patrons who are able to bring their own laptop equipment to the library.

Staffing protocols are based on a two-desk public service configuration, and includes the following inventory of work stations:

• one station at a customer service desk or circulation desk
• one station for trouble-shooting and support of patron self-service check-out
• one station at a youth services public service desk
• four stations for general clerical activities in a workroom, including prep space for youth services programs and activities
• one workroom station for sorting / shelving
• one workroom cubicle for the assistant branch manager
• one office for the branch manager
• one custodial closet

A Type 2 branch will have a larger meeting / programing room than is found in a Type 1 branch – a multi-purpose room to seat up to 75. Like the space in the Type 1 branch, this room will have a flat floor and moveable seats, providing the maximum possible flexibility to support a wide variety of moderate-scale programs and events.

As shown in Figure B2, the space needs based on the menu of resources and services to be provided in a Type 2 branch ranges from a low of 20,200+ square feet to a high of 35,000+ square feet. Within that range, for the purpose of discussions regarding planning, the recommended area needed for a Type 2 branch is 28,000 square feet. Of that, roughly 1,800 square feet will be reserved to tailor the collections and services to the needs of the specific community in which the branch is located.
### FIGURE B2
JOHNSON COUNTY LIBRARY / BRANCH TYPE 2
SPACE NEEDS ESTIMATE

<table>
<thead>
<tr>
<th>Collection space</th>
<th>Units</th>
<th>Optimal</th>
<th>Moderate</th>
<th>Low</th>
<th>Recommend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0 vol per sq.ft.</td>
<td>70,000</td>
<td>5,950</td>
<td>5,950</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod: @ 11.5 vol per sq.ft.</td>
<td>70,000</td>
<td>5,174</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 13.0 vol per sq.ft.</td>
<td>70,000</td>
<td>4,577</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Periodical display</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 1 title per sq.ft.</td>
<td></td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Periodical backfiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 0.5 sq.ft. per title per 1.0 yrs retained</td>
<td>75</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>Non-print</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0 items per sq.ft.</td>
<td>14,000</td>
<td>1,400</td>
<td></td>
<td>1,400</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 12.5 items per sq.ft.</td>
<td>14,000</td>
<td>1,120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 15.0 items per sq.ft.</td>
<td>14,000</td>
<td>933</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public network stations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 50.0 sq.ft. per PC</td>
<td>36</td>
<td>1,800</td>
<td></td>
<td>1,440</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 40.0 sq.ft. per PC</td>
<td>36</td>
<td>1,440</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 35.0 sq.ft. per PC</td>
<td>36</td>
<td>1,260</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reader seating space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 35.0 sq.ft. per seat</td>
<td>64</td>
<td>2,240</td>
<td></td>
<td>1,920</td>
<td>1,920</td>
</tr>
<tr>
<td>Mod: @ 32.5 sq.ft. per seat</td>
<td>64</td>
<td>2,080</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 30.0 sq.ft. per seat</td>
<td>64</td>
<td>1,920</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff work space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 150.0 sq.ft. per station</td>
<td>10</td>
<td>1,500</td>
<td></td>
<td>1,375</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 137.5 sq.ft. per station</td>
<td>10</td>
<td>1,375</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 125.0 sq.ft. per station</td>
<td>10</td>
<td>1,250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meeting room space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program room 1 (type 2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 10.0 sq.ft. per seat (+ stage)</td>
<td>75</td>
<td>900</td>
<td>900</td>
<td>900</td>
<td>900</td>
</tr>
<tr>
<td>Storytime room 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 15.0 sq.ft. per seat + 75 sq.ft.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Special use space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 17.5% of gross building area</td>
<td>6,082</td>
<td>3,853</td>
<td>2,489</td>
<td>3,447</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 15.0% of gross building area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 12.5% of gross building area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonassignable space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 32.5% of gross building area</td>
<td>11,296</td>
<td>7,706</td>
<td>5,476</td>
<td>8,272</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 30.0% of gross building area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 27.5% of gross building area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Tailoring” allowance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0% of gross building area</td>
<td>3,476</td>
<td>1,927</td>
<td>996</td>
<td>2,757</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 7.5% of gross building area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 5.0% of gross building area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special allowances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entry lobby</td>
<td></td>
<td>325</td>
<td>325</td>
<td>325</td>
<td>325</td>
</tr>
<tr>
<td><strong>GROSS BUILDING AREA</strong></td>
<td></td>
<td>35,081</td>
<td>26,012</td>
<td>20,239</td>
<td>27,899</td>
</tr>
</tbody>
</table>
Type 3 branch - Recommended service and resource inventories

In a Type 3 branch – the largest of the branch “types” suggested for JCL – the core goal is to provide a collection of largely high-demand items. Because the scale of the collections housed in this branch has grown, a Type 3 branch will be able to create a deeper and more varied collection than will be found in either a Type 1 or a Type 2 branch. Children’s materials and teen collections will be a special focus of that enhanced coverage and depth.

The essential goal is to develop a collection roughly half-again the size of that found in a Type 2 branch. For print materials, a collection of roughly 2.25 print items per capita becomes a suitable target – 105,000 volumes. In comparison with a Type 1 or a Type 2 branch, the magazine collection should grow again, still modestly, to 100 titles. A back-file collection for 95 of these titles should be maintained for, on average, one year. A non-print collection should be provided equal to 20 items held for every 100 items in the print collection.

A computer network station inventory of 42 stations is recommended for a Type 3 branch. A reader seating inventory of 88 places is recommended for a Type 3 branch. Because the branch will offer wireless connectivity, many of these seats will also be available as points of access to electronic information resources for patrons who are able to bring their own laptop equipment to the library.

Staffing protocols are based on a four-desk public service configuration, and includes the following inventory of work stations:

• two stations at a customer service desk or circulation desk
• one station for trouble-shooting and support of patron self-service check-out
• one station at a youth services public service desk
• one station at a reference / adult services public service desk
• five stations for general clerical activities in a workroom, including prep space for youth services programs and activities and one teen librarian
• two workroom stations for sorting / shelving
• one workroom cubicle for the assistant branch manager
• one office for the branch manager
• one custodial closet

As these models progress from a Type 1 to a Type 2 to a Type 3 branch, the audience capacity in a multi-purpose program room increases. In a Type 3 branch, a multi-purpose room will have an audience capacity of 120. In addition to a flat-floor and moveable seats, this room should also have a room divider so that it can be split into two smaller rooms for concurrent activities. The corresponding rooms in the smaller branch types may have a similar feature, but owing to the smaller scale of those spaces, this characteristic becomes more optional in those smaller branches.

In a Type 3 branch, a dedicated program space is reserved within the children’s department for storytimes. In a Type 3 branch, the schedule of children’s programming is likely to have expanded to a point that warrants provision of a separate dedicated space for this function. The audience capacity of this space will be 30.

As shown in Figure B3, the space needs based on the menu of resources and services to be provided in a Type 3 branch ranges from a low of 30,400+ square feet to a high of 52,300+ square feet. Within that range, for the purpose of discussions regarding planning, the recommended area needed for a Type 3 branch is 38,000 square feet.
### FIGURE B3
JOHNSON COUNTY LIBRARY / BRANCH TYPE 3
SPACE NEEDS ESTIMATE

<table>
<thead>
<tr>
<th>Collection space</th>
<th>Units</th>
<th>Optimal</th>
<th>Moderate</th>
<th>Low</th>
<th>Recommend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0 vol per sq.ft.</td>
<td>105,000</td>
<td>8,925</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod: @ 11.5 vol per sq.ft.</td>
<td>105,000</td>
<td>7,761</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 13.0 vol per sq.ft.</td>
<td>105,000</td>
<td>6,865</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Periodical display @ 1 title per sq.ft.</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Periodical backfiles @ 0.5 sq.ft. per title per 1.0 yrs retained</td>
<td>95</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Non-print</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0 items per sq.ft.</td>
<td>21,000</td>
<td>2,100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod: @ 12.5 items per sq.ft.</td>
<td>21,000</td>
<td>1,680</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 15.0 items per sq.ft.</td>
<td>21,000</td>
<td>1,400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public network stations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 50.0 sq.ft. per PC</td>
<td>42</td>
<td>2,100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod: @ 40.0 sq.ft. per PC</td>
<td>42</td>
<td>1,680</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 35.0 sq.ft. per PC</td>
<td>42</td>
<td>1,470</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Reader seating space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 35.0 sq.ft. per seat</td>
<td>88</td>
<td>3,080</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod: @ 32.5 sq.ft. per seat</td>
<td>88</td>
<td>2,860</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 30.0 sq.ft. per seat</td>
<td>88</td>
<td>2,640</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff work space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 150.0 sq.ft. per station</td>
<td>16</td>
<td>2,400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod: @ 137.5 sq.ft. per station</td>
<td>16</td>
<td>2,200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 125.0 sq.ft. per station</td>
<td>16</td>
<td>2,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meeting room space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program room 1 (type 2) @ 10.0 sq.ft. per seat (+ stage)</td>
<td>120</td>
<td>1,440</td>
<td>1,440</td>
<td>1,440</td>
<td>1,440</td>
</tr>
<tr>
<td>Storytime room 1 @ 15.0 sq.ft. per seat + 75 sq.ft.</td>
<td>30</td>
<td>525</td>
<td>525</td>
<td>525</td>
<td>525</td>
</tr>
<tr>
<td>Special use space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 17.5% of gross building area</td>
<td>9,064</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Mod: @ 15.0% of gross building area</td>
<td></td>
<td>5,777</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 12.5% of gross building area</td>
<td></td>
<td>3,747</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonassignable space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 32.5% of gross building area</td>
<td>16,833</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod: @ 30.0% of gross building area</td>
<td></td>
<td>11,554</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 27.5% of gross building area</td>
<td></td>
<td>8,244</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Tailoring&quot; allowance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0% of gross building area</td>
<td>5,179</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod: @ 7.5% of gross building area</td>
<td></td>
<td>2,888</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 5.0% of gross building area</td>
<td></td>
<td>1,499</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special allowances</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Entry lobby</td>
<td></td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>GROSS BUILDING AREA</td>
<td></td>
<td>52,194</td>
<td>38,912</td>
<td>30,378</td>
<td>38,028</td>
</tr>
</tbody>
</table>
“Legacy” branch - Recommended service and resource inventories

As noted above, it became evident that the original three-tier model for branch library services in Johnson County would not provide sufficient flexibility as a planning tool to accommodate the full range of library service options needed by the communities in the county. A fourth branch library service scenario was needed, targeted at providing a suitable level of service in the smallest communities in the county. This branch type was labeled a “Legacy” branch.

In a Legacy branch, the core goal is to provide a carefully-selected, lean collection of largely high-demand items – 10,500 volumes. A basic subscription list of 25 magazines will be supported. A collection of back issues for all of these titles should be maintained for, on average, one year. A non-print collection should be provided equal to 20 items held for every 100 items in the print collection.

7 computer network stations for public use should be provided.

A reader seating inventory of 18 places is recommended for a Legacy branch.

Staffing protocols are based on a single-desk public service configuration, and includes the following inventory of work stations:

• one station at a customer service desk or circulation desk (and trouble-shooting for any self-service check-out equipment that may be provided)
• one station for general clerical activities in a workroom
• one workroom station for sorting / shelving
• one office for the branch manager

No dedicated meeting / program space will be provided in a Legacy branch. Any programs or events held at a Legacy branch will be accommodated by a floor plan that supports moving furnishings and seating to clear an open area and setting up audience seating for the program.

