

# Facilities Assessment Presentation

March 6, 2012



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## PROJECT TEAM

### 1. Westlake Reed Leskosky- A+E

Ken Damm - architecture

Nancy Nozik - architecture

Matt Murphy – mechanical engineering

Kris Haycook – mechanical engineering

Matt Barratt – electrical engineering

Shawn Carr – structural engineering

2. DesignLAB Architects – library planning

3. Knight & Stolar – site / landscape architects

4. Studio Graphique – graphics/wayfinding

5. Ozanne – opinion of probable cost

## PROJECT TEAM

Westlake  
Reed  
Leskosky

ASSESSMENT OF BUILDING ENVELOPE  
ASSESSMENT OF BUILDING SYSTEMS

designLAB architects

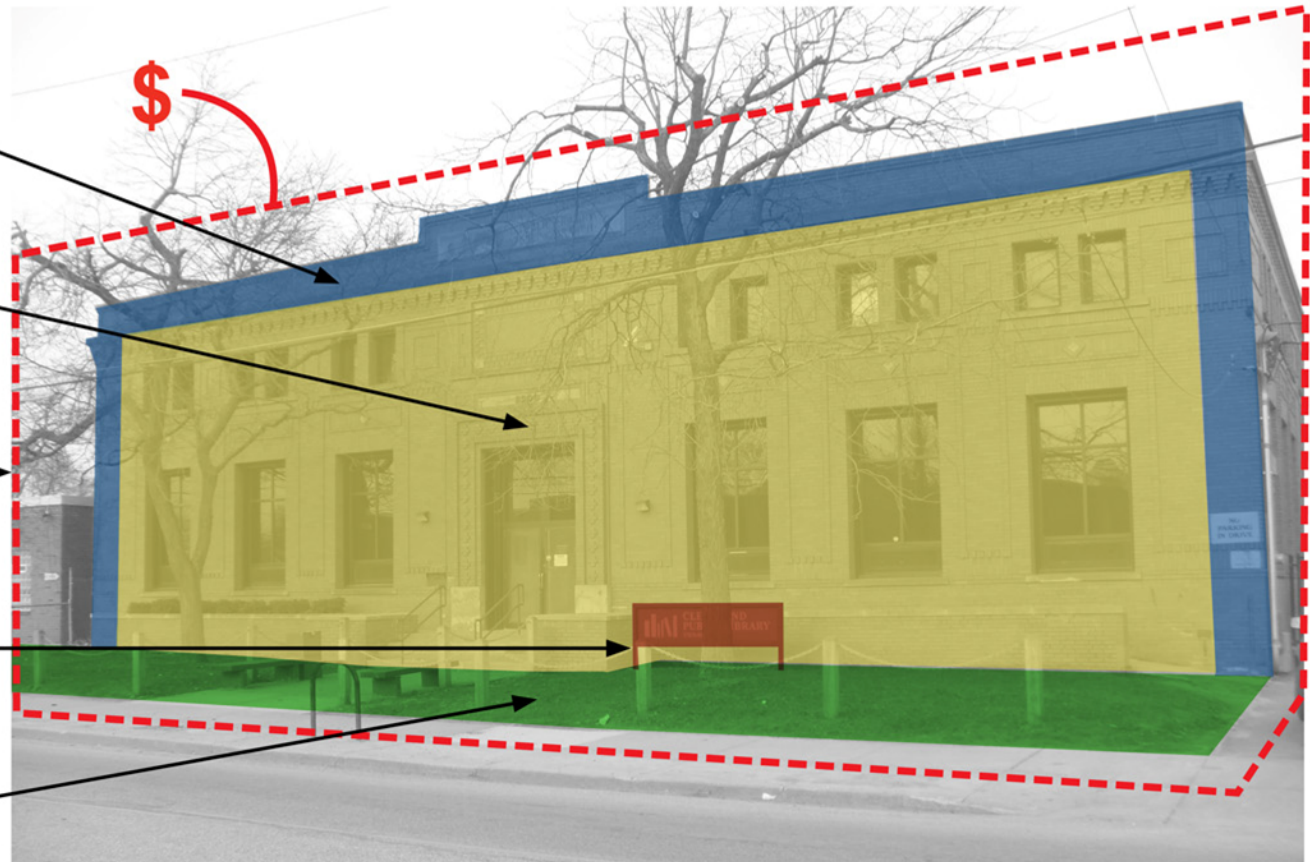
LIBRARY PROGRAMMING  
FLOOR PLAN ASSESSMENT

