# SOUTHWEST REGIONAL LIBRARY

The Southwest Regional Library of the Fort Worth Library located in south Fort Worth. The building occupies a prime location north of a retail district north of Loop 820, 7.01 miles from the Central Library.

*Official Name:* Southwest Regional Library

*Building Address:* 4001 Library Lane

*Library Facility Code:* SWR

## Site Description

The building is situated on a landscaped lot of 1.99 acres, facing Kimberly Lane. The topography of the site slopes gently downward, from the public entrance toward the west. The primary maintenance responsibility for the site falls under the supervision of the City of Fort Worth Parks and Community Services Department. Routine maintenance includes cutting of the grass and landscaping around the building and parking lot. A xeriscape garden on the south end of the building, referred to as the Native Plant Garden by the caretakers, is sponsored by the Fort Worth Native Plant Society of Texas and the Master Gardeners of Fort Worth, and maintained by the Master Gardeners. Drawing SWR-1 illustrates the site of the Southwest Regional Library (11" x 17" overleaf).

## Architectural Description

Construction of the original building was completed in 1987. The facility appears to be well built and in good condition for its age. No construction drawings of this facility were available for review. Drawing SWR-2 depicts the Ground Floor and Mezzanine of the Southwest Regional Library (11" x 17" overleaf). Drawing SWR-3 depicts the square footage of each room of the Ground Floor and Mezzanine (also 11" x 17" overleaf) as tabulated in Table A5.13.1.

*Square Footage:* There are currently 25,661 building gross square feet (bgsf),. There are 21,480 net assignable square feet (nasf) within the facility. The library currently occupies the entire building. Table A5.13.1 contains a room-by-room square footage tabulation for the facility.

**Table A5.13.1**
Existing Square Footage Tabulation, Room-by-Room, Southwest Regional Library

### Ground Floor

| room no. | room name | square footage net assignable | building gross |
|---|---|---|---|
| 101 | Entrance Lobby | 464.07 | |
| 102 | Circulation Desk | 732.81 | |
| 103 | Children's Area | 3,812.49 | |
| 104 | Adult Reading Area | 3,819.03 | |
| 105 | Main Library Area | 4,177.28 | |
| 106 | Open Stack Area | 3,988.92 | |
| 107 | Staff Work Room | 1,000.28 | |
| 108 | Staff Break Room | 239.40 | |
| 109 | Women's Toilet | | 234.23 |
| 110 | Men's Toilet | | 283.33 |
| 111 | Janitor's Room | | 131.11 |
| 112 | Kitchenette | 128.07 | |
| 113 | Mechanical Room | | 165.31 |
| 114 | North Entry | | 25.15 |
| 115 | Storage | 38.48 | |
| 116 | Passage | | 80.29 |
| 117 | Mechanical Room | | 15.75 |
| 118 | Stage | 162.62 | |
| 119 | Meeting Room | 912.54 | |
| 120 | Storage | 67.44 | |
| 121 | Projection Room | 65.89 | |
| 122 | Coats | 30.61 | |
| 123 | Ladder | | 6.83 |
| 124 | Ladder | | 6.83 |
| 125 | Electrical Room | | 103.29 |

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**Table A5.13.1** *(continued)*
Existing Square Footage Tabulation, Room-by-Room,
Southwest Regional Library

### Ground Floor

| room no. | room name | square footage net assignable | square footage building gross |
|---|---|---|---|
| 126 | Electrical Room | | 38.00 |
| 127 | Staff Entry | 36.00 | |
| 128 | Telecom Room | | 9.33 |
| 129 | Book Drop | 54.88 | |
| 130 | Storage Room | 17.48 | |
| 131 | Staff Work Room | 288.89 | |
| 132 | Manager's Office | 184.72 | |
| 133 | Assistant Manager's Office | 158.75 | |
| 134 | South Entry | | 19.48 |
| 135 | Passage | 1,099.78 | |
| | assigned rooms and spaces | 21,480.43 | |
| | unassigned walls, pipe chases, etc. | | 2,510.84 |
| | TOTAL | | 23,991.27 |
| | EFFICIENCY | | 89.53% |

### Mezzanine

| room no. | room name | square footage net assignable | square footage building gross |
|---|---|---|---|
| 201 | Mechanical Room | | 1,106.08 |
| 202 | Mechanical Room | | 424.20 |
| | assigned rooms and spaces | 0.00 | |
| | unassigned walls, pipe chases, etc. | | 139.81 |
| | TOTAL | | 1,670.09 |
| | EFFICIENCY | | 0.00% |

### Summary

| floor | | net assignable square footage | building gross square footage | efficiency |
|---|---|---|---|---|
| 100 | Ground Floor | 21,480.43 | 23,991.27 | 89.53% |
| 200 | Mezzanine | 0.00 | 1,670.09 | 0.00% |
| | **TOTAL** | **21,480.43** | **25,661.36** | **83.71%** |

The T/PW facilities database attributes 25,000 bgsf to the Southwest Regional Library, which is a close approximation of the square footage, including the two mechanical mezzanines, as well as all of the enclosed space.