As shown in Figure B4, the space needs based on the menu of resources and services to be provided in a Legacy branch ranges from a low of 4,200+ square feet to a high of 7,100+ square feet. Within that range, for the purpose of discussions regarding planning, the recommended area needed for a Legacy branch is 5,600 square feet.
<table>
<thead>
<tr>
<th>Collection space</th>
<th>Units</th>
<th>Optimal</th>
<th>Moderate</th>
<th>Low</th>
<th>Recommend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0 vol per sq.ft.</td>
<td>10,500</td>
<td>945</td>
<td></td>
<td></td>
<td>945</td>
</tr>
<tr>
<td>Mod: @ 11.5 vol per sq.ft.</td>
<td>10,500</td>
<td>822</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 13.0 vol per sq.ft.</td>
<td>10,500</td>
<td>727</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Periodical display</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 1 title per sq.ft.</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>Periodical backfiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 0.5 sq.ft. per title per 1.0 yrs retained</td>
<td>25</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Non-print</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0 items per sq.ft.</td>
<td>2,100</td>
<td>210</td>
<td></td>
<td></td>
<td>210</td>
</tr>
<tr>
<td>Mod: @ 12.5 items per sq.ft.</td>
<td>2,100</td>
<td>168</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low: @ 15.0 items per sq.ft.</td>
<td>2,100</td>
<td>140</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public network stations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 50.0 sq.ft. per PC</td>
<td>7</td>
<td>350</td>
<td></td>
<td></td>
<td>350</td>
</tr>
<tr>
<td>Mod: @ 40.0 sq.ft. per PC</td>
<td>7</td>
<td>280</td>
<td></td>
<td></td>
<td>280</td>
</tr>
<tr>
<td>Low: @ 35.0 sq.ft. per PC</td>
<td>7</td>
<td>245</td>
<td></td>
<td></td>
<td>245</td>
</tr>
<tr>
<td>Reader seating space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 35.0 sq.ft. per seat</td>
<td>18</td>
<td>630</td>
<td></td>
<td></td>
<td>630</td>
</tr>
<tr>
<td>Mod: @ 32.5 sq.ft. per seat</td>
<td>18</td>
<td>585</td>
<td></td>
<td></td>
<td>585</td>
</tr>
<tr>
<td>Low: @ 30.0 sq.ft. per seat</td>
<td>18</td>
<td>540</td>
<td></td>
<td></td>
<td>540</td>
</tr>
<tr>
<td>Staff work space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 150.0 sq.ft. per station</td>
<td>4</td>
<td>600</td>
<td></td>
<td></td>
<td>600</td>
</tr>
<tr>
<td>Mod: @ 137.5 sq.ft. per station</td>
<td>4</td>
<td>550</td>
<td></td>
<td></td>
<td>550</td>
</tr>
<tr>
<td>Low: @ 125.0sq.ft. per station</td>
<td>4</td>
<td>500</td>
<td></td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Meeting room space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program room 1 (type 2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 10.0 sq.ft. per seat (+ stage)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Storytime room 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 15.0 sq.ft. per seat + 75 sq.ft.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Special use space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 17.5% of gross building area</td>
<td>1,213</td>
<td></td>
<td></td>
<td></td>
<td>1,213</td>
</tr>
<tr>
<td>Mod: @ 15.0% of gross building area</td>
<td></td>
<td>771</td>
<td></td>
<td></td>
<td>771</td>
</tr>
<tr>
<td>Low: @ 12.5% of gross building area</td>
<td></td>
<td>498</td>
<td></td>
<td></td>
<td>498</td>
</tr>
<tr>
<td>Nonassignable space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 32.5% of gross building area</td>
<td>2,253</td>
<td></td>
<td></td>
<td></td>
<td>2,253</td>
</tr>
<tr>
<td>Mod: @ 30.0% of gross building area</td>
<td></td>
<td>1,542</td>
<td></td>
<td></td>
<td>1,542</td>
</tr>
<tr>
<td>Low: @ 27.5% of gross building area</td>
<td></td>
<td>1,095</td>
<td></td>
<td></td>
<td>1,095</td>
</tr>
<tr>
<td>&quot;Tailoring&quot; allowance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0% of gross building area</td>
<td>693</td>
<td></td>
<td></td>
<td></td>
<td>693</td>
</tr>
<tr>
<td>Mod: @ 7.5% of gross building area</td>
<td></td>
<td>386</td>
<td></td>
<td></td>
<td>386</td>
</tr>
<tr>
<td>Low: @ 5.0% of gross building area</td>
<td></td>
<td>199</td>
<td></td>
<td></td>
<td>199</td>
</tr>
<tr>
<td>Special allowances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entry lobby</td>
<td>225</td>
<td>225</td>
<td>225</td>
<td>225</td>
<td>225</td>
</tr>
<tr>
<td><strong>GROSS BUILDING AREA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7,156</td>
<td>5,367</td>
<td>4,206</td>
<td>5,620</td>
<td></td>
</tr>
</tbody>
</table>
Central Resource Library - Recommended service and resource inventories

The Central Resource Library plays a unique role within the Johnson County Library system. This is reflected in three primary areas that affect the resource inventory and service distribution at the CRL:

- Its collections back up the holdings distributed through the branches into the communities across the county, giving all county residents access to the depth of subject they might need. As a result, a substantial inventory should be housed here.

- The CRL is the venue for the major programming and activities in the system. While all of the other facilities can accommodate some level of event programming, the largest such events will occur here, which occasions the need for more extensive meeting space.

- By virtue of its convenience to the surrounding area, the CRL also serves as a neighborhood branch for county residents who live nearby. As the library initiates the next level of planning to implement this facilities master plan, Board and staff could consider whether to acknowledge this practical reality by fashioning a kind of “library-within-a-library” to highlight a targeted collection of current and popular materials in all formats to support this role.

As shown in Figure B5, the resource inventories forecast for the Central Resource Library are based on the following:

- A system-wide collection of 1,400,000 volumes, of which an estimated 1,000,000 will be housed in branches, leaving 400,000 to be housed at the CRL
- 500 periodicals
- 80,000 non-print items (20 for every 100 print items to be housed)
- 125 computer network stations for public use (a 50% increase over the current inventory)
- 432 reader seats (a 50% increase over the current inventory)
- Programming space that includes an auditorium to seat 250, a multi-purpose room to seat 125, and a conference/board room to seat 15
<table>
<thead>
<tr>
<th>Collection type</th>
<th>Units</th>
<th>SPACE ALLOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Optimal</td>
<td>Moderate</td>
</tr>
<tr>
<td>Books</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opt: @ 10.0 vol per sq.ft.</td>
<td>400,000</td>
<td>36,000</td>
</tr>
<tr>
<td>Mod: @ 11.5 vol per sq.ft.</td>
<td>400,000</td>
<td>31,304</td>
</tr>
<tr>
<td>Low: @ 13.0 vol per sq.ft.</td>
<td>400,000</td>
<td>27,692</td>
</tr>
<tr>
<td>Periodical display</td>
<td>@ 1 title per sq.ft.</td>
<td></td>
</tr>
<tr>
<td>Periodical backfiles</td>
<td>@ 0.5 sq.ft. per title per 1.0 yrs retained</td>
<td></td>
</tr>
<tr>
<td>Non-print</td>
<td>Opt: @ 10.0 items per sq.ft.</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 12.5 items per sq.ft.</td>
<td>80,000</td>
<td>6,400</td>
</tr>
<tr>
<td>Low: @ 15.0 items per sq.ft.</td>
<td>80,000</td>
<td>5,333</td>
</tr>
<tr>
<td>Public network stations</td>
<td>Opt: @ 50.0 sq.ft. per PC</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 40.0 sq.ft. per PC</td>
<td>125</td>
<td>5,000</td>
</tr>
<tr>
<td>Low: @ 35.0 sq.ft. per PC</td>
<td>125</td>
<td>4,375</td>
</tr>
<tr>
<td>Reader seating space</td>
<td>Opt: @ 35.0 sq.ft. per seat</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 32.5 sq.ft. per seat</td>
<td>432</td>
<td>14,040</td>
</tr>
<tr>
<td>Low: @ 30.0 sq.ft. per seat</td>
<td>432</td>
<td>12,960</td>
</tr>
<tr>
<td>Staff work space</td>
<td>Opt: @ 150.0 sq.ft. per station</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 137.5 sq.ft. per station</td>
<td>58</td>
<td>7,975</td>
</tr>
<tr>
<td>Low: @ 125.0 sq.ft. per station</td>
<td>58</td>
<td>7,250</td>
</tr>
<tr>
<td>Meeting room space</td>
<td>Auditorium (type 1)</td>
<td></td>
</tr>
<tr>
<td>@ 12.5 sq.ft. per seat (+ stage)</td>
<td>Program room 1 (type 2)</td>
<td></td>
</tr>
<tr>
<td>@ 10.0 sq.ft. per seat (+ stage)</td>
<td>Conference / board room</td>
<td></td>
</tr>
<tr>
<td>@ 30 sq.ft. per seat + 10 gallery</td>
<td>Special use space</td>
<td></td>
</tr>
<tr>
<td>Opt: @ 17.5% of gross building area</td>
<td>35,439</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 15.0% of gross building area</td>
<td>22,627</td>
<td></td>
</tr>
<tr>
<td>Low: @ 12.5% of gross building area</td>
<td>14,669</td>
<td>15,770</td>
</tr>
<tr>
<td>Nonassignable space</td>
<td>Opt: @ 32.5% of gross building area</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 30.0% of gross building area</td>
<td>45,254</td>
<td>37,848</td>
</tr>
<tr>
<td>Low: @ 27.5% of gross building area</td>
<td>32,272</td>
<td></td>
</tr>
<tr>
<td>&quot;Tailoring” allowance</td>
<td>Opt: @ 10.0% of gross building area</td>
<td></td>
</tr>
<tr>
<td>Mod: @ 7.5% of gross building area</td>
<td>11,313</td>
<td></td>
</tr>
<tr>
<td>Low: @ 5.0% of gross building area</td>
<td>5,868</td>
<td>6,308</td>
</tr>
<tr>
<td>Special allowances</td>
<td>Entry lobby</td>
<td></td>
</tr>
<tr>
<td>GROSS BUILDING AREA</td>
<td>203,256</td>
<td>151,596</td>
</tr>
</tbody>
</table>
recommendations by area

These recommendations are based upon the combined analysis of optimal service delivery models as defined in the four branch types, projected changes in community demographics and the age and condition of JCL’s existing facilities. The following recommendations are provided for each library area:

System-wide Capital Improvements
Continue to maintain a budgeted capital replacement schedule for ongoing improvements to existing buildings.

Northeast Area
Antioch and Cedar Roe are two of the four oldest branches in the JCL System, both of which are located in the Northeast Area. As summarized in the branch summaries starting on page 36, these facilities have multiple constraints which will be costly to correct, if even possible. Therefore, significant reinvestment into these facilities is not recommended. They have reached the end of their useful life and should be replaced. Site constraints on both sites limit options for rebuilding either branch on the current sites as a Type 3 branch. We encourage the Library to explore the possibility of merging these two facilities into a single Type 3 branch. A single, larger facility would offer the benefit of a richer collection for area residents and the advantage of more efficient operation for the Library. If this option cannot be advanced, as an alternative, the library should redevelop the Antioch Library as a Type 2 branch at the current site. This becomes feasible if the Support Services function and Friends of the Library are relocated to another site. A Type 2 branch at this location will likely require a two level design, and some of the branch’s parking requirements will have to be met on the Library’s existing remote parking lot. The Cedar Roe facility should be replaced with a Type 1 branch. The current site cannot support a facility of this size, so this branch will require a new location.

The Type 3 branch model should be combined with special program space for JCCC’s ESL and GED education programs. A new facility can provide improved community access, adequate parking, and increasingly important connections to public transit within the area.

JCL Central and Facilities maintenance services currently housed in the Support Services Building should be consolidated and relocated to a new centralized services location closer to the center of the JCL service area. The existing Central Resource Library should be improved with important investments including improved electrical service capacity, access to main entry, and finishes. Selected program functions such as technical services should be relocated to a new consolidated Central Services Facility freeing up additional flexible program space within Central to better serve the library role as a central community resource for the County.

Significant reinvestment in the aging Corinth and Oak Park Branch Libraries facilities is not recommended. Both buildings are reaching the end of their useful service life and should be replaced. Service area maps in the Civic Technologies report indicate consideration of replacing the Corinth branch on it’s current site. The service area maps indicate a relocated Oak Park branch to the northwest corner of the Southeast Area will better serve the area along with easing the demand at the Blue Valley branch.

Southeast Area
Continued growth in the Southeast area has placed tremendous pressure on the Blue Valley Branch Library. The area would be well served by the construction of a new Type 2 branch near the northwest corner of the area in the vicinity of 125 and Switzer.

As the Southeast Area population continues to grow in the years, ahead a second Type 2 branch should be considered near the mid point of the area along the 175th Street corridor. Finally, a third Type 2 branch will need to be considered to serve the newly defined Aubry/Stilwell Service Area. The timing of this library will be determined by increases in the population.

The northwestern corner of the Southeast Area, given its relatively centralized position within the overall library system is a recommended location for the lease or construction of a new central services facility. This facility could provide more efficient day to day service deliveries and maintenance operations for the entire JCL system out of a central services hub around the I-35/435/69 HWY corridor. As the technology infrastructure improves across the County, careful consideration should go to relocating the IT services function to ensure a secure, robust, and redundant infrastructure for the ever-increasing important technology backbone of the system. Centralizing these functions will improve response time to the branches, save time and money for travelling, and continue to provide the excellent service Johnson County is known for.
Northwest Area
Continued population growth in eastern and western Shawnee are placing pressure on the existing Shawnee branch. Finishing the existing shell space in the lower level of the existing Shawnee branch is recommended to provide expanded program space to meet the demands of these residents.

The construction of the proposed Type 3 Monticello branch should proceed to serve the growing needs of the Shawnee and DeSoto communities west of I-435.

Continued population growth in Lenexa is moving the center of gravity of the Lackman Branch service area further west along the 87th Street Corridor. Consideration should be given to incorporating a Type 2 branch to replace the aging and poorly sited Lackman branch. The potential to locate the Type 2 branch within the City of Lenexa’s City Center/Civic Center development should be considered. Co-location of the Branch within the Civic Center could provide excellent synergies with other community partners.

