

Facilities Condition Assessment Program

Project Review

Status Update

February 10, 2012



Facilities Development and Management

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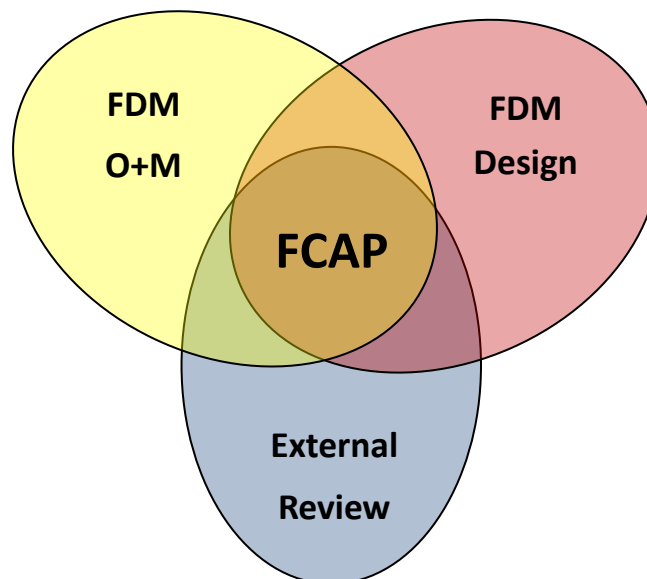
Introduction

The Facilities Condition Assessment Program (FCAP) is a comprehensive restructuring of the City of Milwaukee Department of Public Works (DPW) physical property preservation philosophy. FCAP is designed to increase capital project efficiency, reduce capital project expenditures, and develop stable and predictable annual capital fund requests.

FCAP is developed by Facilities Project Coordinator, Sean Schutten P.E., and supplemented by key staff within City of Milwaukee Facilities Development and Management (FDM). The program combines the precision of facility audit guidelines, the vision of project planning and estimating, and the strategy of capital budgeting. The culmination results in a high-level management tool to maintain Key Performance Indicators (KPIs) across the portfolio of DPW facilities which have a 2012 Current Replacement Value (CRV) of approximately \$975,000,000.

Project Review

Long-term facility preservation requires dependable and accurate oversight. FCAP is a combination of inspection/capital project planning used to monitor and justify capital expenditures. The multi-departmental program includes contributions from specialists in both Operation and Maintenance (O+M) and Design departments. The multi-departmental cross-reference procedures layer and reinforce property depth and knowledge. FCAP centralizes this information and transfers it to a systematic and repeatable plan that effectively and efficiently conveys its content for both internal and external (non-FDM) review.

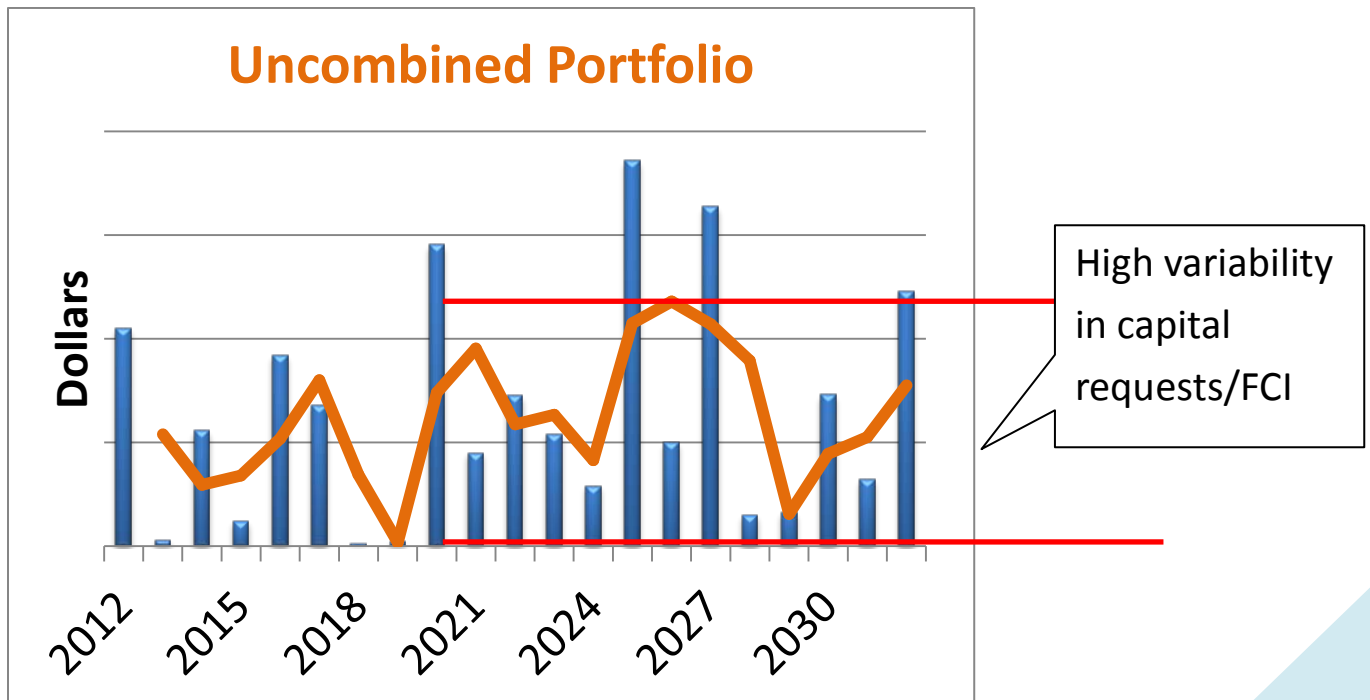


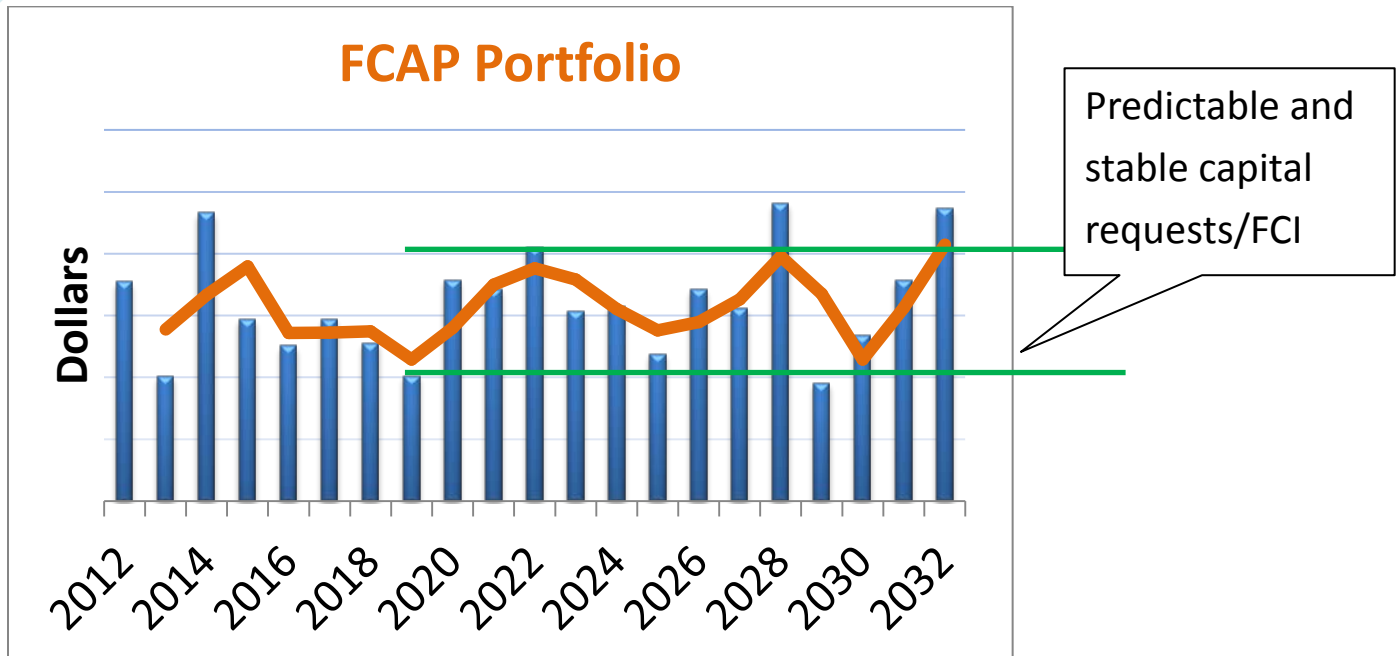
The program is anchored on thorough evaluations at each complex (facility) evaluated and inspected. The information is incorporated into complex specific reports. The individual reports are updated on an annual basis to keep the data accurate.

Each facility evaluation comprises detailed information about component conditions and capital project recommendations. As a single entity, an individual FCAP report is a content-rich evaluation. The FCAP value is enhanced when individual reports are combined into a portfolio and the high-level management tool is utilized.

High-level review allows FCAP strategists to bundle/combine similar capital projects across complexes. This strategy increases internal efficiency and reduces administration, design, and construction costs as opposed to conducting these same projects as single events.

Moreover, the combined FCAP portfolio allows strategists to plan predictable and stable annual capital budget requests. Thereby, maintaining a relatively constant FCI/budget request per year. See graphical examples below:





Finally, a combined portfolio generates KPIs in which facility well-being is monitored.

A System of Accountability

Capital projects are cost intensive undertakings that require analysis and justification to conduct expenditures. FCAP incorporates a quantitative/qualitative condition assessment system to begin monitoring capital projects up to 20 years in advance. Annual field inspections at each facility monitor the status, functionality, and condition of components. FCAP adjustments are based on annual inspections and quantitative/qualitative ratings are adjusted as needed.

Annual field inspections provide an opportunity to collaborate information with O+M personnel. The inspections may reveal defects in components that require O+M attention. Timely preventive/routine maintenance halts exacerbation of deterioration that may otherwise result in premature and more costly capital expenditures.

These frequent inspections, in conjunction with additional factors, provide the basis for capital project requests. Additional factors may include: maintenance expenditure reviews, consultants

recommendations, and betterments to codes.

Compliance

FCAP adheres to by multiple agencies compliance standards to ensure quality and accuracy. A list of FCAP compliances is as follows:

Agency	Meets	Reasoning
APPA	X	<ul style="list-style-type: none"> Facilities audit format
IFMA	X	<ul style="list-style-type: none"> Facility cost projections Life cost analysis Condition analysis
National Research Council	X	<ul style="list-style-type: none"> Standardized inspection process Utilizes standard industry cost data User-friendly management system
U.S. Department of the Interior	X	<ul style="list-style-type: none"> Key Performance Measures

Project Review

The Facilities Condition Assessment Program (FCAP) is a 20 year-forecast of the property and analysis of the capital improvement expenditures. It involves two aspects: the physical analysis and financial analysis. The physical analysis includes an onsite inventory and condition assessment of components that will require capital improvement expenditures within the scope of the 20 year study. The financial analysis includes project scheduling/coordination and cost estimation for these projects.

FCAP includes detailed information about property components at a finite level to serve as the basis for project schedules. The end product serves as a long-term strategic tool to position property fiduciaries to make decisions to best serve its owners.

Component Categorization

The following criteria are used to determine FCAP components:

- City of Milwaukee owned property

- Pertains to components that are funded by the City of Milwaukee Facilities capital budget.
- Limited Useful Life (UL) expectancy
 - Pertains to components that have an ascertainable service life.
- Predictable Remaining Useful Life (RUL) expectancy
 - Components with service life expiration within the 20 year FCAP scope. A prediction for the amount of time (in years) the component has until replacement is required. Subsequent reports may adjust RUL forward or backward.
- Greater than \$5,000 minimum threshold (some exceptions apply)
 - Occasionally, components less than \$5,000 are included in the capital expenditures plan. These components are usually combined/associated with larger capital projects yet remained separately itemized for identification and tracking purposes.
- Requirements by local codes or statutory regulation

Additional information that is used to categorize components include:

O+M Responsibility pertains to those components that require maintenance or replacement less than the minimum capital threshold at/around \$5,000. These components are usually repaired or replaced from O+M funds.

Long Lived pertains to components that are funded through the City of Milwaukee capital program. However, these expenditures are projected beyond the 20 year scope of capital budget, yet still monitored during annual field investigations.

Others pertains to components that are repaired/replaced/maintained by an entity other than Facilities Development and Management.

Report Information

FCAP reports include detailed information about each facility component. A typical component summary will include:

- Component Description
 - Pertains to the element which is projected for capital improvement
- Quantity

- Condition Assessment

- The condition assessment is determined from on-site inspections, consultant’s reports, maintenance history, and collaboration with building occupants. The condition assessment is used to establish a standardized system for building condition assessment. Each building component is defined with a numerical value to indicate its condition. Periodic condition assessment updates monitor components and result in any necessary adjustments to the funding plan. The condition assessment rating is as follows:

Condition Rating Explanation			
9	Excellent condition – No problems noted	4	Poor condition – Advanced deterioration or obsolescence
8	Very good condition – Minor isolated problems	3	Serious condition – Advanced deterioration or obsolescence with minor function loss
7	Good condition – Moderate isolated problems	2	Critical condition – Advanced deterioration or obsolescence with moderate function loss
6	Satisfactory condition – Minor deterioration or obsolescence	1	Failed condition – Complete loss of function
5	Fair condition – moderate deterioration or obsolescence	N	Not applicable or under construction/repair

- Age
- Photo Documentation
 - Components are photographed to capture their visual condition at the time of the inspection.
- Useful Life (UL)
- Remaining Useful Life (RUL)
- Replacement History
 - This section includes information on the component replacement.

Capital Budget

The capital budget for the property is included on two spreadsheets. The first spreadsheet contains the anticipated capital projects for years 2012 through 2021. The second spreadsheet contains the anticipated capital projects for years 2022 through 2031. Information on the spreadsheets includes the following categories:

- Component Name
 - Pertains to the element which is projected for capital improvement.
- Quantity
 - Includes the measured amount of each component at the property.
- Units
 - Pertains to the measurement used to determine quantity. The units within the report are as follows:
 - LF = Linear Feet
 - SF = Square Feet
 - SY = Square Yard
 - EA = Each
 - LS = Lump Sum
- 2012 Unit Cost
 - Pertains to the estimated cost per unit measurement for capital improvement. These costs are derived from RS Means Cost Works, Marshall & Swift/Boeckh, AME, Inc., historic data, and other resources.
- 2012 Replacement Cost
 - Pertains to the estimated cost of the capital improvement project. It is derived by multiplying the *Quantity* by *2012 Unit Cost*.
- Useful Life (UL)
 - Pertains to the time frame in years wherein a component is anticipated to remain functional provided it receives proper maintenance. UL is also referred to as Service Life.
- Remaining Useful Life (RUL)
 - Pertains to the estimated service life remaining for any given component. It coincides with the anticipated year of the capital expenditure. *Remaining Useful Life*

(RUL) pertains to the estimated service life remaining for any given component. It coincides with the anticipated year of the capital expenditure.

- **First Year Funds Requested**
 - Pertains to the year in which the capital expenditure is anticipated.
- **Key Performance Indicators (KPIs) are management benchmarks**
 - CRDM (Capital Repair/Deferred Maintenance) pertains to projects that have been identified for capital repairs and/or subjected to deferred maintenance and have yet to be funded. The aggregated summation of deferred maintenance projects corresponds to the FCI (see below).
 - CRV (Current Replacement Value) is the insurance estimate for reconstruction of the facility in today's dollars.
 - FCI (Facilities Condition Index) is the relationship between the aggregated summations of CRDM Buildings divided by the CRV of the facility. This proportion provides a measure to analyze the condition of the property, compare with other properties, and cross reference with City of Milwaukee guidelines. The City of Milwaukee qualifies the facilities in the following manner, which is based upon APPA standards:

Condition	FCI Rating
Good	0.0 – 0.05
Fair	0.051 – 0.099
Poor	>0.1

FCI is a tool used to measure the quality of facilities. The indicator is a quantitative/qualitative scale that measures the overall well being of the portfolio. The quantitative/qualitative information is subjective and varies from agency-to-agency. However, the similarity is that the FCI is a benchmark in which properties are analyzed.

Facilities Development and Management utilizes CRV to devise the FCI. The FCI is calculated by CRDM building components divided by CRV, or:

A well managed portfolio strategizes capital projects such the FCI remains relatively predictable and stable over time.

Another feature of FCAP is finding an FCI that meets the unique needs for the City of Milwaukee facility portfolio. Thorough property analysis determines the blue-print of each facility. When facilities are combined, the aggregate data will drive the strategy that fulfills property preservation in a predictable and stable manner.

Ongoing analysis of the City of Milwaukee portfolio may result in a modified FCI qualitative/quantitative scale which will reflect the unique need for the City of Milwaukee. Until that time, the APPA benchmark will be used.

2011 FCAP Report Enhancements

The FCAP report process was reviewed and enhanced to make the process more efficient and easily used. This resulted in an increase of beneficial features. The table below defines the FCAP enhancements and benefits:

Enhancement	Benefit(s)
Facility Audit	<ul style="list-style-type: none"> • Detailed onsite facility review • Captures condition • Documents inventory
Condition Assessment Rating	<ul style="list-style-type: none"> • Identify annual rating adjustments • Justify capital budget requests • Easily understood and transferrable among FCAP functionaries
Report Format	<ul style="list-style-type: none"> • Systematic and repeatable • Easily updated • Compatible across work stations • Edited for succinctness
PCI Rating	<ul style="list-style-type: none"> • Measures the performance of the

	property features <ul style="list-style-type: none"> • Develops audit of property features at sites
CCI Rating	<ul style="list-style-type: none"> • Measures the complex performance
Cost Estimation	<ul style="list-style-type: none"> • Easily reviewable
Portfolio Monitoring	<ul style="list-style-type: none"> • Combined facilities for strategic management

Status Update

DPW includes 74 buildings and five parking structures that are to be incorporated into FCAP. In 2010, five complexes were beta-tested. In 2011, five parking garages and 11 DPW complexes were analyzed. A complex is defined as a facility (building/structure) and its associated property features. A complex may contain multiple structures. Therefore, a complex evaluation may include multiple facility evaluations and just one property evaluation. The FCAP complex evaluations are summarized below:

2010	2011		2012
Beta Test	Complete	Near Completion	Planned
City Hall Complex	DPW Parking	DPW Facilities - A	DPW Facilities - B
Material Recovery Facility	<ul style="list-style-type: none"> • 1000 N Water • 2nd and Plankinton • 4th and Highland • MacArthur Square • Milwaukee and Michigan 	<ul style="list-style-type: none"> • Central Repair Garage • Sanitation Central I • Industrial Road Complex 	<ul style="list-style-type: none"> • 809 Building • City Hall • DPW Field HQ • Municipal Nursery • Municipal Service Building Complex • North District Field Station • Sanitation Central • Sanitation South II
Northwest Garage	DPW Facilities - A		
Safety Academy	<ul style="list-style-type: none"> • 123 Building • Education 		
Sanitation/Forestry Central			

	<p>Center</p> <ul style="list-style-type: none"> • Forestry South HQ • Lincoln Avenue Garage Complex • RA Anderson • Sanitation Central II • Southwest Shop • Tow Lot 		<ul style="list-style-type: none"> • ZMB <p>Port Facilities</p> <p>Police Department</p>
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The FCAP Update focuses on a partial group of buildings analyzed in 2011. This group served as the control group to develop enhanced FCAP data processing procedures across a portfolio of facilities.

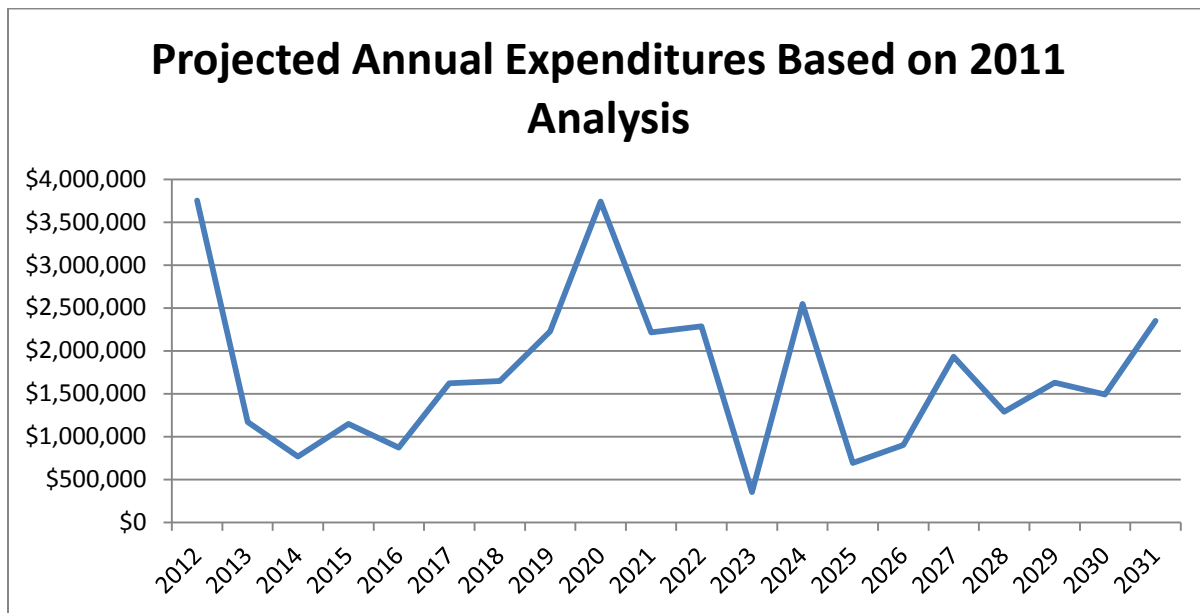
The control group includes the following:

Complex	Facility	Age	SF	CRV	FCI
123 Building	Main Building	26	12,240	\$1,628,465	0.0
Education Center	Main Building	35	3,750	\$384,101	0.0
Forestry South HQ	Headquarters	72	15,893	\$2,498,126	0.0
	Soil Shed	72	2,463	\$126,247	0.0
	Storage Garage	15	7,600	\$258,888	0.0
Lincoln Avenue Garage Complex	Main Garage	54	85,124	\$6,700,325	0.33
	Transfer Station	16	31,238	\$2,646,248	0.00
	Scale House	16	684	\$84,565	0.00
	Self Help	16	331	\$59,332	0.00
RA Anderson	Main Building	72	25,620	\$8,467,132	0.14

Lake Tower					
Sanitation	Main Building	20	12,986	\$1,324,975	0.0
Central II	Salt Dome	19	4,847	\$492,450	0.0
Southwest Shop	Main Building	97	21,275	\$1,874,411	0.12
Tow Lot	Main Building	46	9,440	\$924,869	0.00
		Totals	233,491	\$27,470,134	
DPW Totals(Excluding Parking)			1,740,742	\$306,710,116	
% of DPW Total			=13.4%	8.96%	

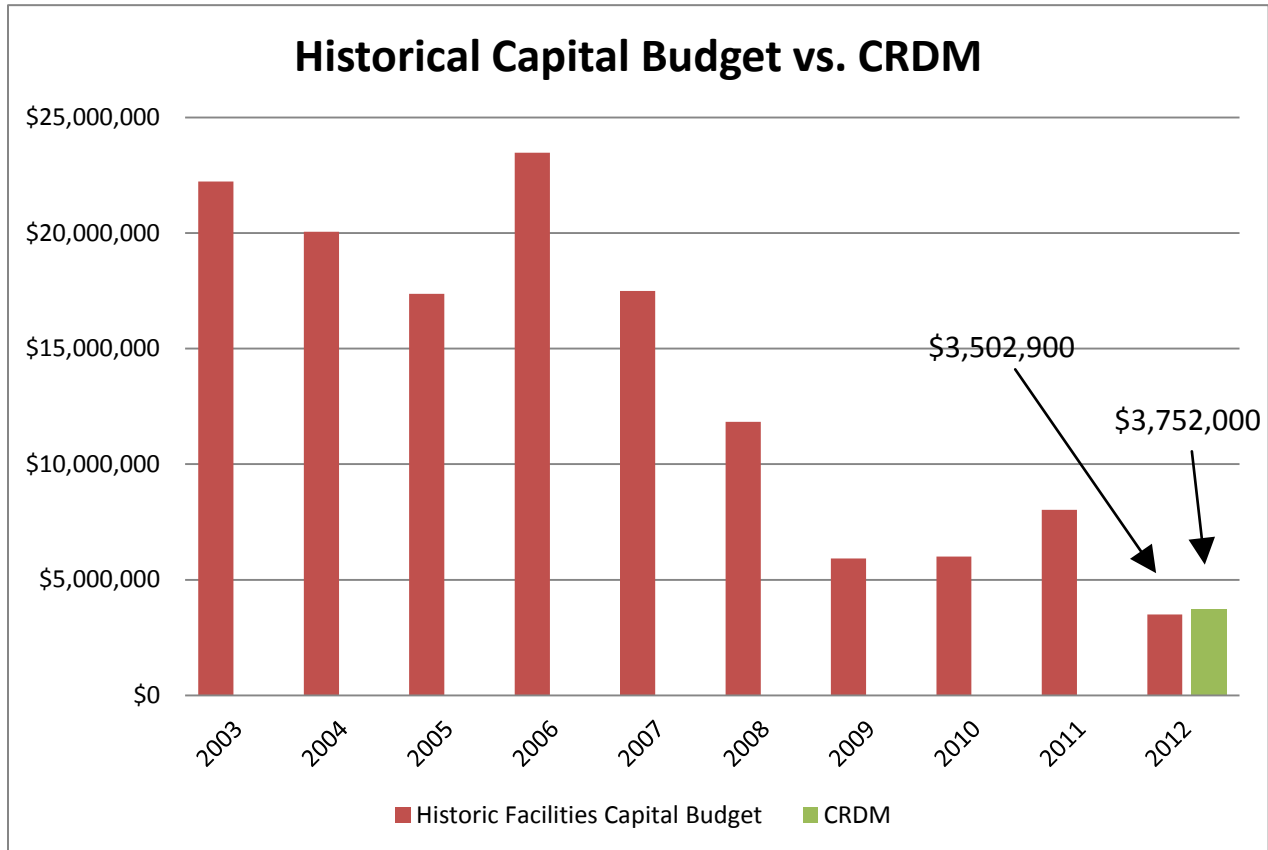
The eight complexes have a CRV of \$27,470,134. The 2012 CRV for all DPW Facilities (Excluding Parking) is \$306,333,054. Therefore, this update explains the enhanced FCAP process on 13.4% of all SF and 8.75% of all CRV at DPW facilities. This data was compiled into the FCAP process, analyzed for future capital improvements, and measured for KPIs.