## Trade Area Population

The population within an 11-minute drive time trade area for the Southwest Regional Library is 167,778, as determined by the Customer Analytics Consultants.

## Driving Distance/Time to Other Libraries

| | | |
|---|---|---|
| East | 13.65 miles | 19 minutes |
| Central Library | 7.01 miles | 14 minutes |

## Demographics

| | |
|---|---|
| Households with children | 20,476 |
| Persons age 17 and under | 38,574 |
| Persons age 18 to 64 | 106,234 |
| Persons age 65+ | 22,970 |
| Percent Black/African-American | 12.7% |
| Percent Hispanic | 27.9% |

## Output Measures

The Library Consultants calculated a number of measurements of operating efficiency and their respective rankings among the 15 current FWL libraries, summarized in Table A5.13.2.

**Table A5.13.2**
Output Measures, Southwest Library

| output | measure | ranking |
|---|---|---|
| Contacts per capita | 9.36 | 9 of 15 |
| Cost efficiency per contact | $1.04 | 1 of 15 |
| Cost efficiency per SF to operate | $66.27 | 7 of 15 |

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## Collections

The current total collection size is 147,252.  At 0.88 items per capita, the collection does not compare favorably to the minimum standard of 2.00 items per capita.

The responsiveness of collections to younger core customers reveals that the population under 17 years of age is 23.0 percent of the total, and the combined Children's/Teen collections are 38.7 percent of total.  The library materials and services more likely to be used at Southwest Regional are Best Sellers, Books on CD, Adult Fiction, and Adult Non-Fiction.

The space required to house the collections in an ADA/User-Friendly standard is 18,138 square feet, or 72.6% of the total building size.

## Computers & Seating

Based on the per capita number of computers provided for the public, the Southwest Library, with 31, is significantly below "Basic" when compared to Texas State Library standards.  To achieve the "Basic" level by the year 2020, Southwest will need 84 public computers.

The current public seating ratio, including computers, at Southwest is one seat per 980 (1:980) collection items.  This compares very favorably to the community library standard of 1:1,500 to 1:1,800 collection items.

## Site & Building Capacity

The Southwest Regional Library currently provides 85 parking spaces on site.  At 25,600 gross square feet, 128 parking spaces would be needed at the Southwest Library, in order to meet the minimum standard of one space per 200 bgsf of building, as currently sized.

Staff workspace is 7.98% of total net assignable square feet (nasf) of the building – a shortfall when compared to the minimum standard of 10% for buildings up to 25,000 gross square feet.  In terms of square footage, the shortfall equates to 439 nasf less than the minimum need of 2,175 nasf.

**Table A5.13.3**
Site & Building Capacity, Southwest Regional Library

| unit of capacity | current 2010 | 2010 need to standards | current vs. standards |
|---|---|---|---|
| Net assignable square feet | 21,480 | 21,987 | 97.69% |
| Building gross square feet | 25,661 | 25,867 | 96.60% |
| Site area, in acres | 1.99 | 2.38 | 83.5% |
| Parking spaces | 85 | 129 | 65.7% |

## Growth Potential

***Adaptability:***  The building is composed of open spaces, with structural spans of 30 feet both east-to-west and north-to-south.  An exception is the Meeting Room 119, which is a clear span room of 28 by 42 feet.  Changes to the configuration of the spaces appear to be feasible.

***Expandability:***  Additions to the south and the east appear most feasible, using the vacant land on the site for future horizontal expansion.  It is not conceivable that vertical expansion could be achieved, given a preliminary analysis of the roof structure.  The xeriscape garden, HVAC equipment, and electrical transformer on the south end of the building should be considered in any plans for southward expansion.

## Technology Assessment

Historic computer usage at the Southwest Regional Library is presented for fiscal years 2007 through 2009 in Table A5.13.4 for PC logins, PC logins to library visits, and wi-fi connections.