As the population in DeSoto increases, the potential for a Type 1 branch with expansion capability to a Type 2 branch should be considered as the current storefront facility has quite limited capacity. Consideration should be given to the K-10 corridor with some attention on where future Olathe Public Library branches are planned or constructed.

Southwest Area
The communities of Edgerton, Gardner and Spring Hill are on the developing suburban fringe of the County and are served by two legacy branches (Edgerton and Spring Hill) and the existing Type 1 Gardner Branch. As these communities grow, consideration should be given to an expansion of the Gardner branch to become a Type 2 destination branch in this area.

The disposition of Edgerton and Spring Hill should be monitored as the County develops. The Spring Hill community needs should be considered in light of planned expansion in the Olathe Public Library district as well as construction of new branch in the Southeast service area described above.

### Space Allocation

<table>
<thead>
<tr>
<th>Branch Name</th>
<th>2009 Area</th>
<th>Recommended Increase</th>
<th>Proposed 2030 Area</th>
<th>Summary of Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Northeast Area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antioch</td>
<td>24,650 sf</td>
<td>0 sf</td>
<td>0 sf</td>
<td>Replaced with combined Antioch/Cedar Roe branch in new Type 3</td>
</tr>
<tr>
<td>Cedar Roe</td>
<td>16,492 sf</td>
<td>0 sf</td>
<td>0 sf</td>
<td>Replaced with combined Antioch/Cedar Roe branch in new Type 3</td>
</tr>
<tr>
<td># Antioch/Cedar Roe</td>
<td></td>
<td></td>
<td>38,000 sf</td>
<td>New Type 3 branch</td>
</tr>
<tr>
<td>Central Resource</td>
<td>80,007 sf</td>
<td>36,993 sf</td>
<td>117,000 sf</td>
<td>Renovation &amp; Addition. Relocate shared services to CSB. Optional relocate CRL.</td>
</tr>
<tr>
<td>Corinth</td>
<td>20,495 sf</td>
<td>17,505 sf</td>
<td>38,000 sf</td>
<td>Replace with Type 3 branch on same site</td>
</tr>
<tr>
<td>Oak Park</td>
<td>17,118 sf</td>
<td>0 sf</td>
<td>0 sf</td>
<td>Replace with new Type 3 branch in Blue Valley North area</td>
</tr>
<tr>
<td>Support Services Building</td>
<td>5,498 sf</td>
<td>0 sf</td>
<td>0 sf</td>
<td>Relocated to CSB in SE Area</td>
</tr>
<tr>
<td><strong>Northwest Area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>De Soto</td>
<td>3,630 sf</td>
<td>11,870 sf</td>
<td>15,500 sf</td>
<td>New Type 1 branch on new site</td>
</tr>
<tr>
<td>Lackman</td>
<td>17,843 sf</td>
<td>10,157 sf</td>
<td>28,000 sf</td>
<td>Relocated Type 2 branch to new Lenexa Civic Center</td>
</tr>
<tr>
<td>Monticello</td>
<td>38,000 sf</td>
<td></td>
<td></td>
<td>New Type 3 branch</td>
</tr>
<tr>
<td>Shawnee</td>
<td>11,424 sf</td>
<td>6,797 sf</td>
<td>18,221 sf</td>
<td>Addition, Renovation, and finish lower level.</td>
</tr>
<tr>
<td><strong>Southeast Area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blue Valley</td>
<td>24,368 sf</td>
<td>13,632 sf</td>
<td>38,000 sf</td>
<td>Expand on existing site to Type 3 and consider nearby land</td>
</tr>
<tr>
<td>Central Services Building</td>
<td>19,016 sf</td>
<td>0 sf</td>
<td>19,016 sf</td>
<td>No new work</td>
</tr>
<tr>
<td>Leawood Pioneer</td>
<td>38,000 sf</td>
<td></td>
<td></td>
<td>New Type 3 branch</td>
</tr>
<tr>
<td>Blue Valley North</td>
<td>24,000 sf</td>
<td></td>
<td></td>
<td>New Type 2 branch expandable to Type 3</td>
</tr>
<tr>
<td>Aubry / Stilwell</td>
<td>28,000 sf</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Southwest Area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edgerton</td>
<td>2,982 sf</td>
<td>0 sf</td>
<td>2,982 sf</td>
<td>No work</td>
</tr>
<tr>
<td>Gardner</td>
<td>13,544 sf</td>
<td>10,456 sf</td>
<td>24,000 sf</td>
<td>Addition to existing branch</td>
</tr>
<tr>
<td>Spring Hill</td>
<td>3,004 sf</td>
<td>12,496 sf</td>
<td>15,500 sf</td>
<td>Replaced with new Type 1 branch on new site</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>260,071 sf</td>
<td></td>
<td>483,219 sf</td>
<td></td>
</tr>
<tr>
<td>Non-Library Partners</td>
<td>9,675 sf</td>
<td></td>
<td>18,329 sf</td>
<td>4% of system</td>
</tr>
<tr>
<td>Support Services</td>
<td>5,498 sf</td>
<td></td>
<td></td>
<td>Replaced</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>275,244 sf</td>
<td></td>
<td>501,548 sf</td>
<td></td>
</tr>
</tbody>
</table>

Note: Assumes an average of 0.76 GSF/Capita for branches.
recommendations by branch

antioch  8700 shawnee mission parkway, merriam, kansas  66202

BRANCH INFORMATION
Year Built: 1956
Additions Renovations: 5 times, latest in 1996
Gross Square Footage: 35,258 (including JCCC)
Volumes: 116,930
Parking: 160

RECOMMENDATIONS
Infrastructure and site constraints limit economically justifiable and feasible improvements. The existing library will be replaced with a proposed Type 3 in the Area in a combined branch with the existing Cedar Roe branch. If replacement is not possible in near future, replacing the boiler is an immediate need and the cost associated for that expense is included in this summary.

<table>
<thead>
<tr>
<th>BRANCH SIZE</th>
<th>ESTIMATED COST</th>
<th>COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXISTING 24,650 sf</td>
<td>0 sf</td>
<td>38,000 sf</td>
</tr>
<tr>
<td>PROPOSED</td>
<td>$18,200,000</td>
<td>Year 7</td>
</tr>
</tbody>
</table>

blue valley  9000 west 151st street, overland park, kansas 66221

BRANCH INFORMATION
Year Built: 2000
Additions Renovations: None
Gross Square Footage: 24,368
Volumes: 112,751
Parking: 99

RECOMMENDATIONS
Upgrade degrading asphalt and concrete work around entrances to create stable walking surfaces. Reseal all sealant joints in exterior masonry walls. Investigate cracking in burnedished block wall at parapet for integrity. Reseal windows after negative air pressure problem is corrected. Repaint exterior metal surfaces that are peeling paint and/or rusting under failing paint. Watch for leaking at floor line, if leaks are present, investigate river rock mow strip around building which appears to be higher than finished floor. Mow strip could act like a gutter, holding water at exterior wall/ perimeter. Consider lowering if water problems arise. Rebuild corner of broken trash enclosure. Replace meeting room fabric wrapped wall panels with fabric suitable for vertical application. Improve lighting options at New Books area of main circulation spine. Discuss options with City of Overland Park to correct the enclosure for the cooling tower as it is restricting the airflow. Redesign the air handling unit to correct negative air pressure in the building per the 2006 masterplan.

<table>
<thead>
<tr>
<th>BRANCH SIZE</th>
<th>ESTIMATED COST</th>
<th>COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXISTING 24,368 sf</td>
<td>13,632 sf</td>
<td>38,000 sf</td>
</tr>
<tr>
<td>PROPOSED</td>
<td>$18,800,000</td>
<td>Year 15</td>
</tr>
</tbody>
</table>

cedar roe  5120 cedar, roeland park, kansas 66205

BRANCH INFORMATION
Year Built: 1967
Gross Square Footage: 16,063
Volumes: 74,848
Parking: 18

RECOMMENDATIONS
Infrastructure, site constraints, and current building codes limit economically justifiable and feasible improvements. The existing library will be replaced with a proposed Type 3 in the Area in a combined branch with the current Antioch Branch.

<table>
<thead>
<tr>
<th>BRANCH SIZE</th>
<th>ESTIMATED COST</th>
<th>COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXISTING 16,492 sf</td>
<td>0 sf</td>
<td>38,000 sf</td>
</tr>
<tr>
<td>PROPOSED</td>
<td>$(1,402,000)</td>
<td>Year 6</td>
</tr>
</tbody>
</table>
central resource library 9875 w. 87th st., overland park, kansas 66212

BRANCH INFORMATION
Year Built: 1979- became Library in 1995
Gross Square Footage: 90,547
Volumes: 297,817
Parking: 393

RECOMMENDATIONS
Replace in roof in 2-3 years. Reseal windows. Investigate and repair leaks at windows and sloped glazed roof. Reseal joints in sill flashings. Repaint building exterior. Carpeting is in need of replacement. Replace soiled ceiling tiles. Re-design lighting of main circulation axis of building. Increase electrical service to building. Consider underfloor air/power distribution to expand service into under-serviced portions of the facility. If central IT services remain at this location, consider adding back-up power, an FM-200 system, and additional cooling to the server room. Consider relocation to accommodate need for expansion in future.

<table>
<thead>
<tr>
<th>BRANCH SIZE</th>
<th>EXISTING</th>
<th>INCREASE</th>
<th>TOTAL</th>
<th>ESTIMATED COST</th>
<th>PROPOSED COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>80,007 sf</td>
<td>0 sf</td>
<td>90,547 sf</td>
<td>$3,400,000</td>
<td>Year 3-4</td>
</tr>
</tbody>
</table>

corinth 8100 mission road, prairie village, kansas 66208

BRANCH INFORMATION
Year Built: 1968
Additions Renovations: 1986 & 2002
Gross Square Footage: 20,458
Volumes: 150,639
Parking: 96

RECOMMENDATIONS
Infrastructure and wood framed construction limit economically justifiable and feasible improvements. The existing library will be replaced with a proposed Type 3 at its current location. Immediate need for upgrading electrical distribution.

<table>
<thead>
<tr>
<th>BRANCH SIZE</th>
<th>EXISTING</th>
<th>INCREASE</th>
<th>TOTAL</th>
<th>ESTIMATED COST</th>
<th>PROPOSED COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20,495 sf</td>
<td>0 sf</td>
<td>38,000 sf</td>
<td>$18,200,000</td>
<td>Year 6</td>
</tr>
</tbody>
</table>

desoto 33145 west 83rd street, de soto, kansas 66108

BRANCH INFORMATION
Year Built: 1982
Gross Square Footage: 3,630
Volumes: 20,522
Parking: 6 in back otherwise on street

RECOMMENDATIONS
Site survey is needed. Repair crumbling curb if it is on JCL’s property. Investigate crack in the CMU wall is noted at south east corner of building at wall of storage space for additional movement, repair. Replace carpet in 2-3 years. Secure the IT-telecom area as it is at high risk of failure.

As population increases, consider new locations for a Type 1 sized branch and relocate this facility to new location.

<table>
<thead>
<tr>
<th>BRANCH SIZE</th>
<th>EXISTING</th>
<th>INCREASE</th>
<th>TOTAL</th>
<th>ESTIMATED COST</th>
<th>PROPOSED COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3,630 sf</td>
<td>11,870 sf</td>
<td>15,500 sf</td>
<td>$7,400,000</td>
<td>Year 19</td>
</tr>
</tbody>
</table>
recommendations by branch

edgerton 319 east nelson, edgerton, kansas 66201

BRANCH INFORMATION
Year Built: 1906, Library opened in 2000 in existing City owned building
Additions Renovations: 2000 when opened.
Gross Square Footage: 2,981
Volumes: 9,636
Parking: 4, however they are street spaces that flank building.

RECOMMENDATIONS
Repaint wood windows. Consider options for insulating glass windows to improve energy efficiency. Replace carpeting in 5+ years. Replace water damaged ceiling tiles. Install additional power receptacles. Create secure telecom area, current is not adequate and is at high risk of failure. Add lounge furniture options.

<table>
<thead>
<tr>
<th>BRANCH SIZE</th>
<th>INCREASE</th>
<th>TOTAL</th>
<th>ESTIMATED COST</th>
<th>PROPOSED COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXISTING</td>
<td>0 sf</td>
<td>2,982 sf</td>
<td>$NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

gardner 137 east shawnee, gardner, kansas 66030

BRANCH INFORMATION
Year Built: 2001
Additions Renovations: n/a
Gross Square Footage: 13,545
Volumes: 41,967
Parking: 69 JCL Owned, but shared with City Hall

RECOMMENDATIONS
Re-roof is probably needed in 2-3 yrs. Install window treatments or film on windows to limit fading of books.

