WEDGWOOD LIBRARY

Evaluations for both public & staff spaces of the facility

The Wedgwood Library is a branch of the Fort Worth Library, located in south Fort Worth. The building occupies a prime location in a retail district south of Loop 820 on Trail Lake Drive, 11.09 miles from the Central Library.

Official Name: Wedgwood Library

Building Address: 3816 Kimberly Lane

Library Facility Code: WWD

Site Description

The building is situated on a landscaped lot of 0.58 acres (25,363 square feet), 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. Drawing WWD-1 illustrates the site of the Wedgwood Library (11" x 17" overleaf).

Architectural Description

Construction of the original building was completed in 1962. The facility appears to be well built and in good condition for its age. Drawing WWD-2 depicts the Ground Floor of the Wedgwood Library (11" x 17" overleaf) and the square footage of each room, as tabulated in Table A5.15.1.

Square Footage: There are currently 4,962 building gross square feet (bgsf),. There are 4,265 net assignable square feet (nasf) within the facility. The library currently occupies the entire building. Table 4.15.1 contains a room-by-room square footage tabulation for the facility.

Table A5.15.1
Existing Square Footage Tabulation, Room-by-Room, Wedgwood Library

Summary

floor		net assignable square footage	building gross square footage	efficiency
100	Ground Floor	4,264.55	4,961.93	85.95%
TOTALS		**4,264.55**	**4,961.93**	**85.95%**

Ground Floor

room no.	room name	square footage net assignable	building gross
101	Entrance Foyer	95.06	
102	Circulation Desk	338.33	
103	Children's Reading Area	846.42	
104	Adult Reading Area	639.04	
105	Main Library Area	1,269.83	
106	Open Stack Area	547.77	
107	Staff Work Room	334.83	
108	Staff Break Room	193.27	
109	Women's Toilet		90.83
110	Men's Toilet		67.49
111	Janitor's Room		83.12
112	Mechanical Room		144.62
assigned rooms and spaces		4,264.55	
unassigned walls, pipe chases, etc.			697.38
TOTAL BGSF			4,961.93
EFFICIENCY			85.95%

The T/PW facilities database attributes 5,664 bgsf to the Wedgwood Library, which is actually the square footage under roof, including the south-facing exterior porch and roof overhangs, as well as all of the enclosed space.

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Existing Facility Assessment

Trade Area Population

The population within the 8-minute drive time trade area for the Wedgwood Library is 90,671, as determined by the Customer Analytics Consultants.

Driving Distance/Time to Other Libraries

Ridglea	6.52 miles	13 minutes
Central Library	11.09 miles	16 minutes

Demographics

Households with children	11,505
Persons age 17 and under	21,510
Persons age 18 to 64	56,448
Persons age 65+	12,713
Percent Black/African-American	14.2%
Percent Hispanic	27.5%

Output Measures

The Library Consultants calculated a number of measurements of operating efficiency and their respective rankings among the 15 current FWL libraries. Table 5.15.2 summarizes our findings for the Wedgwood Library.

Table A5.15.2
Output Measures, Wedgwood Library

output	measure	ranking
Contacts per capita	25.13	4 of 14
Cost efficiency per contact	$1.76	10 of 14
Cost efficiency per SF to operate	$156.80	13 of 14

Collections

The current total collection size is 47,977. At 0.53 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 23.7 percent of the total, and the combined Children's/Teen collections are 40.8 percent of total. The materials and services more likely to be used at Wedgwood are Best Sellers, Adult Fiction, Books on CD, and Adult Non-Fiction.

The space required to house the collections in an ADA/User-Friendly standard is 5,969 square feet, or 120.3% of the total building size.

Computers & Seating

Based on the per capita number of computers provided for the public, the Wedgwood Library, with 16, is significantly below "Basic" when compared to Texas State Library standards. To achieve the "Basic" level by the year 2020, Wedgwood will need 45 public computers.

The current public seating ratio, including computers, is one seat per 955 (1:955) collection items. This compares most favorably to the neighborhood library standard of 1:1,500 to 1:1,800 collection items.