ozanne  
COST ESTIMATING

STUDIO GRAPHIQUE

GRAPHICS, WAYFINDING AND SIGNAGE

KNIGHT & STOLAR, INC.  
Planning Consultants / Landscape Architects  
LANDSCAPE ARCHITECTURE



## GOALS OF FACILITY ASSESSMENT

Provide an objective analysis of the physical needs of 26 branches of the Cleveland Public Library categorized into Priorities

Site

Architectural

Mechanical /Plumbing

Electrical

Signage/ Wayfinding

Library Planning

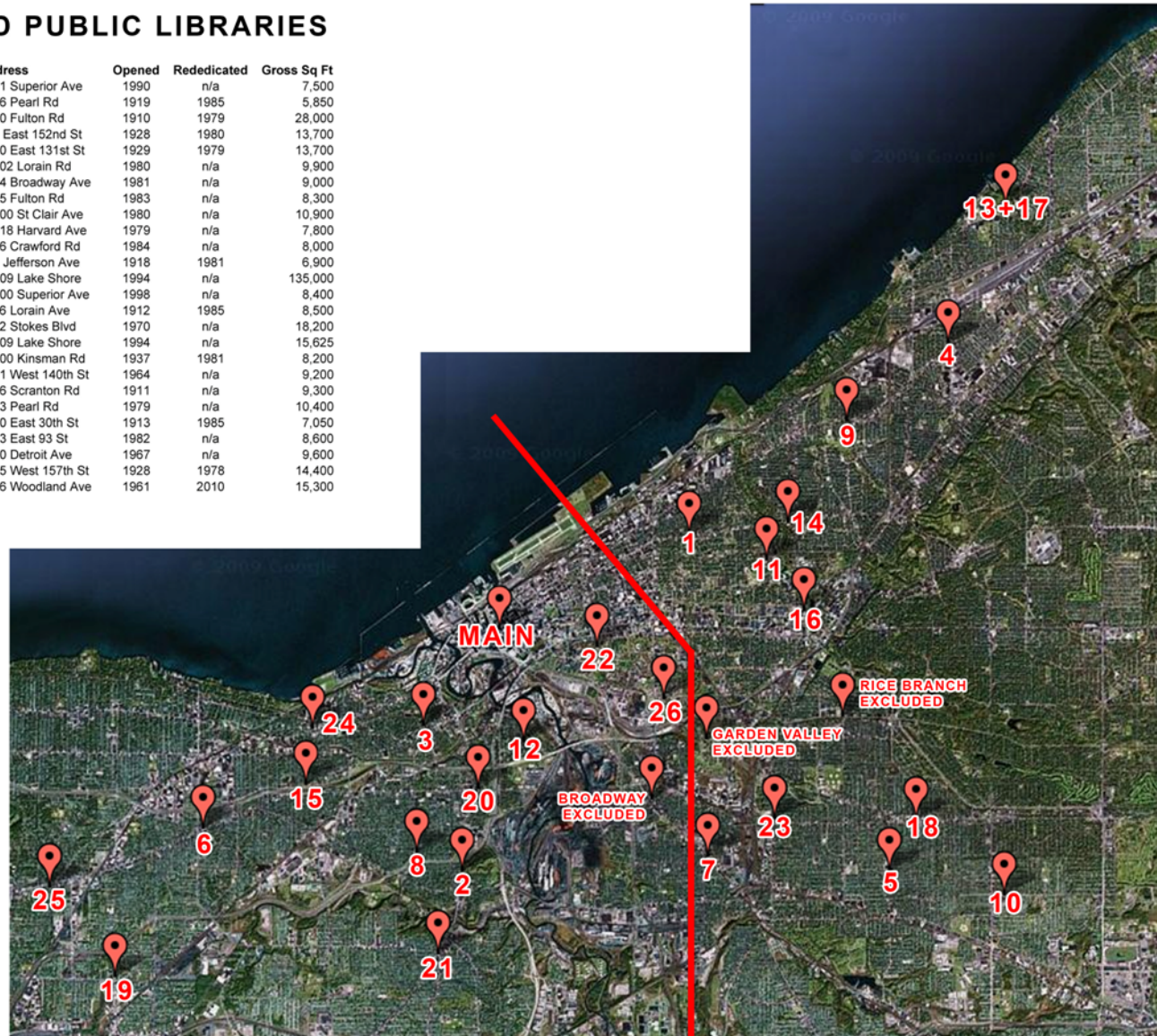


## Process- site by site

1. Review existing plans and print for walk-through.
2. Meet with facility manager and discuss particular concerns
3. Fully observe conditions, take notes and photographs
4. Return to office and record in report format
5. Meet with Ozanne Construction for their opinion of probable cost
6. Enter all information into data base together with planning observations
7. Out of town consultant scheduled separate site visits

## CLEVELAND PUBLIC LIBRARIES

Branch	Address	Opened	Rededicated	Gross Sq Ft
1 Addison	6901 Superior Ave	1990	n/a	7,500
2 Brooklyn	3706 Pearl Rd	1919	1985	5,850
3 Carnegie West	1900 Fulton Rd	1910	1979	28,000
4 Collinwood	856 East 152nd St	1928	1980	13,700
5 East 131st St	3830 East 131st St	1929	1979	13,700
6 Eastman	11602 Lorain Rd	1980	n/a	9,900
7 Fleet	7224 Broadway Ave	1981	n/a	9,000
8 Fulton	3545 Fulton Rd	1983	n/a	8,300
9 Glenville	11900 St Clair Ave	1980	n/a	10,900
10 Harvard-Lee	16918 Harvard Ave	1979	n/a	7,800
11 Hough	1566 Crawford Rd	1984	n/a	8,000
12 Jefferson	850 Jefferson Ave	1918	1981	6,900
13 Lakeshore Facility	17109 Lake Shore	1994	n/a	135,000
14 Langston Hughes	10200 Superior Ave	1998	n/a	8,400