As population increases, expand facility to proposed Type 2 branch at current location. Consider parking options when building is expanded.

<table>
<thead>
<tr>
<th>BRANCH SIZE</th>
<th>INCREASE</th>
<th>TOTAL</th>
<th>ESTIMATED COST</th>
<th>PROPOSED COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXISTING</td>
<td>10,456 sf</td>
<td>24,000 sf</td>
<td>$12,400,000</td>
<td>Year 11</td>
</tr>
</tbody>
</table>

lackman 15345 west 87th street parkway, lenexa, kansas 66219

BRANCH INFORMATION
Year Built: 1986
Additions Renovations: 1997
Gross Square Footage: 17,843
Volumes: 90,712
Parking: 75

RECOMMENDATIONS
Bring 2nd exit from the library up to code. Repair roof/downspout leaks. Re-paint in high-use areas. Improve cooling in telecom room.

Consider replacing with new Type 2 branch in new Lenexa Civic Center to improve visibility, parking, and create synergy with other destinations.

<table>
<thead>
<tr>
<th>BRANCH SIZE</th>
<th>INCREASE</th>
<th>TOTAL</th>
<th>ESTIMATED COST</th>
<th>PROPOSED COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXISTING</td>
<td>10,157 sf</td>
<td>28,000 sf</td>
<td>$10,200,000</td>
<td>Year 7-9</td>
</tr>
</tbody>
</table>
**Recommendations by Branch**

**Leawood Pioneer** 4700 Town Center Drive, Leawood, Kansas 66211

**Branch Information**
- Year Built: 1994
- Additions Renovations: presently being added on to and renovated
- Gross Square Footage: 11,800 (19,000 new SF)
- Volumes: 85,000
- Parking: 54

**Recommendations**
The branch is under construction and renovation at this time. Recommend continuing as a Type 2 branch.

<table>
<thead>
<tr>
<th>Branch Size</th>
<th>Estimated</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing 19,016 sf</td>
<td>Increase 0 sf</td>
<td>Total 19,016 sf</td>
</tr>
</tbody>
</table>

**Oak Park** 9500 Bluejacket, Overland Park, Kansas 66214

**Branch Information**
- Year Built: 1971
- Additions Renovations: 1982
- Gross Square Footage: 17,569
- Volumes: 109,563
- Parking: 90

**Recommendations**
The facility is at risk of numerous failures. Infrastructure, building orientation, and site constraints limit economically justifiable and feasible improvements. The existing library will be replaced with a proposed Type 3 in a location farther south in the County, approximately the northwest corner of the southeast area.

<table>
<thead>
<tr>
<th>Branch Size</th>
<th>Estimated</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing 17,118 sf</td>
<td>Increase 0 sf</td>
<td>Total 38,000 sf</td>
</tr>
</tbody>
</table>

**Shawnee** 13811 Johnson Drive, Shawnee, Kansas 66216

**Branch Information**
- Year Built: 1992
- Additions Renovations: None
- Gross Square Footage: 18,221
- Volumes: 70,321
- Parking: 75 dedicated per Interlocal Agreement.

**Recommendations**
Replace Roof. Finish basement shell space. Upgrade interior finishes of upper level.

<table>
<thead>
<tr>
<th>Branch Size</th>
<th>Estimated</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing 11,424 sf</td>
<td>Increase 6,797 sf</td>
<td>Total 18,221 sf</td>
</tr>
</tbody>
</table>
recommendations by branch

**spring hill** 109 south webster, spring hill, kansas 66083

BRANCH INFORMATION
- Year Built: 1982
- Additions Renovations: 2007
- Gross Square Footage: 3,004
- Volumes: 15,590
- Parking: 26

RECOMMENDATIONS
- Replace carpet 2-3 years.
- Improve telecom area as it is at high risk of failure.
- Increase amount of lounge seating.

As population increases, consider new locations for a Type 1 sized branch and relocate this facility to new location.

<table>
<thead>
<tr>
<th>BRANCH SIZE</th>
<th>EXISTING</th>
<th>INCREASE</th>
<th>TOTAL</th>
<th>ESTIMATED COST</th>
<th>PROPOSED COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,004 sf</td>
<td>12,496 sf</td>
<td>15,500 sf</td>
<td>$7,400,000</td>
<td>Year 16</td>
<td></td>
</tr>
</tbody>
</table>

**support services building** 6250 slater, merriam, kansas 66202

INFORMATION
- Gross Square Footage: 5,498

RECOMMENDATIONS
- Relocate to a new Central Services Facility closer to the center of the JCL district and near I-35/I-435/69 hwy node.

<table>
<thead>
<tr>
<th>BRANCH SIZE</th>
<th>INCREASE</th>
<th>TOTAL</th>
<th>ESTIMATED COST</th>
<th>PROPOSED COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,498 sf</td>
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The total cost to build or renovate a library will be an important consideration for the citizens of Johnson County. Every community facing the challenge of expanding their library buildings to reflect the growing demands and increase in service population has the inevitable challenge of balancing the initial capital cost with the long term operational cost and life cycle cost.

The cost to build (construction cost only) a new library in the United States ranges from about $190.00 to over $450.00 per gross square foot. The average is about $300.00 per gross square feet – adjusted for construction in the Johnson County area. It is critical to note that this is only construction cost and does not include other costs, such as furniture, moving, and professional services. The total project cost can range from a minimum of $245.00 to over $650.00 per gross square feet.

### Cost considerations include:
- Regional costs and the bidding climate.
- Inflation and the effect of national material costs (including the after-effect major events put on building materials)
- Incorporation of sustainable features and the goals for energy and water conservation.
- Expectations for maintenance, operating, and energy costs.
- Decisions on phasing, new construction, renovation, or a combination of these options.
- Site acquisition and/or relocation costs.
- Automation, technology, and materials handling costs.
- Phasing of construction and whether or not the library has to relocate to temporary quarters during construction.
- Whether or not the project includes all new furnishings or a combination of new and reused furniture.
- Quality of materials.

### JCL Facilities Cost Estimates

**Guidelines Used for Cost Projections:**
1. Books/processing costs are based on 2009 costs
2. Construction costs are based on $300/sf
3. To accurately program, establish costs, and create CIP submittals, a study will need to be done for each building (building program)
4. Costs do not include costs of land
5. Site costs will need to be adjusted based on land costs
6. Costs do not include inflation projections

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Johnson County Library | 41
## Construction Timeline

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</table>

- **Design & Construction**
- **Existing Building**
- **Future Building**
JCL 20-Year FMP Overview - PROPOSED

- **Leawood Pioneer**
  - Type 2

- **Edgerton**
  - Type L

- **Central Resource Library**

- **Support Services Building**

- **Shawnee**
  - Type 2

- **2012 CRL interior maintenance**

- **2013 New SSB building**

- **2015 Corin**
  - Type 3

- **2016 Cedar Roe/Antioch merger**

- **2016 Shawnee lower level building**


- **CO Population**: 2009 - 43,102 / 2030 - 43,343

- **CR Population**: 2009 - 13,058 / 2030 - 12,216

- **AN Population**: 2009 - 38,426 / 2030 - 35,640

- **LA Population**: 2009 - 38,711 / 2030 - 41,406

- **2018 – 2020 Blue Valley North replaces Oak Park**

- **2020 Gardner expansion**

- **2013 Monticello**
  - Type 3

- **2016 – 2018 Lackman – Lenexa Civic Center?**

- **202025 Spring Hill**
  - Type 1

- **202025 Stilwell**
  - Type 2

- **2024 Blue Valley expansion**

- **2028 DeSoto**
  - Type 1

- **2012 – 2014 New building?**

- **2016 Cedar Roe/Antioch merger**

- **2018 – 2020 Blue Valley North replaces Oak Park**

- **2020 Gardner expansion**

- **2024 Blue Valley expansion**

- **2028 DeSoto**
  - Type 1

- **2018 – 2020 Blue Valley North replaces Oak Park**

- **2024 Blue Valley expansion**

- **2028 DeSoto**
  - Type 1

- **2025 – 2028 Stilwell**
  - Type 2

- **2016 – 2018 Lackman – Lenexa Civic Center?**

- **2020 Gardner expansion**

- **2024 Blue Valley expansion**

- **2028 DeSoto**
  - Type 1

- **2025 – 2028 Stilwell**
  - Type 2

- **2018 – 2020 Blue Valley North replaces Oak Park**

- **2024 Blue Valley expansion**

- **2028 DeSoto**
  - Type 1

- **2025 – 2028 Stilwell**
  - Type 2

Type 2 = medium branch meant to serve a community of about 45,000 – 50,000

Type 3 = large branch meant to serve a community of about 45,000 – 50,000

Type L = legacy branch continues to serve our smallest communities

Type 1 = small branch meant to serve a community of about 15,000

Central = central resource for all branches with specialized services—serving the whole district

**Note:**
- New construction, existing site
- Renovation/expansion
- New construction, new site
- New branch/facility
- New construction, new site
future facility trends

• Automated materials handling will be used at different levels for each library type:

Central Resource Library: The central library acts as the hub for receiving, processing, and redistributing all new reading and AV materials. Materials that circulate between branches are also redistributed from the central library. A comprehensive materials handling system would enable materials to be processed quicker and with fewer staff (who could be reassigned to customer service). Beside speed and accuracy (scanning of RFID tags), staff would be subjected to less physical stress, including fewer back and carpel tunnel strains. The system would sort the books into bins for redistribution to all of the branches and for shelving at the main library. These bins would then be aligned with delivery slots that are assigned to each branch for quick loading. Besides the central book sorting system, materials returned by the patrons would be automatically delivered via conveyor to the system, thus shortening the time the books are not shelved. The books that are scheduled to return to the shelves at the main library would be automatically placed on book carts and sorted by classification.

Branch Type 3: A mini-version of the central library system would be installed at the regional libraries. A drive-up window for patron pick-up and drop-off of materials would also be included to speed customer service.

Branch Type 2 and 1: Where possible and not limited by the existing building, a book return and sorting system would be installed at the branches to minimize the time staff need to spend sorting materials, loading them onto book carts, or placing into bins for redistribution to the central library for processing.

Branch Type Legacy: No automation

• Collaboration opportunities with other Library Systems (URSA)

New software systems create opportunities for library systems to partner with other library systems to assist users that are looking for a wide range of resources, many of which are not available in their local library. Technology has developed systems that make it easy for users to find materials from a variety of institutions from remote locations and request materials to be transferred to a location convenient to them. This can result in more requests, which could require more staff time and add more costs for libraries or require installation of automated material handling equipment.

• Johnson County’s Sustainability Initiatives

At the heart of any project are the guiding principles used by the architect to craft the building form and solution to the program. Johnson County Library, Johnson County Facilities, and many of its citizens and community leaders have emphatically expressed an interest that one of the guiding principles be sustainable design. To the authors of this report, sustainable architecture means a balanced and systemic look at all elements of the design and its impact on the local and national environment. This includes following national benchmarks for quality, energy consumption, water consumption, protection of natural resources, and sustainable design. In this case, it is recommended that the library follow the requirements of the United States Green Building Council’s Leadership in Energy and Environmental Design (LEED)³ building certification program. Following these standards will ensure:

• Environmental benefits: Reduce the impacts of natural resource and energy consumption.
• Economic benefits: Improve the bottom line through reduced yearly operational costs.
• Health and safety benefits: Enhance occupant comfort and health.
• Community benefits: Minimize strain on local infrastructures and improve quality of life.

• Johnson County Transit Plans

• Fiber Optic infrastructure

Branch Information

Year Built: 1956
Additions Renovations: 5 times, latest in 1996
Gross Square Footage: 35,258 (including JCCC)
Volumes: 116,930
Parking: 160

Conditions & Observations

Overview – This building is the oldest Library in the system. It was built in 1956. It has been added to numerous times and renovated most recently in 1996.

Site – 2.2 acres - This site is easily accessible from the I-35 corridor and conveniently located at the intersection of Antioch Road and Shawnee Mission Parkway. The growth of the arterial streets has pinched the Library’s site over the years. The parking adjacent to the building is minimal. Additional parking is available 1 block to the west. This west lot is bisected from the main site by the Library system’s facility building, popular retail attractions, and an office building, as well as Slater Street. Slater Street is critical to the traffic flow into nearby businesses, as well as fire department access to Shawnee Mission Parkway from the nearby fire station. Pedestrian access from the west lot to the Library is not ideal. There is not a direct line of sight or pedestrian path from the lot to the Library entrance. Patrons are required to walk in the vehicular traffic flow. Sidewalks and curbs along north lot are crumbling.

Structure – Steel

Code – Not Sprinklered. Second level of building is not accessible via elevator. Stair to second level is not compliant with current building codes.