The first data indicator is the combined funding plans and projected annual expenditures from the eight complexes. Its graphical depiction is below:



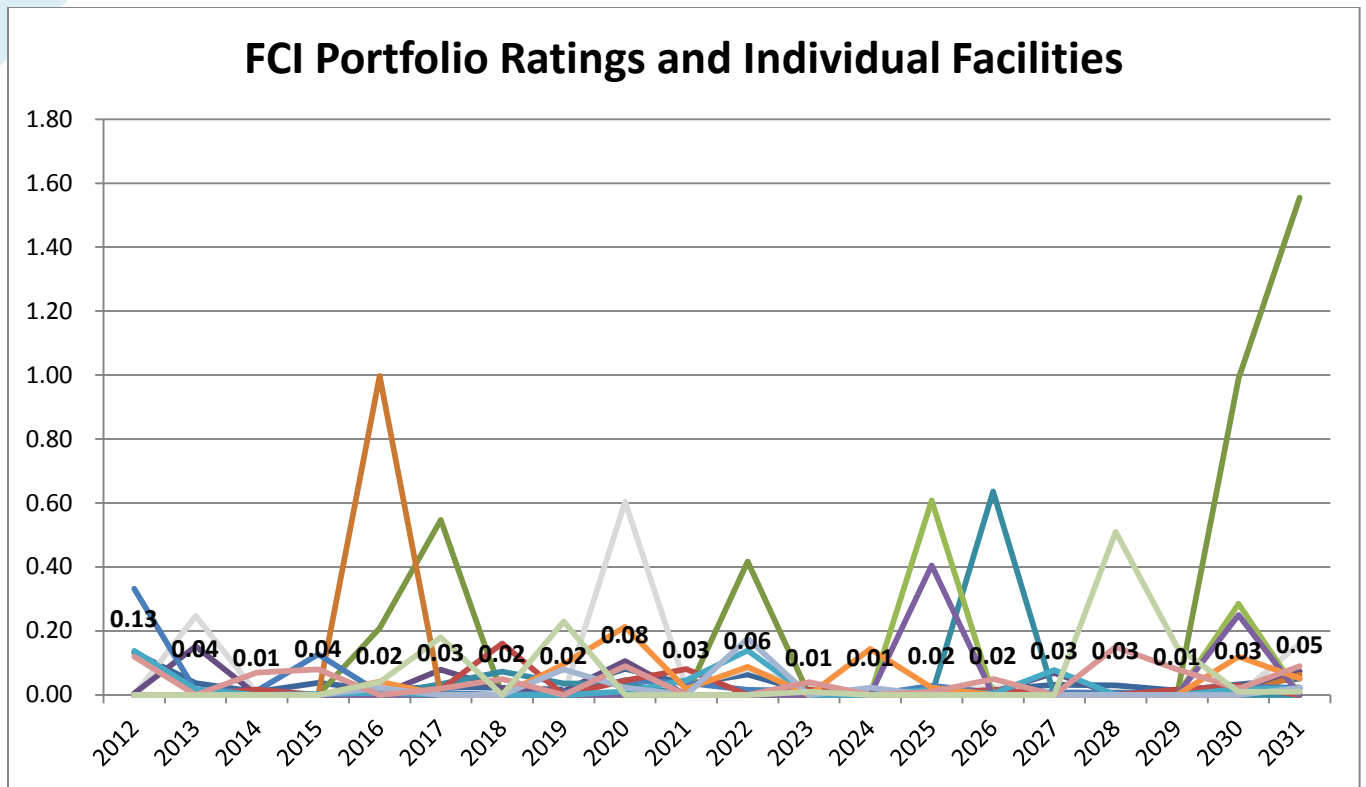
The initial condition assessment of these complexes reveals approximately \$3,750,000 in CRDM and varying annual expenditures thereafter.

The control group was compared to the history of capital budget requests granted t FDM. The 2012 capital budget is at \$3,502,900 whereas the control group CRDM is noted at \$3,752,000. This equates to a deficit \$249,100 or 7.1%.



The CRDM is expected to increase once the remaining 91% of facilities are added to the FCAP combined portfolio. A complete portfolio is anticipated in 2013.

The FCI for individual buildings varies from 0.0 to 1.55 (research equipment at Recycling Education Center). However, the Portfolio FCI (combined facilities) remains within derisible ratings except the initial CRDM as identified from the initial FCAP inspections.



Updates

An FCAP update was conducted at the Safety Academy. The update was a non-site review update. This update includes a review of the prior funding plan and adjustments are made as projects are completed. Adjustments include:

- Cost updates at roofs
- Adjust all projects one year
- Acknowledge chiller and cooling tower replacement
- Developed Backlog monitoring

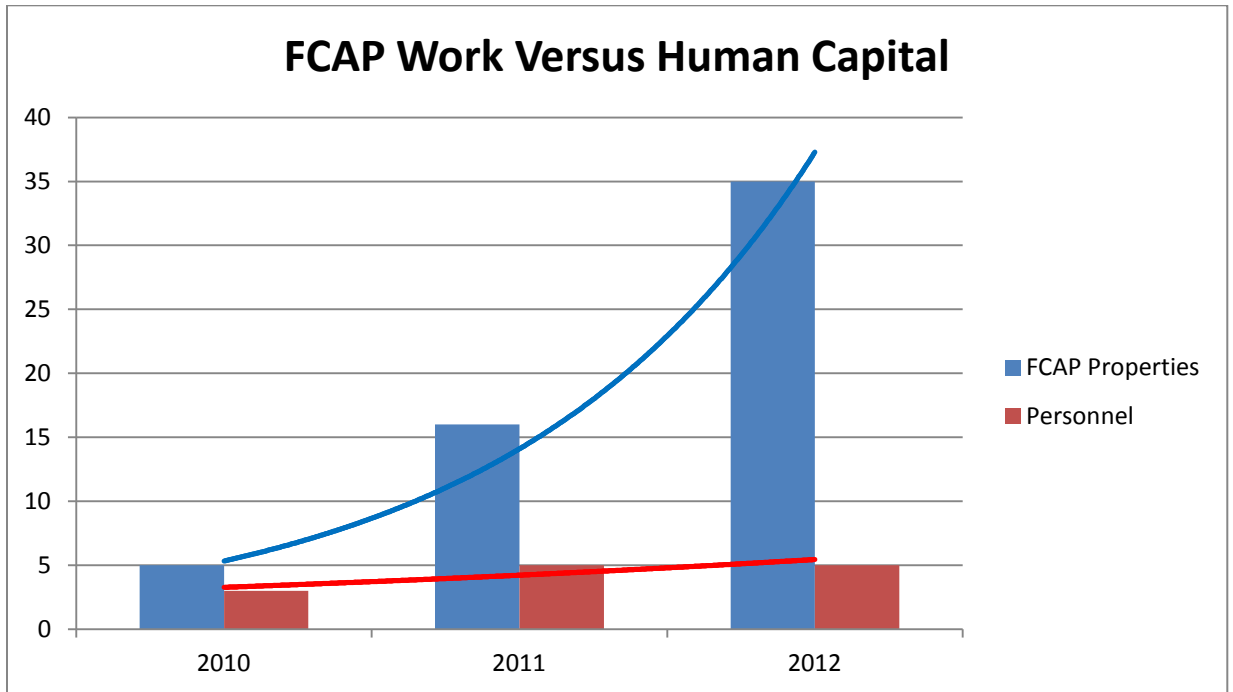
Future Analysis

The foundation of FCAP is adaptable for comprehensive growth across City of Milwaukee agencies. Key questions to consider as FCAP evolves:

- Does each City agency have its own facility capital budget?
- Does each City agency conduct its own capital improvements?
- Does the City have departmentalized funds for cash flow analyses?
- Does the City of Milwaukee intend to develop, grow and maintain a cash account to

fund capital expenditures?

- Does the City of Milwaukee have the staff to sustain excellence? The following graph depicts the FCAP program expansion in one year. 2012 is an estimated amount of FCAP reports based on expected projects.



Summary

The Facilities Condition Assessment Program (FCAP) is a comprehensive restructuring of the City of Milwaukee Department of Public Works (DPW) physical property preservation philosophy. FCAP is designed to increase capital project efficiency, reduce capital project expenditures, and develop stable and predictable annual capital fund requests. Project completion is anticipated in 2013.

References

The following list of reference materials were used aid in the development of this document and the FCAP report:

Adams, M.C (1997). *Successful Funding Strategies for Facility Renewal*: APPA

Investments in Federal Facilities (2004). National Research Council

Stewardship of Federal Facilities (1998). National Research Council

Rose, R. (1999). *Charting a New Course for Campus Renewal*: APPA

Kaiser, H.H (1993). *The Facilities Audit A Process for Improving Facilities Conditions*: APPA

Cost Planning and Estimating for Facilities Maintenance (1996). RS Means

Cotts, D. and Rondeau, E.P. (2004). *The Facility Manager's Guide to Finance and Budgeting*:
AMACOM

Roper, K.O.; Kim, J. H.; Lee, S. (2009), *Strategic Facility Planning: A White Paper*: IFMA

Marshall, Swift & Boeckh

RS Means

**DPW FCAP
FCAP Summary**

	20 Year Total Cost	CRDM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Projected Capital Improvements Per Year														
Building Name														
123 Building	\$3,092,000	\$5,000	\$5,000	\$433,000	\$10,000		\$44,000	\$568,000			\$1,218,000	\$51,000	\$178,000	\$51,000
Education Center	\$1,577,000			\$52,000			\$80,000	\$210,000				\$98,000	\$160,000	
Forestry South HQ	\$2,482,000	\$11,000	\$11,000	\$395,000			\$510,000	\$234,000	\$79,000	\$42,000	\$338,000	\$9,000		
Lincoln Garage Complex	\$12,184,000	\$2,232,000	\$2,232,000	\$95,000	\$622,000	\$952,000	\$47,000	\$98,000	\$669,000	\$1,001,000	\$784,000	\$592,000	\$140,000	\$169,000
RA Anderson	\$5,687,000	\$1,174,000	\$1,174,000	\$149,000		\$27,000	\$76,000	\$9,000			\$122,000	\$490,000	\$1,531,000	
Sanitation Central II	\$2,153,000	\$35,000	\$35,000	\$16,000			\$73,000	\$267,000		\$200,000	\$363,000	\$32,000	\$272,000	
Southwest Shop	\$2,531,000	\$231,000	\$231,000	\$6,000	\$134,000	\$168,000		\$41,000	\$190,000		\$199,000		\$5,000	\$88,000
Tow Lot	\$4,930,000	\$64,000	\$64,000	\$25,000			\$40,000	\$194,000	\$710,000	\$983,000	\$719,000	\$943,000		\$45,000
Total 20 Year Cost	\$34,636,000	\$3,752,000	\$3,752,000	\$1,171,000	\$766,000	\$1,147,000	\$870,000	\$1,621,000	\$1,648,000	\$2,226,000	\$3,743,000	\$2,215,000	\$2,286,000	\$353,000
		CRV	\$27,470,134	\$28,202,543	\$28,951,648	\$29,723,132	\$30,516,084	\$31,330,600	\$32,165,774	\$33,022,706	\$33,905,497	\$34,807,251	\$35,738,076	\$36,693,081
		FCI	0.13	0.04	0.01	0.04	0.02	0.03	0.02	0.02	0.08	0.03	0.06	0.01

Notes

- 1) FY is Fiscal Year. FY is the calendar year.
- 2) UL is Useful Life and RUL is Remaining Useful Life
- 3) The annual building materials inflation rate estimate is estimated at 2.70%
- 4) Current Replacement Value (CRV) is the 2012 estimated replacement value for the buildings w/ an annual inflation rate of 2.70%
- 5) Facility Condition Index (FCI) is the CRDM Building divided by the CRV, or CRDM Building/CRV

**DPW FCAP
FCAP Summary**

	20 Year Total Cost	2024	2025	2026	2027	2028	2029	2030	2031
Projected Capital Improvements Per Year									
Building Name									
123 Building	\$3,092,000	\$13,000		\$58,000	\$7,000	\$25,000			\$431,000
Education Center	\$1,577,000							\$380,000	\$597,000
Forestry South HQ	\$2,482,000			\$279,000	\$255,000				\$330,000
Lincoln Garage Complex	\$12,184,000	\$1,534,000	\$422,000	\$383,000	\$530,000	\$64,000	\$1,093,000	\$508,000	\$249,000
RA Anderson	\$5,687,000	\$347,000	\$193,000	\$44,000	\$975,000	\$9,000		\$260,000	\$281,000
Sanitation Central II	\$2,153,000	\$277,000	\$63,000		\$166,000			\$257,000	\$132,000
Southwest Shop	\$2,531,000	\$275,000	\$16,000	\$136,000		\$437,000	\$223,000	\$69,000	\$313,000
Tow Lot	\$4,930,000	\$102,000				\$756,000	\$313,000	\$18,000	\$18,000
Total 20 Year Cost	\$34,636,000	\$2,548,000	\$694,000	\$900,000	\$1,933,000	\$1,291,000	\$1,629,000	\$1,492,000	\$2,351,000
		\$37,673,379	\$38,682,086	\$39,715,322	\$40,775,207	\$41,867,869	\$42,987,435	\$44,137,039	\$45,318,816
		0.01	0.02	0.02	0.03	0.03	0.01	0.03	0.05

Notes

- 1) FY is Fiscal Year. FY is the calendar year.
- 2) UL is Useful Life and RUL is Remaining Useful Life
- 3) The annual building materials inflation rate estimate is estimated at
- 4) Current Replacement Value (CRV) is the 2012 estimated replacement
- 5) Facility Condition Index (FCI) is the CRDM Building divided by the CRV

12/1/2011



FACILITIES
CONDITION
ASSESSMENT
PROGRAM

123 BUILDING – PARKING OPERATIONS

Facilities Development | Management

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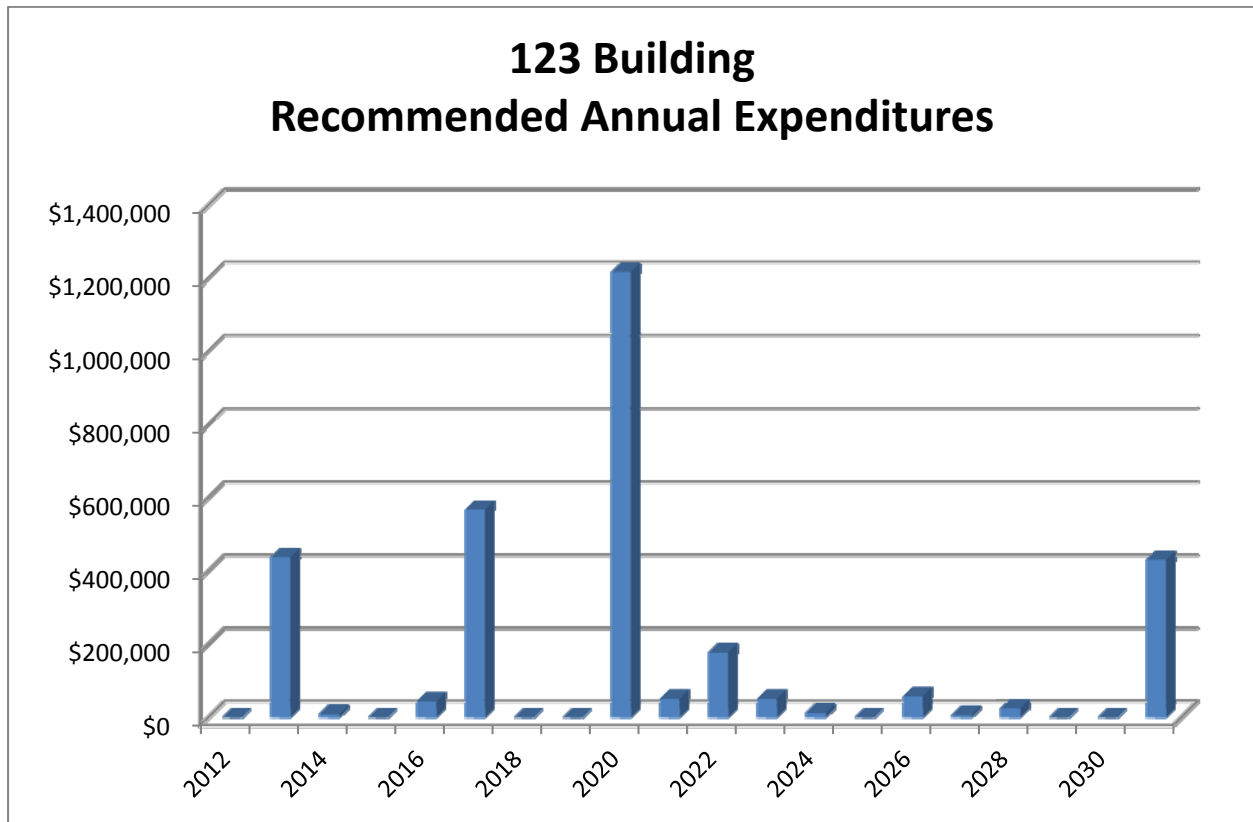
Introduction

Executive Summary

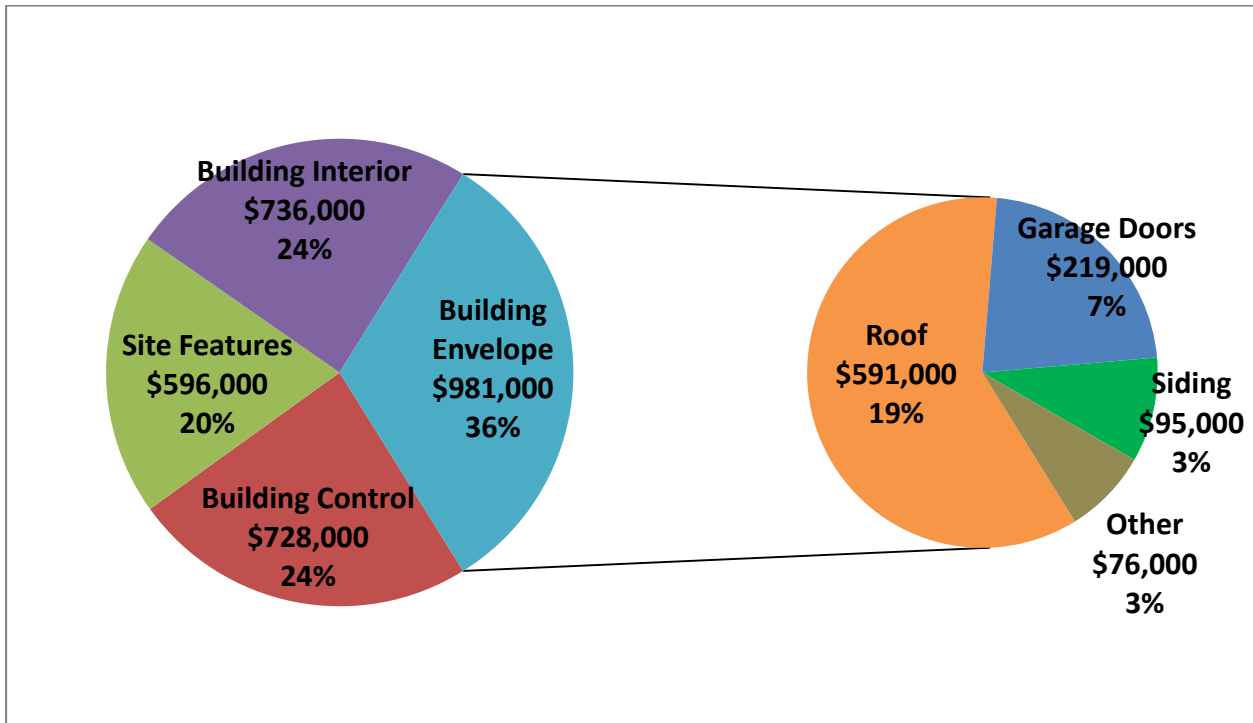
123 Building is a two story light industrial facility that contains parking operations. The building comprises offices, a tire repair shop, and storage space. It is located at 123 N. 25th Street and is bounded by 25th Street to the east and Canal Street to the south. The structure was developed in 1988. In 2001, the facility was renovated to accommodate parking operations.

The Facility Condition Index rating of 0.00.

Annual expenditures for 123 Building vary from year- to -year as indicated from the graph below.



The most significant category of 123 Building expenditures pertains to building envelope repairs as shown below. Building envelope roof repairs is the most significant single component.



Component Inventory

The property components at 123 Building are categorized as follows:

City of Milwaukee Capital Expenditures

Building Envelope Components

- Doors
 - Pedestrian
 - Garage
- Gutters and Downspouts
- Roof, EPDM w Ballast
- Light Fixture
- Siding, Metal
- Windows

Building Interior Components

- Light Fixtures, Garage

- Offices
 - Equipment and Furniture
 - Kitchen and Hallways
- Rest Rooms/Locker Rooms

Building Control Components

- Building Automation System
- Electrical
 - Branch Circuits
 - Secondary Distribution
- Fire Warning System
- Generator, Emergency
- Make-Up Air Units
- Security System
- Split Systems
- Unit Heaters

Site Features

- Asphalt Pavement
 - Maintenance
 - Replacement
- Bollards
- Fence, Chain Link
- Fuel Island
 - Canopy
 - Dispensers
- Light Poles and Fixtures
- Underground Storage Tanks
 - Replacement
 - Monitoring

O+M Responsibility

- Light Fixtures, Exterior Wall Mounted
- Exhaust Fans
- Water Heaters
- Paint Finishes, Touch-Up
- Other Items Normally Funded by O+M

Long Lived

- Foundations
 - Office Building
 - Storage Garage
- Pipes, HVAC, Water and Waste
- Sub Surface Utilities
- Structural Frames

Others Responsibility

- None

Doors, Pedestrian

123 Building exterior includes seven metal doors and one glass doors for access into the facility. The doors are at an age of 23 years. The inspection revealed that the rusted doors were rusted base plates and deteriorated caulk. The caulk was replaced in 2011 after the on-site inspection.

The useful life of doors is up to 35 years. Based on condition, the City of Milwaukee plans replacement/refurbishment by 2022.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Metal	7	5	23	10	2022
Glass	1	7	23	10	2022



Metal door with rust



Glass entrance door

Doors, Garage

123 Building includes 20 overhead garage doors at the tire shop. Most garage doors are not in use due to the layout of the tire shop repair facility.

The useful life of garage doors with limited use is up to 25 years. Based on condition and use the city plans phased replacement of 25% of the garage doors every five years beginning by 2016.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
15' x 15'	4	6	Unknown	5	2016
13' x 14'	16	6	Unknown	4	2016



Garage door with replaced lower panel and rusted panel hinges



Damaged garage door – fund interim repairs from the operating budget

Roof, EPDM

123 Building includes a stone ballasted EPDM roof that comprises 18,341 square feet. The roofs are inspected and maintained by a third party. The last inspection occurred in 2010 and photographs were taken at that time. The third party recommends replacement of the EPDM roof by 2012. Ballasted EPDM roofs have a useful life of 20 years. Subsequent roof replacement is anticipated by 2031.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
#6 EPDM	2,052	2	20	0	2013



Ballasted EPDM roof



Organic growth near drain



Flashing pulled from siding due to EPDM membrane normalization

Light Fixtures

123 Building contains 15 exterior wall mounted light fixtures and 2 ceiling mounted light fixtures. These components are in fair condition overall. The useful life of exterior light fixtures in this capacity is up to 25 years. The City of Milwaukee plans their replacement by 2022 in conjunction with siding replacement.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Wall Mounted	15	6	23	10	2022
Ceiling Mounted	2	6	23	10	2022



Wall mounted light fixture

Siding, Metal

123 Building contains 6,920 square feet of corrugated siding. The siding is at an age of 23 years. The inspection revealed minor isolated occurrences of damaged/bent siding. The useful life of exterior siding is up to 35 years The City of Milwaukee should anticipate its replacement by 2022

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Siding	6,920	6	23	10	2022



Siding



Damaged siding

Windows, Replacement

123 Building comprises 274 square feet of aluminum frame glass windows. Typical useful life expectancy for windows is up to 35 years. The aluminum windows are at an age of 23 years. The City of Milwaukee anticipates aluminum frame window replacement by 2022, in conjunction with siding replacement.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Aluminum Windows	274	6	23	10	2022



Typical aluminum frame windows at north elevation

Light Fixtures, Garage

123 Building service garage and second floor storage area contain 47 light fixtures that are at an age of 23 years. The useful of industrial/storage room light fixtures is up to 35 years. The City of Milwaukee anticipates their replacement by 2020.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Garage	22	7	23	8	2020
Storage	25	7	23	8	2020



Garage light fixtures



Storage room light fixtures

Offices, Equipment and Furniture

123 Building comprises offices on the first floor. City of Milwaukee anticipates the next furniture and equipment replacement to occur in conjunction with the next interior renovation by 2020. Interim replacement of computers, printers, copiers should be funded from department O+M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Cubicles	17	7	9	8	2020
Chairs	94	7	9	8	2020
Desks	66	7	9	8	2020
File Cabinets	18	7	9	8	2020
Tables	14	7	9	8	2020
Televisions	4	6	9	8	2020
Printers/Copiers	14	N/A	Unknown	8	2020
Computers	27	N/A	Unknown	Varies	2020
Telephones	33	N/A	Unknown	10	2020



Typical equipment furniture in offices



Tire shop office

Offices, Interior Renovations

123 Building comprises interior finishes including carpet, vinyl tile, acoustic tile ceiling, painted walls, cabinets, light fixtures. These components are associated with the office spaces, kitchen, and hallways. The useful life of interior renovations is up to 20 years. The last renovation was around 2002.