Site & Building Capacity

The Wedgwood Library currently provides 27 parking spaces on site. At just under 5,000 gross square feet, 25 parking spaces would be needed at the Wedgwood Library, in order to meet the minimum standard of one space per 200 bgsf of building, as currently sized.

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Staff workspace is 7.84% of total net assignable square feet (nasf) of the building – a significant shortfall when compared to the minimum standard of 18% for buildings of up to 5,000 gross square feet. In terms of square footage, the shortfall equates to 433 nasf less than the minimum need of 768 nasf.

Table A5.15.3
Site & Building Capacity, Wedgwood Library

unit of capacity	current 2010	2010 need to standards	current vs. standards
Net assignable square feet	4,265	10,005	42.6%
Building gross square feet	4,962	11,770	42.2%
Site area, in acres	0.58	1.08	53.7%
Parking spaces	27	59	45.8%

Growth Potential

Expandability: Little land is available on the lot for future horizontal expansion. A small addition to the south of approximately 600 square feet appears most feasible, using the existing covered porch area. It is not conceivable that vertical expansion could be achieved, given a preliminary analysis of the roof structure.

Adaptability: The building is mostly composed of open spaces, with structural spans ranging from 20 to 30 feet east-to-west and almost 15 feet north-to-south. With no internal bearing walls, changes to the configuration of the spaces appear to be feasible.

Technology Assessment

Historic computer usage at the Wedgwood Library is presented below for fiscal years 2007 through 2009. Table A5.15.4 presents statistics for PC logins, PC logins to library visits, and wi-fi connections.

Table A5.15.4
Historic Computer Usage, Wedgwood Library

service item	2007	2008	2009
PC Logins	17,020	15,462	17,426
PC Logins to Visits Ratio	12.9%	12.9%	14.1%
Wi-Fi Connections	n/a	190	624

Computer Network: The building was built years before technology was introduced in public libraries. While power and data cabling has been added to accommodate the installation of network devices that exist in the library today, there is no spare network jack. The one or two available power outlets in the public area are inaccessible or would cause power cords to be strung across pathways if used by Wi-Fi users. Staff believes that this issue discourages customers from using the wireless service. Power connections for computers at the reference desk should be improved. Wi-Fi is available.

Public Computers: A summary of the distribution of public computers is provided in Table A5.15.5 below. Computer reservation stations and print release stations are not included in the Adult Services quantity.

Table A5.15.5
Public Computer Distribution, Wedgwood Library

computer location	quantity
Public Access Catalog (PAC)	5
Adult Services	11
Teen Services	0
Children's Services	0
TOTAL	16

Demand for PCs increases when the Southwest Regional Library is closed. Much of the time, two persons are working together at the public computers, although the space is designed

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for one person. There are no PCs in the Children's area and no early literacy computer is provided. The placement of the public computers interferes with the entrance to the staff workroom. Older hardware and software create difficulties. One color and one black and white printer are provided, which are sufficient.

Public Technology: The TV was not in use because staff reported that no one viewed it when it had been offered previously. The current location is not well suited for gaming, another intended use of the unit. A TV at the circulation desk could promote library events and provide instruction for using library services. Adaptive equipment is not available.

Computer Training: No classes are offered.

Self-Service: No self-check station is provided. Space is available on the circulation desk for a unit, and that would be a good location.

Technology for Staff: A total of nine staff computers are provided. Four staff members share one computer, which causes staff members to have to wait until someone else finishes before the staff member can use the computer. Staff requested a minimum of one additional computer. Placement of the staff computer CPU on the floor makes it difficult for staff to access the connections on the computer. Providing space for a more accessible position would improve the situation. A better location is needed for the supervisor's computer to enable the supervisor to participate in webinars and manage personnel issues. All staff computers need to be equipped with barcode scanners and receipt printers. Most materials are returned to the circulation desk, where they are checked in. Materials that are returned elsewhere are checked in at the station in the workroom. Staff expressed frustration with the telephone system.

Study Rooms & Meeting Spaces: No study rooms or meeting spaces currently exist in the building.