Roof – 13 year old Modified Bitumen. Areas of roof bubble in the heat and go back down in cooler temperatures. Roof has been reported to be free of leaks. Manufacturer has seen bubbling and has not been asked to repair/replace because it has not leaked. Recommend continuing observation until nearing the end of warranty period.

Exterior Walls – Brick Veneer that appeared to be well maintained in most areas. Brick freestanding wall at west side (near trash enclosure) is spalling. Drilled holes in brick on east elevation are open for water and insect infestation. Also, large holes drilled into wall at mechanical area not sealed around conduit. Some areas of cracking in mortar joints and up brick about 4” from corner visible at northwest corner. Caulking where brick meets abutting sidewalk is pulling away. EIFS exterior at 2nd level is in good condition. EIFS meeting grade at east elevation is damaged, possibly from lawn mowers. EIFS appears to meet lawn, possible insect infestation location. Exterior base of wall meeting pavement needs immediate re-caulking. Windows are aluminum with insulated glass, some are operable.

Exterior light fixtures recessed in the canopy are filled with bugs.

Accessibility (ADA) – No elevator to second floor.

Interior – Main Library has been renovated in 1996. It is in fairly good condition.

The flooring in the lobby is marmoleum with the adjacent restrooms being tile. The Library floor is carpeted. The back of house spaces are mixtures of VCT and carpet. The carpet is showing signs of wear. Replacement recommended in 2-4 years.

Wall finishes are predominantly painted and in fair condition. The main public restrooms have dated finishes. The children’s play area is showing wear and tear on walls and cushions.

Back of house areas have dated finishes and lighting.
The upper level offices have not been renovated and are cramped. There is a stair to the second floor that is architecturally pleasing; however the railing does not meet current codes.

Ceilings – Low ceilings (approximate 9’). Predominantly lay-in ceiling with a gyp board “spine” area across main circulation space. Ceiling tiles are showing dirt. Lighting is mainly 2x2 troffers with 2x4 troffers in smaller rooms, direct-indirect at gyp board spine, and neon cove light around curved feature wall.

MEP Systems – 1996 renovation installed a VAV mechanical system, replaced domestic hot water, electrical main distribution, and light fixtures. Restroom fixtures have automatic flush valves. Hot water boiler for the VAV water reheat was not replaced in 1996, but does not appear to be original with the building. The current mechanical system has no redundancy. With a useful mechanical system life of 20 years, the 1996 system has approximately 7 years of reasonable operable life before maintenance costs or replacement possibilities increase. Building controls are 50% replaced.

IT – This branch has 3T band width. It is one of the largest in the system. It is stressed which makes the staff functions suffer. There is a re-cabling project underway in the building, but not for the entire building. The IT area conditions cause this system to be at a medium risk of failure per JCL’s outside consultant.

Furnishings – Classic library furnishings in good condition. Mostly wood tables and chairs in main library areas. Lounge furniture present in large reading room. Staff furniture appears to be dated and mixed. Staff breakroom lounge furniture is worn.
blue valley
9000 west 151st street
overland park, kansas 66221

BRANCH INFORMATION
Year Built: 2000
Additions Renovations: None
Gross Square Footage: 24,368
Volumes: 112,751
Parking: 99

CONDITIONS & OBSERVATIONS
Overview – This building was built in 2000. It is well maintained. The radial shape of the building allows for good visual access to main circulation spine, however, the wall dividing the adult collections from the young adult and children collections limit flexibility.

Site – 2.2 acres - The site is along the busy arterial street of 151st Street. It is easily accessible from the east. Leaving the site is a right turn only. The site is landlocked by the nearby school, future community pool site, and retail. Traffic flow around the site is relatively easy. Drive thru traffic is around the back of the building and walk-up patrons approach from the parking lot at the front of the building. Staff must cross through the drive thru traffic to enter the building. Concrete curbs and sidewalks around drive thru are degrading. Asphalt and concrete plaza areas are degrading at the connection between the drive-thru lane and the parking lot. The smooth transition for an ADA compliant condition is compromised. Past water drainage flow towards the building are assumed to be corrected by recent site work.

Structure – Steel structure appears to be in good condition.

Code – Our review did not uncover anything that did not comply with current codes. The building is sprinklered.

Roof – Modified Bitumen, original. It was noted that a recent wind storm blew sections of roof membrane off. It appears to be repaired at this time. Some areas appear to be holding water.

Exterior Walls – Split-face block, burnished block walls, metal panel awning, and glass. The windows have been problematic with blown seals due to air pressure issues in the building. Exterior painted metals throughout exterior are all in the process of losing their paint, some metal is galvanized, some is not therefore rust is showing. Windows are aluminum with insulated glass. Window sills at clerestory do not have counter flashing, creating a possible leak area. Sealant in stone parapet cap needs resealing. Vertical cracking in burnished block at backside of parapet is apparent. Some coping along the east side of high roof appear to be pulling off. Exterior paint on steel columns is peeling off and rust is apparent. Flexible flashing at base of wall is oozing out of wall throughout the project; product used is not supposed to be exposed. Joint between burnished block and adjacent sidewalks need resealing. River rock mow strip around building appears to be higher than finished floor. Mow strip could act like a gutter, holding water at exterior wall/ perimeter. Consider lowering if water problems arise. Exterior base of wall meeting pavement needs immediate re-caulking throughout most of the perimeter. Cracking of mortar joints apparent where steel shelf angle is imbedded into split-faced block at staff entry. Jamb of the trash enclosure is severely cracked on southwest corner. It is recommended to rebuild this corner before loose pieces start falling out.

Accessibility (ADA) – Good inside building. There is adequate compliant access to the building from the parking lot, however, degrading asphalt and concrete at plaza create areas for tripping hazards.

Interior – Quarry tile vestibule is in good condition. Carpet is mostly carpet tile and in good condition. Carpet was replaced in 2007. Wall finishes are paint and high performance multi-color type coating that appear to be in good condition. The meeting room fabric wrapped wall panels need to be recovered with fabric suitable for vertical application. Good interior signage.

BUILDING SCORE
Site
Building Envelope  B-
Building Interior  A
Infrastructure  A
Service  A
Total Score  A
Lighting - The curved circulation path has pendants and accent display lighting. This lighting does not lend itself well to browsing/reading along the circulation path. New books are shelved along this path. Linear fluorescent fixtures in collection areas work well. 2x2 fluorescent troffers over reader stations are adequate. Pendant lights feature other reader station areas offering a variety of lighting options for patrons. Individual task lights are also available on some furniture options.

Ceilings – Acoustical ceiling tile over reader station areas are in good condition. Collection areas are open to structure.

MEP Systems – The enclosure for the cooling tower is restricting the airflow around it. Solving this challenge may be difficult given the current City of Overland Park requirements. It may require meetings with City to see what options we have for amending this. The 2006 Masterplan recommended a redesign of the air handling unit to correct negative air pressure in the building. Pressure from HVAC system is blowing front doors open and blowing seals on windows. At the time of this report, this has not been corrected; however a contract is in negotiations. There are many household ceiling fans installed in Meeting Room, story time room, and collection areas. It is unclear if they are correcting a problem or serve some other purpose.

IT- This branch has 2T1 band width. Fiber will be coming into the area in 2009. This building is easy to run cables in. The IT area conditions cause this system to be at a low risk of failure per JCL’s outside consultant.

Furnishings – Wide variety of individual and group stations are in good condition. Furniture is natural finished maple with plastic laminate work surfaces. A variety of chair options are also available, i.e., wood chairs, upholstered task chairs, tablet arm lounge chairs, and large lounge chairs. Furniture in staff lounge appears worn.
blue valley
Cedar Roe
5120 Cedar
Roeland Park, Kansas 66205

Branch Information
Year Built: 1967
Gross Square Footage: 16,063
Volumes: 74,848
Parking: 18

Conditions & Observations
Overview – The building was built in 1969. It won an AIA Design Award in 1970. The facility is highly used and its organization is easy to understand. The facility has an unusable mezzanine because it does not comply with current building codes.

Site – 0.8 Acres - The site is hidden behind a major retail area. It is flanked by residential on 2 sides, Walmart to the east, and a church to the north. Parking is severely undersized. Currently there are 18 parking spots. The church allows the Library to share the parking, which helps, but when there is a function at the church parking is very limited. Parking should be around 4 cars/1,000 sf which would mean 64 spaces. The parking lot is worn, but not as worn as other branch lots. Curbs along the west side are asphalt instead of concrete. There is a small berm up to the adjacent residential properties that appears like it would wash mud into the parking lot in a heavy rain. The exterior concrete mow strip/continuous splash blocks below the eaves of the sloped roofs are severely weathered and crumbling on all elevations. Steel reinforcing is exposed in some instances. The exterior stair on east side is crumbling and needs to be replaced. Wood trim around the roof edge is wood and will need repainting in 2-3 years.

Structure – Concrete, Steel, and Timber construction.

Code - Not Sprinklered. The existing building does not comply with current building code requirements. If any additions are made to this facility, it will require bringing the entire facility up to current codes. There are 3 exits noted in the building, 2 on the west and 1 on the east. The doors on the east side are egress only, however the crumbling stair does not provide a proper egress path from the building. The stairway has a chain across it at the bottom. The 3 exits on the main floor are too close together. Lack of exits leave the mezzanine unusable for program spaces. There are 2 exits out of the basement mechanical and storage space. At the time of the review, the exit out of the mechanical room into an exterior exit way was filled with 8 inches of water. Handrail on stair meets original code, but not current code.

Building Score
Site: F
Building Envelope: C
Building Interior: C
Infrastructure: F
Service: A
Total Score: F

Roof – Shakes on majority of roof appear to be in good shape. There is a small portion of flat roof that is ballasted and well maintained. Leaking of the roof has not been an issue. Roof flashing is copper and has been maintained regularly. Some resealing of joints in coping is needed. Clerestory window sills are adequately raised off roof surface and flashed. Roof drain covers are damaged, rusting, and filling with debris.

Exterior Walls – Brick veneer has some signs of aging. North elevation has moss growing in the grout joints. Single pane windows with steel frames are not energy efficient.

Accessibility (ADA) – Not in compliance. There is a curb cut to the main entry. The secondary egress out the east side does not have an accessible route to the right of way. 1 ADA unisex toilet meets requirements of renovation year, but not current codes. Clearance between shelving units is not always in compliance with required widths.

Interior – Brick and block walls on much of the interior. Neutral colors. Quarry tile in vestibule and entry. Carpet tile is in good condition. Public restrooms have dated finishes, low lighting levels, and appear cramped.

The mezzanine has VCT flooring, acoustical ceiling tile and track lighting. The ceiling tile is dirty from the diffusers. Ceilings – Not many areas have ceilings as most areas are
vaulted. Low ceiling areas have lay-in ceiling in fair condition on the main floor.

Lighting - Suspended fluorescent downlight strips in vaulted areas were installed in 1998 renovation. Lay-in ceilings have 2x2 direct fluorescent fixtures. Restrooms have low lighting levels.

MEP Systems – See the attached Smith & Boucher Report for detailed evaluation. A constant volume multi-zone AHU is original with the 1968 construction and system has no redundancy. The AHU is 21 years beyond its expected service life and is very inefficient. The boiler, pump, air cooled chiller and HVAC Controls were replaced in 2003, however second (rear) boiler has cracked firepot and is not operational. Annual maintenance of the boilers is crucial to their performance and operational life. The boiler exhaust flue is not stainless steel as recommended. The existing flue is showing signs of corrosion and will need to be replaced in 5 – 10 years. Mechanical room is constrained. The electrical main distribution panel is original to the building and operating in good condition, but prone to failure due to being past its operational life and inability to acquire replacement parts. New light fixtures and panels for computer rooms were installed in 1999.

IT Infrastructure – IT controls are in the boiler room in the path around the mechanical equipment. The space is neither adequate nor secured from accidental bumping.

Furnishings – Mostly wood tables and chairs in good condition. Computer stations have desks with upholstered task chairs. The task chairs appear to be a variety of styles. Upholstered lounge chairs are classic library style in good condition. Some old reference desks remain in portions of library. Soft seating in children’s area is wearing.
central resource library
9875 west 87th street
overland park, kansas 66212

BRANCH INFORMATION
Year Built: 1979- became Library in 1995
Gross Square Footage: 90,547
Volumes: 297,817
Parking: 393

CONDITIONS & OBSERVATIONS
Overview – This Library is a heavily used facility. Its open floor plan allows flexibility in reorganizing to fit the current needs of patrons.

Site – 7.8 Acres. The site is adequate for the building and number of visitors. A drive-thru window does not exist at this location. Traffic flow through the drive-up book drop is awkward. Parking lot needs normal patch and repair to asphalt.

Structure – Steel and Precast.

Code - Sprinklered

Roof – Modified Bitumen roof. Portions of the roof are bubbling. Ponding water was observed. Leaks have been encountered inside. Replace in 2-3 years. Roof edge flashing is rusting.