The inspection revealed that the interior spaces were in satisfactory condition. carpet contained stains throughout the facility and the finished interior wall exhibited worn surfaces. The southeast office exhibited stained ceiling tiles presumably from water leaks. The hallways exhibited damaged and begrimed wall surfaces

The City of Milwaukee plans for the next interior renovation of the offices, kitchens, and hallways by 2020. This project should be coordinated with rest room renovations, and equipment and furniture replacements.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Acoustic Tile Ceiling (SF)	3,242	6	9	8	2020
Painted Walls/Ceiling (SF)	5,084	6	9	8	2020
Carpet (SY)	215	6	9	8	2020
Vinyl Tile (SF)	1,146	6	9	8	2020
Light Fixtures, Fluorescent	77	6	9	8	2020
Drinking Fountain	1	6	9	8	2020



Stained carpet



Stained acoustic tile ceiling panels



Damaged/begrimed wall finishes



Begrimed wall surface in garage

Rest Rooms/Locker Rooms, Renovations

123 Building comprises two rooms/locker rooms. The rest rooms/locker rooms appear original to building construction in 1988. Few modifications to toilet partitions and lockers were observed. Rest rooms/locker rooms have a useful life of up to 25 years. The City of Milwaukee plans room/locker room renovation in conjunction with other interior renovations by 2020.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Tile Wall (SF)	792	5	23	8	2020
Paint Walls/Ceilings (SF)	4,036	5	23	8	2020
Acoustic Tile Ceiling (SF)	110	5	23	8	2020
Ceramic Tile Floor (SF)	2,272	5	23	8	2020
Vinyl Tile Floor (SF)	46	5	23	8	2020
Light Fixtures, Strip	36	5	23	8	2020
Toilet	6	5	23	8	2020
Urinal	1	5	23	8	2020
Sink	7	5	23	8	2020
Partition	4	4	23	8	2020
Lockers	141	5	23	8	2020
Counters (LF)	14	5	23	8	2020
Shower Heads	13	4	23	8	2020
Benches	6	6	23	8	2020
Mirrors	6	6	23	8	2020



Women's rest room finishes



Women's rest room finishes



Women's shower finishes



Men's rest room finishes



Men's partition w deterioration



Men's shower finishes



Men's rest room ceiling damage



Typical toilet

Building Automation System

A building management system does not exist at the 123 Building. Integration of a system allows remote operation and is planned for 2013. The hardware and software components are planned for upgrades by 2028.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
BAS, Installation	1	N/A	N/A	1	2013
BAS, Upgrades	1	N/A	N/A	16	2028

Electrical

123 Building contains secondary distribution and branch circuit electrical equipment. The equipment is at an age of 23 years. Secondary distribution has a useful life of up to 40 years and is long-lived. Primary circuits have a useful life of up to 30 years, The City of Milwaukee plans replacement of the electrical services in conjunction with interior renovations by 2020.

Inventory (LS)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Secondary Distribution	1	7	23	8	2020
Circuit Branches	1	7	23	8	2020



Secondary distribution



Typical branch circuit

Fire Warning System

123 Building fire warning system is comprised of exit/emergency lights, and associated wiring. The system is at an age of approximately nine years. Fire warning systems have a useful life of up to 25 years. Replacement of the fire warning system is anticipated by 2020.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Emergency Lights	16	7	9	8	2020
Exit Lights	2	7	9	8	2020



Emergency/Exit light fixture

Generator, Emergency

At this time, 123 Building does not contain an emergency generator. Installation of a generator will allow building services to continue in the event of a power outage. The generator load will be determined by the required components to remain in service. Pending a generator load analysis, the exact capacity and cost will be refined.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Generator	Does Not Exist	-	-	-	2013

Make-Up Air Units

123 Building contains two make-up units located in the second floor mezzanine and storage areas. Both units are at an age of 23 years. The useful life of an air handling unit is up to 35 years. The City of Milwaukee should anticipate replacement of the air handling units by 2020. Interim repairs and replacements should be funded from O+M.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
MAU #1 - Mezzanine					
CFM	4,000	6	23	8	2020
Furnace (MBH)	500	6	23	8	2020
Motor (HP)	2	6	23	8	2020
MAU #2 – Mech. Room					
CFM	2,000	6	23	8	2020
Furnace (MBH)	250	6	23	8	2020
Motor (HP)	1	6	23	8	2020



Mezzanine MAU



Storage room MAU

Security System

123 Building contains an access management card reader system. Replacement information is provided by the Security Operations Manager.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Access Management System	1			1	2013

Split Systems

123 Building comprises two split systems. Each split system comprises an internal forced air furnace and an external condensing unit. The useful life of split systems is up to 20 years. Based on varied ages and conditions, the City of Milwaukee anticipates replacement of one split system by 2014 and another by 2020. Interim partial replacements and repairs are funded by O + M.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Split System #1					
Furnace (MBH)	130	7	8	12	2024
Condenser (Tons)	5	7	8	12	2024
Split System #2					
Furnace (MBH)	100	7	24	2	2014
Condenser (Tons)	5	7	24	2	2014



Interior forced air furnace

Unit Heaters

123 Building contains 10 unit heaters. The unit heaters are at an age of 23 years and have a useful life of 35 years. The City of Milwaukee anticipates their replacement by 2020. Interim repairs and replacements are funded by O + M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Garage, 140MBH	6	7	24	8	2020
Garage, 100MBH	1	7	24	8	2020
2 nd Floor, Mech. Rm, 60MBH	1	7	24	8	2020
1 st Floor, Hallway, 20MBH	2	7	24	8	2020



Garage unit heater

Asphalt Pavement

123 Building contains 4,575 SY of asphalt pavement. The pavement is in fair overall condition. The inspection revealed concentrations of failed pavement and alligator cracking. Interim asphalt pavement maintenance, including crack filling and partial replacements, is conducted in conjunction with seal coat applications every five years beginning by 2012. Complete replacement of the asphalt pavement system (pavement and catch basin) is anticipated by 2022.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Asphalt Pavement (SY)	4,575	5	Unknown	10	2017
Catch Basins (EA)	1	5	Unknown	10	2017



Typical cracked pavement at west lot



Failed pavement at west lot



Cracked/Patched pavement at east lot



Pavement patch at garage/lot threshold



Cracked pavement at entrance



Catch basin with minor settlement

Bollards

123 Building contains vehicle impact bollards located between garage doors. The bollards are in satisfactory condition with an occurrence of rust. The useful life of bollards is up to 40 years. The city of Milwaukee should coordinate their replacement by 2017 in conjunction with asphalt pavement replacement.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Bollards	25	6	23	5	2017



Typical rusted bollard

Fence, Chain Link

123 Building perimeter is enclosed by a 730 linear foot chain link fence that is about six feet high. The fence is in fair overall condition at an unknown age. The useful life of chain link fences is up to 30 years. City of Milwaukee plans fence replacement in conjunction with asphalt pavement replacement by 2017. The estimated cost includes funds for replacement of the gate and gate operator.

Building lessees express interest in extending the chain link fence to enclose the property for security purposes. This proposed item is projected in 2013.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Chain Link Fence (LF)	730	5	Unknown	5	2017
Gate	1	5	Unknown	5	2017
Gate Operator	1	5	Unknown	5	2017



Rusted/Misaligned chain link fence



Damaged fence rail and barbed wire

Fuel Island

123 Building contains one fuel island with three fuel dispensers. The condition of this structure is satisfactory overall. An exterior, open air structure has a useful life of up to 40 years. The dispensers have a useful life of up to 25 years. The city of Milwaukee plans fuel island replacement in conjunction with asphalt pavement and underground storage tanks replacements.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Fuel Island (SF)	900	6	Unknown	5	2017
Dispensers	3	5	Unknown	5	2017



Fuel island and dispensers

Light Poles and Fixtures

123 Building property includes two light poles and fixtures. The light pole at the east lot contains a metal pole and the light pole at the west lot contains a concrete pole. These components are in satisfactory condition. The useful life of light poles and fixtures is up to 35 years. City of Milwaukee anticipates their replacement in conjunction with the asphalt pavement system by 2017.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Light Pole and Fixtures	2	6	Unknown	5	2017



Light pole and fixture at west lot



Light pole and fixture at east lot

Underground Storage Tanks

123 Building includes three underground storage tanks at/near the canopy. The tanks are double walled and subjected to interstitial monitoring on an annual basis. The City of Milwaukee plans replacement of the underground storage tanks and interstitial monitoring devices in conjunction with asphalt pavement replacement.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
2,500 Unleaded	2	6	Unknown	5	2017
1,000 Diesel	1	6	Unknown	5	2017
Monitoring Devices	3	6	Unknown	5	2017

123 Building

	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	CRDM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Building Envelope Components																			
Doors, Pedestrian	1	LS	\$20,000	\$20,000	35	10	\$26,000	2022	\$0										
Doors, Garage, Phased (25% Per Phase)	1	LS	\$40,000	\$40,000	25	4	\$219,000	2016	\$0					\$44,000					\$51,000
Roof, EPDM w Ballast	18,341	SF	\$12.00	\$220,092	20	1	\$591,000	2013	\$0		\$226,000								
Light Fixtures	17	LS	\$390	\$6,630	25	10	\$9,000	2022	\$0										
Siding, Metal	6,920	SF	\$10.50	\$72,660	35	10	\$95,000	2022	\$0										
Windows, Replacement	1	LS	\$32,000	\$32,000	35	10	\$42,000	2022	\$0										
Building Interior Components																			
Light Fixtures, Garage	1	LS	\$39,000	\$39,000	35	8	\$48,000	2020	\$0										\$48,000
Offices, Equipment and Furniture	1	LS	\$258,000	\$258,000	20	8	\$319,000	2020	\$0										\$319,000
Offices, Interior Renovations	1	LS	\$135,000	\$135,000	20	8	\$167,000	2020	\$0										\$167,000
Rest Rooms/Locker Rooms, Renovations	1	LS	\$163,000	\$163,000	25	8	\$202,000	2020	\$0										\$202,000
Building Control Components																			
Building Automation System, Installation	1	LS	\$13,500	\$13,500	N/A	1	\$14,000	2013	\$0		\$14,000								
Building Automation System, Upgrades	1	LS	\$13,500	\$13,500	15	16	\$25,000	2028	\$0										
Electrical, Branch Circuits	1	LS	\$65,000	\$65,000	30	8	\$80,000	2020	\$0										\$80,000
Electrical, Secondary Distribution	1	LS	\$191,000	\$191,000	40	8	\$236,000	2020	\$0										\$236,000
Fire Warning System	1	LS	\$22,000	\$22,000	25	8	\$27,000	2020	\$0										\$27,000
Generator, Emergency, Proposed	1	LS	\$125,000	\$125,000	35	1	\$128,000	2013	\$0		\$128,000								
Make-Up Air Units	1	LS	\$34,000	\$34,000	35	8	\$42,000	2020	\$0										\$42,000
Security System, Access Management	1	LS	\$43,000	\$43,000	10	1	\$95,000	2013	\$0		\$44,000								
Split Systems	1	EA	\$9,500	\$9,500	20	2	\$23,000	2014	\$0			\$10,000							
Unit Heaters	1	LS	\$78,000	\$78,000	35	8	\$97,000	2020	\$0										\$97,000
Site Features																			
Asphalt Pavement, Maintenance	4,575	SY	\$1.00	\$4,575	3-5	1	\$18,000	2013	\$0	\$5,000									
Asphalt Pavement System, Replacement	4,575	SY	\$33.00	\$150,975	20	5	\$172,000	2017	\$0						\$172,000				
Bollards	25	EA	\$1,250	\$31,250	40	5	\$36,000	2017	\$0						\$36,000				
Fence, Chain Link, Installation	730	LF	\$46.00	\$33,580	30	5	\$38,000	2017	\$0						\$38,000				
Fence, Chain Link, Proposed	450	LF	\$46.00	\$20,700	30	1	\$21,000	2013	\$0		\$21,000								
Fuel Island, Canopy	1	EA	\$60,000	\$60,000	40	5	\$110,000	2017	\$0						\$110,000				
Fuel Island, Dispensers	3	EA	\$16,000	\$48,000	25	5	\$110,000	2017	\$0						\$110,000				
Light Poles and Fixtures	2	EA	\$5,500	\$11,000	35	5	\$13,000	2017	\$0						\$13,000				
Underground Storage Tanks	1	LS	\$68,000	\$68,000	45	5	\$78,000	2017	\$0						\$78,000				
Underground Storage Tanks, Monitoring	3	EA	\$3,500	\$10,500	20	5	\$10,000	2017	\$0						\$11,000				

Total 20 Year Cost \$3,092,000 **Total Annual Cost** \$5,000 \$433,000 \$10,000 \$0 \$44,000 \$568,000 \$0 \$0 \$1,218,000 \$51,000

Notes	CRV	FCI	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	\$1,628,465	0.00	\$1,672,434	\$1,717,589	\$1,763,964	\$1,811,591	\$1,860,504	\$1,910,738	\$1,962,328	\$2,015,311	\$2,069,724	

- 1) FY is Fiscal Year. FY is the calendar year
- 2) UL is Useful Life and RUL is Remaining Useful Life
- 3) The annual building materials inflation rate estimate is estimated at 2.70%
- 4) Current Replacement Value (CRV) is the 2012 estimated replacement value for the buildings
- 5) Facility Condition Index (FCI) is the annual expendiutes (deficiencies) divided by the CRV
- 6) 2011 Energy Usage: BTU/SF = 1,646, KW = 8,800, Therms = Not reported. Building Hours = 24 Hours

123 Building

	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Building Envelope Components																		
Doors, Pedestrian	1	LS	\$20,000	\$20,000	35	10	\$26,000	2022	\$26,000									
Doors, Garage, Phased (25% Per Phase)	1	LS	\$40,000	\$40,000	25	4	\$219,000	2016					\$58,000					\$66,000
Roof, EPDM w Ballast	18,341	SF	\$12.00	\$220,092	20	1	\$591,000	2013										\$365,000
Light Fixtures	17	LS	\$390	\$6,630	25	10	\$9,000	2022	\$9,000									
Siding, Metal	6,920	SF	\$10.50	\$72,660	35	10	\$95,000	2022	\$95,000									
Windows, Replacement	1	LS	\$32,000	\$32,000	35	10	\$42,000	2022	\$42,000									
Building Interior Components																		
Light Fixtures, Garage	1	LS	\$39,000	\$39,000	35	8	\$48,000	2020										
Offices, Equipment and Furniture	1	LS	\$258,000	\$258,000	20	8	\$319,000	2020										
Offices, Interior Renovations	1	LS	\$135,000	\$135,000	20	8	\$167,000	2020										
Rest Rooms/Locker Rooms, Renovations	1	LS	\$163,000	\$163,000	25	8	\$202,000	2020										
Building Control Components																		
Building Automation System, Installation	1	LS	\$13,500	\$13,500	N/A	1	\$14,000	2013										
Building Automation System, Upgrades	1	LS	\$13,500	\$13,500	15	16	\$25,000	2028						\$25,000				
Electrical, Branch Circuits	1	LS	\$65,000	\$65,000	30	8	\$80,000	2020										
Electrical, Secondary Distribution	1	LS	\$191,000	\$191,000	40	8	\$236,000	2020										
Fire Warning System	1	LS	\$22,000	\$22,000	25	8	\$27,000	2020										
Generator, Emergency, Proposed	1	LS	\$125,000	\$125,000	35	1	\$128,000	2013										
Make-Up Air Units	1	LS	\$34,000	\$34,000	35	8	\$42,000	2020										
Security System, Access Management	1	LS	\$43,000	\$43,000	10	1	\$95,000	2013		\$51,000								
Split Systems	1	EA	\$9,500	\$9,500	20	2	\$23,000	2014			\$13,000							
Unit Heaters	1	LS	\$78,000	\$78,000	35	8	\$97,000	2020										
Site Features																		
Asphalt Pavement, Maintenance	4,575	SY	\$1.00	\$4,575	3-5	1	\$18,000	2013	\$6,000					\$7,000				
Asphalt Pavement System, Replacement	4,575	SY	\$33.00	\$150,975	20	5	\$172,000	2017										
Bollards	25	EA	\$1,250	\$31,250	40	5	\$36,000	2017										
Fence, Chain Link, Installation	730	LF	\$46.00	\$33,580	30	5	\$38,000	2017										
Fence, Chain Link, Proposed	450	LF	\$46.00	\$20,700	30	1	\$21,000	2013										
Fuel Island, Canopy	1	EA	\$60,000	\$60,000	40	5	\$110,000	2017										
Fuel Island, Dispensers	3	EA	\$16,000	\$48,000	25	5	\$110,000	2017										
Light Poles and Fixtures	2	EA	\$5,500	\$11,000	35	5	\$13,000	2017										
Underground Storage Tanks	1	LS	\$68,000	\$68,000	45	5	\$78,000	2017										
Underground Storage Tanks, Monitoring	3	EA	\$3,500	\$10,500	20	5	\$10,000	2017										

Total 20 Year Cost \$3,092,000 **Total Annual** \$178,000 \$51,000 \$13,000 \$0 \$58,000 \$7,000 \$25,000 \$0 \$0 \$431,000

Notes
 1) FY is Fiscal Year. FY is the calendar year
 2) UL is Useful Life and RUL is Remaining Useful Life
 3) The annual building materials inflation rate estimate is estimated at 2.70%
 4) Current Replacement Value (CRV) is the 2012 estimated replacement value for the buildings
 5) Facility Condition Index (FCI) is the annual expenditures (deficiencies) divided by the CRV
 6) 2011 Energy Usage: BTU/SF = 1,646, KW = 8,800, Therms = Not reported. Building Hours = 24 Hours

\$2,125,606 \$2,182,998 \$2,241,939 \$2,302,471 \$2,364,638 \$2,428,483 \$2,494,052 \$2,561,392 \$2,630,549 \$2,701,574
 0.08 0.02 0.01 0.00 0.02 0.00 0.01 0.00 0.00 0.16

12/1/2011



FACILITIES
CONDITION
ASSESSMENT
PROGRAM

EDUCATION CENTER

Facilities Development | Management

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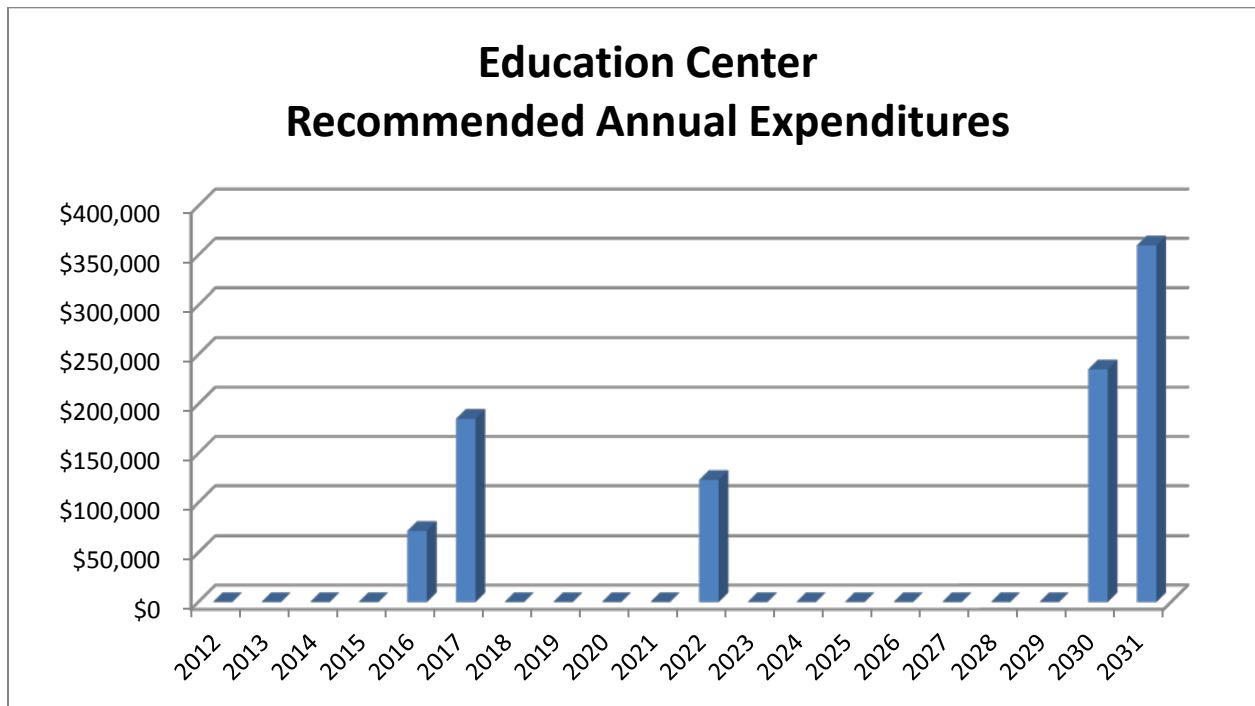
Introduction

Executive Summary

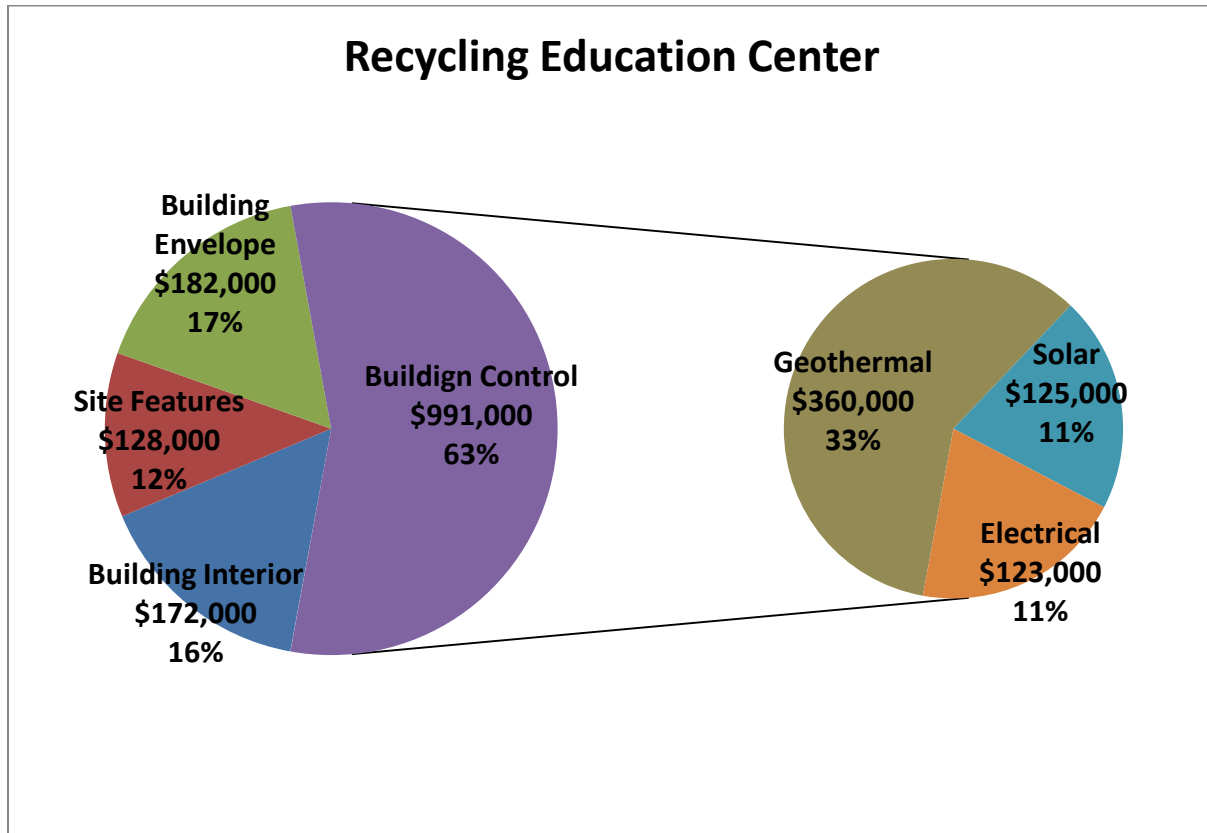
The Recycling Education Center (Education Center) is a 4,000 square foot building. The building was constructed in 1976. Keep Greater Milwaukee Beautiful (KGMB) is the current occupant of the structure.

The Facility Condition Index rating is 0.00.

Annual expenditures for Education Center vary from year– to –year as indicated from the graph below.



The most significant category of Education Center expenditures pertains to Building Control Components as shown below. The geothermal system is the most significant component.



Component Inventory

The property components at Education Center are categorized as follows:

City of Milwaukee Capital Expenditures

Building Envelope Components

- Roof, Single Ply
- Windows and Doors

Building Interior Components

- Offices
 - Equipment and Furniture
 - Offices, Interior Finishes
- Rest Rooms

Building Control Components

- Building Automation System
- Electrical
 - Branch Circuits
 - Secondary Distribution
- Geothermal
- Solar

Site Features

- Asphalt Pavement System
- Landscape Improvements
- Light Poles and Flag Poles

O+M Responsibility

- Asphalt Pavement Maintenance
- Circulation Pumps
- Heat Pumps
- Masonry Repairs and Sealant
- Water Heater
- Other Items Normally Funded by O+M

Long Lived

- Foundation, Building
- Pipes, HVAC, Water, Waste
- Structural Frame, Building

Others Responsibility

- None

Roof, Single Ply

Education Center contains a fully adhered single ply roof membrane that is in fair overall condition. The third party roof inspection company noted embrittled membrane. The aluminum flashing is reported in good condition overall.

The useful life of a single ply roof is up to 20 years. The City of Milwaukee anticipates its replacement by 2016. The Education Center roof replacement is expected to have increased costs compared to similar roof replacements (inconsideration of height, roof material, and size.) Increased cost is a function of removal and reinstallation of the photovoltaic power system.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Single Ply Roof	4,012	5	Unknown	4	2016



Roof overview



Embrittled membrane

Windows and Doors

Education Center exterior includes two glass door entrances, one metal door mechanical room entrance, and 915 SF of aluminum framed windows. The windows and doors appear in fair condition.

The useful life of windows and doors is up to 35 years. Based on condition, the City of Milwaukee plans replacement/refurbishment by 2022. Funds are included for replacement of the metal louvers at the time of window and door replacement.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Doors, Metal	1	5	Unknown	10	2022
Doors, Glass	2	5	Unknown	10	2022
Windows (SF)	915	5	Unknown	110	2022



Glass/aluminum framed windows/doors



Metal doors and louvers

Offices, Equipment and Furniture

Education Center comprises office equipment and furniture throughout the facility. The useful life for aggregate replacement of furniture and equipment is 20 years. City of Milwaukee anticipates the next furniture and equipment replacement to occur in conjunction with the next interior renovation by 2018. Interim replacement of computers, printers, copiers should be funded from department O+M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Cubicles (desks, walls, etc.)	5	6	Unknown	6	2017
Chairs	5	5	Unknown	6	2017
File Cabinets	7	6	Unknown	6	2017
Tables	3	5	Unknown	6	2017
Computers	11	6	Unknown	Varies	2017
Copiers/Printers	7	6	Unknown	6	2017
Televisions	3	6	Unknown	6	2017
Telephones	89	6	Unknown	6	2017



Typical equipment furniture



Typical equipment furniture

Offices, Interior Finishes

Education Center comprises interior finishes including carpet, vinyl tile, acoustic tile ceiling, painted walls, cabinets, light fixtures. These components are associated with the office spaces, hallways, and kitchen area. The useful life of interior renovations is up to 20 years.