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**Table A5.13.4**
Historic Computer Usage, Southwest Regional Library

| service item | 2007 | 2008 | 2009 |
|---|---|---|---|
| PC Logins | 10,540 | 9,061 | 9,266 |
| PC Logins to Visits Ratio | 54.1% | 57.2% | 55.3% |
| Wi-Fi Connections | n/a | 1,701 | 5,880 |

***Computer Network:*** The library was designed with technology in mind. Floor boxes include network connections and power outlets. However, the placement of the floor boxes does not match the placement of the technology, particularly the public computers. Wi-fi has been available at the Southwest Library since May of 2008. The network equipment rack is installed in the small room where the outdoor book return comes into the building.

***Public Computers:*** A summary of the distribution of public computers is provided in Table A5.13.5 below. Computer reservation stations and print release stations are not included in the Adult Services quantity.

**Table A5.13.5**
Public Computer Distribution, Southwest Regional Library

| computer location | quantity |
|---|---|
| Public Access Catalog (PAC) | 6 |
| Adult Services | 17 |
| Teen Services | 0 |
| Children's Services | 8 |
| TOTAL | 31 |

The six PACs provided are sufficient to meet demand. Six Internet computers are located in the Children's area. Two early literacy computers are provided, one in the preschool area and the other at the entrance of the Children's area. One reservation station and one print release station are provided, but an additional reservation station would improve customer service and minimize lines at the reservation station.

Sufficient workspace is provided for the users of the Internet computers. Not all computers face the service desk, making it more difficult for staff to monitor compliance with the use policies. More consolidation of the location of the adult computers would maximize staffing efficiencies. The library's public computers were used 26.2% more hours per computer than the system-wide average of public computer use.

***Public Technology:*** A digital signage system is in use. A security system for library materials is installed. The library was designed with multiple public entrances, some of which are not easily monitored by library staff, making a security system more necessary. Wi-fi users have easy access to power outlets at the desks along the wall. Gaming events are scheduled every week and use the video display in the Meeting Room.

***Computer Training:*** No computer training for the public is offered.

***Self-Service:*** One self-check station is provided. A second station (reallocated from Central) was added at the end of 2009. The lack of functions to allow customers to process payments at the self-check and the difficulty in handling all material formats at the unit are problematic.

***Study Rooms & Meeting Spaces:*** No study rooms exist. A flat panel video display is installed in the Meeting Room. A portable projector is available for use with a screen. The screen is on the same wall as the video display and hides the video display, making it difficult to use both at the same time, should a programmer want to do so. Network connectivity is available via installed network jacks or via wireless. A laptop storage and/or charging cart could be accommodated in the Meeting Room if the library implemented circulating laptops.

***Technology for Staff:*** A total of 25 staff computers are provided. The quantity of computers for staff is insufficient, especially in the workroom areas. Staff will sometimes use available public computers for staff functions because no staff

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computer is available.  Check-in is done in the workroom, allowing the circulation desk staff to manage the large quantity of check-outs and also provide customer service.  Seven desks are devoted to checking-in returned materials in the Staff Work Room.  An outside book return deposits materials directly into a small room adjacent to the Staff Work Room.  This location would allow an automated material handling system to receive materials from both the outdoor and inside returns and sort them on a unit installed in the Work Room.  Duplex printers to replace existing single-sided staff printers could help manage costs.

**Site Improvements**

*G2010 Roadways:*  A loop drive provides access to the public entrance and exterior book drop.  *composite rating: 4.*

*G2020 Parking Lots:*  A striped concrete parking lot for 85 cars, including five spaces reserved for the handicapped, is situated to the north and the west of the building.  Storm water drainage from paved parking areas is effective during moderate rains. *composite rating: 4.*

*G2030 Pedestrian Paving:*  Handicapped access to the public entrance appears to be compliant.  As well, all other egress points from the building appear to provide accessible routes. *composite rating: 3.*

*G2040 Site Development:*  Pole- and bollard-mounted lighting on the site uses metal halide lamps and appears adequate. Three flag poles and three racks for six bikes each are provided near the public entrance.  A back-lit glass block sign, which is difficult to read, is positioned at the corner of Briarhaven Road and Hulen Street.  *composite rating: 4.*

*G2050 Landscaping:*  Medium-sized trees, shrubs, and flower beds are planted in the built-in planters along the northwest face of the building, and a xeriscape garden is located on the south end of the building, south of a wall and fence housing HVAC and electric components for the building.  The garden has been

noted by the City of Fort Worth's Sustainable Task Force as one of the few in the City.  *composite rating: 4.*