Site Improvements

G2010 Roadways: A loop drive provides access to the public entrance and exterior book drop box on the south side of the building. *composite rating: 4.*

G2020 Parking Lots: A striped parking lot for 25 cars, including two spaces reserved for the handicapped, is situated to the west of the building. Two spaces reserved for staff are located north of the building. Storm water drainage across paved parking areas is effective during moderate rains. *composite rating: 4.*

G2030 Pedestrian Paving: Handicapped access to the public entrance appears to be compliant, however, the other egress point from the building does not provide an accessible route. *composite rating: 1.*

G2040 Site Development: Lighting on the site uses metal halide lamps and appears adequate. One flag pole and one rack for eight bicycles are provided at the public entrance. *composite rating: 4.*

G2050 Landscaping: Two large, mature trees occupy the property. Shrubs and flower beds are planted in the built-in planters on the south and west facades of the building. *composite rating: 4.*

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

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Substructure

A1010 Foundations: As indicated on the original construction drawings, the building utilizes a foundation comprised of steel-reinforced concrete grade beams supported by steel-reinforced concrete pier footings under each column and approximately 14 feet on center around the perimeter. No evidence of settlement was observed. *rating: 4.*

A1030 Slabs on Grade: Interior concrete floors are six-inch thick slab-on-grade type, reinforced with #4 and #5 re-bars, per the original construction drawings. No evidence of settlement was observed. *rating: 4.*

Building Shell/Exterior Envelope

B1020 Superstructure: The building's superstructure is comprised of load-bearing steel columns, supporting steel beams and open-web steel joists supporting the roof deck. Eight-inch thick concrete masonry unit walls provide lateral bracing around the perimeter. *rating: 4.*

B2010 Exterior Walls: The building uses a brick veneer, backed by concrete masonry unit bearing walls in most locations. No insulation appears to have been provided within the exterior, as indicated on the original construction drawings, but is difficult to verify from visual inspection. *rating: 3.*

B2020 Exterior Windows: Window units are typically fixed glass, with single-pane glass in aluminum frames. An aluminum storefront spans the south façade of the building, also fixed single-pane glass in aluminum frames. *rating: 1.*

B2030 Exterior Doors: All exterior doors appear to be original to the 1962 building. The entrance doors are aluminum with vision glass, which does not appear to be tempered. All other exterior doors in the building are hollow metal in hollow metal frames. *rating: 2.*

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 gypsum decking, as indicated on the original construction drawings. 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 consists of bronze doorknobs, which are not ADA compliant. Panic hardware is provided on the staff entrance/exit door, but appears to be original to the building. *composite rating: 2.*

C3010 Wall Finishes: Predominate wall finishes throughout are light colored paint on plaster partitions. Selected areas have exposed concrete block or face brick walls. Toilet Rooms 109 and 110 have ceramic wall tiles. The light colors offers good light reflectance. *composite rating: 2.*

C3020 Floor Finishes: Floor covering throughout the building is predominantly carpet tile, with vinyl composition tile used in utility and staff areas and ceramic tile used in Toilet Rooms 109 and 110. Generally, floor finishes are in fair condition. *composite rating: 1.*

C3030 Ceiling Finishes: The dominant ceiling finish throughout the building is two-foot by four-foot lay-in suspended acoustical ceiling tile, with paint on plaster in Toilet Rooms 109 and 110, Janitor's 111, and Mechanical Room 112. All ceiling finishes appear to be in fair condition. *composite rating: 1.*

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Vertical Movement & Egress

C2010 Stairs: No fire stairs are required for this one-story building. Exterior concrete stairs at both the public and staff entrances appear to be adequate. *rating: 4.*

D1010 Elevators: No elevator is required for this one-story building. *rating: N/A.*

Z1020 Handicapped Accessibility: The building provides three means of egress at grade level, of which two are accessible routes. Toilet Rooms 109 and 110 have been modified from their original configuration, but do not meet all current Texas Accessibility Standards (TAS). *rating:* 1.

Equipment & Furnishings

E2010 Millwork & Casework: The cabinetry in each space appears to be original to the building, but is I n working condition. The Circulation Desk appears to have been rebuilt and functions adequately. *composite rating: 4.*

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: 2.*

Mechanical System Description

A Mechanical Room houses an air handling unit (AHU) with two zone dampers in the supply air ductwork and a gas-fired hydronic boiler. One zone serves the main Circulation area and the other zone serves the Work Room. The AHU is constant volume. System appears to be a variable volume and temperature (VVT) system with a by-pass from supply to return while varying supply air via dampers to the individual zones.