The inspection revealed that the interior spaces were in satisfactory condition. Carpet contained stains throughout the facility and the finished interior walls exhibited worn surfaces. The rest rooms contained deteriorated components

The City of Milwaukee plans for the next interior renovation at the Education Center by 2018. This project should be coordinated with equipment and furniture upgrades and rest room renovations.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Acoustic Tile Ceiling (SF)	1,450	5	Unknown	6	2017
Painted Walls/Ceiling (SF)	5,450	5	Unknown	6	2017
Carpet (SY)	225	4	Unknown	6	2017
Ceramic Tile (SF)	1,010	5	Unknown	6	2017
Wall Paper (SF)	1,150	5	Unknown	6	2017
Counters (LF)	8	4	Unknown	6	2017
Light Fixtures, Fluorescent	62	7	Unknown	6	2017
Refrigerator	1	4	Unknown	6	2017
Microwave	1	4	Unknown	6	2017
Range	1	3	Unknown	6	2017



Interior finishes



Worn/stained carpet



Kitchen equipment and finishes



Rest room finishes



Stained ceiling tile



Television

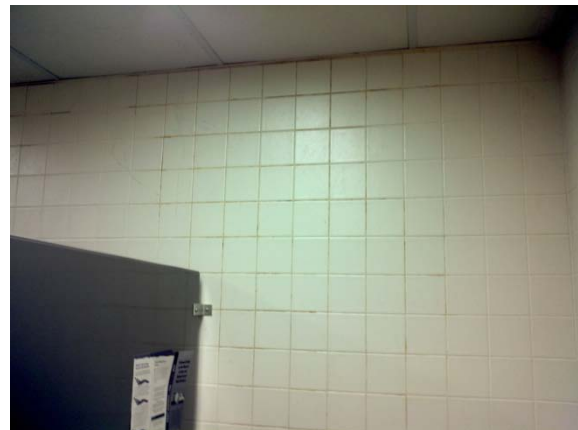
Rest Rooms, Renovations

Education Center comprises two rest rooms. The interior finishes and components were in poor overall condition. Rest room updates have a useful life of up to 25 years. The City of Milwaukee should consider rest room renovation in conjunction with other interior renovations by 2017. Interior finishes of tile floor, acoustic tile ceiling, and paint finishes are included within the previous section 'Offices, Interior Finishes'.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Tile Wall (SF)	490	7	10	10	2017
Toilet	4	7	10	10	2017
Urinal	1	7	10	10	2017
Sink	2	7	10	10	2017
Partition	4	7	10	10	2017



Typical rest room interior finishes



Typical rest room interior finishes

Building Automation System

The mechanical system controls at the Education Center are integrated into the City of Milwaukee Building Automation System. These controls are scheduled for hardware and software upgrades by 2022.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
BAS	1	7	4	10	2022

Electrical

Education Center contains secondary distribution and branch circuit electrical equipment. The equipment is at an age of 22 years and was replaced in 1989. Secondary distribution has a useful life of up to 40 years and branch circuits have a useful life of up to 25 years. The City of Milwaukee anticipates branch circuit replacement by 2018 and secondary distribution replacement by 2030.

Inventory (LS)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Circuit Branches	1	5	22	6	2017
Secondary Distribution	1	6	22	18	2030



Branch circuit

Geothermal

A geothermal installation provides heating/cooling to the Education Center. The system was installed in 2008 and comprises ten-560 foot glycol-based subterranean tubes, one system circulation pump, and four heat pumps. The geothermal system is integrated within the City of Milwaukee building automation system (BAS) where its functionality and efficiency are continuously monitored.

The useful life of geothermal installation is up to 35. The City of Milwaukee plans its replacement by pump and control replacement by 2031. Interim heat pump and circulation pump replacements/repairs should be funded from O +M.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Geothermal Installation	1	7	4	19	2031



Heat pumps and circulation pump



Building automation system monitoring devices



Piping/ground threshold



Geothermal subterranean pipe location

Photovoltaic Power System

The roof-mounted photovoltaic power system was installed in 2008. The system generates electricity for Education Center purposes. Surplus electricity is bought by WE Energies. The photovoltaic power system is integrated within the City of Milwaukee building automation system (BAS) where its functionality and efficiency are continuously monitored. The installation is expected to fund itself by 2018.

The useful life of a photovoltaic power system is up to 25 years. The City of Milwaukee anticipates is replacement by 2030. The photo voltaic system may need to be decommissioned and removed from the roof during replacement. Actual construction details will be defined at the time of roof replacement.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Photovoltaic Power System	1	7	4	21	2030



Roof mounted solar panels



Building automation system monitoring devices

Asphalt Pavement System

Education Center contains 1,235 SY of asphalt pavement. The pavement is in poor overall condition. Alligator cracks are present throughout the parking lot. Partial patches and previous repairs, most notably at the location of the geothermal pipe installation, are evident. Complete replacement of the asphalt pavement system (pavement and concrete curbs) is anticipated by 2013. At the time of replacement, the actual scope of work will be determined.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Asphalt Pavement (SY)	1,235	4	Unknown	1	2013
Concrete Curbs (LF)	340	5	Unknown	1	2013



Typical failed pavement



Deteriorated concrete curb

Landscape Improvements

Education Center contains a landscaped lot with trees, shrubs, and grass. Periodic landscape improvements are required to provide a positive reflection of the facility. The next landscape upgrade is anticipated by 2021 and every 20 years thereafter.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Tree, Conifer	4	5	Unknown	9	2021
Tree, Deciduous	6	5	Unknown	9	2021
Shrub, Deciduous	14	5	Unknown	9	2021
Shrub, Evergreen	16	5	Unknown	9	2021
Grass (SF)	1,650	5	Unknown	9	2021



Landscape



Shrubs

Light Poles and Flag Poles

Education Center property contains four light poles and three flag poles. The useful life of light poles and fixtures and flag poles is up to 25 years. The City of Milwaukee anticipates their replacement in conjunction with the landscape improvements by 2021.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Light Poles and Fixtures	4	5	Unknown	9	2021
Flag Poles	3	6	Unknown	9	2021



Light pole and flag poles



Light pole and base w paint finish deterioration and rust

Education Center

	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	CRDM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Building Envelope Components																			
Roof, Single Ply	4,012	SF	\$18.00	\$72,216	20	4	\$72,000	2016	\$0					\$72,000					
Windows and Doors, Replacement, Aluminum	1	LS	\$110,000	\$110,000	35	10	\$110,000	2022	\$0										
Building Interior Components																			
Offices, Equipment and Furniture, Replacement	1	LS	\$79,000	\$79,000	20	5	\$79,000	2017	\$0						\$79,000				
Offices, Interior Finishes, Renovations	1	LS	\$69,000	\$69,000	20	5	\$69,000	2017	\$0						\$69,000				
Rest Rooms, Renovations	1	LS	\$24,000	\$24,000	25	5	\$24,000	2017	\$0						\$24,000				
Building Control Components																			
Building Automation System, Upgrades	1	LS	\$12,500	\$12,500	15	10	\$13,000	2022	\$0										
Electrical, Branch Circuits (1989 Installation)	1	LS	\$12,500	\$12,500	30	5	\$13,000	2017	\$0						\$13,000				
Electrical, Secondary Distribution (1989 Installation)	1	LS	\$110,000	\$110,000	40	18	\$110,000	2030	\$0										
Geothermal (2008 Installation)	1	LS	\$360,000	\$360,000	35	19	\$360,000	2031	\$0										
Photovoltaic Power System (2008 Installation)	1	EA	\$125,000	\$125,000	35	18	\$125,000	2030	\$0										
Site Features																			
Asphalt Pavement System, Replacement	1,235	SY	\$41.00	\$50,635	20	1	\$51,000	2013	\$0		\$51,000								
Landscape Improvements	1	LS	\$52,000	\$52,000	20	9	\$52,000	2021	\$0										\$52,000
Light Poles and Flag Poles	1	LS	\$28,000	\$28,000	35	9	\$25,000	2021	\$0										\$25,000

Total 20 Year Cost							\$1,103,000	Total Annual Cost	\$0	\$51,000	\$0	\$0	\$0	\$72,000	\$185,000	\$0	\$0	\$0	\$77,000
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CRV	\$384,101	\$394,472	\$405,122	\$416,061	\$427,294	\$438,831	\$450,680	\$462,848	\$475,345	\$488,179
FCI	0.00	0.00	0.00	0.00	0.17	0.42	0.00	0.00	0.00	0.00

Notes

- 1) FY is Fiscal Year. FY is the calendar year
- 2) UL is Useful Life and RUL is Remaining Useful Life
- 3) The annual building materials inflation rate estimate is estimated at 2.70%
- 4) Current Replacement Value (CRV) is the 2012 estimated replacement value for the buildings
- 5) Facility Condition Index (FCI) is the CRDM divided by the CRV, or CRDM/CRV
- 6) 2011 Energy Usage: BTU/SF = 3,266, KW and Therms = Not reported. Building Operations: 8am-4:30pm
- 7) Water Consumption = 66 Ccf

Education Center

	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Building Envelope Components																		
Roof, Single Ply	4,012	SF	\$18.00	\$72,216	20	4	\$72,000	2016										
Windows and Doors, Replacement, Aluminum	1	LS	\$110,000	\$110,000	35	10	\$110,000	2022	\$110,000									
Building Interior Components																		
Offices, Equipment and Furniture, Replacement	1	LS	\$79,000	\$79,000	20	5	\$79,000	2017										
Offices, Interior Finishes, Renovations	1	LS	\$69,000	\$69,000	20	5	\$69,000	2017										
Rest Rooms, Renovations	1	LS	\$24,000	\$24,000	25	5	\$24,000	2017										
Building Control Components																		
Building Automation System, Upgrades	1	LS	\$12,500	\$12,500	15	10	\$13,000	2022	\$13,000									
Electrical, Branch Circuits (1989 Installation)	1	LS	\$12,500	\$12,500	30	5	\$13,000	2017										
Electrical, Secondary Distribution (1989 Installation)	1	LS	\$110,000	\$110,000	40	18	\$110,000	2030									\$110,000	
Geothermal (2008 Installation)	1	LS	\$360,000	\$360,000	35	19	\$360,000	2031										\$360,000
Photovoltaic Power System (2008 Installation)	1	EA	\$125,000	\$125,000	35	18	\$125,000	2030									\$125,000	
Site Features																		
Asphalt Pavement System, Replacement	1,235	SY	\$41.00	\$50,635	20	1	\$51,000	2013										
Landscape Improvements	1	LS	\$52,000	\$52,000	20	9	\$52,000	2021										
Light Poles and Flag Poles	1	LS	\$28,000	\$28,000	35	9	\$25,000	2021										

	Total 20 Year Cost	\$1,103,000	Total A	\$123,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$235,000	\$360,000
				\$501,360	\$514,897	\$528,799	\$543,077	\$557,740	\$572,799	\$588,264	\$604,147	\$620,459	\$637,212				
				0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.56

Notes

- 1) FY is Fiscal Year. FY is the calendar year
- 2) UL is Useful Life and RUL is Remaining Useful Life
- 3) The annual building materials inflation rate estimate is estimated at 2.70%
- 4) Current Replacement Value (CRV) is the 2012 estimated replacement value for the buildings
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- 6) 2011 Energy Usage: BTU/SF = 3,266, KW and Therms = Not reported. Building Operations: 8am-4:30pm
- 7) Water Consumption = 66 Ccf

12/1/2011



FACILITIES
CONDITION
ASSESSMENT
PROGRAM

FORESTRY SOUTH HEADQUARTERS

Facilities Development | Management

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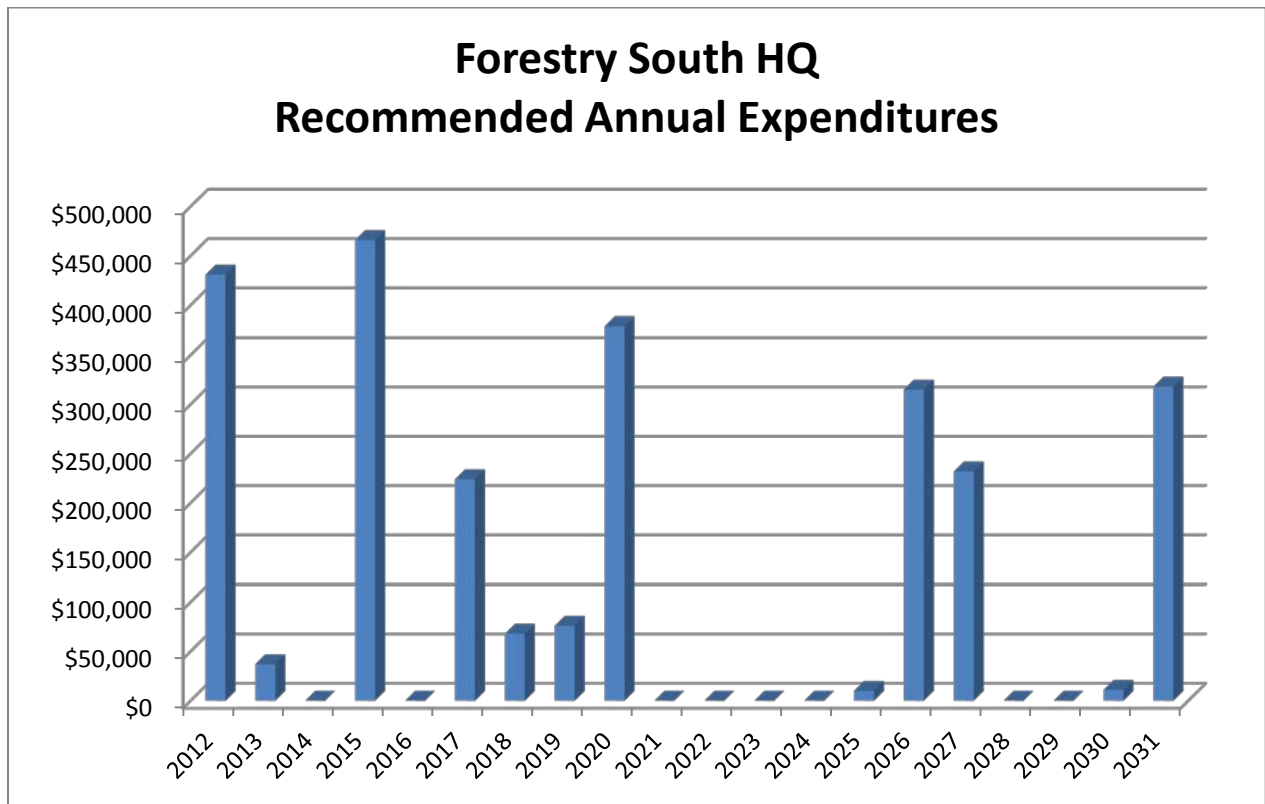
Introduction

Executive Summary

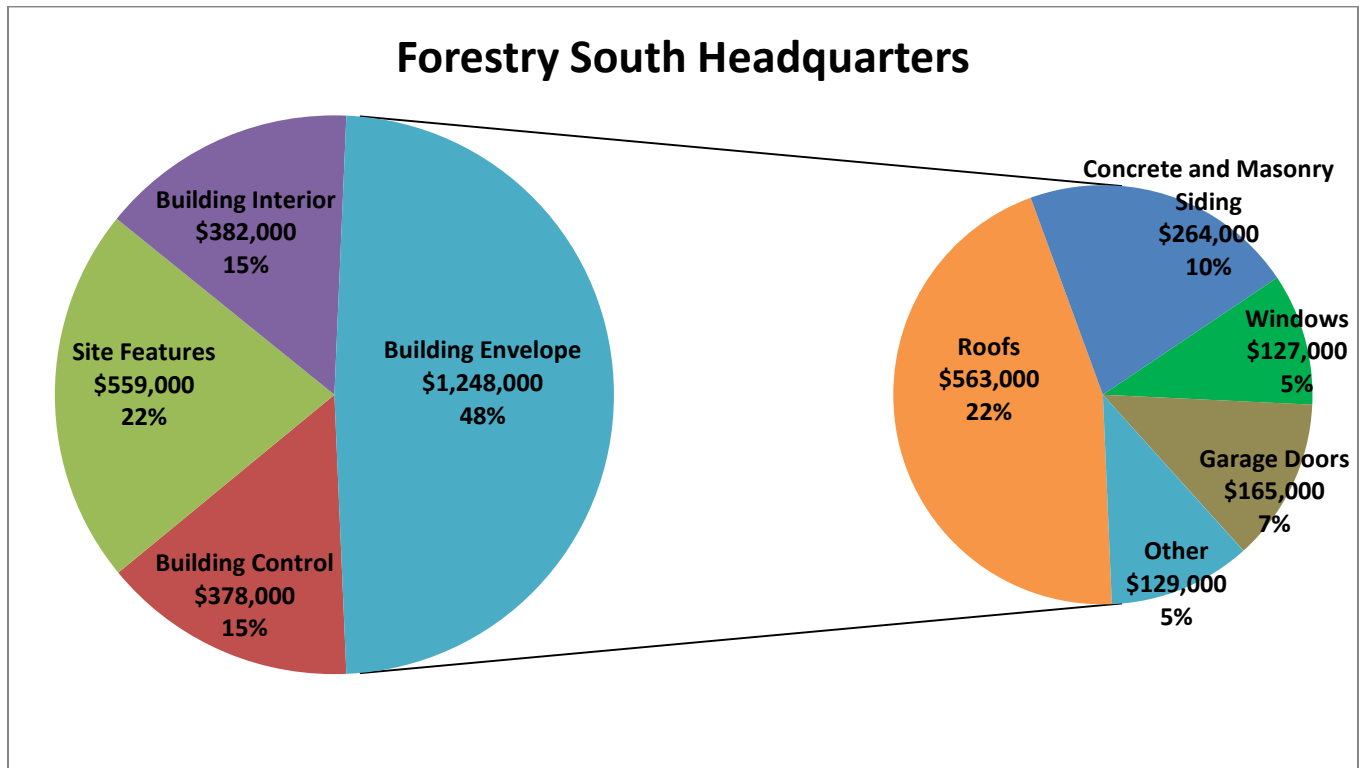
Forestry South Headquarters is located at 2024 West Holt Avenue. The facility is bounded by private property to the north, an alley to the east, rail road tracks to the west and Holt Avenue to the south. The facility comprises three structures and a propane fuel system. The Office Building was constructed in 1939 and renovated to include additional office space in 1994. The Storage Garage and gasoline fuel system were also installed in 1994. The final structure is a Soil Building houses landscape material.

The Facility Condition Index rating of 0.13.

Annual expenditures for Forestry South HQ vary from year- to -year as indicated from the graph below.



The most significant category of Forestry South HQ expenditures pertains to building envelope repairs as shown below. Building envelope roof repairs is the most significant single component.



Component Inventory

The property components at Forestry South HQ are categorized as follows:

City of Milwaukee Capital Expenditures

South Head Quarters

Building Envelope Components

- Doors
 - Pedestrian
 - Garage
- Gutters and Downspouts
- Roofs, EPDM
- Siding
 - Concrete and Masonry
- Windows
 - Frame

- Glass Block
- Skylight

Building Interior Components

- Offices
 - Equipment and Furniture
 - Interior Renovations
- Paint Finish Garage
- Rest Rooms/Locker Rooms

Building Control Components

- Boiler, Building Heat
- Building Automation System
- Electrical
 - Branch Circuits
 - Secondary Distribution
- Fire Warning System
- Split Systems
- Unit Heaters

Storage Garage (1995 Construction)

- Doors, Garage
- Light Fixtures, Interior
- Roof, Metal
- Siding, Metal

Soil Shed

- Roof, Asphalt Shingle
- Soil Shed, Replacement

Site Features

- Asphalt Pavement
 - Maintenance
 - Replacement
- Fence, Chain Link (including gates)
- Gasoline Fuel System

- Retaining Wall, Concrete

O+M Responsibility

- Light Fixtures, Exterior Wall Mounted
- Exhaust Fans
- Water Heaters
- Paint Finishes, Touch-Up
- Other Items Normally Funded by O+M

Long Lived

- Foundations
 - Office Building
 - Storage Garage
- Pipes, HVAC, Water and Waste
- Sub Surface Utilities
- Structural Frames

Others Responsibility

- None

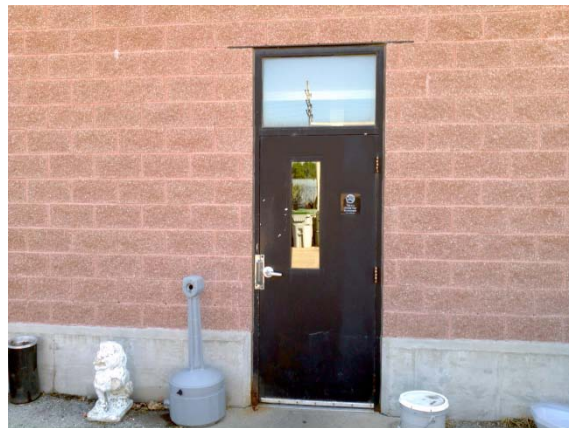
Doors, Pedestrian

Forestry South HQ Office Building exterior includes six metal doors for access into the facility, and the Storage Garage includes two metal doors. The inspection revealed that doors exhibited the onset of rust near the base. The useful life of doors is up to 35 years. Based on condition, the City of Milwaukee plans replacement/refurbishment by 2021.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Office Building	6	5	Varies	7	2019
Storage Garage	2	5	18	7	2019



Office Building door with rust



Office Building door with rust



Storage Garage door succumbed to rust

Doors, Garage

Forestry South HQ includes four overhead garage doors at the Office Building and four overhead garage overhead garage doors at the Storage Door. The garage doors appear in fair overall condition. Partial panel replacement and rust was evident at the Office Building doors. The useful life of garage doors is up to 15 years. The city of Milwaukee anticipates phased replacement of four garage doors every seven years beginning by 2012.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Office Building	4	4	18	0	2012
Storage Garage	4	6	18	7	2019



Garage door w repairs at Office Building



Garage door at Storage Garage

Gutters and Downspouts

Forestry South HQ includes 350 linear feet of gutters and 80 linear feet of downspouts at the Storage Garage. The useful life of gutters and downspouts is 20 years. Replacement of gutters and downspouts should be conducted with the metal roof replacement by 2024.

Inventory (LF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Gutters	350	5	18	12	2024
Downspouts	80	5	18	12	2024



Gutters and downspouts at west elevation

Roof, Asphalt Shingle

Forestry South HQ Soil Building is an open-air structure that includes an asphalt shingle roof that comprises 2,643 square feet. The asphalt shingle roof was installed in 1997. Asphalt shingle roofs have a useful life of up to 20 years. The City of Milwaukee anticipates replacement of the asphalt shingle roof by 2031, after near-term soil structure replacement.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Asphalt Shingle Roof	2,643	6	15	19*	2031

*Projection is based on replacement after soil structure is replaced



Soil structure

Roofs, EPDM

Forestry South HQ Office building comprises three EPDM roof sections. The roofs are inspected and maintained by a third party. The last inspection occurred in 2010. At that time, roof #1 was recommended for immediate replacement and the remaining roofs were recommended for replacement by 2014. This information is incorporated within the funding plan.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
#1 – Office Building Garage	8,576	2	Unknown	0	2012
#2 – 1994 Addition	1,576	5	Unknown	1	2013
#3 – Rest Rooms	1,067	5	Unknown	1	2013



Roof #1 - tires restrain membrane



Roof #1 – delaminated membrane



Roof #2



Roof #3

Roofs, Metal

Forestry South HQ Storage Garage includes a 7,695 square foot metal roof with translucent insert panels. The roof is inspected and maintained by a third party. The last inspection occurred in 2010 and no reports of improper function were generated. The useful life of metal roofs is up to 35 years. Its replacement is anticipated by 2026 in conjunction with metal siding and gutters and downspouts.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Metal Roof, Storage Garage	7,965	2	15	14	2026



Metal roof w translucent panels

Siding, Concrete and Masonry

Forestry South HQ building exterior comprises 6,500 square feet of brick masonry and 870 square feet of exposed concrete foundation original to the building construction. The 1994 building addition comprises 2,800 square feet of masonry units. The original brick masonry is in fair to serious overall condition and the 1994 masonry units are in good overall condition. Visual onsite inspection at the original brick masonry identified multiple locations of cracked, spalled, and damaged brick and mortar. Additionally, the inspection revealed rusted/deflected metal lintels and cohesion/adhesion caulk failure. For budgetary purposes, the City of Milwaukee bases its cost estimate for concrete and masonry work on the following:

- Partial depth concrete repairs: 43 square feet
- Full depth concrete repairs: 14 square feet
- Crack fill w grout/sealant: 100 linear feet
- Epoxy injection crack repairs: 75 linear feet
- Masonry replacement: 648 square feet
- Masonry repointing: 1,394 square feet
- Concrete coping replacement: 125 linear feet
- Caulk windows/door/louvers
- Paint exposed metal surfaces

The actual scope of work will be verified by design inspection.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Brick Masonry, Original	6,500	3	73	0	2012
Concrete, Foundation	870	5	73	0	2012
Masonry Units, 1994	1,600	7	18	0	2012
Caulk (LF)	1,340	6	Varies	0	2012
Concrete Coping Stone (LF)	600	5	73	0	2012
Metal Lintels (LF)	270	5	Varies	0	2012



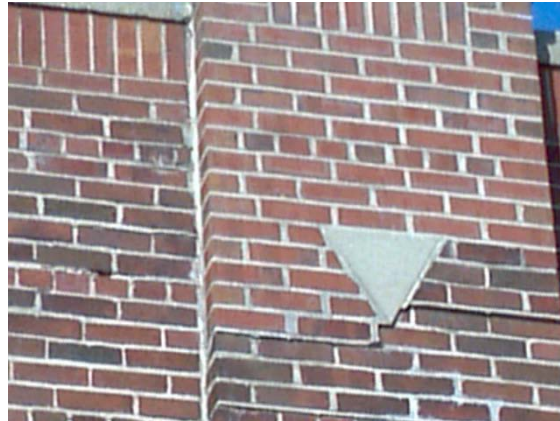
Mortar step crack at south elevation



Cracked brick/mortar at south elevation



Spalled brick/mortar east elevation



Displaced brick at east elevation



Cracked mortar/spalled brick at east elev.