Exterior Walls – Exterior materials are Precast, EIFS, Curtain wall, and Metal. Windows need ongoing resealing. Numerous leaks were observed at windows and sloped glazed roof. Sills flashings at window openings are not continuous. Joints in these flashings need resealing. The building exterior is due for repainting at this time. Rust was noted on steel elements on exterior.

Accessibility (ADA) – Main entry plaza is not wheelchair friendly in its current configuration. Plans are underway to improve the entry plaza.

Interior – Carpentry is in need of replacement.

Ceilings – Acoustical ceiling tile in combination of ceiling panel sizes. Ceiling tiles are dirty.

Lighting - 1x4 fluorescent troffers with concealed lighting around the perimeter of rooms provide most of the general lighting in the collection/reader station areas. Lighting appears to be adequate in collection areas. Main circulation axis of building is lit by indirect fixtures that appear to be improperly aligned for best use of available light; therefore,

MEP Systems – A detailed systems analysis was performed recently outside of this contract. Details of the discoveries can be found in that report. The building has some areas where there isn’t enough air distribution. Walker duct system is not extended into areas originally planned for collection areas. Since the building opened as a Library, more materials are being accessed electronically. This transformation has left portions of the building without enough power receptacles to meet the demand for technology. Electrical service is at capacity. JCL is in negotiations with KCPL regarding upsizing the transformer onsite.

IT - The IT department is housed in the CRL. They are in the middle of a data room evaluation with an outside consultant. This consultant is evaluating IT conditions in all locations. The central IT room is in this building. It was designed with an under floor system for cabling, but due to water leaks it has been reconfigured for overhead cable trays. The IT room does not have adequate cooling capacity. Mobile Liebert units are used for cooling. The server room does not have back-up power, UPS only. The fire suppression system in the server room is a wet-pipe system. A FM-200 system is ideal for this type of room.

BUILDING SCORE

<table>
<thead>
<tr>
<th>Site</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Envelope</td>
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<tr>
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</tr>
<tr>
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<tr>
<td>Service</td>
<td>A</td>
</tr>
<tr>
<td>Total Score</td>
<td>C</td>
</tr>
</tbody>
</table>
The phone system in CRL is no longer supported. Data jacks locations create cable management issues. Consider furniture options that streamline cable management process.

Furnishings – Public furniture is a collection of wood (maple), plastic laminate, metal shelving, and upholstered lounge furniture. The color scheme is dated; however, many of the non-upholstered pieces are in good condition. Upholstered pieces are showing signs of wear. Lounge furniture in staff breakroom is worn.
central resource library
BRANCH INFORMATION
Year Built: 1968
Additions Renovations: 1986 & 2002
Gross Square Footage: 20,458
Volumes: 150,639
Parking: 96

CONDITIONS & OBSERVATIONS
Overview – The branch is a traditional wood framed building common to the JC Nichols neighborhood style. The neighborhood has a stable population, while having a variety of young families, original home owners, and large retirement communities. The branch is adjacent to a busy shopping area in Prairie Village.

Site – 1.8 acres - The parking lot is adequate size for the branch. It has 96 stalls and the recommended would be 82. The traffic flow within the lot is awkward and creates safety concerns for patrons walking in the lot. The lot has a high and low section. The lower section is congested and the high section is low usage. One has to drive through the low section to get to the higher section, which creates the pedestrian/vehicle conflicts. The parking lot appears very worn with the exception of the south side which may have been resurfaced in the past few years. The concrete curbs are crumbling. Some of the curbs are getting shallow due to added asphalt layers. Fencing around A/C unit needs replacement.

Structure – Wood framed. The south addition is partially a crawl space and partially slab on grade. The south east end of the south addition appears to have a sloping floor under the three eastern ranges of collection. Shelving units have been braced above. It is recommended to have a structural engineer evaluate what is causing the slope in the floor.

Code – Fire Alarm system has been installed since 2006 report. Non-Sprinklered. Stair from staff space to basement is being used for storage which is impeding egress width. Verify common path of travel rule for egress from north end of public spaces. Exiting the basement is awkward. There are two exits from the basement that exit into exterior sunken gardens which do not have a way out of them. There are two stairways out of the basement, however one goes through staff space which is constrained by items being stored in it. It appears that this would not meet current building codes, however it is not known if there is an existing variance with the City.

Roof – Cedar shakes and white EPDM have recently been replaced. The flat roof was replaced since the 2006 report. The shakes on the north, south, east, and lower slope of west have been replaced. The high part of the west roof needs replacing.

Exterior Walls – Wood siding and Stone. The siding is in need of painting.

Accessibility (ADA) –The handicapped parking spots do not have a curb cut onto a sidewalk at the front of the stalls. A handicapped patron will have to walk behind the cars to get to a ramp at the front entry. The parking lot slopes to the main entry and may not meet 1:20 maximum slope without a handrail. The entry on the east of the building does not have a ramp. 1 elevator is available to access the lower level.

Interior – There is a mixture of gyp board walls with plaster, stone, CMU, and wood paneled walls. The flooring is predominantly carpeting with some staff spaces that are VCT. Carpeting throughout the Library has been recently replaced with carpet tile. The interior walls at the public areas have been recently painted. CMU walls in staff spaces and south end collection area have peeling paint.

BUILDING SCORE
Site: B+
Building Envelope: D
Building Interior: A
Infrastructure: D
Service: A
Total Score: C
Ceilings – A large portion of the main level is a vaulted wood ceiling in good condition. The south collection area is acoustical lay-in ceiling. The basement has 2x4 acoustical ceiling tile with low headroom.

Lighting - The vaulted area are linear suspension direct fluorescent troffers fixtures running perpendicular to the stacks. Lighting in the low ceiling area are rows of 2x4 direct fluorescent fixtures running parallel to the stacks. Lighting in the basement is 2x4 direct fluorescent fixtures in a general lighting pattern.

MEP Systems – See the attached Smith & Boucher Report for detailed evaluation. The HVAC system appears to be fully functional and well maintained. The existing equipment could be expected to last another 13 years. The main electrical distribution is original and in poor shape. It is missing covers over breaker spaces which presents an electrocution hazard. It should be replaced.

IT - The telecom area at this branch is not adequate and is at high risk of failure.

Furniture – Furniture in staff break room and teen area is worn. Furniture on main library floor consists of plastic seating, upholstered seating, plastic laminate tables metal shelving, and some wood furniture. The furniture is in good condition. Some lounge furniture exists, however they don’t appear to be as comfortable as other branch lounge furniture.
BRANCH INFORMATION
Year Built: 1982
Gross Square Footage: 3,630
Volumes: 20,522
Parking: 6 in back otherwise on street

CONDITIONS & OBSERVATIONS
Overview – This branch is in a small storefront building that faces the main street in Desoto. The prominent location is desirable. This building serves the needs of a small portion of the County. It will not be able to support any substantial population growth in the area.

Site – 0.16 acres - Located on the main street of Desoto. Street parking is shared with other business, and does not appear to be a problem. Curbs on the west side of the building, but the Library is unsure if it is owned by them. Site survey is needed.

Structure – Masonry. Crack in the CMU wall is noted at south east corner of building at wall of storage space.

Code – Non-sprinklered. The facility appears to be within current building codes.

Roof – Composition Shingles in good shape. Age unknown.

Exterior Walls – CMU with brick veneer.

Accessibility (ADA) – Access to entry is good, no curb along frontage. Handicap parking immediately in front of entry.

Interior – Recently reconfigured and freshened up. New paint on CMU walls. Carpet is in fair condition, however may need replacement in 1-3 years. Break room has VCT flooring with painted block walls. Demountable walls on 2 of break room walls.

Ceilings – Acoustical ceiling tile with mild dirt present.

Lighting - 2x4 flourescent lay-in fixtures with lenses provide adequate general lighting.

MEP Systems – Household furnace with condensing units on ground behind building in fenced off area.

IT- The telecom area at this branch is not adequate and is at high risk of failure.

BUILDING SCORE
Site  F
Building Envelope  D-
Building Interior  C
Infrastructure  A
Service  A
Total Score  D

Furniture – Furniture is classic library furniture in good condition. Mixture of wood seating, upholstered lounge furniture, and task chairs are present.
edgerton
319 east nelson
edgerton, kansas 66201

BRANCH INFORMATION
Year Built: 1906 Library opened in 2000 in existing City owned building
Additions Renovations: 2000 when opened.
Gross Square Footage: 2,981
Volumes: 9,636
Parking: 4, however they are street spaces that flank building.

CONDITIONS & OBSERVATIONS
Overview – The City of Edgerton owns the building and is responsible for repairs to the building. Unique feature of outdoor patio on back.

Site – On Edgerton’s main street. Retail storefront in a historic building.

Structure - Masonry

Code – Inhabitable basement.

Roof – Built-up. Several leaks present, however it is the City of Edgerton’s responsibility to repair.

Exterior Walls – Historic brick building. Old wood windows with single pane glass are not energy efficient and have peeling paint present.

Accessibility (ADA) – Front door appears to comply. The second exit out the back will be difficult for someone with a wheelchair or walker due to the brick paver walking surface.

Interior – Newer renovation appears to be well maintained. Carpeting appears to be in fair condition. Walls are brick and painted gyp board that appear to be in good condition.

Ceilings – Acoustical ceiling tile in good condition except where water leaks are present.

Lighting - Linear indirect pendants and recessed can lights. Lighting seems to be adequate for Library function in daytime. Plenty of natural light is available.

MEP Systems – Household furnace with condensing units on ground.

IT- The telecom area at this branch is not adequate and is at high risk of failure.

BUILDING SCORE

Site A
Building Envelope F
Building Interior D
Infrastructure B
Service A

Total Score D+

Furniture – Classic library tables and chairs in good condition. Technology stations have upholstered task chairs (matching) in good condition. Soft lounge seating not available at this location.
BRANCH INFORMATION
Year Built: 2001
Additions Renovations: n/a
Gross Square Footage: 13,545
  Collection: 3,917
  Reader Seating: 1,965
  Staff Space: 1,873
  Meeting Room: 929
  Special Use: 874
  Non-assignable: 3,644
Volumes: 41,967
Parking: 69 JCL Owned, but shared with City Hall

CONDITIONS & OBSERVATIONS
Overview - The building has a nice presence on the site. It is sunken into the hill to the east. Activity on grade above main collection area may be distracting to patrons within the building. The program/meeting spaces offer an opportunity to host events outside of library hours if desired. Way finding in the building seems very intuitive.

Site – 0.91 acres - Location near Main Street of Gardner and adjacent to municipal buildings. Middle school is within walking distance of library. The building is planned for an addition to the west, however it would take away the majority of the parking available for the building, and City Hall. Additional land may be available to the northwest of the site however it would require patrons to cross a street to enter the building. Parking lot and concrete work appears to be in good condition

Structure - Steel

Code – Facility appears to be in compliance. Fire dampers have been installed per the 2006 report.

Roof – Modified bitumen roof 8 years old. Seams fail periodically. Re-roof is probably needed in 2-3 yrs. Lightning protection is present on the building.

Exterior Walls – Brick, burnished block, and glass. East exposure is sun fading book spines along the east elevation.

Accessibility (ADA) – Appears to be in compliance.

Interior – Vestibule and restrooms are tile flooring in good condition. Carpet is carpet tile in good condition. Walls are predominately painted gyp board in good condition. The interior design is a warm, comfortable space with pleasant lighting. There is a nice, consistent signage system.

BUILDING SCORE
Site A
Building Envelope D
Building Interior A
Infrastructure A
Service A
Total Score B+

Ceilings – Acoustical ceiling tile in good condition.

Lighting - Mainly linear indirect with accents of recessed can lights and pendants. Lighting levels seem appropriate throughout. Linear fluorescent fixtures run perpendicular to shelving. Task lighting is available at some reader stations. Linear indirect pendants also present in staff work areas. Lighting is a successful design solution.

MEP Systems – HVAC restart equipment installed and the air handling units were re-engineered per the 2006 report. The air-handling units were originally undersized, but this has been corrected. Household ceiling fans present over information desk, no confirmation if they are a result of undersized AHU’s.

IT- This facility has a dedicated Telecom room. The IT area conditions create this system to be at a low risk of failure per JCL’s outside consultant.

Furniture - Wide variety of individual and group stations are in good condition. Furniture is a light cherry stained wood finish with plastic laminate work surfaces. A variety of chair options are also available, i.e., wood chairs, upholstered task chairs, and large lounge chairs. Staff spaces have systems furniture in good condition and matching.
Lackman
15345 west 87th street parkway
Lenexa, Kansas 66219

BRANCH INFORMATION
Year Built: 1986
Additions Renovations: 1997
Gross Square Footage: 17,843
Volumes: 90,712
Parking: 75

CONDITIONS & OBSERVATIONS
Overview – This facility serves a large population of young adults and young families. The facility was originally constructed in 1986 with a planned expansion that occurred in 1997.