15 Lorain	8216 Lorain Ave	1912	1985	8,500
16 Martin Luther King, Jr.	1962 Stokes Blvd	1970	n/a	18,200
17 Memorial-Nottingham	17109 Lake Shore	1994	n/a	15,625
18 Mt Pleasant	14000 Kinsman Rd	1937	1981	8,200
19 Rockport	4421 West 140th St	1964	n/a	9,200
20 South	3096 Scranton Rd	1911	n/a	9,300
21 South Brooklyn	4303 Pearl Rd	1979	n/a	10,400
22 Sterling	2200 East 30th St	1913	1985	7,050
23 Union	3463 East 93 St	1982	n/a	8,600
24 Walz	7910 Detroit Ave	1967	n/a	9,600
25 West Park	3805 West 157th St	1928	1978	14,400
26 Woodland	5806 Woodland Ave	1961	2010	15,300







## Establishing Priorities

### Priority 1- Critical conditions

Examples include life safety, accessibility or critical structural Concerns.

- Fire alarm system in disrepair

- Non-accessible restrooms

- Critical structural concerns

### Priority 2- Serious concerns

Examples include building envelope conditions, energy consumption issues or failing systems requiring high maintenance

- Leaking roof or parapet

- Single glazed windows

- Frequent mechanical unit failures

## Establishing Priorities

### Priority 3- Moderate conditions

Examples include moderate building envelope conditions, recommended repairs or old but functioning systems.

- Minor masonry tuck pointing

- Replace corroded door frames

- 20 year old Roof Top Unit still works with normal maint.

### Priority 4- Minor concerns

Examples include minor repairs, or replacement of worn finishes

- Replace worn carpet, stained ceiling tiles and painting

- Replace worn millwork or window treatments

- Replace old fixtures

## Cost Estimating- “Opinion of Probable Cost”

Ozanne Construction Co.