Parallel step cracks east elevation



Mortar loss at west elevation



Mortar loss at west elevation



Displaced brick at west elevation



Rusted metal lintel at north elevation



Control joint sealant is cracked/brittle



Water infiltration and damaged paint

Siding, Metal

Forestry South HQ Storage Garage contains 6,500 square feet of corrugated metal siding. The siding is at an age of 18 years. The inspection revealed minor isolated occurrences of damaged siding. The useful life of exterior siding is up to 35 years. The City of Milwaukee should anticipate its replacement by 2026.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Siding	6,500	7	18	14	2026



Metal siding at Storage Garage



Damaged siding

Windows

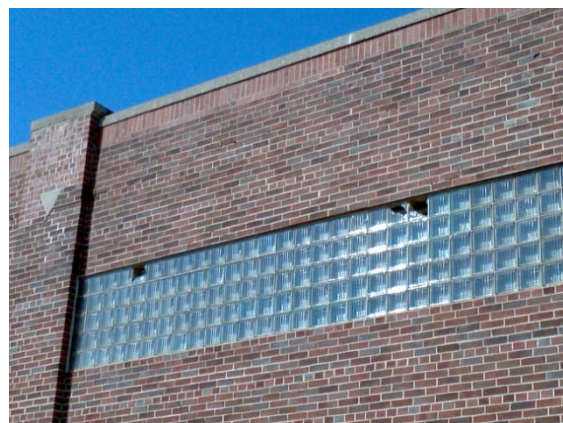
Forestry South HQ comprises three window types: frame, glass block, and skylight. The frame windows comprise 260 square feet and were installed with the Office building addition in 1994. These windows appeared in satisfactory condition with minor surface deterioration evident. The glass block windows comprise 650 square feet. These windows were in poor overall condition with multiple locations of damage. A glass block window installation at the south elevation exhibited an adjacent lintel with significant deflection. The skylight comprises 390 square feet of horizontal area. Its age is unknown and it is in fair overall condition. However, the unit is reported as thermally inefficient.

The useful life of windows is up to 35 years. Based on condition and age, the City of Milwaukee should anticipate replacement of the frame windows by 2031. The glass block and skylight should be replaced in coordination with the concrete and masonry repairs and the roof replacement, respectively.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Frame	260	6	18	19	2031
Glass Block	650	4	Unknown	0	2012
Skylight (horizontal area)	390	5	73	0	2012



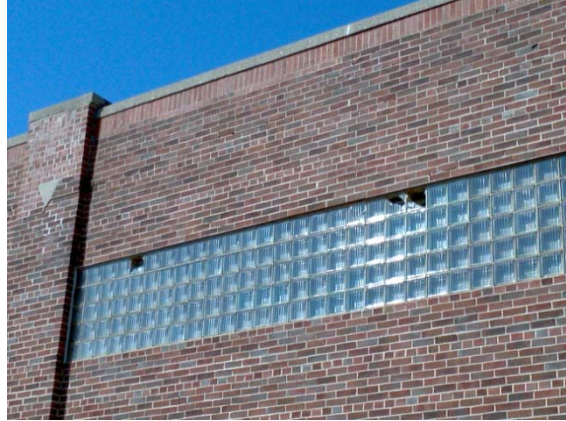
Typical frame window installation



Damaged glass block windows



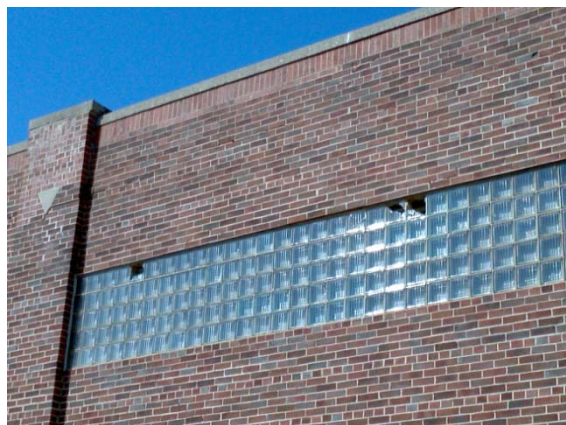
Cracked/damaged glass block



Damaged glass block windows



Cracked/damaged glass block



Damaged glass block windows



Deflected lintel

Garage, Office Building, Paint Finish

Forestry South HQ Office building Garage includes 19,500 square feet of painted ceilings and walls and 15 light fixtures. The paint finish is in satisfactory condition and the light fixtures are operable. The useful life of coordinated paint finishes and light fixture replacements is up to 35 years. The City of Milwaukee should anticipate this coordinated renovation by 2018.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Paint Finish	19,500	6	Unknown	6	2018
Light Fixtures (EA)	15	6	Unknown	6	2018



Office Building garage interior

Offices, Equipment and Furniture

Forestry South HQ comprises interior and finishes within the Office Building. The City of Milwaukee anticipates the next furniture and equipment replacement to occur in conjunction with the next interior renovation by 2020. Interim replacement of computers, printers, copiers should be funded from department O+M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Chairs	66	5	Unknown	8	2020
Desks	20	5	Unknown	8	2020
Cubicles	4	5	Unknown	8	2020
File Cabinets	3	5	Unknown	8	2020
Printers/Copiers	7	N/A	Unknown	8	2020
Computers	7	N/A	Unknown	8	2020
Televisions	5	N/A	Unknown	8	2020
Telephones	10	N/A	Unknown	8	2020
Refrigerator	4	N/A	Unknown	8	2020
Microwave	7	N/A	Unknown	8	2020
Vending Machine	1	N/A	Unknown	8	2020
Sofas	7	5	Unknown	8	2020



2nd Floor equipment/furniture



2nd Floor office equipment/furniture



2nd Floor office equipment/furniture



1st Floor break room equipment/furniture

Offices, Interior Renovations

Forestry South HQ Office Building comprises interior finishes including vinyl tile, acoustic tile ceiling, painted walls and ceilings, cabinets, and light fixtures. These components are associated with the office spaces, break room, hallways, and stairwells. The useful life of interior renovations is up to 20 years. The last renovation was in 1994.

The inspection revealed that the interior spaces were in satisfactory condition. An acoustic tile ceiling exhibited water damage and soiled wall surfaces consistent with age were observed.

The City of Milwaukee plans for the next interior renovation by 2020. This project should be coordinated with other interior renovations.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Acoustic Tile Ceiling (SF)	2,085	6	18	8	2020
Painted Walls/Ceiling (SF)	9,060	6	18	8	2020
Vinyl Tile (SF)	3,500	6	18	8	2020
Cabinets (LF)	30	6	18	8	2020
Light Fixtures, Fluorescent	56	6	18	8	2020
Light Fixtures, Ceiling	2	6	18	8	2020
Light Fixtures, Recessed	7	6	18	8	2020
Drinking Fountain	1	6	18	8	2020



Stained wall in break room



Stained acoustic tile ceiling in break room



Replaced ceiling tile 2nd Floor offices



Begrimed wall surface in garage

Rest Rooms/Locker Rooms, Renovations

Forestry South HQ comprises two rest rooms/locker rooms and an additional stand alone rest room. The rest rooms/locker rooms are in satisfactory to poor condition with worn finishes, despite a minor upgrade in 1994. Rest rooms/locker rooms have a useful life of up to 25 years. The City of Milwaukee plans room/locker room renovation in conjunction with other interior renovations by 2020.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Paint Walls/Ceilings (SF)	2,375	4	Unknown	8	2020
Acoustic Tile Ceiling (SF)	550	5	Unknown	8	2020
Ceramic Tile Floor (SF)	80	5	Unknown	8	2020
Vinyl Tile Floor (SF)	760	5	Unknown	8	2020
Light Fixtures, Strip	17	5	Unknown	8	2020
Light Fixtures, Recessed	6	5	Unknown	8	2020
Toilet	6	5	Unknown	8	2020
Urinal	2	5	Unknown	8	2020
Sink	4	5	Unknown	8	2020
Partition	42	4	Unknown	8	2020
Lockers	66	5	Unknown	8	2020
Shower Stalls	3	4	Unknown	8	2020
Benches	3	6	Unknown	8	2020
Mirrors	3	6	Unknown	8	2020



Women's rest room/locker room



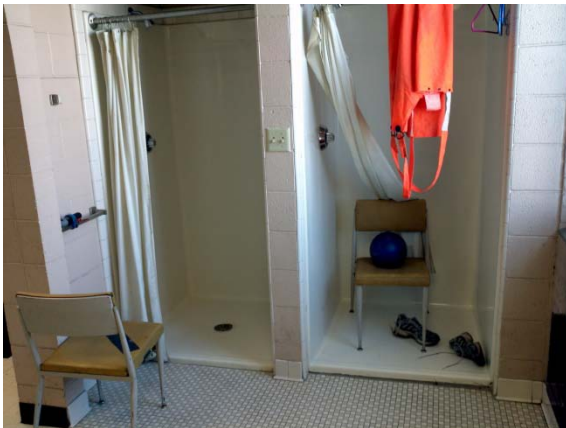
Women's rest room finishes



Stand alone rest room finishes



Men's rest room finishes



Men's shower stalls



Men's rest room finishes

Building Automation System

The mechanical system controls at Forestry South HQ are integrated into the City of Milwaukee Building Automation System. These controls are scheduled for hardware and software upgrades in 2012. The City of Milwaukee should anticipate similar upgrades every 15 years.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
BAS	1	3	Unknown	0	2012



BAS hardware



BAS hardware

Boiler, Building Heat

Forestry South HQ includes one building heat boiler in the mechanical room with a capacity of 1,700 MBH. The boiler is 27 years of age. The useful life of boilers in this capacity is up to 30 years. The City of Milwaukee anticipates its replacement by 2017.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Boiler (1,700MBH)	1	6	27	5	2017



Building heat boiler

Electrical

Forestry South HQ contains secondary distribution and branch circuit electrical equipment. The equipment is at an age of 23 years. Secondary distribution has a useful life of up to 40 years. Primary circuits have a useful life of up to 30 years. Branch circuit replacement is anticipated by 2017 in conjunction with HVAC upgrades. Secondary distribution is anticipated by 2027.

Inventory (LS)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Secondary Distribution	1	6	23	15	2027
Circuit Branches	1	6	23	5	2017



Secondary distribution



Branch circuit

Fire Warning System

Forestry South HQ does not have a fire warning system at this time. However, the facility includes 15 exit lights. The 2012 estimate is for installation of code compliant fire warning system. The cost will vary based on the actual facility needs and design considerations.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Fire Warning System	5	N/A	N/A	0	2012

Split Systems

Forestry South HQ comprises two split systems. Each split system comprises an internal forced air furnace and an external condensing unit. The useful life of split systems is up to 20 years. The City of Milwaukee anticipates their replacement by 2017. Interim partial replacements and repairs are funded by O + M.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Split System #1					
Furnace (MBH)	90	6	17	5	2017
Condenser (Tons)	4	6	17	5	2017
Split System #2					
Furnace (MBH)	80	6	17	5	2017
Condenser (Tons)	4	6	17	5	2017



Interior forced air furnace

Unit Heaters

Forestry South HQ contains ten unit heaters. The unit heaters are at various ages and have a useful life of 35 years. The City of Milwaukee anticipates their replacement by 2017 in conjunction with HVAC upgrades. Interim repairs and replacements are funded by O + M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
3 MBH	1	6	17	5	2017
5.5 MBH	1	6	28	5	2017
10 MBH	1	6	17	5	2017
75 MBH	1	6	28	5	2017
100 MBH	1	6	28	5	2017
260 MBH	4	6	28	5	2017
364 MBH	1	6	28	5	2017



Unit heaters



Unit heater

Doors, Garage

Forestry South HQ includes four overhead garage doors at the Office Building and four overhead garage overhead garage doors at the Storage Door. The garage doors appear in fair overall condition. Partial panel replacement and rust was evident at the Office Building doors. The useful life of garage doors is up to 15 years. The city of Milwaukee anticipates phased replacement of four garage doors every seven years beginning by 2012.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Office Building	4	4	18	0	2012
Storage Garage	4	6	18	7	2019



Garage door w repairs at Office Building



Garage door at Storage Garage

Asphalt Pavement

Forestry South HQ contains 6,970 SY of asphalt pavement. The pavement is in fair condition at an age of 15 years. The inspection revealed locations of failed pavement, potholes, and cracking. Interim asphalt pavement maintenance, including crack filling and partial replacements, is conducted in conjunction with seal coat applications in 2012 and every five years every five years beginning by 2017. Complete replacement of the asphalt pavement is anticipated by 2015.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Asphalt Pavement (SY)	6,970	6	Unknown	12	2015



Pothole and failed pavement



Cracked/failed pavement



Failed patched/pavement

Gasoline Fuel System

Forestry South HQ contains a gasoline fuel system that was installed in 1994. The open air system includes a 1,000 gallon unleaded gas tank, ten bollards, and one dispenser. The useful life of open air fuel systems is up to 30 years. The City of Milwaukee should anticipate its replacement by 2020.

Inventory (LF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Gasoline Tank (Gallons)	1,000	5	18	8	2020
Dispenser	1	5	18	8	2020
Bollards	10	6	18	8	2020
Light Pole and Fixture	1	6	18	8	2020



Gasoline fuel station

Fence, Chain Link

Forestry South HQ facility perimeter is enclosed by a chain link fence. The fence exhibited isolated damage. The useful life of chain link fences is up to 35 years. City of Milwaukee plans fence replacement by 2015 in conjunction with pavement and retaining wall capital projects.

Inventory (LF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Chain Link Fence	740	5	Unknown	3	2015
Gate	40	6	Unknown	3	2015



Misaligned fence at north perimeter



Fence at west perimeter

Retaining Wall, Concrete

Forestry South HQ facility perimeter includes a concrete retaining wall at the east and north elevations. The retaining wall exhibits isolated cracks and locations of damage. The useful life of a concrete retaining is up to and beyond 55 years. However, interim repairs are required to maximize its service life. The City of Milwaukee anticipates concrete retaining wall repairs in conjunction with asphalt pavement and fence replacement by 2015.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Retaining Wall, Concrete	1,450	6	Unknown	3	2015



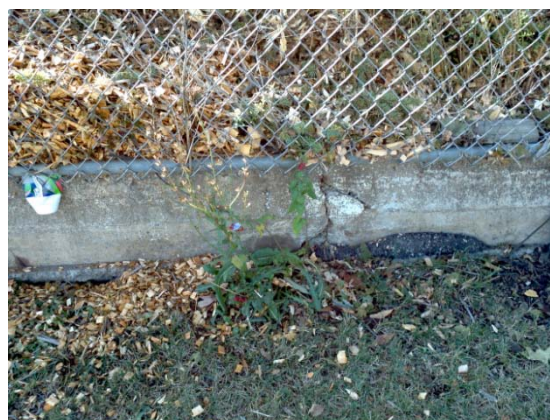
Spalled concrete retaining wall



Cracked wall w efflorescence



Cracked concrete w efflorescence



Cracked concrete retaining wall

Soil Shed, Replacement

Forestry South HQ includes an open air soil shed. The soil shed has a concrete foundation, wood frame walls, wood siding, and an asphalt shingle roof. The roof is at an age of 15 years. The inspection revealed cracked concrete foundation and damaged structural members presumably from a combustion incident.

The useful life of a soil shed is up to 35 years. Based on its condition, the City of Milwaukee plans for soil shed replacement in conjunction with pavement replacement by 2015. Subsequent asphalt shingle roof replacement is anticipated by 2031.

Inventory (LF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Soil Shed	1	5	73	3	2015



Damaged structural components



Cracked foundation wall

Forestry South HQ			2012 Unit	2012 Capital	20 Year Total		First												
Quantity	Units	Cost	Cost	UL	RUL	Cost	Capital	CRDM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
South Headquarters																			
Building Envelope Components																			
Doors, Pedestrian	1	LS	\$15,000	\$15,000	35	7	\$18,000	2019	\$0							\$18,000			
Doors, Garage, Phased	1	EA	\$10,700	\$10,700	15	1	\$80,000	2013	\$0	\$11,000	\$11,000					\$13,000	\$13,000		
Gutters and Downspouts	430	LF	\$22.00	\$9,460	20	14	\$14,000	2026	\$0										
Roof, EPDM, Office Building, #1	8,756	SF	\$13.50	\$118,206	20	1	\$317,000	2013	\$0		\$121,000								
Roof, EPDM, Office Building, #2	1,576	SF	\$13.50	\$21,276	20	1	\$57,000	2013	\$0		\$22,000								
Roof, EPDM, Office Building, #3	1,067	SF	\$13.50	\$14,405	20	1	\$39,000	2013	\$0		\$15,000								
Siding, Concrete and Masonry	1	LS	\$106,000	\$106,000	15	1	\$267,000	2013	\$0		\$109,000								
Windows, Frame	1	LS	\$30,000	\$30,000	35	19	\$50,000	2031	\$0										
Windows, Glass Block	1	LS	\$40,000	\$40,000	35	1	\$41,000	2013	\$0		\$41,000								
Windows, Skylight	1	LS	\$37,000	\$37,000	35	1	\$38,000	2013	\$0		\$38,000								
Building Interior Components																			
Offices, Equipment and Furniture, Replacement	1	LS	\$96,000	\$96,000	20	8	\$119,000	2020	\$0									\$119,000	
Offices, Interior Renovations	1	LS	\$83,000	\$83,000	20	8	\$103,000	2020	\$0									\$103,000	
Paint Finish, Garage	1	LS	\$49,000	\$49,000	35	6	\$57,000	2018	\$0						\$57,000				
Rest Rooms/Locker Rooms, Renovations	1	LS	\$74,000	\$74,000	25	8	\$92,000	2020	\$0									\$92,000	
Building Control Components																			
Boiler, Building Heat	1	EA	\$80,000	\$80,000	30	5	\$91,000	2017	\$0					\$91,000					
Building Automation System, Upgrades	1	EA	\$5,000	\$5,000	15	1	\$12,000	2013	\$0		\$5,000								
Electrical, Branch Circuits	1	LS	\$31,000	\$31,000	30	5	\$35,000	2017	\$0					\$35,000					
Electrical, Secondary Distribution	1	LS	\$45,000	\$45,000	40	15	\$67,000	2027	\$0										
Fire Warning System	1	EA	\$25,000	\$25,000	25	1	\$26,000	2013	\$0		\$26,000								
Split Systems	2	EA	\$10,000	\$20,000	20	5	\$23,000	2017	\$0					\$23,000					
Unit Heaters	1	LS	\$66,000	\$66,000	35	5	\$75,000	2017	\$0					\$75,000					
Storage Garage (1995)																			
Doors, Garage, Phased	1	EA	\$9,000	\$9,000	15	5	\$43,000	2018	\$0					\$10,000	\$11,000	\$11,000	\$11,000		
Light Fixtures, Interior	1	LS	\$9,000	\$9,000	35	6	\$11,000	2018	\$0						\$11,000				
Roof, Metal	7,695	SF	\$12.50	\$96,188	35	14	\$140,000	2026	\$0										
Siding, Metal	6,500	SF	\$10.50	\$68,250	35	14	\$99,000	2026	\$0										
Soil Shed																			
Roof, Asphalt Shingle	2,643	SF	\$3.00	\$7,929	20	19	\$13,000	2031	\$0										
Soil Shed, Replacement	1	LS	\$126,247	\$126,247	35	4	\$140,000	2016	\$0				\$140,000						
Site Features																			
Asphalt Pavement, Maintenance	6,970	SY	\$1.00	\$6,970	3-5	1	\$38,000	2013	\$0		\$7,000							\$9,000	
Asphalt Pavement, Replacement	6,970	SY	\$33.00	\$230,010	20	4	\$263,000	2016	\$0				\$263,000						
Fence, Chain Link (incl. gate)	780	LF	\$54.00	\$42,120	30	4	\$48,000	2016	\$0				\$48,000						
Gasoline Fuel System	1	EA	\$16,000	\$16,000	25	4	\$18,000	2016	\$0				\$18,000						
Retaining Wall, Concrete, Maintenance	1	LS	\$36,000	\$36,000	55+	4	\$41,000	2016	\$0				\$41,000						
Total 20 Year Cost							\$2,482,000	Total Annual Cost	\$11,000	\$395,000	\$0	\$0	\$510,000	\$234,000	\$79,000	\$42,000	\$338,000	\$9,000	
Notes									South Head Quarters CRV										
1) FY is Fiscal Year. FY is the calendar year.									FCI	\$2,498,126	\$2,565,575	\$2,634,846	\$2,705,987	\$2,779,048	\$2,854,083	\$2,931,143	\$3,010,284	\$3,091,561	\$3,175,034
2) UL is Useful Life and RUL is Remaining Useful Life									FCI	0.00	0.15	0.00	0.00	0.00	0.08	0.02	0.01	0.11	0.00
3) The annual building materials inflation rate estimate is estimated a 2.70%									Storage Garage CRV										
4) Current Replacement Value (CRV) is the 2012 estimated replacement value for the buildings									FCI	\$258,888	\$265,878	\$273,057	\$280,429	\$288,001	\$295,777	\$303,763	\$311,964	\$320,387	\$329,038
5) Facility Condition Index (FCI) is the CRDM divided by the CRV, or CRDM/CRV									FCI	0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.04	0.03	0.00
6) 2011 Energy Usage: BTU/SF = 48,916, KW = 79,438, Therms = 12,303. Building Operations: 7am-3:30pm									Soil Shed CRV										
7) 2011 Water Usage =443 Ccf									FCI	\$126,247	\$129,656	\$133,156	\$136,752	\$140,444	\$144,236	\$148,130	\$152,130	\$156,237	\$160,456
									FCI	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00

12/1/2011



FACILITIES
CONDITION
ASSESSMENT
PROGRAM

LINCOLN AVENUE GARAGE COMPLEX

Facilities Development | Management

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Introduction

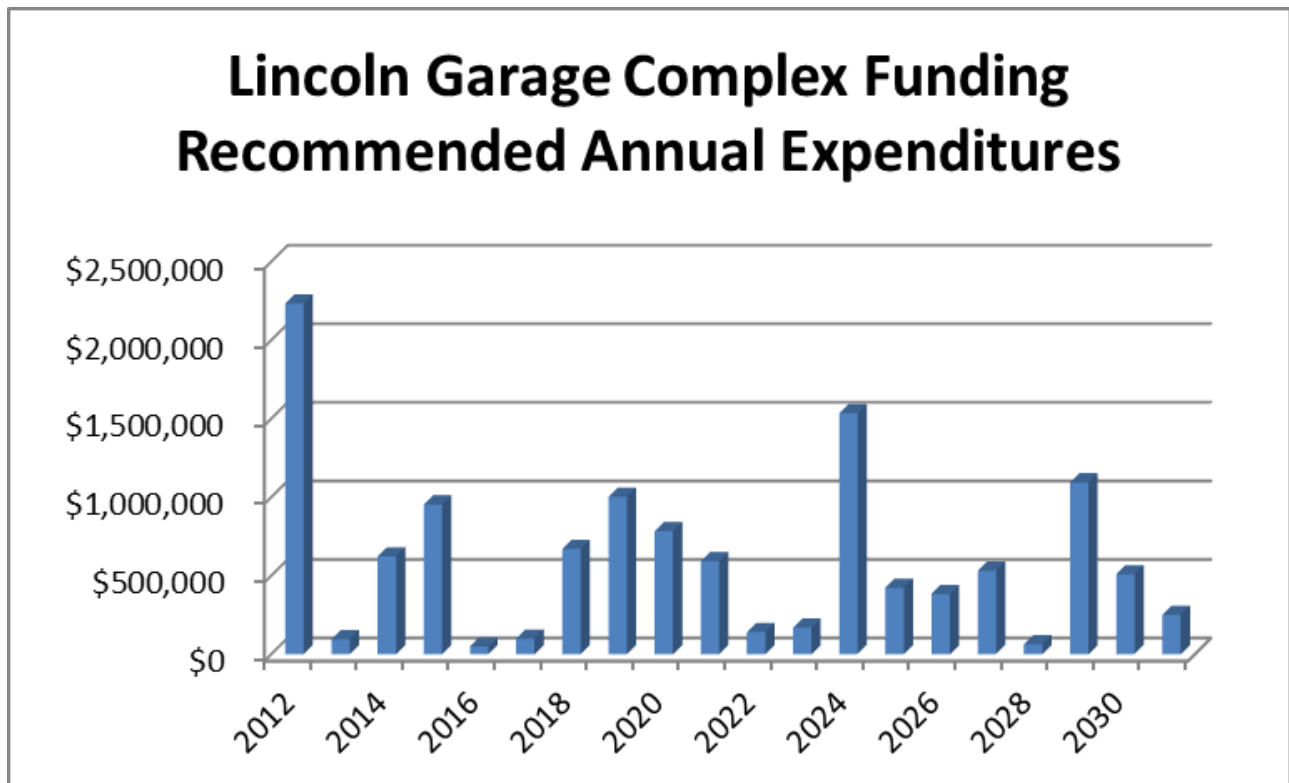
Executive Summary

Lincoln Garage Complex is located at 38th and Lincoln Avenue on the near south of Milwaukee. The complex is a primary sanitation and fleet operation locale. The complex comprises four buildings: Lincoln Garage, Transfer Station, Scale House, and Self Help. The ages of the buildings are listed below:

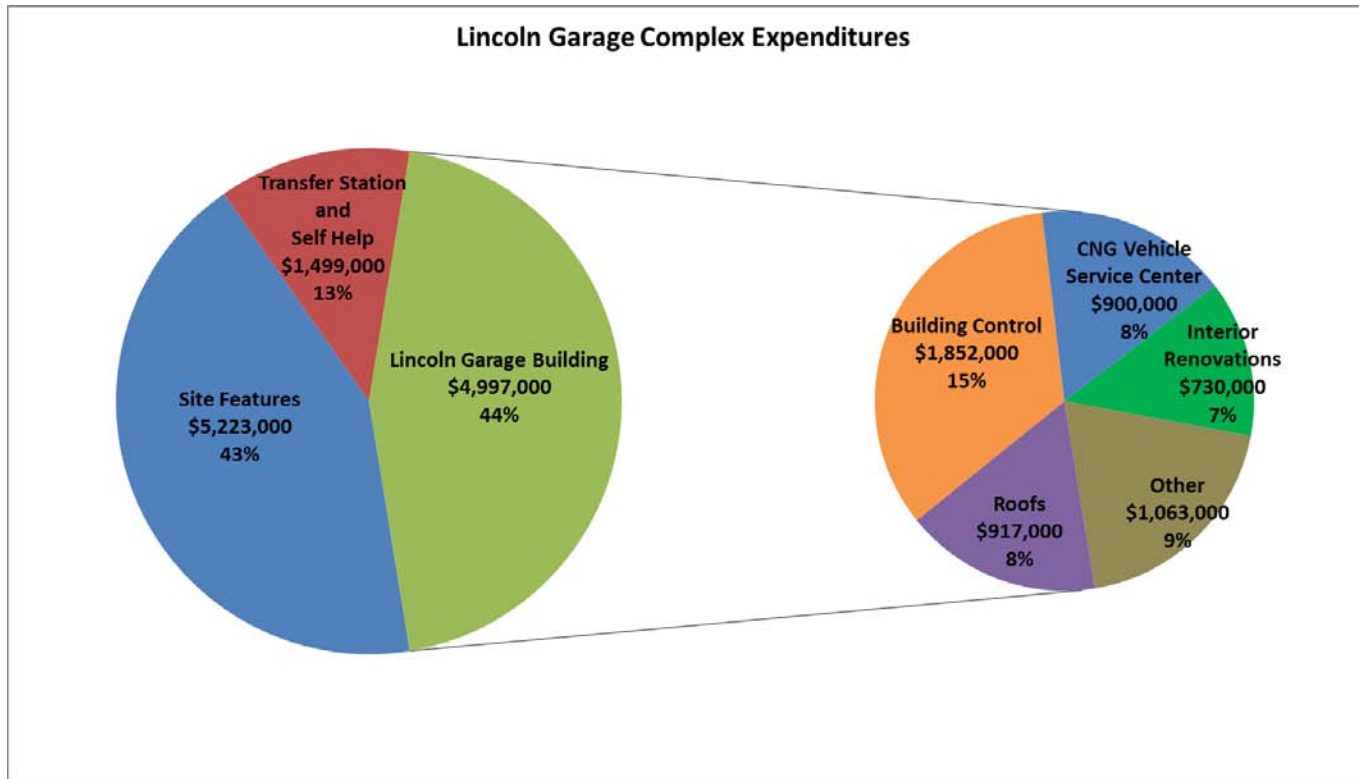
Building	Age	FCI
Lincoln Garage	54	0.33
Transfer Station	18	0.0
Scale House	18	0.0
Self Help	18	0.0

The property includes additional features including a Compressed Natural Gas construction, four fuel islands, truck scales, and concrete pavement.