The refrigeration cooling system consists of a direct expansion (DX) coil in the air handling unit and a separate air cooled condensing unit located outside.

The heating system consists of a hydronic gas-fired boiler and an in-line circulation pump. The 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 2-inch service to the building. *rating: 4.*

D2020 Domestic Water Heater: A 40-gallon gas-fired hot water heater rated 40,000 Btu/hr input is located in Mechanical Room 112, installed in 2003. The water heater 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, according to the original construction drawings. The T/PW database references aluminum gutters and downspouts, original to the building. No internal piping for roof drainage appears to be provided. *rating:* 3.

Air Conditioning System

D3030 Compressor/Condenser: A Carrier air cooled condenser was installed about 2 years ago. The condenser is a 20-ton single-circuit unit with two condenser fans. It appears to be in good condition. *rating: 4.*

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D3040 Air Handling Equipment: The Carrier multi-zone air handling unit appears to have been installed around 1993. It has a DX coiling coil and a hydronic heating coil. It appears to be in good condition, but its years in service are approaching replacement. Mechanical Room 112 is very congested and difficult to access equipment. Most equipment only has access to one side. AHU configuration does not allow good access for coil cleaning or inspection.

The staff indicates there are issues with Staff Work Room 107 being cold while at the same time the main Circulation Desk 102 being too hot. The current system only allows variable airflow to the space and there might be an issue with set points. There does not appear to be any humidity controls or capability to limit high humidity levels. *rating: 0.*

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

D3040 Refrigerant Piping: Piping is copper tube with flexible elastomeric insulation. *rating: 4.*

Heating System

D3020 Boiler: The Laars hydronic heating boiler (400,000 Btu/hr input) is an atmospheric-type boiler. It was installed in 2001 and appears to be in good condition. The current boiler installation has a variance since it does not provide the required clearances around the unit to adjoining walls. Combustion air into Mechanical Room 112 is provided through louvers in the door. Louver insect/bird screens are dirty and prohibit adequate free area for combustion air; and in turn may not allow adequate air for the gas-fired equipment. *rating: 3.*

D3040 Pumps: The Paco in-line heating circulation pump appears to be original to the building with a motor replacement occurring since then. Pump is making squeaking noise 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: No building automation system is provided, and building temperature controls are by local control only. *rating: 0.*

Interior Mechanical Items

These items were surveyed on a room-by-room basis but are given a composite rating for the building as a whole.

D2010 Plumbing Fixtures: Men's Toilet 110 has one wall-mounted handicapped accessible lavatory, one floor-located urinal, and one handicap accessible floor-mounted flush valve water closet. All fixtures are vitreous china. The water closet is loose at the floor. The lavatory is cracked. Women's Toilet 109 has one wall-mounted handicapped accessible lavatory and one handicap accessible floor-mounted flush valve water closet. All fixtures are vitreous china. These fixtures are in good condition.

Staff Break Room 108 has one single compartment stainless steel sink and in good condition. There is one wall-mounted slop sink in Janitor's Room 111, upon which the bottom exterior is peeling.

One single-height electric water cooler is provided in Open Stack Area 106 and is in good condition, but does not meet TAS requirements. The number of fixtures in the facility meets current code. *composite rating: 2.*

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D3040 Diffusers: Diffusers are predominantly ceiling mounted, circular in most public spaces. There are signs of aging, discolor on the diffusers and dirty areas on the ceiling next to the air devices. Toilet room air devices are rusted. *composite rating: 3.*

D3040 Ventilation: Throughout most of the facility, air movement was good. The facility has six ceiling fans. *composite rating: 4.*

D3060 Local Automatic Temperature Control: There is only thermostat control for the building. Staff experiences temperature swings in the building. *composite rating: 2.*

Fire Protection Systems

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

Electrical System Description

The electrical system consists of a 400A, 120/208V, 3-phase, 4-wire distribution panel located at the Mechanical Room and a lighting panel located in the Office Area. The main panel feeds the air conditioning equipment, boiler, and lighting panel. All equipment is original (1962) and it has reached its end of life.