Costs are based on preliminary assessment

Solutions are not designed, items not specified

2011 dollars-expect escalation

Expect volatility in the construction market

Class 4-5 estimate- good for concept screening and strategic

Planning

Class 4-5 estimate must allow for 30% +/- accuracy

## Executive Summary

Cleveland Public Library branches are well maintained and operated and offer a clean, comfortable resource for the community. The most notable deficiencies are lack of handicapped accessibility and old mechanical systems.

System wide cost by priority-

Priority 1- Critical	\$ 2,442,791
Priority 2- Serious	\$ 3,097,069
Priority 3- Moderate	\$ 8,591,227
Priority 4- Minor	\$ 867,944
Estimate of all system wide upgrades	\$ 14,999,031
More detailed break-down to follow (hand-outs)	plus contingency



## Executive Summary- continued

Average projected cost per site is \$576,000

Highest cost sites-	Cost	Cost/ SF
Lakeshore	\$ 2.5M	\$ 160
MLK	\$ 1.2M	\$ 65
South	\$ 1.4M	\$ 120

New construction for Library (range \$200 SF +/-)

## Common Site Findings

Need ADA compliant entry ramps:

Carnegie West Branch

Lorain Branch

MLK Jr. Branch

Rockport Branch

South Branch

Walz Branch

Need ADA compliant parking spaces:

Rockport Branch

South Branch

South Brooklyn Branch

Need pavement repair

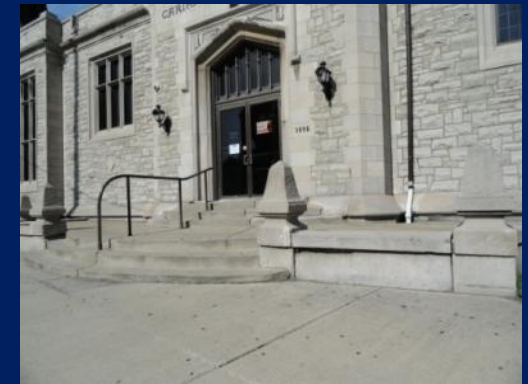
Addison Branch

Collinwood Branch

West Park Branch



Lorain Branch



South Branch



West Park Branch

## Common Architectural Findings

### Building envelope

- Leaky roofs, flashings or copings

- Corroded entrance systems

- Masonry tuck pointing

### Accessibility

- Non-accessible restrooms

- Check-out counters

- Staff work areas/ lounges

### Finishes

- Worn carpet, stained ceiling tiles, paint



## Common Mechanical Findings

### Mechanical Equipment (Boilers, Air Handlers, Misc.)

The majority of the mechanical equipment are at or over their median service life as suggested by ASHRAE.

### Controls

Each library can benefit from advanced controls, control strategies, proper zoning, Outside Air Ventilation controls, variable frequency drives, and DDC (Direct Digital Control) to improve energy efficiencies.

### Water Treatment

Water treatment of the heating water system protects the piping and equipment of the heating system. Many branches lack proper treatment of water, reducing service life.



## Common Electrical Findings

### Lighting

Most sites could benefit from upgrades lighting, not only for user comfort, but newer technology and design will result in energy savings.

### Improved lighting controls

Avoid breaker switching for lights. Daylighting and occupancy control opportunities.

### Power distribution

New panels will be required for increased computers. Routing of conduits/data to new locations will require careful design. Floor access is not always available.

## Common Plumbing Findings

### Plumbing Fixtures

Many of CPL public restrooms have existing ADA deficiencies that would require CPL to renovate these restrooms. It is recommended to replace these fixtures to reduce water consumption with renovation.