Annual expenditures for Lincoln Garage Complex vary from year– to –year as indicated from the graph below.



The most significant category of Lincoln Garage Complex expenditures pertains to Site Features as shown below. Pavement partial replacement is the most significant single component.



Component Inventory

The property components at Lincoln Garage Complex are categorized as follows:

City of Milwaukee Capital Expenditures

Building Envelope Components

Lincoln Garage	Transfer Station	Scale House	Self Help
Doors	Doors	Roof	Windows/Doors
o Pedestrian	o Garage	Windows/Doors	
o Garage	Gutters/Downspouts		
Light Fixtures	Roofs, Metal		
Roofs, EPDM	Siding		
Siding	o Concrete		
o Masonry	o Metal		
o Metal			
Windows			

Building Interior Components

Lincoln Garage	Transfer Station	Scale House	Self Help
Light Fixtures Offices <ul style="list-style-type: none"> ○ Equipment ○ Furniture Paint Finishes Rest Rooms/Locker Rooms	Light Fixtures Paint Finishes	Interior Renovation	Interior Renovation

Building Control Components

Lincoln Garage	Transfer Station	Scale House	Self Help
Air Filter Units Building Automation System Electrical <ul style="list-style-type: none"> ● Branch Circuits ● Secondary Distribution Fire Warning System Make-Up Air Units Tube Heaters	Exhaust Fans		

Site Features

- Asphalt Pavement
 - Maintenance
 - Replacement
- Block Heaters
- Bollards
- Catch Basins
- Concrete
 - Curbs
 - Pavement
- CNG Equipment
- Fuel Island
 - Dispensers
 - Canopies
 - Northeast
 - Self Help
 - Southwest

- Guard Rails
- Light Poles and Fixtures
- Pond Liner
- Storm Water Management System
- Structure, Scales
- Structure, Smoke Stack
- Underground Storage Tanks
 - Replacement
 - Monitoring

O+M Responsibility

Normal O+M expenditures of Routine Maintenance/Diagnostics, Touch-Up Paint, Small Mechanical Devices. Building specific O+M includes:

Lincoln Garage	Transfer Station	Scale House	Self Help	Site Features
Split System	Unit Heaters Through Wall Units	Exterior <ul style="list-style-type: none"> ○ Caulk ○ Downspouts ○ Gutters ○ Siding ○ Wood Soffit Split Systems	Exterior <ul style="list-style-type: none"> ○ Asphalt Roof ○ Caulk ○ Fascia ○ Siding Split Systems	Landscape

Long Lived

Lincoln Garage	Transfer Station	Scale House	Self Help	Site Features
Foundation Structural Frame	Foundation Structural Frame	Foundation Structural Frame	Foundation Structural Frame	CNG Equipment CNG Sign Environmental Liner at Transfer Station

Others Responsibility

- Chain Link Fence, South of Lincoln Complex and East of Self Help (Tow Lot)
- Trash Compactors, Transfer Station (Tenant)

Doors, Pedestrian

Lincoln Garage Complex includes multiple pedestrian access doors. The useful life of exterior metal doors is up to 35 years. Based on condition, the City of Milwaukee plans replacement of Lincoln Garage doors by 2022. Scale House and Self Help doors should be replaced in conjunction with window replacements by 2030. Transfer Station doors should be replaced as need and funded by O + M.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Lincoln Garage	7	6	22	10	2022
Transfer Station	3	6	O + M Funds		
Scale House	1	6	Replace w/ Windows		
Self Help	1	6	Replace w/ Windows		



Typical Lincoln Garage door

Doors, Garage

Lincoln Garage contains 68 overhead garage doors and the Transfer Station contains 16 overhead garage doors. The garage doors at the east elevation of the Transfer Station are inoperable. However, the building tenant reports that this does not affect operations. The remaining doors are in operating condition. The useful life of garage doors with limited use is up to 15 years. Due to the large quantity of garage doors, the City of Milwaukee anticipates phased replacement of up to 11 garage doors at Lincoln Garage and three garage doors at the Transfer Station every three years beginning by 2014.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Lincoln Garage					
13' x 13'	64	Varies	Varies	2	2014
13' x 18'	2	Varies	Varies	2	2014
14' x 21'	2	Varies	Varies	2	2014
Transfer Station					
11' x 30'	11	3	Unknown	2	2014
17' x 20'	5	6	Unknown	2	2014



Lincoln Garage, garage doors



Damaged Transfer Station garage door

Gutters and Downspouts

Transfer Station includes 560 LF of metal gutters and downspouts that appear in good overall condition. Gutters and downspouts should be coordinated with roof replacements, or by 2018. Interim repairs and replacements should be funded from the operating budget.

Inventory (LF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Gutters	260	6	Unknown	6	2018
Downspouts	300	6	Unknown	6	2018



Gutters and downspouts



Damaged downspout

Light Fixtures, Exterior

Lincoln Garage includes 25 exterior wall mounted light fixtures. The useful of exterior wall mounted light fixtures is up to 25 years and replacement should be conducted in conjunction with metal siding replacement by 2021.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Light Fixtures	25	6	Unknown	9	2021



Garage light fixtures

Roofs, EPDM

Lincoln Garage includes four EPDM roof sections and the Scale house includes a ballasted EPDM roof. The roofs are inspected and maintained by a third party. The last inspection occurred in 2011 where the Lincoln Garage roofs were reported in fair condition and the Scale house roof was reported in good overall condition. EPDM roofs have a useful life of 20 years. The City of Milwaukee anticipates Lincoln Garage roof replacements by 2015 and Scale House roof replacement by 2025.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Lincoln Garage					
#1 EPDM	2,700	5	Unknown	3	2015
#2 EPDM	47,043	5	Unknown	3	2015
#3 EPDM	22,113	5	Unknown	3	2015
#4 EPDM	22,113	5	Unknown	3	2015
Scale House					
EPDM w Ballast	833	7	Unknown	13	2025



Lincoln Garage roof overview



Loose patch at Lincoln Garage roof



Ponded water at Lincoln Garage



Split roof membrane at Lincoln Garage



Vegetation growth atop roof near drains



Scale House roof

Roof, Metal

The Transfer Station includes three metal roof sections. The roofs are inspected and maintained by a third party. The last inspection occurred in 2011 where the roofs are indicated to be in fair condition and require major maintenance. Metal roofs have a useful life of 35 years. The City of Milwaukee anticipates their replacement by 2018.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
#1 Metal	23,052	4	18	6	2018
#2 Metal	2,332	4	18	6	2018
#3 Metal	24	4	18	6	2018



Roof #1 overview



Rusted roof at fasteners every 10 feet



Dry/brittle caulk



Surface coating missing



Roof #2 overview



Delaminated surface coating



Rusted lap joint



Roof #3

Siding, Concrete

Transfer Station comprises 9,050 square feet of exposed concrete. Periodic concrete repairs are necessary every 15 years to combat the natural deterioration of concrete siding. Based on condition, the City of Milwaukee anticipates to conduct the following work by 2021:

- Partial depth concrete repairs: 180 square feet
- Full depth concrete repairs: 25 square feet
- Crack fill w rout/sealant: 100 linear feet
- Crack repair w epoxy ejection: 65 linear feet
- Concrete sealer application

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Concrete	9,050	7	Unknown	9	2021



Cracked concrete



Vines exacerbate deterioration

Siding, Masonry

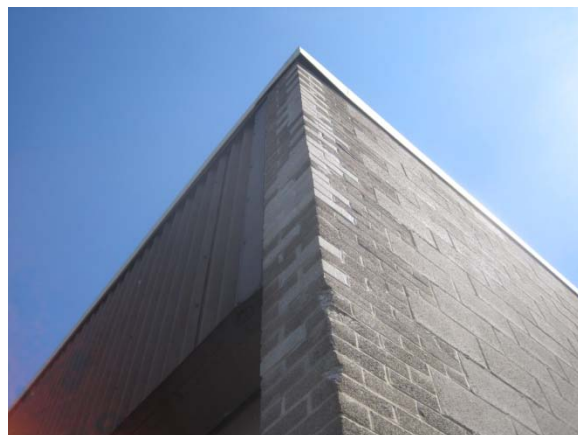
Lincoln Garage, Scale house, and Self Help contain masonry/brick exteriors. Periodic repairs are necessary every 15 years to deter masonry deterioration. Based on condition, the City of Milwaukee anticipates conducting the following work by 2021:

- Replacement of approximately: 280 square feet of masonry
- Repointing of approximately: 560 square feet of masonry
- Caulk replacement at windows/doors

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Lincoln Garage, Brick	7,800	5	Unknown	9	2021
Lincoln Garage, CMU	6,400	5	Unknown	9	2021
Scale House, Brick	870	6	Unknown	9	2021
Self Help, Masonry	700	7	Unknown	9	2021



Cracked brick/mortar at Lincoln Garage



Cracked/replaced brick at Lincoln Garage

Siding, Metal

Lincoln Garage contains 7,200 square feet of metal panel siding and the Transfer Station contains 10,060 square feet of metal siding. The inspection revealed damaged siding throughout Lincoln Garage and the Transfer Station. The useful life of exterior siding is up to 35 years The City of Milwaukee should anticipate its replacement by 2021.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Lincoln Garage	7,200	5	Unknown	9	2021
Transfer Station	10,060	5	Unknown	9	2021



Damaged siding at Lincoln Garage



Damaged siding at Lincoln Garage



Damaged metal siding

Windows/Doors, Replacement

Lincoln Garage, Scale House, Self Help include windows and doors. Typical useful life expectancy for windows is up to 35 years. The City of Milwaukee should conduct window and door replacement with other exterior capital improvements. The table below summarizes the recommendations.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Lincoln Garage	815	6	Unknown	9	2021
Scale House	210	6	18	9	2030
Self Help	145	7	18	9	2030



Lincoln Garage windows



Scale House windows

CNG Facility Service Center

The City of Milwaukee Fleet Operations is currently under transition from diesel powered vehicles to CNG vehicles. Although early in the transition, the fleet is expected to grow with the newly developed City of Milwaukee CNG infrastructure. At this time, a CNG vehicle service center does not exist. However, engineering design for Lincoln Garage facility modification is complete. The City of Milwaukee waits funding for the facility modification to support the growing fleet of alternative fuel vehicles.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Facility Modification	1	N/A	N/A	0	2012

Light Fixtures, Interior

Lincoln Garage interior has 257 ceiling and wall mounted light fixtures and the Transfer Station interior has 44 interior ceiling mounted light fixtures. The Lincoln Garage light fixtures were recently modified to include motion sensors. Light fixtures have a useful life of up to 35 years. The City of Milwaukee anticipates light fixture replacement at both Lincoln Garage and the Transfer Station by 2030. The Scale House and Self Help light fixtures are recommend for replacement with interior renovations of those facilities.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Lincoln Garage					
High Intensity Discharge	71	6	Unknown	18	2030
Fluorescent	165	6	Unknown	18	2030
Traffic Signals	11	6	Unknown	18	2030
Other	10	6	Unknown	18	2030
Transfer Station					
Pendulum	21	N/A	Unknown	18	2030
Other	23	N/A	Unknown	18	2030



Typical Lincoln Garage light fixture



Typical Lincoln Garage light fixture

Offices, Equipment and Furniture

Lincoln Garage includes various furniture and equipment. The primary component is shelving units used to organize vehicular components. The useful life for aggregate replacement of furniture and equipment is 20 years. City of Milwaukee anticipates the next equipment and furniture replacement by 2025. Interim replacement of equipment and furniture components should be funded from department O+M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Shelves	70	6	Unknown	13	2025
Chairs	27	5	Unknown	13	2025
Tables	6	5	Unknown	13	2025
Televisions	1	5	Unknown	13	2025
Computers	1	Unknown	Unknown	13	2025
Copiers/Printers	1	Unknown	Unknown	13	2025
Telephones	4	Unknown	Unknown	13	2025
Refrigerator	3	Unknown	Unknown	13	2025
Microwave	3	Unknown	Unknown	13	2025
Vending Machine	2	Unknown	Unknown	13	2025



Furniture



Furniture

Interior Renovations

The Scale House and Self Help building include finished interior spaces that include floor tile, acoustic tile ceiling, painted walls, cabinets, light fixtures. The finishes also include the kitchenette components. Due to the small interior spaces, renovations also include HVAC replacements. The useful life of interior renovations is up to 20 years. The City of Milwaukee plans for the next interior renovations at the Scale House and Self Help building by 2025.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Scale House	720	6	Unknown	13	2025
Self Help	415	6	Unknown	13	2025



Scale House office finishes



Scale house rest room finishes



Scale House interior

Paint Finishes, Structural Steel

Lincoln Garage and Transfer Station have exposed structural steel components throughout the garage areas. The structural components exhibited surface rust, though section loss was not observed. The useful life of paint finishes is up to 35 years. The City of Milwaukee plans paint finishes at Lincoln Garage and the Transfer Station by 2020.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Lincoln Garage	98,400	6	Unknown	8	2020
Transfer Station	23,000	6	Unknown	8	2020



Steel components – Lincoln Garage



Rusted steel components



Steel components – Transfer Station

Rest Rooms/Locker Rooms, Renovations

Lincoln Garage comprises two locker rooms and one restroom. The rest rooms are in satisfactory condition. Rest rooms have a useful life of up to 25 years. The City of Milwaukee plans rest room renovation in conjunction with other interior renovations by 2025. Interim partial replacements should be funded from the O + M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Paint Walls/Ceilings (SF)	1,725	6	Unknown	13	2025
Wall Tile (SF)	1,375	6	Unknown	13	2025
Ceramic Tile Floor (SF)	715	6	Unknown	13	2025
Light Fixtures	16	6	Unknown	13	2025
Toilet	6	6	Unknown	13	2025
Urinal	3	6	Unknown	13	2025
Sink	4	6	Unknown	13	2025
Partition	6	6	Unknown	13	2025
Showers	3	6	Unknown	13	2025
Mirrors	4	6	Unknown	13	2025
Drinking Fountain	1	6	Unknown	13	2025



Rest room finishes



Rest room finishes



Shower stall



Shower stalls

Air Filter Units

Lincoln Garage comprises 21 air filter units throughout the garage floor. Fifteen units are in poor operational/non-functional condition and six are in good operational condition. The useful life of air filter units is up to 35 years. Based on condition, City of Milwaukee anticipates air filter unit replacement in 2012. Interim partial replacements and repairs are funded by O + M.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Air Filter Units	21	3	Unknown	0	2012



Air filter unit

Building Automation System

The mechanical system controls at Lincoln Garage are not integrated into the City of Milwaukee Building Management System. Mechanical system upgrades should include Building Management System integration in 2012. In addition, upgrades should be anticipated by 2027.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
BAS, Installation	1	N/A	N/A	N/A	2012
BAS, Upgrades	1	N/A	N/A	N/A	2027

Electrical

Lincoln Garage Complex receives primary electrical distribution from the local utility company. The City of Milwaukee owns and maintains the secondary distribution and branch circuits thereafter. The secondary distribution is primarily original, at an age of 43 years and in satisfactory condition. The branch circuits vary in ages, though a majority is at an age of 43 years. The useful life of electrical supply in industrial settings is up to 35 years. Replacement of electrical components is recommended at the time of mechanical upgrades due to the inter-related nature of these services. The City of Milwaukee should consider comprehensive replacements in 2012. Interim replacements should be funded as needed by O + M.

Prior to Electrical and HVAC upgrades, an analysis should be conducted.

Inventory (LS)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Secondary Distribution	1	6	43	0	2012
Circuit Branches	1	5	Varies	0	2012



Secondary distribution



New/old branch circuit

Exhaust Fans

Transfer Station includes five large exhaust fans. The useful life of exhaust fans is up to 35 years. The City of Milwaukee should anticipate their replacement by 2030.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Exhaust Fans, 12,000 CFM	5	7	Unknown	18	2030

Fire Warning System

Lincoln Garage contains a fire warning system comprised of annunciators, pull boxes, exit lights, smoke/heat detectors, control panel and associated wiring. The system is relatively new and reported in good operational condition. Fire warning systems have a useful life of up to 25 years. Replacement of the fire warning system is anticipated by 2031.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Annunciators	27	7	Unknown	19	2031
Pull Boxes	10	7	Unknown	19	2031
Exit Lights	12	7	Unknown	19	2031
Smoke/Heat Detectors	88	7	Unknown	19	2031

Make-Up Air Units

Lincoln Garage contains eight air handling units. The air handling units are primarily non-functional due to age. The useful life of an air handling unit is up to 35 years. The City of Milwaukee should anticipate replacement of the air handling units in 2012 in conjunction with other mechanical/electrical upgrades. Interim repairs and replacements should be funded from O+M.

Inventory (EA)	Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure	
MUA D9					
Furnace (MBH)	400	2	43	0	2012
MUA D7					
Furnace (MBH)	450	2	43	0	2012
MUA N3, N4, D8					
Furnace (MBH)	500	2	43	0	2012
MUA D1, D2, D10					
Furnace (MBH)	600	2	43	0	2012



Make-Up air unit



Make-Up air unit

Security System

The security includes access management and video surveillance systems. The information is provided by the Security Operations Manager.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Access Management	11	5	25	0	2012
Video Surveillance	1	5	25	0	2012

Tube Heaters, Infrared

Lincoln Garage contains 11 infrared tube heaters that supply direct heat to concentrated areas. The heaters are functional and require annual maintenance at an age of 40 years. The useful life of tube heaters is up to 25 years. They should be replaced with near term mechanical/electrical upgrades. Interim partial replacements and repairs are funded by O + M.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Tube Heater	11	5	25	0	2012
Pump	1	5	25	0	2012



Rusted tube heater

Asphalt Pavement

Lincoln Garage Complex contains 8,300 SY of asphalt pavement. The primary locations include the northeast corner of the Self Help lot and the block heater locations at the rear of Lincoln Garage. The inspection revealed concentrations of failed pavement and alligator cracks. Interim asphalt pavement maintenance, including crack filling and partial replacements, should be funded from O + M in 2012. Beginning by 2014 the maintenance should be conducted every five years.

Complete replacement of the asphalt pavement should be conducted in a phased manner. Fifty percent of the pavement (4,150 square yards) should be replaced by 2019 and again by 2024. is anticipated by 2017.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Asphalt Pavement (SY)	8,300	6	Unknown	7	2019



Asphalt pavement at Self Help



Failed pavement at Self Help



Self Help failed pavement



Lincoln Garage asphalt pavement

Block Heaters

Lincoln Garage Complex comprises 16 block heaters for diesel-powered vehicles and 16 block heaters for CNG-powered vehicles. The CNG block heaters were installed in 2011 and the diesel block heaters are at an unknown age. The useful life of block heaters is up to 15 years. The City of Milwaukee should anticipate replacement of up to 11 block heaters every five years beginning by 2014. Replacement should be coordinated concrete and asphalt replacements.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Block Heaters, CNG	16	8	0	Varies	2014
Block Heaters, Diesel	16	5	Unknown	2	2014

Bollards

Lincoln Garage contains 69 bollards and the Transfer Station contains 44 contains vehicle impact bollards located between garage doors. The bollards are in satisfactory condition with rust observed. The useful life of bollards is up to 40 years. The city of Milwaukee should anticipate phased replacement of 20 bollards every five years beginning by 2014, and coordinate with concrete and asphalt replacements.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Bollards, Lincoln Garage	69	6	Unknown	2	2014
Bollards, Transfer Station	44	6	Unknown	2	2014



Bollards w surface rust at Lincoln Garage



Bollards w surface rust at Transfer Station

Catch Basins

Lincoln Garage Complex contains 19 catch basins. Catch basins have useful lives of up to 50 years. For budgetary purposes, the City of Milwaukee should anticipate replacement of two catch basins and resetting of 3 catch basins every five years beginning by 2014. This work should be coordinated with concrete and pavement replacement.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Catch Basins	19	6	Varies	2	2014



Settled catch basin near Transfer Station



Cracked concrete at entrance drive

Concrete Curbs

Lincoln Garage Complex contains 1,975 linear feet of concrete curbs. The useful life of concrete curbs is up to 50 years. The City of Milwaukee should anticipate replacement of up to 250 linear feet of curbs every five years beginning by 2014.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Concrete Curbs	1,975	Varies	Varies	2	2014



Deteriorated curb near Transfer Station



Deteriorated curb near Transfer Station

Concrete, Partial Replacements

Lincoln Garage Complex contains 385,000 square feet of concrete pavement throughout the property. The pavement is at various ages and conditions. The useful life of concrete is up to 50 years. The City of Milwaukee should anticipate replacement of up to ten percent, or 38,500 square feet, of concrete every five years beginning by 2014.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Concrete Pavement	385,000	Varies	Varies	2	2014



Self Help concrete



Cracked concrete at Transfer Station



Cracked concrete at Transfer Station



Cracked concrete at Lincoln Garage

CNG Equipment

Lincoln Garage Complex contains a Compressed Natural Gas (CNG) fueling facility for DPW and public use. The infrastructure was installed in 2011 and completion is anticipated by early 2012. The equipment is multifaceted and includes compressors, mechanical, software, dispensers, and fuel islands. Periodic rebuilding of mechanical equipment and compressors, as well as software updates are anticipated every 15 years. The City of Milwaukee should anticipate this project by 2026.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
CNG Maintenance	1	N/A	0	14	2026

Fence, Chain Link

Lincoln Garage Complex includes a chain link fence between the Lincoln Garage east parking lot and Self Help Lot. In addition, three gates and operators exist. The useful life of chain link fences is up to 35 years. City of Milwaukee plans fence replacement 2027. The estimated cost includes funds for replacement of the gates and gate operators.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Chain Link Fence (LF)	680	7	Unknown	12	2024
Gates	3	7	Unknown	12	2024
Gate Operator	3	Unknown	Unknown	12	2024



Chain link fence



Gate and operator

Fuel Islands

Lincoln Garage Complex includes four fuel islands. All but the Self Help Island includes at least one fuel dispenser. An exterior, open air structure has a useful life of up to 40 years. The city of Milwaukee should coordinate fuel island replacement in conjunction with pavement replacement. Two dispensers are scheduled for replacement every five years beginning by 2015.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Northeast					
Fuel Island (SF)	2,300	5		7	2019
Dispensers	3	5	Unknown	7	2015
Southwest					
Fuel Island (SF)	3,450	5		12	2024
Dispensers	5	Varies	Varies	12	2015
Self Help					
Fuel Island (SF)	1,440	5		17	2029
Dispensers	0	Varies	Varies	12	2015
Public CNG					
Fuel Island (SF)	1	9	0	LL	
Dispensers	1	9	0	LL	



Northeast fuel island



Rusted curb and dispenser



Southwest fuel island



Damaged canopy



Self Help fuel island

Guard Rails

Lincoln Garage Complex includes 460 linear feet of guard rails. The useful life of guard rails is up to 35 years. City of Milwaukee plans guard rail replacement 2024.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Guard Rail (LF)	460	6	Unknown	12	2024



Guard rail

Light Poles and Fixtures

Self Help lot includes ten light poles and fixtures. The useful life of light poles and fixtures is up to 35 years. City of Milwaukee anticipates their replacement in conjunction with concrete and asphalt pavement.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Light Pole and Fixtures	10	6	Unknown	17	2029



Light pole and fixture

Pond Liner, Replacement

The south border of the Lincoln Garage Complex (actually south of the Tow Lot) includes a retention pond that was rebuilt in 1998. The pond liner governs replacement and has a useful life of up to 30 years. The City of Milwaukee should anticipate pond liner replacement by 2027 after Tow Lot pavement replacement.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Pond Surface Area	35,000	Unknown	13	15	2027

Storm Water Management System, Conduit

The Lincoln Garage Complex contains a subsurface storm water management system. The City of Milwaukee should anticipate partial replacements of up to 100 linear feet of storm sewer in conjunction with pavement replacement every five years beginning by 2014.