D5010 Service Equipment: The service is aerial from a pole-mounted transformer at the northeast corner of the site. A 400-A distribution panel in Mechanical Room 112 acts as the service entrance. The system is 120/208V, 3 phase, 4 wire. This panel serves all mechanical equipment and a lighting panel located in the office area. *rating: 3.*

D5010 Power Distribution Panels: The lighting panel in the office area provides power for lighting, receptacles and other loads. This panel has 42 circuits with no spaces available. *rating: 1.*

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

D5040 Emergency Power: Building does not have emergency power distribution system. *rating: 0.*

Interior Electrical Items

These items were surveyed on a room-by-room basis but are given a composite rating for the building as a whole.

D5020 Receptacles: Power distribution across the public area is accomplished through power poles. Additional receptacles are needed for laptop use and in Staff Break Room 108. *composite rating: 3.*

D5020 Lighting: Two-foot by four-foot fluorescent fixtures are the primary source of illumination. Reading areas have lighting levels approximately 45 foot-candles (FC) with 15 FC vertical at the book stacks. Switching is accomplished at the panel with no automatic controls. *composite rating: 3.*

D5030 Data Infrastructure: Data infrastructure is managed from a wall-mounted cabinet in Staff Work Room 107. 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. *rating: 4.*

D5030 Public Address System: There is no public address system in the building. *composite rating: 0.*

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

D5040 Fire Alarm: This building has smoke detectors with local signal only but does not have a fire alarm system. *composite rating: 0.*

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D5040 Emergency/Egress Lighting: This building does not have emergency lighting system. *composite rating: 0.*

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.

Handicapped Accessibility: Provisions are adequate to access the building, and essential facilities within, but some additional requirements are applicable. Access to the staff entrance, door hardware, toilet room configuration, and some furniture placement within the facility create limited accessibility to many areas.

Exiting: Provisions are adequate, so no additional requirements are applicable to this facility. However, the second means of egress from the public areas is through Staff Work Room 107. A better option is a direct exit to the exterior, through a controlled and/or alarmed door.

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 Fire Alarm: No fire alarm system is provided, but alarms should be installed per current code.

Install Public Address Systems: A sound system for public address should be installed throughout the building.

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.

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 near a main thoroughfare, and is in a good location for the delivery of construction materials and labor.

Site Limitations: Limited land is available for future horizontal expansion, or for staging of construction.

Construction Difficulty: No other 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 not conceivable that an on-site addition could be completed without requiring the Library to relocate to another building.

Historic Issues: The building is not located within a historic district, however, if expansion or new construction is to occur, any new addition should be sensitive to the character of the neighborhood.

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

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Costs to Retrofit Existing Building Systems

Table A5.15.6 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 $302,091, or $60.88 per square foot. When excluding the cost

for new furniture of $47,981, the total cost to retrofit the building systems is reduced to $254,110.

Most of the systems affected would be made more energy efficient, and/or fully code compliant – improving the life safety of the facility – thereby limiting the potential liability to the City of Fort Worth in the event of a disaster or accident.