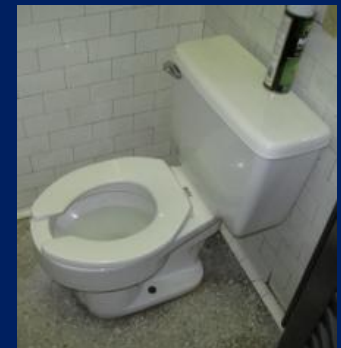
### Recommended Fixture Requirements:

Toilets: 1.28 Gallons Per Flush

Urinals: 0.125 Gallons Per Flush

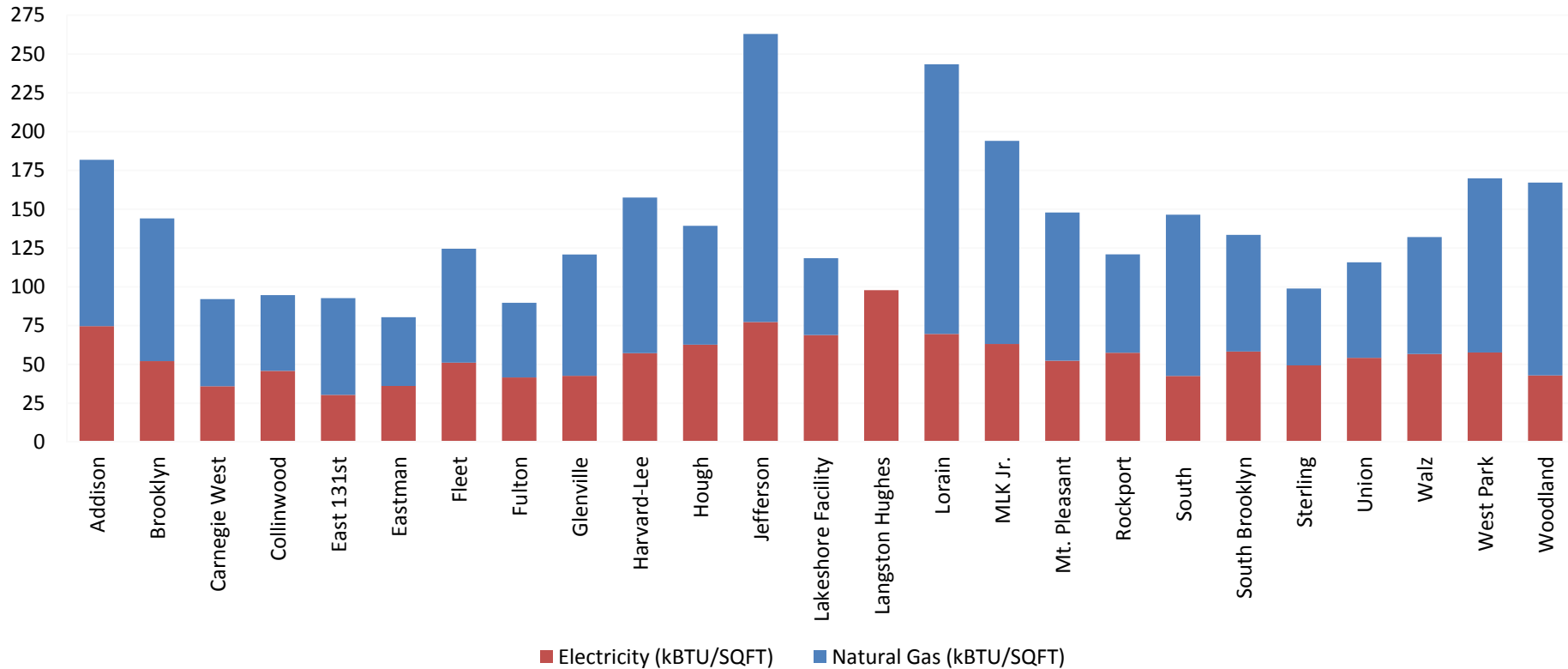
Lavatories: 0.5 Gallons Per Minute (Aerators)

Sinks: 0.5 Gallons Per Minute (Aerators)