*G3000 Site Utilities:*  Underground utilities that appear to be available at the site include water, sanitary sewer, storm sewer, gas, power, cable television, and telephone.  *composite rating: 4.*

**Substructure**

*A1010 Foundations:*  The building appears to utilize a foundation comprised of steel-reinforced concrete grade beams supported by steel-reinforced concrete footings, but cannot be verified without construction drawings.  No evidence of settlement was observed.  *rating: 4.*

*A1030 Slabs on Grade:*  Interior concrete floors appear to be steel-reinforced concrete, with a raised floor system throughout most spaces on the Ground Floor of the building.  Again, no evidence of settlement was observed.  *rating: 4.*

**Building Shell/Exterior Envelope**

*B1020 Superstructure:*  The building's superstructure appears to be comprised of load-bearing steel columns, supporting steel beams and open-web steel joists supporting metal floor and roof decks.  Masonry walls appear to provide lateral bracing around the perimeter.  *rating: 4.*

*B2010 Exterior Walls:*  The building uses a brick veneer, which appears to be backed by metal studs in most locations.  Control joints are employed on the exterior brick facades, but no weep holes are apparent.  Cracks are evident on the south face of the building.  Insulation seems to have been provided within the exterior, but is difficult to verify from visual inspection.  *rating: 3.*

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**B2020 Exterior Windows:**  Window units are typically fixed insulated glass in aluminum frames.  Condensation is apparent within some sections of insulated glass.  An aluminum storefront spans the entrances to the building, also fixed insulated glass in aluminum frames.  Glass block is also used along the curved wall of the facade.  *rating: 3.*

**B2030 Exterior Doors:**  The entrance doors are aluminum with insulated vision glass, which is tempered.  The main entrance doors are automatic opening type.  The doors at North Entry 114 and South Entry 134 are aluminum and glass storefront-type.  All other exterior doors in the building are hollow metal in hollow metal frames.  *rating: 4.*

**B3010 Roofing:**  The roof of the building is primarily flat, utilizing a two-ply modified bituminous/thermoplastic membrane roofing system, according to the T/PW database.  The substrate material under the roofing membrane is presumed to be metal decking, based on standard practice at the time of construction.  A continuous skylight runs above Passage 135.  Roof leaks that have developed over the years appear to have been remedied with the replacement of the roof membrane in 1997.  *rating: 4.*

**Interior Items**

These items were surveyed and rated on a room-by-room basis, and include composite ratings for all rooms in the entire building.

**C1020 Interior Doors & Hardware:**  The interior doors are solid core wood in hollow metal frames.  Door hardware includes lever handles which are ADA compliant.  Panic hardware is provided on the staff entrance/exit door.  *composite rating: 4.*

**C3010 Wall Finishes:**  Predominate wall finishes throughout are light colored paint on drywall partitions.  Toilet Rooms 109 and 110 have ceramic wall tiles.  The light colors offers good light reflectance and appear to be well maintained.  *composite rating:* 4.

**C3020 Floor Finishes:  :**  Floor covering throughout the building is predominantly carpet tile, with eight-inch by eight-inch ceramic tile used in high-traffic areas and Toilet Rooms 109 and 110.  Generally, floor finishes are in good condition, but carpet tile should be replaced in public areas.  *composite rating: 2.*

**C3030 Ceiling Finishes:**  The dominant ceiling finish throughout the building is two-foot by two-foot lay-in suspended acoustical ceiling tile, with paint on drywall in the Toilet, Janitor's, and Mechanical Rooms.  All ceiling finishes appear to be in good condition.  *composite rating: 4.*

**Vertical Movement & Egress**

**C2010 Stairs/Ramps/Ladders:**  No fire stairs are required for this one-story building.  The ladders to mezzanine Mechanical Rooms 201 and 202 are minimally adequate, but not convenient for routine maintenance, or for movement of large replacement parts.  *rating: 4.*

**D1010 Elevators:**  No elevator is required for this one-story building, although access to the mechanical mezzanines would enhance maintenance of the HVAC units housed there.  *rating: N/A.*

**Z1020 Handicapped Accessibility:**  The building provides six means of egress at grade level, of which all appear to be accessible routes.  Toilet Rooms 109 and 110 appear to meet all current TAS standards.  *rating:* 4.