Site – 1.92 acres - The site is hidden from view from 87th street. Parking is adequate.

Structure - Steel

Code – Not Sprinkled. Existing does not appear to comply with exiting requirements. The 2nd exit from the library is through a staff space.

Roof – Modified Bitumen and Standing Seam. There appears to be 1 location where the 2 roof types intersect where a leak is present. There is also a downspout that is creating a leak at the north east corner.

Exterior Walls – Brick, metal, glass, and split-faced block. Windows are aluminum framed with insulating glass.

Accessibility (ADA) - Appears to be within regulations and works well.

Interior – Carpet tile flooring is in fair condition. Carpet was replaced in 2008. Interior walls are painted gyp board. New paint in high-use areas may be needed within 1 year.

Ceilings – Acoustical ceiling tile and painted gyp board. Staff areas and Children's area has flat 9'-0" approx ceiling heights. Ceiling tile in these areas have mild dirt on them. Ceiling in vaulted area is in good condition.

Lighting - Vaulted area is provided by fluorescent fixtures integral with the shelving units and with pendant fixtures. Lighting in staff areas is provided with 2x2 lay-in troffers and recessed can lights. Lighting in children's area is recessed can lights and 1x4 surface mounted troffers installed in a concentric circle configuration perpendicular to the shelving ranges.

BUILDING SCORE
Site A
Building Envelope B
Building Interior B
Infrastructure C
Service A
Total Score B

IT - The telecom area at this branch is not adequate and is at high risk of failure. The cooling of the telecom room is insufficient.

Furniture - Wide variety of individual and group stations are in good condition. Furniture is a natural maple wood finish with plastic laminate work surfaces. A variety of chair options are also available, i.e., wood chairs, upholstered task chairs, and large lounge chairs.
BRANCH INFORMATION
Year Built: 1994
Additions Renovations: presently being added on to and renovated
Gross Square Footage: 11,800 (19,000 new SF)
Volumes: 85,000
Parking: 54

CONDITIONS & OBSERVATIONS
Overview - This facility was under a significant addition and renovation at the time of this report. The report assumes that most of the previous building envelope, interior, and infrastructure issues have been corrected and brought to current standards and expectations. Service has been excellent and is expected to continue. The site is shared with City. The expansion has filled out the site and limited onsite parking for Library patrons. This will be its challenge moving forward.

Site – 1.49 acres

BUILDING SCORE
Site D
Building Envelope A
Building Interior A
Infrastructure A
Service A

Total Score B+
oak park
9500 bluejacket
overland park, kansas 66214

BRANCH INFORMATION
Year Built: 1971
Additions Renovations: 1982
Gross Square Footage: 17,569
Volumes: 109,563
Parking: 90

CONDITIONS & OBSERVATIONS
Overview – This branch is a long narrow building occupying the eastern half of a long site. The western half of the site is a green space. The building shape limits flexibility in reconfiguring the space, as well as creates challenges for visual access to different areas. The meeting room is at a far end of the library which appears very remote.

Site – 3.2 acres - Book drop in middle of parking lot, not ideal for staff access. North side of building does not have a lot of site lighting for patrons using north entry.

Structure – Steel

Code – The exterior railing at the main entry does not comply with the requirements of a guardrail per the current codes.

Roof – Mansard standing seam metal roof with stainless steel metal panels as back of parapet. New EPDM on eastern half of flat room. Modified Bitumen on western addition. EPDM roof appears to need greater cricketing for proper drainage.

Exterior Walls – Brick with wood trim and aluminum windows. Brick cracking was noticed. Disconnected downspout noted on east end.

Accessibility (ADA) – An accessible route is available to the building, however it is at the western end of the site and one would have to travel through the loading dock area to reach the main entry.

Interior - Carpeted vestibule is worn. Carpet throughout branch is worn, replacement needed within 1 year. Interior walls are painted gyp board. Some newer paint accent walls are in good shape and add warmth to the facility.

Ceilings – Acoustical ceiling tile throughout.

Lighting - 2x4 fluorescent lay-in fixtures with lenses provide general lighting. Light levels appear low in some areas of facility.

BUILDING SCORE
Site B+
Building Envelope C
Building Interior F
Infrastructure F
Service A

Total Score F

MEP Systems - Two independent mechanical systems serve the original building and the addition. Both are original. The air handling unit that serves the original building is 39 years old. It is not performing well and failure is inevitable. The unit has degraded to the point where it does not perform properly. The unit serving the addition is well maintained but is at the end of its useful service life. Electrical equipment and lighting are original with the construction and need to be replaced. Domestic hot water heater is performing adequately and can last up to another 7 years. Restroom fixtures have had automatic flush valves installed.

IT - The telecom area at this branch is not adequate and is at high risk of failure. The cooling of the telecom room is insufficient.

Furniture – Mix and match collection of furniture. Variety of plastic chairs and plastic laminate workstations available. Task chairs and lounge furniture present in adult collection areas.
BRANCH INFORMATION
Year Built: 1992
Additions Renovations: None
Gross Square Footage: 18,221
Volumes: 70,321
Parking: 75 dedicated per Interlocal Agreement.

CONDITIONS & OBSERVATIONS
Overview - The 17 year old branch has a prominent location on the site with other community buildings. It serves its patron base well. It was planned with future space in the lower level which was shelving in the original construction. The building is well maintained, however the interior finishes could use upgrading. The service area for this branch is ready for the additional space available in the basement.

Site - 0.7 acres - The site is owned by City except where the building sits. The library is co-located with the Civic Center and Community pool. The orientation of the building offers great natural light into both levels of the building. The approach to the drive up book drop does not have a long enough queuing line which forces vehicles to approach the drive-thru at an oblique angle. This is awkward for patrons.

Structure - Steel. Column bases in basement are rusting due to water infiltration at base of windows.

Code - Egress through western exit stair is not fully accessible. Building is prepped for the addition of an elevator to the basement when the basement is finished. East exit from adult collection area needs to be clear of accessory furniture.

Roof - Modified Bitumen, 17 years old.

Exterior Walls - Brick and glass. The Brick appears to be in good condition. The glazing is dirty and the window system has leaks. The base of the window system has began to corrode/rust.

Accessibility (ADA) – Good access into building.

Interior – The interior is mostly carpeted floors and drywall walls. The carpet is beginning to show wear signs. Repainting interior could be expected in 1-3 years.

BUILDING SCORE
Site A
Building Envelope C
Building Interior B
Infrastructure A
Service A

Total Score B+

Ceilings – Vaulted ceiling has wood finish. It appears to be in great condition. Lower ceilings are acoustical ceiling tile that appears to be in fair condition.

Lighting - Consists of high-bay mercury vapor lighting. These fixtures have varied lamp colors based on age of lamp. This type of lamp isn't the preferred type for this application. Lighting in the suspended ceiling is 1x4 fluorescent troffers running in the same direction of the shelving units.

MEP Systems – Baseboard heating along window systems. The heating units in the basement have been sitting in dampness and are showing signs of rust.

IT - The telecom area at this branch is not adequate and is at high risk of failure. The cooling of the telecom room is insufficient.

Furniture – Variety of plastic chairs, plastic laminate tables, wood tables, wood chairs, and vinyl upholstered lounge chairs. Appears to be in good condition.
SHAWNEE BRANCH
Basement Floor Plan
BRANCH INFORMATION
Year Built: 1982
Additions Renovations: 2007
Gross Square Footage: 3,004
Volumes: 15,590
Parking: 26

CONDITIONS & OBSERVATIONS
Overview
Site – 0.41 acres.
Structure – CMU masonry
Code – Appeared in compliance.
Roof – Composition shingles
Exterior Walls – Brick and Glass
Accessibility (ADA) – Everything appeared in compliance.
Interior – Recently repainted. Carpet is showing wear. Replacement may be needed in 1-3 years.
Ceilings - Acoustical ceiling tile with mild dirt present.
Lighting - 2x4 flourescent lay-in fixtures with lenses provide adequate general lighting.
MEP Systems – household furnace
IT - The telecom area at this branch is in an office which is not adequate and is at high risk of failure.
Furniture – Classic library wood tables and chairs, upholstered lounge chairs and task seating in good condition

BUILDING SCORE
Site  A
Building Envelope  B
Building Interior  F
Infrastructure  A
Service  B
Total Score  C
SPRING HILL BRANCH
First Floor Plan
JOHNSON COUNTY LIBRARIES  
MEP System Evaluations  
Johnson County, Kansas  
March 17, 2009

Facilities Description

In this analysis of the Johnson County Libraries four buildings were studied and are included in this report. Table 2.1 lists the facilities and square footage of the buildings included in this report.

Table 2.1

<table>
<thead>
<tr>
<th>Building Name</th>
<th>Square Footage</th>
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<tr>
<td>Antioch Library</td>
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<td>Cedar Roe Library</td>
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<td>Corinth Library</td>
<td>20,475</td>
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<tr>
<td>Oak Park Library</td>
<td>17,569</td>
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ANTIOCH LIBRARY

The Antioch Branch Library was originally constructed in 1956 and was renovated in 1996. The 1996 renovation of the building included demolition of the existing HVAC system and installation of a new system to serve the heating and cooling needs of the renovated building. The only piece of HVAC equipment that was not replaced as part of the renovation was the existing hot water heating boiler. New electrical main distribution equipment was also installed as part of the renovation to accommodate the needs of the new HVAC equipment and to replace the existing original electrical main distribution equipment which at the time of the renovation was 40 years old and at the end of its useful life primarily due to unavailable parts. New light fixtures throughout the facility were also installed as part of the renovation.
The current HVAC system that was installed in 1996 as part of the renovation consists of a variable air volume (VAV) air handling unit, variable air volume terminal units with hot water re-heat coils, the existing hot water boiler that was not replaced, a hot water pump, and an air cooled chiller and a chilled water pump.

The VAV air handling unit is a custom built unit manufactured by Racan Industries. It is located in the mechanical room on the southwest corner of the building and contains a chilled water coil and a hot water coil that are served by the chilled water and hot water heating distribution systems. The air handling unit also has three humidifiers to provide active humidification for the building.

The VAV terminal units are located throughout the building and provide temperature control and ventilation for individual spaces and zones throughout the building. The VAV air handling unit provides supply air that is conditioned to approximately 55°F to the individual VAV terminal units. The terminal units supply variable volumes of this supply air to condition the individual spaces and if there is a call for heat the minimum volume of the supply air is provided and heated via the re-heat coils in the terminal units to heat the space. Thermostats in the individual spaces control the VAV terminal units.

The hot water boiler is located in the boiler room on the southwest corner of the building and is a gas-fired forced draft fire-tube boiler that was manufactured by Kewanee. The boiler does not appear to be the original boiler that was installed in 1956, but is a vintage that is older than 1996. The boiler heats the hot water that is circulated by the hot water heating pump. This water serves the hot water re-heat coils for the VAV terminal units, the hot water pre-heat coil in the VAV air handling unit, and the original existing cabinet unit heaters that are located at the entrances and exits to the building.
The air cooled chiller is located outdoors at the southwest corner of the building and was manufactured by McQuay. The chiller provides mechanical cooling for the building via the chilled water coil located in the VAV air handling unit. Chilled water is pumped from the chiller through the chilled water coil in the VAV air handling unit by the chilled water pump.

The HVAC controls were installed in 1996 in association with the building and HVAC renovation and are direct digital controls (DDC).

The HVAC system that currently serves the building is approximately 13 years old with the exception of the boiler which appears to be older than the system components that were installed in 1996. The HVAC system appears to be fully functional and has been well maintained. The average equipment service life of the HVAC equipment that currently serves the building is 20 years. Based on the average equipment service life, and the fact that the equipment has been well maintained the equipment could be expected to last another 7 years without any specific piece of equipment having a catastrophic failure. The exception to this is the Boiler.

The boiler that currently serves the building was manufactured by Kewanee. Kewanee was purchased by Burnham Industries in 1991 and Burnham Industries manufactured Kewanee boilers under the Burnham name until production was ceased in 2001. Because Kewanee boilers are no longer manufactured it is becoming increasing difficult to find parts to repair and maintain the boilers. The boiler appears to be at the end of its equipment service life and if there is a failure it may be very difficult to repair.

The current HVAC system does not have any redundancy built into the system. If the VAV air handling unit, the boiler, or the chiller, fail the building will be without heating or cooling until the equipment can be repaired or replaced. Based on the current age of
the equipment it will become increasing difficult to find parts in the near future.

As stated previously the main electrical distribution equipment and the lighting systems in the building were replaced in 1996. These systems are in good shape and the average equipment service life of these systems is 30 years. These systems can be expected to last another 17 years without the need for replacement.

The plumbing fixtures in building are in good shape and currently the toilets and the urinals have automatic flush valves installed. The domestic hot water heater is in good shape and can be expected to last another 7 years.