## Energy Use – Energy (kBTU) Per Year

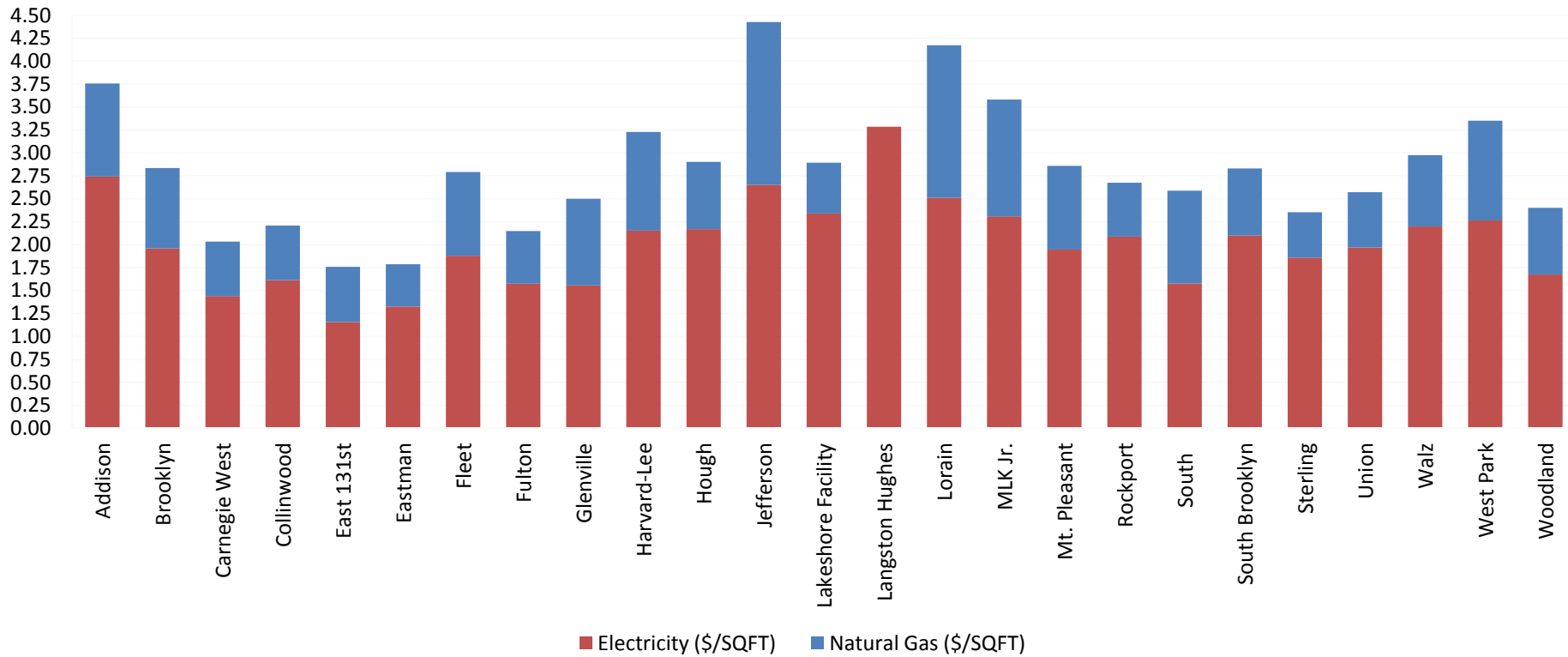
**Cleveland Public Library - Energy Use Comparison  
(kBTU/Yr/Occupied SQFT)**



\*Information based on actual utility bills provided by CPL.

## Energy Use – In U.S. Dollars Per Year

**Cleveland Public Library - Operating Cost Comparison  
(\$/Yr/Occupied SQFT)**



\*Information based on actual utility bills provided by CPL.