**Equipment & Furnishings**

**E2010 Millwork & Casework:**  The cabinetry in each space appears to be original to the building, but is in working condition.  The Circulation Desk appears to function adequately.  *composite rating: 4.*

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***E2020 Furnishings, Fixtures, & Equipment:*** In general, the furnishings in each space are those originally installed when the building opened, and are well worn. *composite rating: 1.*

**Mechanical System Description**

There are a total of three Mechanical Rooms. Two of the rooms, Mechanical Rooms 201 and 202, are located on a mezzanine area with ladder access to each room. The third, Mechanical Room 117, houses the boiler, hydronic specialties, and chilled and heating water pumps. This room is located on the Ground Floor.

The facility is served with seven air handling units (AHUs) – five constant volume units and two units with variable air volume (VAV) systems. Each air handling unit is provided with a hydronic chilled water and hot water coil with 3-way valve operation. One VAV AHU system with a cooling only single zone terminal unit serves the main interior spaces of the Library and the other VAV AHU system with fan-powered VAV terminal units with hydronic reheat serves the staff areas. There are about five cooling only terminal units and six fan-powered VAV units. Two AHU units serve the exterior space of the Library. The remaining spaces are served by the other AHUs.

The refrigeration cooling system consists of an air-cooled chiller located outside with chilled water piping extending underground and rising up into the facility to a single chilled water pump.

The heating system consists of a hydronic gas-fired boiler and a circulation heating water pump. Each AHU has a hydronic heating coil with a 3-way valve. Associated with the hydronic system is an expansion tank with make-up water connection and chemical pot feeder.

**Plumbing System**

***D2020 Domestic Water Distribution:*** Copper piping is utilized throughout the building. Water pressure appears adequate with a 3-inch city water service to the building. *rating: 4.*

***D2020 Domestic Water Heater:*** A 40-gallon gas-fired water heater rated 32,000 Btu/hr input is located in the Janitor Closet. In the past, the unit has leaked but was repaired. The water heater was installed in 1998. There is a domestic hot water circulating pump. The system does not include a thermostatic mixing valve to limit hot water temperatures to public lavatories. *rating: 3.*

***D2030 Sanitary Collection:*** Piping is a combination of PVC and cast iron. *rating: 4.*

***D2040 Storm Water Collection:*** Scuppers provide roof drainage at the building perimeter. Piping for interior roof drainage was undetermined. *rating:* 3.

**Air Conditioning System**

***D3030 Air Cooled Chiller:*** The Carrier air cooled semi-hermetic screw chiller was installed in 2001 and utilizes refrigerant HFC-134A. The chiller is 106-nominal tons with dual circuit units with four condenser fans. It appears to be in good condition with the exception of damaged condenser fins. *rating: 4.*

***D3040 Air Handling Equipment:*** The seven AHU's are Trane Climate Changer draw-thru units with hydronic cooling and heating coils and supply and return fans, original to the facility (1987). Due to the age of the equipment, replacement parts are not readily available. AHU configuration does not allow good access for coil cleaning or inspection. The two Reliance Electric variable frequency drives are also original to the facility and are due for replacement. The mezzanine Mechanical Rooms are very congested and difficult to access equipment and piping. There are low overhead clearances throughout. The only entry/exit to mezzanine Mechanical Rooms 201 and 202 is a vertical ladder from the Ground Floor or roof hatch. There is rumbling noise in the area of Circulation Desk 102 due to mechanical equipment. *rating: 1.*

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**D3040 Pumps:**  There is one chilled water constant flow pump, manufactured by Armstrong, is original to the facility, and has reached its life expectancy.  *rating: 0.*

**D3040 HVAC Distribution Systems:**  All heating, ventilating, and air conditioning (HVAC) systems are ducted supply and ducted return air.  *rating: 4.*

**Heating System**

**D3040 Boiler:**  The Weil McClain hydronic heating boiler is an atmospheric-type unit.  It is original to the facility and shows it age.  The Boiler Room is very congested with the chilled and heating water pumps located in it along with control panels and hydronic specialties.  Combustion air into the Boiler Room is provided through a single opening in the ceiling – typically two separate combustion air intakes high/low should be provided.  Staff indicated there is an issue with the boiler control system, in that at times it gets too warm and staff has to manually turn off the boiler.  *rating: 0.*

**D3040 Pumps:**  There is one heating water constant flow pump.  The Armstrong end-suction heating circulation pump appears to be original to the building and has reached its life expectancy.  *rating: 0.*

**D3040 Distribution Piping:**  Piping is primarily black steel and copper tube. *rating: 4.*

**Automatic Temperature Controls**

**D3060 Automated HVAC Controls:**  Pneumatic controls are installed throughout the building.  Controls are local only with 3-way valves at all the coils.  Damper actuators are all original.  *rating: 0.*

**Interior Mechanical Items**

These items were surveyed and rated on a room-by-room basis, and include composite ratings for all rooms in the entire building.