Inventory (LF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Storm Sewers	3,600	Unknown	Varies	2	2014

Structure Scales

Scale House and Transfer Station contain two truck scales. The scales are reported in good operational condition. The useful life of scales is up to 15 years. City of Milwaukee anticipates their replacement by 2020.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Scales	2	6	Unknown	8	2020



West truck scale



East truck scale

Structure Smoke Stack

A smoke stack exists on the property. Funds are included for its removal by 2018.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Smoke Stack	1	Unknown	Unknown	6	2018

Underground Storage Tanks

Lincoln Garage Complex contains four underground storage tanks. The tanks are double walled and subjected to interstitial monitoring on an annual basis. The City of Milwaukee plans replacement of the underground storage tanks in conjunction with asphalt pavement replacement.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
1,000 Gallon Waste Oil	1	8	14	12	2024
2,500 Gallon Diesel	1	8	21	12	2024
10,000 Gallon Unleaded	1	8	17	12	2024
20,000 Gallon Diesel	1	8	16	12	2024
Monitoring Devices	3	4		1	2012

Lincoln Avenue Complex

	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Self Help																		
Building Envelope																		
Windows/Doors, Replacement	1	LS	15,000	\$15,000	35	18	\$24,000	2030									\$24,000	
Building Interior Components																		
Interior Renovations	1	LS	\$24,000	\$24,000	20	13	\$34,000	2025				\$34,000						
Site Features																		
Asphalt Pavement, Maintenance	8,300	SY	\$1.00	\$8,300	3-5	0	\$51,000	2012			\$11,000					\$13,000		
Asphalt Pavement, Phased	4,150	SY	\$35.00	\$145,250	20	7	\$375,000	2019			\$200,000							
Block Heaters, Phased	11	EA	\$2,200.00	\$24,200	15	2	\$126,000	2014			\$33,000					\$38,000		
Bollards, Partial Replacement	20	EA	\$1,250	\$25,000	40	2	\$129,000	2014			\$34,000					\$39,000		
Catch Basins, Phased	5	EA	\$2,900	\$14,500	40	2	\$75,000	2014			\$20,000					\$23,000		
Concrete Curbs, Partial Replacements	250	LF	\$27.00	\$6,750	20	2	\$35,000	2014			\$9,000					\$11,000		
Concrete Pavement, Partial Replacements	38,500	SF	\$8.00	\$308,000	50	2	\$1,604,000	2014			\$424,000					\$484,000		
CNG Equipment, Maintenance	1	LS	\$178,000	\$178,000	15	14	\$258,000	2026					\$258,000					
Fence, Chain Link (incl. gates and operators)	1	LS	\$25,000	\$25,000	30	12	\$34,000	2024			\$34,000							
Fuel Island, Dispensers	2	LS	\$16,000	\$32,000	25	3	\$172,000	2015				\$45,000					\$52,000	
Fuel Island, Northeast	1	LS	\$185,000	\$185,000	40	7	\$223,000	2019										
Fuel Island, Self Help	1	LS	\$103,000	\$103,000	40	17	\$162,000	2029								\$162,000		
Fuel Island, Southwest	1	LS	\$270,000	\$270,000	40	12	\$372,000	2024			\$372,000							
Guard Rails	460	LF	\$55.00	\$25,300	35	12	\$35,000	2024			\$35,000							
Light Poles and Fixtures	1	LS	\$47,000.00	\$47,000	35	17	\$74,000	2029								\$74,000		
Pond Liner, Replacement	1	LS	\$305,000	\$305,000	25	15	\$455,000	2027						\$455,000				
Storm Water Management System, Condiut	100	LF	\$725	\$72,500	35	2	\$377,000	2014			\$100,000					\$114,000		
Structure, Scales	2	EA	\$90,000	\$180,000	15	8	\$223,000	2020										
Structure, Smoke Stack	1	EA	\$145,000	\$145,000	55+	6	\$170,000	2018										
Underground Storage Tanks	1	EA	\$190,000	\$190,000	45	12	\$262,000	2024			\$262,000							
Underground Storage Tanks, Monitoring	3	EA	\$3,500	\$10,500	20	1	\$11,000	2013										

Total 20 Year Cost							\$12,184,000	Total	\$140,000	\$169,000	\$1,534,000	\$422,000	\$383,000	\$530,000	\$64,000	\$1,093,000	\$508,000	\$249,000	
Notes								Lincoln	\$8,746,000	\$8,982,000	\$9,224,000	\$9,474,000	\$9,729,000	\$9,992,000	\$10,262,000	\$10,539,000	\$10,823,000	\$11,116,000	
1) FY is Fiscal Year. FY is the calendar year.								Transfer	0.02	0.01	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.02	0.02
2) UL is Useful Life and RUL is Remaining Useful Life								Scale	\$3,454,000	\$3,547,000	\$3,643,000	\$3,742,000	\$3,843,000	\$3,946,000	\$4,053,000	\$4,162,000	\$4,275,000	\$4,390,000	
3) The annual building materials inflation rate estimate is estimated at 2.70%								Scale	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.03	0.00	
4) Current Replacement Value (CRV) is the 2012 building replacement value w/ an annual inflation rate of 2.70%								Scale	\$110,000	\$113,000	\$116,000	\$120,000	\$123,000	\$126,000	\$130,000	\$133,000	\$137,000	\$140,000	
5) Facility Condition Index (FCI) is the CRDM Building divided by the CRV, or CRDM Building/CRV								Scale	0.00	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.28	0.00	
6) 2011 Energy Usage: BTUs/SF = 66,661; KW = 647,464; Therms = 56,153. Building Operations: 3:30am-Midnight								Scale	\$77,000	\$80,000	\$82,000	\$84,000	\$86,000	\$88,000	\$91,000	\$93,000	\$96,000	\$98,000	
7) 2011 Water Usage = 3,036 Ccf								Scale	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.25	0.00	

12/1/2011



FACILITIES
CONDITION
ASSESSMENT
PROGRAM

RA ANDERSON LAKE TOWER

Facilities Development | Management

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Introduction

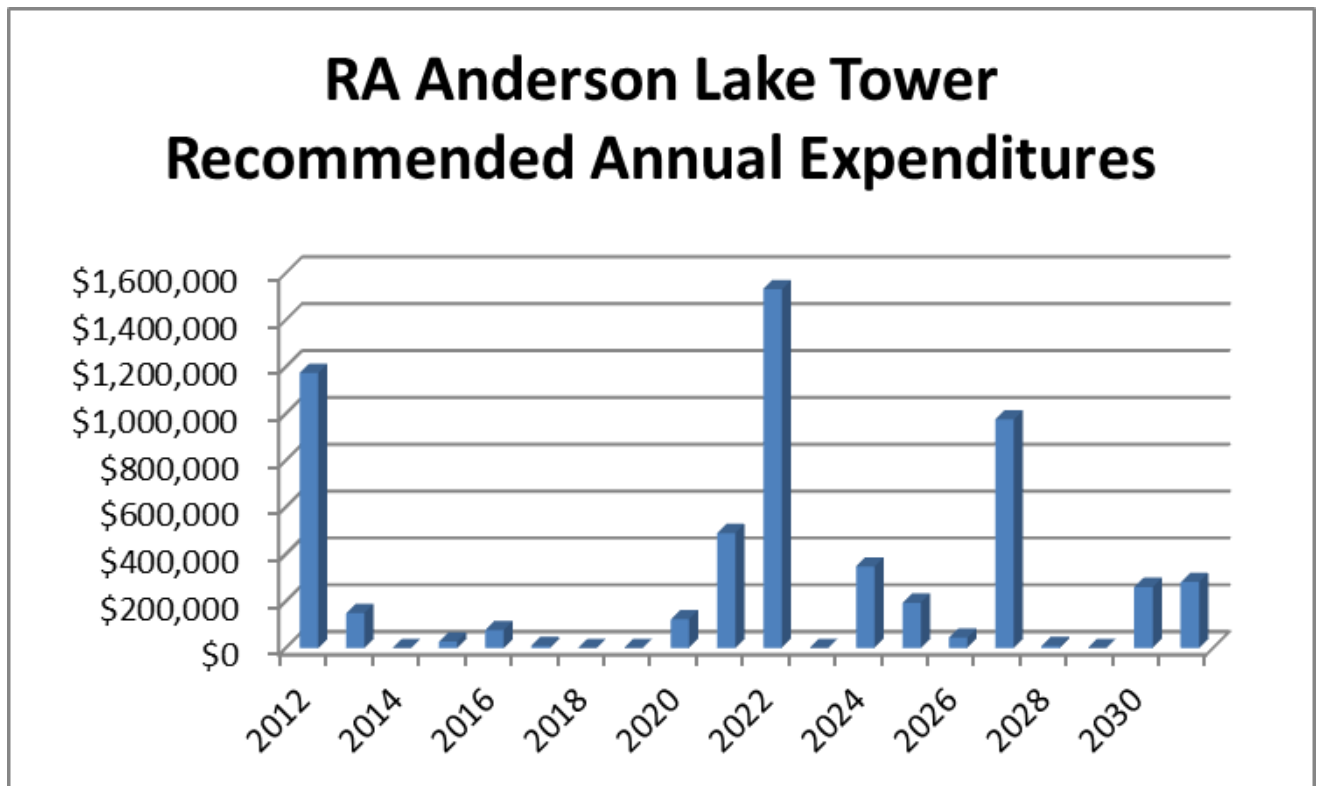
Executive Summary

RA Anderson Municipal Building (RA Anderson) is a 25,620 square foot mixed use facility located at 4001 South 6th Street. RA Anderson is bounded by 6th Street to the east, Howard Avenue Purification Plant to the north and west, and Sanitation South Area II to the south. The structure was developed in 1939. In 2001, the interior was completely renovated (except the entrance lobby and stairs).

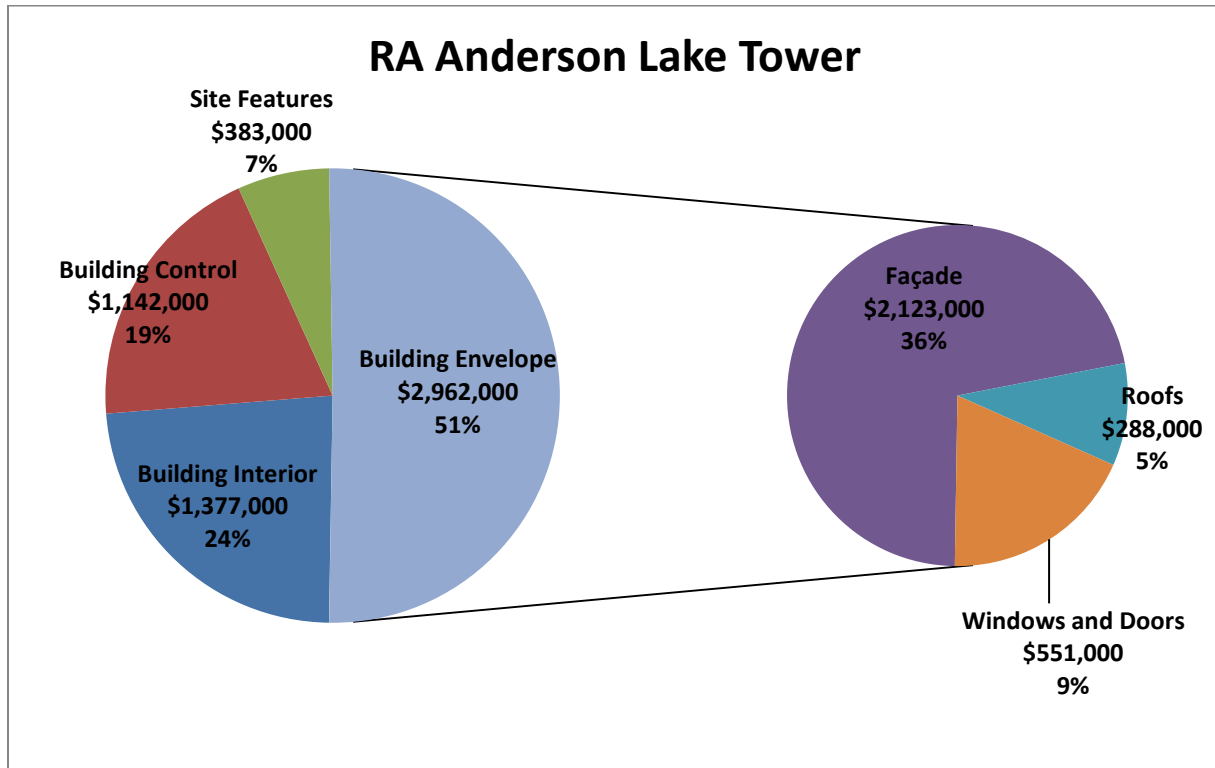
The building was built in the art deco style around a water tank for the Town of Lake. RA Anderson was acquired when the Town of Lake was annexed by the City of Milwaukee in 1954. The water tank is no longer in use. The building was renamed in 1998 for former Alderman Robert A. Anderson.

The Facility Condition Index rating is 0.14.

Annual expenditures for RA Anderson vary from year- to -year as indicated from the graph below.



The most significant category of RA Anderson expenditures pertains to building envelope repairs as shown below. Building envelope façade repairs is the most significant components.



Component Inventory

The property components at RA Anderson are categorized as follows:

City of Milwaukee Capital Expenditures

Building Envelope Components

- Architectural Details, Entrances
- Doors
 - Pedestrian
 - Garage
- Roofs
 - Built-up
 - EPDM

- Siding
 - Caulk Replacement
 - Critical Façade Inspection
 - Concrete, 2012 Repairs
 - Concrete, Remaining Near Term Repairs
 - Concrete, Subsequent Repairs
- Windows
 - Aluminum
 - Glass Block

Building Interior Components

- Offices
 - Equipment and Furniture, Replacement
 - Offices, Kitchens, and Hallways, Renovations
- Rest Rooms

Building Control Components

- Building Automation System
- Boilers, Heat
- Chiller
- Electrical, Branch Circuits
- Fire Warning System
- Generator, Emergency, Proposed
- Security System

Site Features

- Asphalt Pavement
 - Maintenance
 - Replacement

- Concrete, Partial Replacements
- Light Poles and Fixtures

O+M Responsibility

- Circulation Pumps
- Landscaping
- Paint Finishes, Touch-Up
- Routine Diagnostics/Maintenance
- Split Systems, Garage Make-Up Air Unit
- Turbine/Energy Recovery System (Abandoned)
- Unit Heaters
- Other Items Normally Funded by O+M

Long Lived

- Foundation, Building
- Air Handling Units 4th Floor
- Elevators, Hydraulic
 - Cylinder and Pump/Controls (2001 Installation)
- Pipes, HVAC, Water, Waste (2001 Replacement)
- Structural Frame, Building
- Pump, Fire (2001 Installation)
- Water Tank
- Windows, Glass Block (2001 Installation)

Others Responsibility

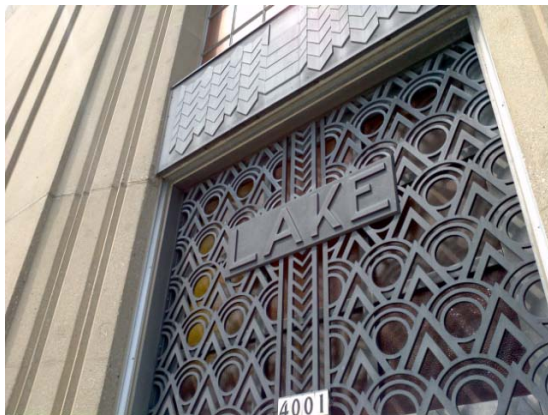
- None

Architectural Details, Entrances, Refurbishment

RA Anderson exterior includes art deco architectural details at the east, north, and south entrances. The east entrance includes ornate iron work and stained glass windows. Each entrance contains two light fixtures. They are at an age of 72 years.

The useful life of both architectural details is up to 35 years. The City of Milwaukee plans replacement/refurbishment by 2027.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Metal Details	1	7	72	15	2027
Glass	1	7	72	15	2027
Light Fixtures	6	7	72	15	2027



Metal architectural detail



Typical light fixture

Doors, Pedestrian

RA Anderson exterior includes two metal doors at the west elevation of the building and 3 sets of aluminum framed glass doors at the east, north, and south entrances. The doors are at an age of 31 years. The inspection revealed rusted base plates and deteriorated caulk. The caulk was replaced in 2011 after the on-site inspection.

The useful life of doors is up to 35 years. Based on condition, the City of Milwaukee plans replacement by 2020.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Metal	2	6	31	8	2020
Glass	3	5	31	8	2020



Front entrance doors



Cracked threshold at door

Door, Garage

RA Anderson includes one overhead garage door at the west elevation of the building.

The useful life of doors is up to 15 years. Based on condition, the City of Milwaukee plans replacement by 2017.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Garage Door	1	5	Unknown	5	2017



Garage door



Garage door operator

Roofs

RA Anderson includes six roof sections. The roofs are inspected and maintained by a third party. The last inspection occurred in 2010 and photographs were taken at that time. The third party recommends replacement of three EPDM roofs immediately and repairs at the remaining three roofs. Roofs have a useful life of 20 years. Roof information is summarized below.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
#1 Built Up Roof w Gravel	829	5	9	9	2021
#2 Built Up Roof w Gravel	1,590	5	9	9	2021
#3 EPDM	2,052	2	9	0	2012
#4 EPDM	2,052	2	9	0	2012
#5 EPDM	2,052	5	9	4	2016
#6 EPDM	2,052	2	9	0	2012



Roof 5 EPDM membrane detached



Roof 6 adhered with pavers



Roof 4 w ponded water



Roof 3 overview



Roof 2 w gravel ballast



Roof 1 w gravel ballast



Detached membrane at Roof 2



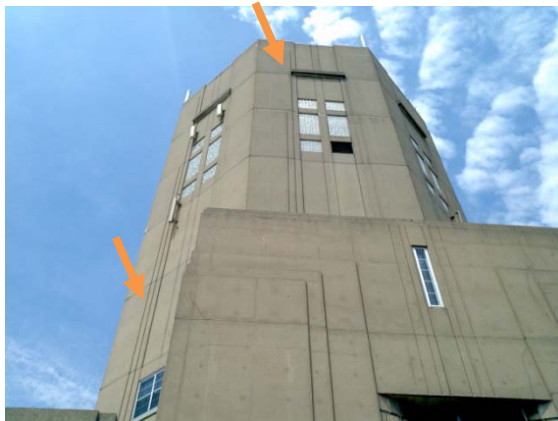
Roof deck underside is cracked and leaks

Siding, Caulk Replacement

RA Anderson comprises 5,200 linear feet of caulk at the building exterior. The caulk was replaced in 2011 and is in good overall condition. Caulk at/near the intersection of exterior façade panels was excluded from replacement.

The useful life of caulk is up to 15 years. The City of Milwaukee plans subsequent caulk replacement by 2027.

Inventory (LF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Caulk	5,200	7	0	15	2027



Caulk joints



Caulk at doors replaced in 2011

Siding, Concrete

RA Anderson comprises 34,500 square feet of concrete façade. Concrete façade inspections are required every five years per City of Milwaukee façade ordinance. City of Milwaukee last conducted the façade inspection in 2011. The City of Milwaukee plans subsequent façade inspections by 2016 and every five years thereafter.

In 2011 the City of Milwaukee began a capital improvement project to the exterior of the building. The work included multiple projects, which are divided into two categories 1) below third floor, 2) and above third floor. The 2011 projects are summarized below:

2011 RA Anderson Exterior Work		
Project Description	Above Third Floor	Below Third Floor
Full and Partial Concrete Surface Repairs	x	x
Crack Repairs via Rout and Silicone Sealant Installation	x	x
Window Sill Repointing		x
Parapet Wall Rebuilding Above Entrance (3 rd Floor)		x
Concrete Eyebrow Restoration (2-of-8 Complete)	x	
Sealant/Caulk Replacement	x	x
Concrete Sealer (Silane) Application	x	x
Roof Drain Inspection w/ Conductor Drain Pipe Repairs	x	x
Swing Stage Rigging	x	

The 2011 repair work is expected to continue into 2012 and focus on repairs at the eyebrows and water tank level. The following table summarizes the 2012 repairs.

2012 RA Anderson Exterior Work		
Project Description	Above Third Floor	Below Third Floor
Concrete Eyebrow Restoration (6-of-8 Remain)	x	
Water Tank Parapet Wall Structural Repairs	x	
Metal Catwalk Sand Blast/Replace/Paint	x	
Elastomeric Membrane Application (Parapet/Catwalk)	x	
Aluminum Roof Paint Application (Parapet/Catwalk)	x	
Antenna Removal/Banding/Lightning Rod Installation	x	
Permanent Banding at Water Tank for Rigging	x	

At the conclusion of the 2011/2012 repair work, a portion of the exterior façade repairs will be completed. However, a significant portion of tower façade repairs remains. Work yet to be completed includes partial and full depth concrete surface repairs and sealant replacement at 96 locations above the third floor located at the intersections of horizontal and vertical sealant joints. Once this work is complete, subsequent exterior repairs are anticipated to occur every

15 years beginning by 2027 years and include:

Subsequent RA Anderson Exterior Work		
Project Description	Above Third Floor	Below Third Floor
Full and Partial Concrete Surface Repairs	x	x
Crack Repairs via Rout and Silicone Sealant Installation	x	x
Concrete Sealer (Silane) Application	x	x
Swing Stage Rigging	x	

If possible, the City of Milwaukee should coordinate exterior repair projects with window replacements, architectural detail refurbishment, and caulk replacement. This will reduce design and mobilization costs making the combined project less expensive than individual projects.

Inventory (Ls)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Critical Façade Examination	34,500	6	72	5	2016
2012Repairs (LS)	1	3	N/A	0	2012
Remaining Repairs	1	3	N/A	0	2012
Subsequent	1	N/A	N/A	15	2027



Exterior facade



Spalled concrete facade



3rd floor parapet wall rebuild



Cracked concrete eyebrow



Concrete eyebrow restoration



Parapet wall, antenna, and water tank



Swing stage rigging



Concrete sealer application

Windows, Replacement

RA Anderson comprises 3,200 square feet of aluminum frame glass windows and 1,025 square feet of glass block windows. Typical useful life expectancy for windows is up to 35 years. The aluminum windows are at an age of approximately 30 years and the glass block windows are at an age of 11 years. The City of Milwaukee anticipates aluminum frame window replacement by 2021 and glass block window replacement by 2027, in conjunction with façade repair.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Aluminum Windows	3,200	6	30	9	2021
Glass Block Windows	1,025	6	11	15	2027



Typical aluminum frame windows



Repointed window sill

Offices, Equipment and Furniture

RA Anderson comprises offices on the first and second floors. The third floor contains a finished public meeting room and facilities. The office equipment and furniture was replaced in 2001. The useful life for aggregate replacement of furniture and equipment is 20 years. City of Milwaukee anticipates the next furniture and equipment replacement to occur in conjunction with the next interior renovation by 2022. Interim replacement of computers, printers, copiers should be funded from department O+M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Cubicles (desks, walls, etc.)	89	7	11	10	2022
Chairs	89	7	11	10	2022
File Cabinets	66	7	11	10	2022
Computers	89	7	Unknown	Varies	2022
Telephones	89	6	Unknown	10	2022



Typical equipment furniture

Offices, Kitchens and Hallways, Renovations

RA Anderson comprises interior finishes including carpet, vinyl tile, acoustic tile ceiling, painted walls, cabinets, light fixtures. These components are associated with the office spaces, meeting rooms, and kitchen areas. The useful life of interior renovations is up to 20 years. The last renovation was in 2001.

The inspection revealed that the interior spaces were in satisfactory condition. carpet contained stains throughout the facility and the finished interior wall exhibited worn surfaces. Wall and ceiling finishes in the garage were in fair/poor condition. The second floor southeast office, third floor kitchen and restrooms, and fourth floor hallway contained water damaged ceilings and wall surfaces due to tower leaks. Tower leaks were resolved with the 2011 exterior façade repairs. The original period-specific light fixtures and floor finishes in the entrance lobby and atrium are in good condition and excluded from the inventory and renovation estimates.

The City of Milwaukee plans for the next interior renovation of the offices, kitchens, and hallways by 2022. This project should be coordinated with rest room renovations.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Acoustic Tile Ceiling (SF)	15,000	6	11	10	2022
Painted Walls/Ceiling (SF)	24,400	6	11	10	2022
Carpet (SY)	1451	6	11	10	2022
Vinyl Tile (SF)	1,131	7	11	10	2022
Counters (LF)	49	7	11	10	2022
Cabinets (LF)	68	7	11	10	2022
Light Fixtures, Fluorescent	323	7	11	10	2022
Light Fixtures, Recessed	38	7	11	10	2022



First floor hallway finishes



Second floor office space



Stained ATC 2nd floor southeast office



Third floor kitchen, note damaged ATC



Lobby light fixtures, tile, floor long lived



Carpet stain

Rest Rooms, Renovations

RA Anderson comprises two rest rooms per floor from the first through third floors for a total of six rest rooms. Each rest room was renovated in 2001 as part of the building interior renovation. Rest room updates have a useful life of up to 25 years. The City of Milwaukee should consider rest room renovation in conjunction with other interior renovations by 2022.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Tile Wall (SF)	1,720	7	10	10	2022
Acoustic Tile Ceiling (SF)	970	7	10	10	2022
Vinyl Tile Floor (SF)	970	7	10	10	2022
Light Fixtures, Strip	20	7	10	10	2022
Light Fixtures, Recessed	8	7	10	10	2022
Toilet	13	7	10	10	2022
Urinal	4	7	10	10	2022
Sink	10	7	10	10	2022
Partition	15	7	10	10	2022



Typical rest room interior finishes

Boilers, Heat

RA Anderson comprises two building heat boilers located in the first floor mechanical room. Each boiler has a capacity of 1,379 MBH. The boilers were replaced in 1994. In 2001 all HVAC piping and terminal units were replaced. The useful life of boilers in this capacity is up to 30 years. The City of Milwaukee anticipates their replacement by 2025.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Boilers (1,379MBH)	2	7	17	13	2025



Building heat boilers



Typical unit heater



Baseboard heater

Building Automation System

The mechanical system controls at RA Anderson are integrated into the City of Milwaukee Building Management System. The hardware and software components are planned for upgrades by 2015 and again by 2030.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
BAS, Upgrades	1	7	11	3	2015

Chiller

RA Anderson chiller is pad mounted and located at the rear elevation of the building. The chiller has a capacity of 50 tons and was installed in 2001. The useful life of boilers in this capacity is up to 30 years. The City of Milwaukee anticipates its replacement by 2020, in conjunction with the building heat boilers.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Chiller (50 Tons)	1	7	10	13	2025



Chiller

Electrical

RA Anderson contains secondary distribution and branch circuit electrical equipment. The equipment is at an age of ten years and was replaced with the 2001 interior renovation. Secondary distribution has a useful life of up to 40 years and is long-lived. Primary circuits have a useful life of up to 25 years and is expected for replacement by 2031.