## Energy Use – Walz Library Energy Evaluation



Building #23  
Walz Branch Library

HVAC

CPL Main

CPL Libraries

CPL Assessments

Main Page

HVAC

### Energy Ranking (kBTU/SQFT)

13th of 25 Reviewed Branches

### Utility Ranking (\$/SQFT)

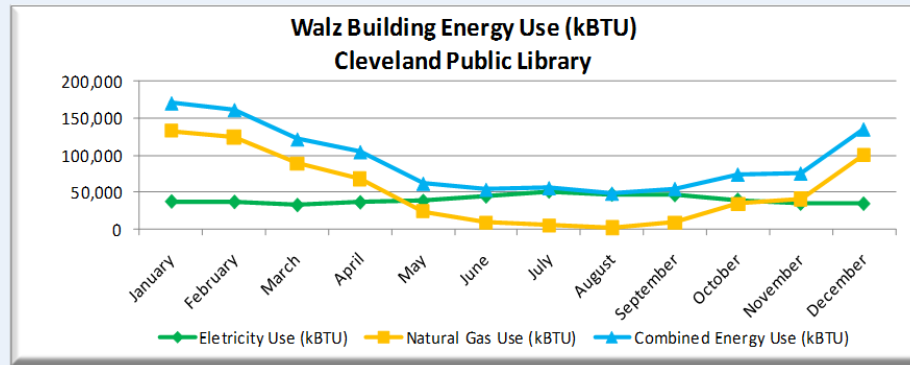
17th of 25 Reviewed Branches

### Library Building Performance

\$/SQFT:	<b>2.98</b>	Goal: <\$2.0/SQFT
Overall kBTU/SQFT:	<b>132</b>	Goal: <92kBTU/SQFT
Gas kBTU/SQFT:	<b>75.4</b>	Goal: N/A
Electrical kWh/SQFT:	<b>16.61</b>	Goal: N/A

### National Percentile of Libraries

Overall Energy Use (kBTU/SQFT):	<b>10th</b>
Electrical Use (kBTU/SQFT):	<b>25th</b>



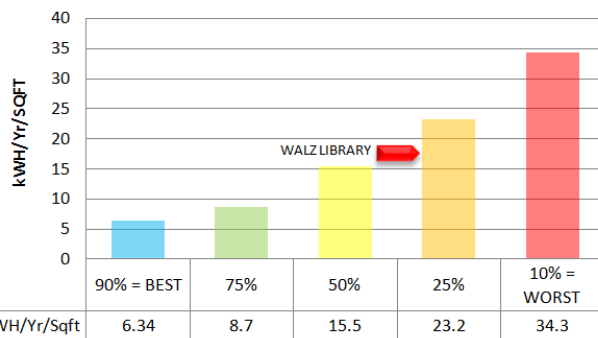
### Building Profile:

Built: 1964
Building Gross SQFT: 9,600
Building Occupied SQFT: 8,500

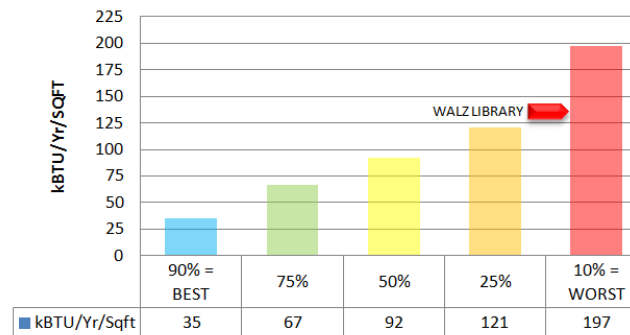
### Energy Use Summary:

This library's large energy consumers consist of (2) 80% Efficient Boilers with a Constant Volume Forced Air Split System. Waltz's energy performance can be improved through engineered evaluation, the purchasing of high efficiency equipment, upgraded building and temperature controls, lighting upgrades, and building envelope improvements. The energy use curve of this branch appears to be normal with higher gas use in the winter time and higher electric use in the summer time.

### National Electrical Energy Use Comparison For Libraries (kWh/Yr/SQFT)



### National Combined Energy Use Comparison For Libraries (kBTU/Yr/SQFT)



## Next Steps

Meet with CPL leadership for workshop(s)

Determine Project priorities and phasing for reinvestment

Cost vs Value Comparisons.

Operational decisions

Decide how and where the money will be spent

On what schedule is funding available

Goal-

Develop a Master Plan outlining the desired reinvestment opportunities with a timeline.

Go to data base-

Questions-





# Key Findings – DesignLAB Precedents