**D2010 Plumbing Fixtures:**  The Men's Toilet 110 has two counter-mounted lavatories, three urinals, and three wall-mounted flush valve water closets.  All fixtures are vitreous china and in good condition.  The Women's Toilet 109 has two counter-mounted lavatories and four wall-mounted flush valve water closets.  All fixtures are vitreous china and in good condition.

Kitchenette 112 has one single compartment white porcelain sink in good condition.  There is one floor mounted mop sink in the Janitor's Room 111, in good condition.  Three bi-level electric water coolers are provided at the three public entrances, and are in good condition.  *composite rating: 4.*

**D3040 Ventilation:**  Throughout most of the facility, air movement was good.  *composite rating: 4*

**D3040 Diffusers:**  Diffusers are predominantly ceiling mounted with some sidewall air devices.  Air devices look to be in good condition.  *composite rating: 4.*

**D3060 Local Automatic Temperature Control:**  Thermostats control temperatures the building.  There are some issues with temperature swings in the building.  *composite rating: 1.*

**Fire Protection System**

**D4010 Fire Protection Sprinklers:**  No fire protection system exists in the facility.  *rating: 0.*

**Electrical System Description**

This facility has normal and emergency power distribution systems.  The normal power electrical distribution system consists of one 1200A, 480/277V, 3-phase, 4-wire main switchboard, two 480/277V, 3-phase, 4-wire panels, two transformers, and four 120/208V, 3-phase, 4-wire branch circuit panels.

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An emergency power distribution system consists of a 17.5KVA generator, one transfer switch, one 480/277V, 3-phase, 4-wire panel, one 30KVA transformer and one 120/208V, 3-phase, 4-wire branch circuit panel. The main switchboard feeds transformer "T1", panels "HA" and "HB", the automatic transfer switch and HVAC loads. Transformer "T1" feeds panels "LA" and "LB". Panel "HB" feed transformer "T2" which in turn feeds panels "LC" and "LD". The emergency generator feeds panel "HE" through the automatic transfer switch. Panel HE feeds panel "LE" through transformer "T3". Lighting is automatically controlled.

**D5010 Service Equipment:** All equipment is original and in good condition. Space in the Mechanical and Electrical Rooms is limited. Future renovations need to address this space availability issue. There is no evidence that feeders need to be replaced. *rating: 4.*

**D5010 Power Distribution Panels:** Branch panels are in good condition. There is spare capacity to handle routine maintenance and minor renovations, but space in the Mechanical and Electrical Rooms is limited. The panels "LC" and "LD" were originally planned to be installed in the Mechanical Room 117. They were installed in the Stage 118 area. Future renovations need to address this space availability issue. *rating: 3.*

**D5020 Lighting & Branch Wiring:** There is no evidence that branch circuits, and other conductors need to be replaced. *rating: 4.*

**D5040 Emergency Power:** The building has a generator with circuits for emergency lighting. There was no evidence of deficiencies when the consultants surveyed the system, however, the T/PW facilities database suggests a need to address the generator and its switchgear in the near future. *rating: 4.*

**Interior Electrical Items**

**D5020 Receptacles:** Computers and other loads in the reading and computer areas are fed through a combination of floor- and wall-mounted receptacles. Power poles are used in the Staff Work Room. *composite rating: 4.*

**D5020 Lighting:** Two-foot by four-foot fluorescent fixtures are the primary source of illumination. Lighting levels are adequate across the Library. Switching in public areas is automatic through lighting control panels. Interior lighting is in good condition. *composite rating: 4.*

**D5030 Data Infrastructure:** Data infrastructure is managed from a wall-mounted cabinet in the Book Return Room. This cabinet, typical for most branches, provides adequate data infrastructure in a limited space. Although adequate for the facility, it is recommended that any future renovations include at least one dedicated space for IT infrastructure. *composite rating: 4.*

**D5030 Public Address System:** The facility has a public address system. There is no evidence of deficiencies. *composite rating 4.*

**D5030 Security System:** This building does not have a security system. *composite rating: 0.*

**D5040 Fire Alarm:** This building has a fire alarm system. There is no evidence of deficiencies, however, the T/PW facilities database suggests a need to address the fire alarm panel in the near future. *composite rating: 4.*

**D5040 Emergency/Egress Lighting:** This facility has an emergency generator that feeds egress lighting. There is no evidence of deficiencies. *composite rating: 4.*

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**Additional Systems**

The following are systems that are either good practice in library facility design or would be required by current building codes if a renovation or expansion were to be undertaken. They do not presently exist in the building, so it is suggested they be added.