Table A5.15.6
Retrofit of Existing Building Systems, Wedgwood Library

uniformat code	construction element	rating	weight factor	square footage		unit cost	total cost	comments
A1010	Foundations	4	0%	4,962	bgsf	$5.22	$0	
A1030	Slabs on grade	4	0%	4,962	bgsf	2.65	0	
B1020	Superstructure	4	0%	4,962	bgsf	12.45	0	
B2010	Exterior walls	3	25%	4,962	bgsf	9.55	11,847	improve R-value
B2020	Exterior windows	1	75%	4,962	bgsf	8.11	30,181	replace single-pane glass
B2030	Exterior doors	2	50%	4,962	bgsf	4.85	12,033	replace glass with tempered/insulated
B3010	Roofing	4	0%	4,962	bgsf	6.89	0	roof was replaced in 1997
C1020	Interior doors & hardware	2	50%	4,265	nasf	3.15	6,717	replace door knobs with levers
C2010	Stairs/ramps	4	0%	4,962	bgsf	7.55	0	
C3010	Wall finishes	2	50%	4,265	nasf	3.33	7,101	paint interior partitions
C3020	Floor finishes	1	75%	4,265	nasf	3.15	10,076	install new carpet tile
C3030	Ceiling finishes	1	75%	4,265	nasf	3.28	10,492	replace acoustical ceiling
D2010	Plumbing fixtures	2	50%	4,265	nasf	2.50	5,331	replace select fixtures
D2020	Domestic water distribution	4	0%	4,962	bgsf	1.72	0	
D2020	Domestic water heaters	3	25%	4,962	bgsf	0.25	310	add thermostatic mixing valve
D2030	Sanitary collection	4	0%	4,962	bgsf	1.15	0	
D2040	Storm water collection	3	25%	4,962	bgsf	1.77	2,196	increase overflow capacity
D3020	Boilers	3	25%	4,962	bgsf	4.78	5,930	improve access & outside air intake
D3030	Compressors/condensers	4	0%	4,962	bgsf	2.05	0	
D3040	Air handling equipment	0	110%	4,962	bgsf	7.10	38,753	replace existing equipment
D3040	Refigerant piping	4	0%	4,962	bgsf	1.05	0	
D3040	Heating system pumps	0	110%	4,962	bgsf	0.87	4,749	replace existing equipment

Table A5.15.6 *(continued)*
Retrofit of Existing Building Systems, Wedgwood Library

uniformat code	construction element	rating	weight factor	square footage		unit cost	total cost	comments
D3040	Distribution piping	4	0%	4,962	bgsf	$1.05	$0	
D3040	HVAC ductwork	4	0%	4,265	nasf	4.25	0	
D3040	Ventilation	4	0%	4,265	nasf	2.03	0	
D3050	HVAC diffusers	3	25%	4,265	nasf	1.21	1,290	replace rusted/dirty grilles
D3060	Building temperature controls	0	110%	4,265	nasf	3.15	14,778	install new system
D3060	Local temperature controls	2	50%	4,265	nasf	0.48	1,024	install programmable thermostats
D4010	Fire protection system	0	110%	4,962	bgsf	3.90	21,287	install new dry-pipe system
D5010	Electrical service equipment	3	25%	4,962	bgsf	1.97	2,444	replace existing panel
D5010	Distribution panels	1	75%	4,962	bgsf	3.43	12,765	replace existing panel
D5010	Branch power distribution	4	0%	4,962	bgsf	2.30	0	
D5020	Lighting fixtures	3	25%	4,265	nasf	3.50	3,732	add automatic controls
D5020	Emergency lighting	0	110%	4,265	nasf	0.90	4,222	install new system
D5020	Convenience receptacles	3	25%	4,265	nasf	2.90	3,092	add receptacles in public & staff areas
D5030	Data infrastructure	4	0%	4,962	bgsf	3.77	0	
D5030	Public address system	0	110%	4,265	nasf	1.55	7,272	install new system
D5030	Building security system	0	110%	4,962	bgsf	1.10	6,004	install new system
D5040	Fire alarm system	0	110%	4,962	bgsf	1.75	9,552	install new system
D5040	Emergency power	0	110%	4,962	bgsf	1.66	9,061	install new system
E2010	Casework & millwork	4	0%	4,265	nasf	8.22	0	
E2020	Furniture & equipment	2	50%	4,265	nasf	22.50	47,981	replace all wood & office furniture
G2010	Roadways	4	0%	4,962	bgsf	1.12	0	
G2020	Parking lots	4	0%	4,962	bgsf	0.97	0	
G2030	Pedestrian paving	1	75%	4,962	bgsf	0.76	2,828	add accessible ramp at staff entrance
G2040	Site development	4	0%	4,962	bgsf	0.42	0	
G2050	Landscaping	4	0%	4,962	bgsf	0.23	0	
G3000	Site utilities	4	0%	4,962	bgsf	1.44	0	
Z1010	Handicapped access	1	75%	4,962	bgsf	2.43	9,043	address egress, toilets, doors, water fo

TOTAL RETROFIT COST   **$302,091**