CEDAR ROE LIBRARY

The Cedar Roe Branch Library was originally constructed in 1968 and was renovated in 19XX and 1999. The 19XX renovation of the building included the replacement of the existing hot water heating boiler, the associated pump, the air cooled chiller, and the existing building HVAC controls. The 1999 renovation included revisions to the existing ductwork and the addition of new ductwork to serve renovated spaces. The 1999 renovation also included new lighting systems throughout the building.

The current HVAC system that serves the building consists of a constant volume multi-zone air handling unit, (2) hot water boilers, (2) hot water pumps, and an air cooled condensing unit.

The constant volume multi-zone air handling unit that serves the building was manufactured by McQuay and is the original air handling unit that was installed in 1968 when the building was constructed. The air handling unit is located in the basement mechanical room and contains a direct expansion (DX) cooling coil and a hot water heating coil that are served respectively by the air cooled condensing unit and the hot water heating distribution system.
multi-zone air handling unit provides temperature control and ventilation to individual spaces via supply air ductwork. The supply air temperature for each zone of the supply air ductwork that is connected to the air handling unit is regulated by a thermostat in the space that it serves. The thermostat controls a set of dampers in the air handling unit that mixes supply air from the DX cooling coil and the hot water heating coil to provide either cooling or heating to the individual spaces.

The (2) hot water boilers that are located in the boiler room in the basement of the building are gas fired condensing boilers manufactured by Fulton. The boilers were installed in 19XX and the boiler labeled B-2 is currently not operational. The boiler labeled B-1 is operational and currently heats the water that is circulated by (1) of the (2) hot water pumps. There currently are (2) hot water pumps for redundancy and only (1) is required at any given time to circulate the heating hot water for the building. The heating hot water system serves the heating coil in the air handling unit and the original existing cabinet unit heaters that are located at the entrances and exits to the building.

The air cooled condensing unit is located outdoors on the southwest corner of the building, was installed in 19XX, and was manufactured by York. The air cooled condensing unit provides mechanical cooling for the building via the DX cooling coil in the multi-zone air handling unit. Refrigerant is circulated from the condensing unit to the DX cooling coil through refrigerant piping.

The original pneumatic controls for the building were removed as part of the 19XX renovation and new direct digital controls (DDC) were installed. New DDC thermostats were installed throughout the building and new damper and valve actuators were installed on the air handling unit. The DDC controls that have been installed are Steafa controls. The original pneumatic thermostats located throughout the building were abandoned in place.
The HVAC system that currently serves the building appears to be completely functional, with the exception of boiler B-2, and it is clear that steps have been taken to maintain and repair equipment that is beyond its normal equipment service life. The average equipment service life of the HVAC equipment that is installed in this building is 20 years.

The multi-zone air handling unit is 41 years old and 21 years beyond its expected equipment service life. In addition to being beyond its service life the air handling unit is very inefficient in its heating and cooling energy use. Multi-zone air handling units simultaneously heat and cool the supply air to maintain the zone temperature setpoint. Modern energy efficient air handling units do not allow simultaneous heating and cooling, which reduces unnecessary energy use, and therefore multi-zone air handling units are not commonly used in HVAC applications any longer.

The boilers that serve the building are high efficiency condensing boilers and are XX years old. Boiler B-2 is currently inoperable and it is in need of repair. If Boiler B-2 is fixed and the boilers are cycled to each run on a lead-lag cycle where (1) boiler operates to provide heating and then is cycled off and the other boiler is cycled on, on a weekly basis, the boilers should last another XX years if maintained. Part of the annual maintenance requirement of the Fulton high efficiency condensing boilers is to change the spark plug, clean the flapper valves, and verify proper combustion. This annual maintenance if not performed will shorten the equipment service life of the boiler and has a significant cost per boiler. Condensing type boilers required stainless steel boilers flues due to the corrosive nature of the boiler exhaust. The existing boiler exhaust flues show signs of corrosion and should be repaired to ensure that the condensate from the boiler exhaust gases can drain from the boiler exhaust stack and prevent further damage. Due to the current state of the boiler exhaust flue it would be anticipated that they would need replacement in 5 to 10 years.
The air cooled condensing unit is XX years old and in good condition. It would be expected to be in service for another XX years without catastrophic failure. The existing refrigerant piping from the air cooled condensing unit is rusted and in need of replacement before substantial leaks become present. Refrigerant leaks are costly and pose and environmental hazard.

The current operational HVAC system does not have any redundancy built into the system. If the multi-zone air handling unit, the air cooled condensing unit, or the currently operational boiler fail the building will be without heating or cooling until the equipment can be repaired or replaced. Based on the age of the air handling unit, if there is a failure of any component of this piece of equipment it will be costly to repair due to the unavailability of parts.

The main electrical distribution equipment is the original equipment that was installed in 1968 when the building was constructed. This equipment is beyond its equipment service life but is in good condition and does not require replacement unless a renovation to the building takes place. Due to the inability to get parts for this equipment it would require replacement if the electrical requirements for any system in the building change. New lighting fixtures were installed in 1999 and can be expected to provide another 20 years of service. In addition to the new light fixtures new lighting power panels and computer power panels were installed during the 1999 renovation.

The plumbing fixtures in the building are in good shape and currently are manually operated fixtures. The existing domestic hot water heater is in good condition and could be expected to last another 5 years.

**CORINTH LIBRARY**

The Corinth Branch Library was originally constructed in 1968 and was renovated in 2002. The 2002 renovation to the building included
the replacement of the existing constant volume direct expansion (DX) cooling and steam heating air handling units and their associated air cooled condensing units. A new steam boiler and steam condensate pumps were installed in 19XX and new lighting systems were installed in 19XX.

The current HVAC system that serves the building consists of (4) constant volume DX cooling and steam heating air handling units, (4) air cooled condensing units, and (2) steam heating boilers.

The constant volume air handling units that serve the building provide temperature control and ventilation to (4) different zones of the building. All (4) air handling units were manufactured by Aaon with three of the units located in the south basement mechanical room and (1) unit located in the northwest basement mechanical room. The units deliver heating or cooling supply air to the zones that they serve and regulate the temperature of the zone based on a call for heating or cooling by the unit thermostat located in that zone.

The air cooled condensing units located on the exterior of the building provide mechanical cooling for the building via DX cooling coils in the air handling units and refrigerant that is circulated from each individual condensing unit to its associated air handling unit cooling coil through refrigerant piping. (3) Condensing units are located on the exterior south side of the building and (1) unit is located on the roof of the building. (2) Of the units located on the south side of the building were manufactured by Carrier. The remaining condensing units were manufactured by Aaon.

The boilers that serve the building heating system are gas fired cast iron steam boilers. The boilers provide heating for the building by supplying steam to the steam heating coils in the air handling units. Condensate from the steam heating coils is returned to condensate collection pumps where it is pumped back to the
boilers to be reheated to become supply steam again. There is a condensate return pump for each boiler. Boiler B-1, located in the south basement mechanical room, was manufactured by the Smith Boiler Company. Boiler B-2, located in the northwest basement mechanical room, was manufactured by the Ajax Boiler Company. Boiler B-1 currently serves the (3) air handling units in the south basement mechanical room. Boiler B-2 currently serves the air handling unit in the northwest basement mechanical room and is operated only during periods of extreme cold due to the boiler size and firing rate. The system that boiler B-2 serves is small and due to a lack of substantial heating load the boiler quickly satisfies the steam requirement and in turn has a rapid firing rate of off and on.

The HVAC system that currently serves the building appears to be fully functional and well maintained. The average equipment service life for the air handling units and the condensing units for this building is 20 years. The average equipment service life of the cast iron steam heating boilers is 30 years. Based on the condition of this equipment it could be expected that the air handling equipment and associated air cooled condensers will last another 13 years. Boilers B-1 can be expected to last another XX years. The equipment service life expectancy of boiler B-2 has been shortened due to the increased firing rates that the boiler has experienced. Boiler B-2 is oversized for its current application and a fairly complex system to provide heating for a single air handling unit of the size that it currently serves. The currently application of boiler B-2 requires added maintenance and an alternative heating source should be considered. Steam heating in general requires more maintenance than other forms of heating and for small applications would not be considered the first or most efficient choice.

The main electrical distribution equipment for the building is located in the southwest basement mechanical room and is the original equipment that was installed in 1968 when the building was constructed. The electrical distribution system has had newer panel
installed adjacent to the existing panels to accommodate additional loads that have been added to the building over the years. The original main electrical distribution equipment is not in good shape and is missing covers over breaker spaces that present an electrocution hazard. The main electrical panels are at the end of their equipment service life and should be replaced for safety reasons. New lighting fixtures were installed in 19XX and can be expected to provide another XX years of service.

The plumbing fixtures in building are in good shape and currently the toilets and the urinals have automatic flush valves installed. The domestic hot water heater is in good shape and can be expected to last another 7 years.

**OAK PARK LIBRARY**

The Oak Park Branch Library was originally constructed in 1970 and had an addition to the west side of the building added in 19XX. The MEP systems that currently serve the original building and the building addition are the original systems with the exception of some system modifications to maintain operation and functionality.

There are currently two separate HVAC systems that serve the building. The HVAC system that serves the original building consists of a built-up constant volume multi-zone air handling unit with a DX cooling coil and zone dampers for the supply air ductwork, (2) air cooled condensing units, and perimeter electric cabinet unit heaters. The HVAC system that serves the building addition consists of (2) constant volume air handling units with DX cooling coils and electric heaters and (2) air cooled condensing units.

The constant volume multi-zone air handling unit that serves the original building is a built up unit that is constructed of duct fiberboard with a large vane axial fan manufactured by American Blower Fan, supply air ductwork for individual zones with zone dampers, and a DX cooling coil. It was installed in 1970 when the
building was constructed and is located in the mechanical penthouse. This air handling unit provides ventilation and cooling for the building through zone ductwork. Thermostats in the individual zones control dampers in the supply air ductwork to regulate the volume of supply air to the associated zone. The DX cooling coil in the air handling unit is served by (2) air cooled condensing units located on the roof of the original building.

The (2) air cooled condensing units located on the roof of the original building provide mechanic cooling for the original building via the DX cooling coils located in the air handling unit that serves the building. The air cooled condensing units were manufactured by Carrier and are units that were installed to replace the original air cooled condensing unit for the original building. Refrigerant is circulated from each air cooled condensing unit to an associated DX cooling coil in the air handling unit through refrigerant piping. These units appear to be approximately 15-20 years old.

The original building is heated with perimeter electric cabinet unit heaters located below each window that were installed when the building was constructed in 1970. These units utilize a fan and an electric heating coil to heat the air in the space when the associated thermostat calls for heating.

The constant volume air handling units that serve the building addition are located in the south mechanical room of the building addition and were manufactured by Lennox. These units provide temperature control and ventilation to (2) zones of the building addition. The units deliver heating or cooling supply air to the zones that they serve and regulate the temperature of the zone based on a call for heating or cooling by the unit thermostat located in that zone. The units contain electric resistance heaters that heat the supply air when heating is required for each zone of the building addition.
The air cooled condensing units located on the roof of the building addition provide mechanical cooling for the building addition via DX cooling coils in the air handling units that serve the building addition. Refrigerant is circulated from each individual condensing unit to its associated air handling unit cooling coil through refrigerant piping.

The normal equipment service life of the HVAC equipment that is serving this building is 20 years. All of the HVAC equipment is either at the end of its service life or beyond it.

The air handling unit that serves the original building is 39 years old and has degraded to the point that catastrophic failure is inevitable and the unit is no longer operating with acceptable performance characteristics. Many steps have been taken to prolong the life of this equipment, including new controls; however the material that the unit was constructed of has degraded to a point where it is failing to perform properly. The HVAC equipment for the original building is due for immediate replacement including the air handling unit, the associated condensing units, and the cabinet unit heaters. The original design for this system would not be an application that would be considered for a modern energy efficient building. To replace this system with an energy efficient system that is appropriate for the building application would take a complete re-design of the system.

The HVAC system for the building addition appears to be fully functional and has been well maintained. This system is at the end of its equipment service life and is due for replacement based on its age. This system could be maintained for another 5 years but the operating efficiencies of the units have been degraded over the service life of the equipment causing operating and maintenance costs to be higher.
The electrical distribution equipment for this building is the original equipment that was installed in 1970 and the equipment that was installed in 19XX as part of the building addition. This equipment is at the end of its service life and will need to be replaced in association with the required HVAC system replacement due to the unavailability of parts to accommodate a new HVAC system with different electrical requirements. The lighting systems in the building are original and new energy efficient light fixtures should be installed to provide significant energy and maintenance savings for the building.

The plumbing fixtures in building are in good shape and currently the toilets and the urinals have automatic flush valves installed. The domestic hot water heater is in good shape and can be expected to last another 7 years.

Please refer to the Appendix A for a summary of the MEP systems evaluation.

END OF REPORT