***Install Building Energy Management System:*** The consultants recommend installation of a building automation system for energy management.

***Install Fire Protection:*** No fire protection system is provided, but should be installed throughout the building.

***Install Smoke Detection:*** This code requirement was applicable to this facility when built, but current codes may require additional system components, depending on the extent of renovation.

***Install Security Systems:*** An intrusion alarm system should be considered, with either locally sounding alarms at the exits from public spaces, or a central monitor in Staff Work Room 107 or Circulation Desk 101.

**Construction Cost Impacts**

The building-wide survey includes the identification of issues that may impact the cost of expansion. Examples of these issues include the degree of difficulty of construction on the site, the current state of the local economy, how renovation will impact the operations of a facility, etcetera.

***Location:*** The site is on a main thoroughfare, and is in a good location for the delivery of construction materials and labor.

***Site Limitations:*** Land is available for future horizontal expansion, or for staging of construction.

***Construction Difficulty:*** No apparent limitations exist to additional construction at the site. Given no evidence of settlement, sub-surface conditions may be stable. However, a geotechnical analysis of the soil should be conducted prior to any expansion of the facility.

***Phasing:*** Future horizontal additions can be constructed, but not without impact to the existing operations. It is conceivable that an on-site addition could be completed without requiring the Library to relocate to another building, but such a phasing plan would not be advisable.

***Historic Issues:*** The building is not located within a historic district.

***Asbestos:*** No asbestos is known to exist in the building or on the site at this time.

**Costs to Retrofit Existing Building Systems**

Table A5.13.6 provides the unit costs of the various retrofit projects. The unit prices apply to either the overall gross area of the building (bgsf), or net assignable square footage (nasf), as appropriate, to develop the cost for system retrofits.

***Analysis.*** The total cost to retrofit the building systems is $830,088, or $32.35 per square foot. When excluding the cost for new furniture of $241,650, the total cost to retrofit the building systems is reduced to $588,438. Most of the systems affected would be made more energy efficient, and/or fully code compliant.

*Appendix Five: Current Facilities/Future Needs*
*Southwest Regional Library*
*page A5.10*

*Library Facilities Study*
Fort Worth Library 2010 System Master Plan
Godfrey's Associates, Inc.

**Table A5.13.6**
Retrofit of Existing Building Systems, Southwest Regional Library

| uniformat code | construction element | rating | weight factor | square footage | | unit cost | total cost | comments |
|---|---|---|---|---|---|---|---|---|
| A1010 | Foundations | 4 | 0% | 25,661 | bgsf | $5.22 | $0 | |
| A1030 | Slabs on grade | 4 | 0% | 25,661 | bgsf | 2.65 | 0 | |
| B1020 | Superstructure | 4 | 0% | 25,661 | bgsf | 12.45 | 0 | |
| B2010 | Exterior walls | 4 | 0% | 25,661 | bgsf | 9.55 | 4,479 | add weep holes, repair cracks |
| B2020 | Exterior windows | 3 | 25% | 25,661 | bgsf | 8.11 | 52,028 | replace glass with broken seals |
| B2030 | Exterior doors | 4 | 0% | 25,661 | bgsf | 4.85 | 0 | |
| B3010 | Roofing | 4 | 0% | 25,661 | bgsf | 6.89 | 0 | roof was replaced in 1997 |
| C1020 | Interior doors & hardware | 4 | 0% | 21,480 | nasf | 3.15 | 0 | |
| C2010 | Stairs/ramps/ladders | 4 | 0% | 25,661 | bgsf | 7.55 | 0 | |
| C3010 | Wall finishes | 4 | 0% | 21,480 | nasf | 3.33 | 0 | |
| C3020 | Floor finishes | 2 | 50% | 21,480 | nasf | 3.15 | 33,831 | replace carpet tile in public areas |
| C3030 | Ceiling finishes | 4 | 0% | 21,480 | nasf | 3.28 | 0 | |
| D2010 | Plumbing fixtures | 4 | 0% | 21,480 | nasf | 2.50 | 0 | |
| D2020 | Domestic water distribution | 4 | 0% | 25,661 | bgsf | 1.72 | 0 | |
| D2020 | Domestic water heaters | 3 | 25% | 25,661 | bgsf | 0.25 | 1,604 | add thermostatic mixing valve |
| D2030 | Sanitary collection | 4 | 0% | 25,661 | bgsf | 1.15 | 0 | |
| D2040 | Storm water collection | 3 | 25% | 25,661 | bgsf | 1.77 | 11,355 | increase overflow capacity |
| D3020 | Boilers | 2 | 50% | 25,661 | bgsf | 4.78 | 61,330 | unit has reached life expectancy |
| D3030 | Air-Cooled Chiller | 4 | 0% | 25,661 | bgsf | 1.15 | 0 | |
| D3040 | Air handling equipment | 1 | 75% | 25,661 | bgsf | 7.10 | 136,645 | units have reached life expectancy |
| D3040 | Air conditioning system pumps | 0 | 110% | 25,661 | bgsf | 0.87 | 24,558 | unit has reached life expectancy |
| D3040 | Heating system pumps | 0 | 110% | 25,661 | bgsf | 0.87 | 24,558 | unit has reached life expectancy |
| D3040 | Distribution piping | 4 | 0% | 25,661 | bgsf | 1.05 | 0 | |
| D3040 | HVAC ductwork | 4 | 0% | 21,480 | nasf | 3.81 | 0 | |
| D3040 | Ventilation | 4 | 0% | 21,480 | nasf | 2.03 | 0 | |
| D3050 | HVAC diffusers | 4 | 0% | 21,480 | nasf | 1.21 | 0 | |
| D3060 | Building temperature controls | 0 | 110% | 21,480 | nasf | 3.15 | 74,428 | install new system |
| D3060 | Local temperature controls | 1 | 75% | 21,480 | nasf | 0.48 | 7,733 | install additional thermostats |
| D4010 | Fire protection system | 0 | 110% | 25,661 | bgsf | 3.90 | 110,086 | install new dry-pipe system |

**Table A5.13.6** *(continued)*
Retrofit of Existing Building Systems, Southwest Regional Library

| uniformat code | construction element | rating | weight factor | square footage | | unit cost | total cost | comments |
|---|---|---|---|---|---|---|---|---|
| D5010 | Electrical service equipment | 4 | 0% | 25,661 | bgsf | $1.97 | $0 | |
| D5010 | Distribution panels | 4 | 0% | 25,661 | bgsf | 3.43 | 0 | |
| D5010 | Branch power distribution | 3 | 25% | 25,661 | bgsf | 2.30 | 14,755 | secure existing panels |
| D5020 | Lighting fixtures | 4 | 0% | 21,480 | nasf | 3.50 | 0 | |
| D5020 | Emergency lighting | 4 | 0% | 21,480 | nasf | 0.90 | 0 | |
| D5020 | Convenience receptacles | 4 | 0% | 21,480 | nasf | 2.90 | 0 | |
| D5030 | Data infrastructure | 4 | 0% | 25,661 | bgsf | 3.77 | 0 | |
| D5030 | Public address system | 4 | 0% | 21,480 | nasf | 1.55 | 0 | |
| D5030 | Building security system | 0 | 110% | 25,661 | bgsf | 1.10 | 31,050 | install new system |
| D5040 | Fire alarm system | 4 | 0% | 25,661 | bgsf | 1.75 | 0 | |
| D5090 | Emergency generator | 4 | 0% | 25,661 | bgsf | 1.66 | 0 | see T/PW database |
| E2010 | Casework & millwork | 4 | 0% | 21,480 | nasf | 8.22 | 0 | |
| E2020 | Furniture & equipment | 2 | 50% | 21,480 | nasf | 22.50 | 241,650 | replace tables & chairs in public areas |
| G2010 | Roadways | 4 | 0% | 25,661 | bgsf | 1.12 | 0 | |
| G2020 | Parking Lots | 4 | 0% | 25,661 | bgsf | 0.97 | 0 | |
| G2030 | Pedestrian Paving | 4 | 0% | 25,661 | bgsf | 0.76 | 0 | |
| G2040 | Site Development | 4 | 0% | 25,661 | bgsf | 0.42 | 0 | |
| G2050 | Landscaping | 4 | 0% | 25,661 | bgsf | 0.23 | 0 | |
| G3000 | Site Utilities | 4 | 0% | 25,661 | bgsf | 1.44 | 0 | |
| Z1010 | Handicapped access | 4 | 0% | 25,661 | bgsf | 2.43 | 0 | |

         TOTAL RETROFIT COST          **$830,088**

*Appendix Five: Current Facilities/Future Needs*      *Library Facilities Study*
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