Inventory (LS)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Secondary Distribution	1	7	11	NA	Long Lived
Circuit Branches	1	7	11	19	2031



Secondary distribution



Transformer



Typical branch circuit

Fire Warning System

RA Anderson fire warning system is comprised of a control panel, detection devices, annunciators, pull boxes, exit/emergency lights, and associated wiring. The system is at an age of ten years. Fire warning systems have a useful life of up to 25 years. Replacement of the fire warning system is anticipated by

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Smoke/Heat Detectors	38	7	11	10	2022
Annunciators	57	7	11	10	2022
Pull Boxes	11	7	11	10	2022
Alarm Bells	2	7	11	10	2022
Emergency Lights	29	7	11	10	2022
Exit Lights	29	7	11	10	2022
Control Panel	1	7	11	10	2022



Fire control equipment and pump



Light fixtures emergency and exit

Security System

RA Anderson Municipal Building contains a access management system. Information is provided by the Security Operations Manager.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Access Management	1	7		8	2020

Asphalt Pavement

RA Anderson contains 3,900 SY of asphalt pavement driveways and parking stalls. The pavement is in fair overall condition. The inspection revealed transverse cracks along centerline drainage paths, concentrations of failed pavement (especially at catch basins), and catch basin settlement. These repairs should be conducted on an on-going basis and conducted in conjunction with seal coat applications every 3-5 years. Complete replacement of the asphalt pavement system (pavement, concrete curbs, and catch basin repairs/replacement) is anticipated by 2024. At the time of replacement, the actual scope of work will be determined.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Asphalt Pavement (SY)	3,900	5	11	12	2024
Catch Basins (EA)	4	6	11	12	2024
Concrete Curbs (LF)	405	6	11	12	2024
Concrete Car Stops (EA)	61	6	11	12	2024



Asphalt pavement



Transverse crack at centerline drainage



Alligator cracking/failed pavement



Failed pavement/pot hole



Failed pavement and settled catch basin



Damaged concrete curb

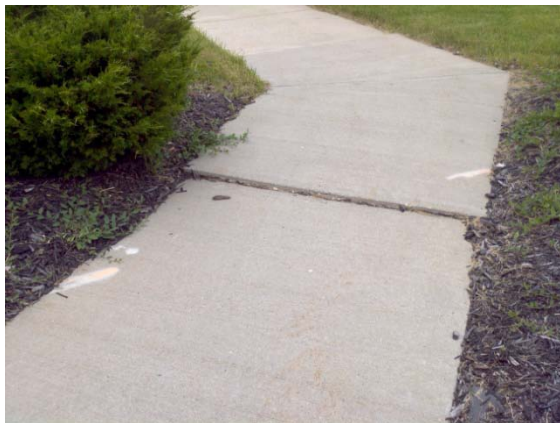


Damaged car stop

Concrete, Partial Replacements

RA Anderson contains 3,900 SF of concrete flatwork throughout the property including curbs and sidewalks/stoop. The concrete is in satisfactory condition overall. Cracked concrete and trip hazards were observed during the inspection. Trip hazards must be grinded to match elevations of adjacent concrete and be funded as an ongoing O+M expenditure. Periodic replacement of up to 800 square feet of concrete is recommended every eight years beginning by 2016.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Concrete Sidewalks/Stoops	3,900	6	10	12	2016
Concrete Curbs (LF)	405	6	10	12	2016



Concrete trip hazard – grind and level



Cracked concrete sidewalk w settlement

Light Poles and Fixtures

RA Anderson property comprises 16 bollard light poles and three light poles and fixtures to laminate the property. These components are in satisfactory condition. The useful life of light poles and fixtures (including bollards) is up to 25 years. City of Milwaukee anticipates their replacement in conjunction with the asphalt pavement system by 2024.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Bollard Light Fixtures	16	6	10	12	2024
Light Poles and Fixtures	3	6	10	12	2024



Typical light pole and fixture



Bollard light w factory finish deterioration

RA Anderson

	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	CRDM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Building Envelope Components																			
Architectural Details, Entrances, Refurbishment	1	LS	\$33,000	\$33,000	35	15	\$49,000	2027	\$0										
Doors, Pedestrian, Replacement	1	LS	\$33,000	\$33,000	35	8	\$41,000	2020	\$0									\$41,000	
Door, Garage, Replacement	1	EA	\$7,800	\$7,800	15	5	\$9,000	2017	\$0						\$9,000				
Roof 1, Built-up Roof w/ Gravel	829	SQ	\$19.00	\$15,751	20	9	\$20,000	2021	\$0										\$20,000
Roof 2, Built-up Roof w/ Gravel	1,590	SF	\$19.00	\$30,210	20	9	\$38,000	2021	\$0										\$38,000
Roof 3, EPDM	2,052	SF	\$12.50	\$25,650	20	0	\$67,000	2012	\$26,000	\$26,000									
Roof 4, EPDM	2,052	SF	\$12.50	\$25,650	20	0	\$67,000	2012	\$26,000	\$26,000									
Roof 5, EPDM	2,052	SF	\$12.50	\$25,650	20	4	\$29,000	2016	\$0					\$29,000					
Roof 6, EPDM	2,052	SF	\$12.50	\$25,650	20	0	\$67,000	2012	\$26,000	\$26,000									
Siding, Caulk Replacement	5,200	LF	\$13.30	\$69,160	15	15	\$103,000	2027	\$0										
Siding, Concrete, Critical Façade Inspection	1	LS	\$30,000	\$30,000	5	4	\$165,000	2016	\$0					\$33,000					\$38,000
Siding, Concrete, 2012 Repairs	1	LS	\$390,000	\$390,000	N/A	0	\$390,000	2012	\$390,000	\$390,000									
Siding, Concrete, Remaining Near Term Repairs	1	LS	\$700,000	\$700,000	N/A	0	\$700,000	2012	\$700,000	\$700,000									
Siding, Concrete, Subsequent Repairs	1	LS	\$480,000	\$480,000	15	15	\$716,000	2027	\$0										
Windows, Replacement, Aluminum (1980)	1	LS	\$310,000	\$310,000	35	9	\$394,000	2021	\$0										\$394,000
Windows, Replacement, Glass Block (2000)	1	LS	\$72,000	\$72,000	35	15	\$107,000	2027	\$0										
Building Interior Components																			
Offices, Equipment and Furniture, Replacement	1	LS	\$590,000	\$590,000	20	10	\$770,000	2022	\$0										
Offices, Kitchens, and Hallways, Renovations	1	LS	\$365,000	\$365,000	20	10	\$476,000	2022	\$0										
Rest Rooms, Renovations	1	LS	\$100,000	\$100,000	25	10	\$131,000	2022	\$0										
Building Control Components																			
Building Automation System, Upgrade	1	LS	\$25,000	\$25,000	15	3	\$67,000	2015	\$0				\$27,000						
Boilers, Heat	2	EA	\$56,000	\$112,000	30	13	\$158,000	2025	\$0										
Chiller	1	EA	\$25,000	\$25,000	30	13	\$35,000	2025	\$0										
Electrical, Branch Circuits	1	LS	\$139,000	\$139,000	30	19	\$231,000	2031	\$0										
Fire Warning System	1	LS	\$118,000	\$118,000	25	10	\$154,000	2022	\$0										
Generator, Emergency, Proposed	1	LS	\$145,000	\$145,000	35	1	\$149,000	2013	\$0		\$149,000								
Security System, Access Management	1	LS	\$60,000	\$60,000	10	8	\$171,000	2020	\$0										\$74,000
Site Features																			
Asphalt Pavement, Maintenance	5,870	SY	\$1.00	\$5,870	3-5	0	\$29,000	2012	\$6,000	\$6,000				\$7,000					\$7,000
Asphalt Pavement System, Replacement	5,870	SY	\$37.00	\$217,190	20	12	\$299,000	2024	\$0										
Concrete, Partial Replacements	800	SF	\$7.80	\$6,240	50	4	\$16,000	2016	\$0					\$7,000					
Light Poles and Fixtures (including bollard lights)	1	LS	\$28,000	\$28,000	25	12	\$39,000	2024	\$0										

Total 20 Year Cost \$5,687,000 **Total Annual Cost** \$1,174,000 \$149,000 \$0 \$27,000 \$76,000 \$9,000 \$0 \$0 \$122,000 \$490,000

Notes
 1) FY is Fiscal Year. FY is the calendar year.
 2) UL is Useful Life and RUL is Remaining Useful Life
 3) The annual building materials inflation rate estimate is estimated at
 4) Current Replacement Value (CRV) is the 2010 estimated replacement value for the buildings w/ an annual inflation rate of 2.70%
 5) Facility Condition Index (FCI) is the CRDM Building divided by the CRV 2.70%
 6) 2011 Energy Usage: BTUs/SF = 102,293; KW = 293,920; Therms = 16,179. Building Operations: 6am-3pm
 7) 2011 Water Usage = 170 Ccf

CRV \$8,467,132 \$8,696,000 \$8,931,000 \$9,172,000 \$9,419,000 \$9,674,000 \$9,935,000 \$10,203,000 \$10,479,000 \$10,761,000
FCI 0.14 0.02 0.00 0.00 0.01 0.00 0.00 0.00 0.01 0.05

RA Anderson

	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Building Envelope Components																		
Architectural Details, Entrances, Refurbishment	1	LS	\$33,000	\$33,000	35	15	\$49,000	2027						\$49,000				
Doors, Pedestrian, Replacement	1	LS	\$33,000	\$33,000	35	8	\$41,000	2020										
Door, Garage, Replacement	1	EA	\$7,800	\$7,800	15	5	\$9,000	2017										
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Roof 3, EPDM	2,052	SF	\$12.50	\$25,650	20	0	\$67,000	2012									\$41,000	
Roof 4, EPDM	2,052	SF	\$12.50	\$25,650	20	0	\$67,000	2012									\$41,000	
Roof 5, EPDM	2,052	SF	\$12.50	\$25,650	20	4	\$29,000	2016										
Roof 6, EPDM	2,052	SF	\$12.50	\$25,650	20	0	\$67,000	2012									\$41,000	
Siding, Caulk Replacement	5,200	LF	\$13.30	\$69,160	15	15	\$103,000	2027						\$103,000				
Siding, Concrete, Critical Façade Inspection	1	LS	\$30,000	\$30,000	5	4	\$165,000	2016					\$44,000					\$50,000
Siding, Concrete, 2012 Repairs	1	LS	\$390,000	\$390,000	N/A	0	\$390,000	2012										
Siding, Concrete, Remaining Near Term Repairs	1	LS	\$700,000	\$700,000	N/A	0	\$700,000	2012										
Siding, Concrete, Subsequent Repairs	1	LS	\$480,000	\$480,000	15	15	\$716,000	2027						\$716,000				
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Rest Rooms, Renovations	1	LS	\$100,000	\$100,000	25	10	\$131,000	2022	\$131,000									
Building Control Components																		
Building Automation System, Upgrade	1	LS	\$25,000	\$25,000	15	3	\$67,000	2015									\$40,000	
Boilers, Heat	2	EA	\$56,000	\$112,000	30	13	\$158,000	2025				\$158,000						
Chiller	1	EA	\$25,000	\$25,000	30	13	\$35,000	2025				\$35,000						
Electrical, Branch Circuits	1	LS	\$139,000	\$139,000	30	19	\$231,000	2031										\$231,000
Fire Warning System	1	LS	\$118,000	\$118,000	25	10	\$154,000	2022	\$154,000									
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Site Features																		
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Asphalt Pavement System, Replacement	5,870	SY	\$37.00	\$217,190	20	12	\$299,000	2024			\$299,000							
Concrete, Partial Replacements	800	SF	\$7.80	\$6,240	50	4	\$16,000	2016						\$9,000				
Light Poles and Fixtures (including bollard lights)	1	LS	\$28,000	\$28,000	25	12	\$39,000	2024					\$39,000					

Total 20 Year Cost							\$5,687,000	Total A	\$1,531,000	\$0	\$347,000	\$193,000	\$44,000	\$975,000	\$9,000	\$0	\$260,000	\$281,000
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Notes									\$11,052,000	\$11,350,000	\$11,657,000	\$11,972,000	\$12,295,000	\$12,627,000	\$12,968,000	\$13,318,000	\$13,677,000	\$14,047,000
1) FY is Fiscal Year. FY is the calendar year.									0.14	0.00	0.00	0.02	0.00	0.08	0.00	0.00	0.02	0.02

- 2) UL is Useful Life and RUL is Remaining Useful Life
- 3) The annual building materials inflation rate estimate is estimated at
- 4) Current Replacement Value (CRV) is the 2010 estimated replacement value for the buildings w/ an annual inflation rate of 2.70%
- 5) Facility Condition Index (FCI) is the CRDM Building divided by the CRV 2.70%
- 6) 2011 Energy Usage: BTUs/SF = 102,293; KW = 293,920; Therms = 16,179. Building Operations: 6am-3pm
- 7) 2011 Water Usage = 170 Ccf

12/1/2011



FACILITIES
CONDITION
ASSESSMENT
PROGRAM

SANITATION CENTRAL II

Facilities Development | Management

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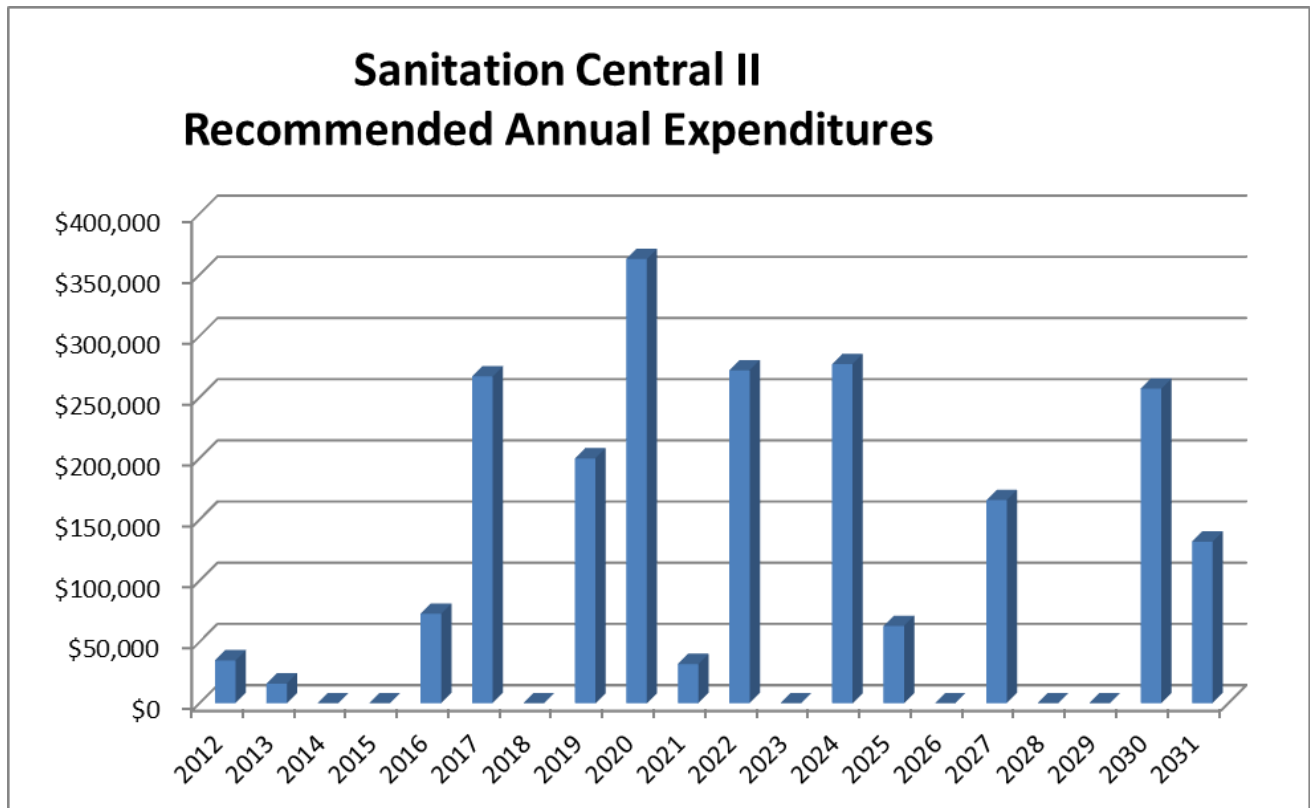
Introduction

Executive Summary

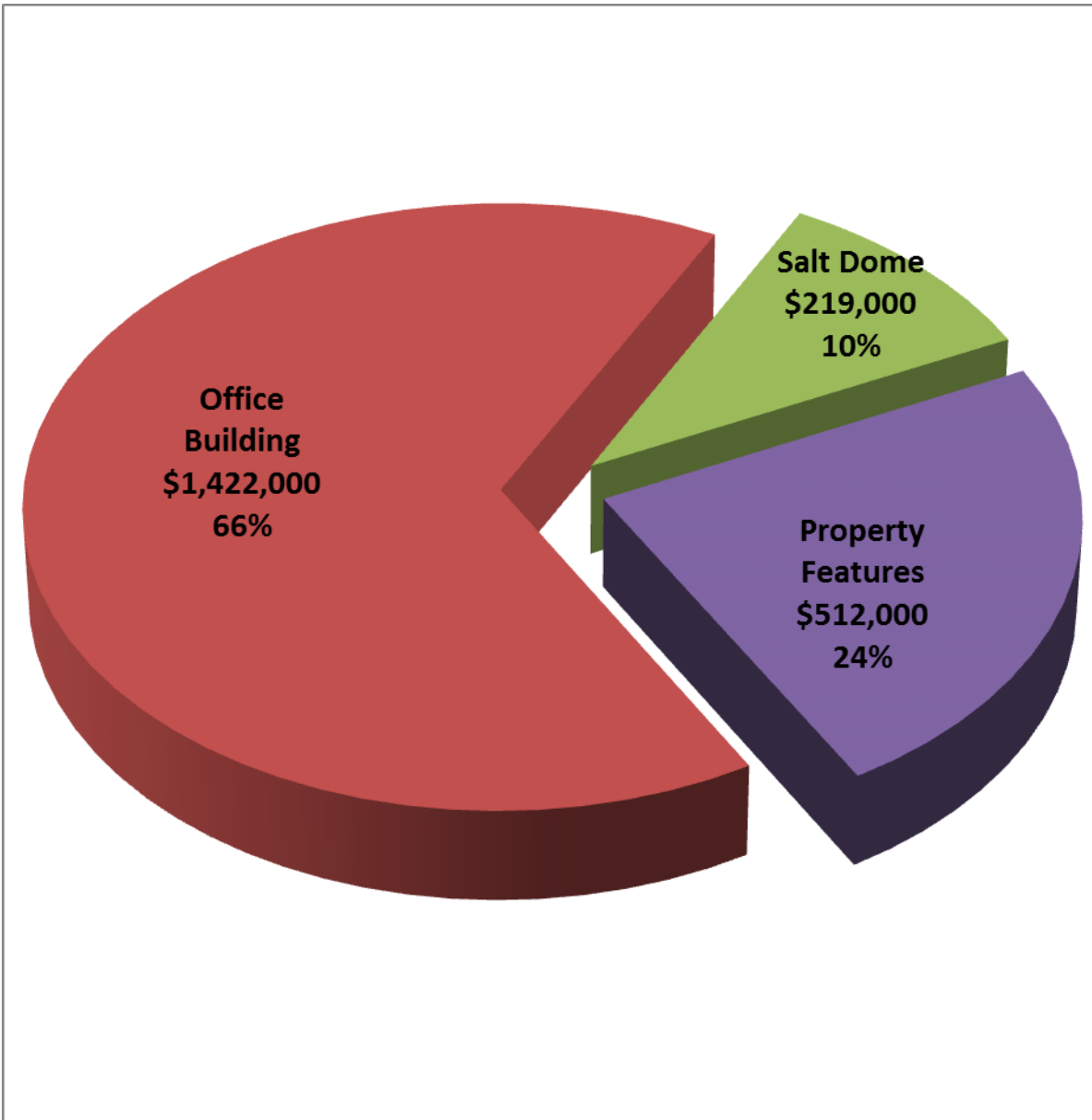
Sanitation Central II is an office building/light industrial facility located at 14th and Hayes. A salt dome is also located onsite.

The Condition Index rating at the Office Building and Salt Dome are is 0.00.

Annual expenditures for Sanitation Central II vary from year– to –year as indicated from the graph below.



The most significant category of expenditures pertains to the office building as shown below.



Component Inventory

The property components at Sanitation Central II are categorized as follows:

City of Milwaukee Capital Expenditures

Sanitation Office Building

Building Envelope Components

- Doors
 - Pedestrian

- Garage
- Gutters and Downspouts
- Roofs
 - EPDM
 - Metal
- Siding
 - Concrete and Masonry
 - Metal
- Windows

Building Interior Components

- Offices
 - Equipment and Furniture
 - Offices, Interior Renovations
- Garage/Storage Rooms, Renovations
- Rest Rooms/Locker Rooms, Renovations

Building Control Components

- Building Automation System
- Electrical
 - Branch Circuits
 - Secondary Distribution
- Fire Warning System
- Security System
 - Access Management
 - Video Surveillance
- Split Systems

Salt Dome

- Doors, Garage
- Gutters and Downspouts
- Roof, EPDM
- Roofs, Metal
- Siding, Concrete and Masonry

Site Features

- Asphalt Pavement

- Maintenance
- Replacement
- Bollards
- Concrete
- Fence, Chain Link (including gates and operators)
- Light Poles and Fixtures

O+M Responsibility

- Light Fixtures, Exterior Wall Mounted
- Exhaust Fans
- Water Heater
- Unit Heaters
- Other Items Normally Funded by O+M

Long Lived

- Flag Pole
- Foundations
 - Office Building
 - Salt Dome
- Pipes, HVAC, Water and Waste
- Structural Frames
 - Office Building
 - Salt Dome

Others Responsibility

- None

Doors, Pedestrian

Sanitation Central II exterior includes five metal doors and one glass doors for access into the facility. The doors are at an age of 23 years. The inspection revealed that the metal doors exhibited rust at the base.

The useful life of doors is up to 35 years. Based on condition, the City of Milwaukee plans replacement/refurbishment by 2024.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Metal	5	6	22	12	2024
Glass	1	7	22	12	2024



Metal door with rust



Glass entrance door

Doors, Garage

Sanitation Central II includes ten overhead garage doors at the office building and one overhead garage door at the salt dome. The garage doors at the office building appear in satisfactory overall condition with minor rust observed. Whereas, the garage door at the salt dome appears in fair overall condition with the onset of rust and minor damage.

The useful life of garage doors with limited use is up to 15 years. The city of Milwaukee anticipates phased replacement of up to four garage doors every four years beginning by 2016 and concluding by 2024. Subsequent phased replacement is anticipated to begin by 2031.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
14' x 15'	10	6	Unknown	4	2016
15' x 20'	1	5	Unknown	4	2016



Office building garage doors



Salt dome garage door – note rust/damage

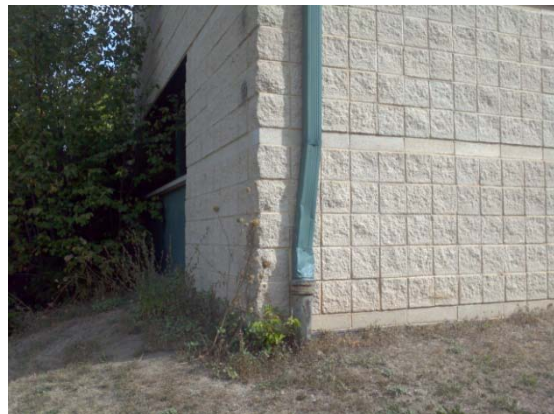
Gutters and Downspouts

Sanitation Central II includes 570 linear feet of gutters and 330 linear feet of downspouts at the buildings. The useful life of gutters and downspouts is 20 years. Replacement of gutters and downspouts should be conducted with the metal roof replacement by 2022.

Inventory (LF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Gutters	570	5	22	12	2022
Downspouts	330	5	22	12	2022



Gutters and downspout



Damaged downspout

Roof, EPDM

Sanitation Central II includes two stone ballasted EPDM roofs that are located above the garages. An additional EPDM roof is located at the salt dome at comprises 110 square feet. The south garage EPDM roof measures 2,210 square feet and the north garage EPDM roof measures 4,612.

The roofs are inspected and maintained by a third party. The last inspection occurred in 2011 where the roofs are indicated to be in fair condition. Ballasted EPDM roofs have a useful life of 20 years. The City of Milwaukee anticipates their replacement by 2019.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
#1 Office	4,612	5	Unknown	7	2019
#3 Office	2,210	5	Unknown	7	2019
#4 Salt Dome	110	5	Unknown	7	2019



Ballasted EPDM roof



Hole at flashing



Tented edge flashings



Rubber flashing w hole



Rusted bonnet at vent



Overgrown tree deposits debris atop roof

Roof, Metal

Sanitation Central II includes seven metal roof sections at the office building and four metal roof sections at the salt dome. These roofs vary in sizes as indicated in the table below.

The roofs are inspected and maintained by a third party. The last inspection occurred in 2011 where the roofs are indicated to be in fair condition. Ballasted EPDM roofs have a useful life of 20 years. The City of Milwaukee anticipates their replacement by 2022.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
#2 Office	4,264	5	22	7	2022
#4 Office	1,329	5	22	7	2022
#5 Office	929	5	22	7	2022
#6 Office	320	5	22	7	2022
#7 Office	155	5	22	7	2022
#8 Office	153	5	22	7	2022
#9 Office	148	5	22	7	2022
#1 Salt Dome	4,858	5	22	7	2022
#2 Salt Dome	291	5	22	7	2022
#3 Salt Dome	246	5	22	7	2022
#4 Salt Dome	110	5	22	7	2022



Tented edge flashings



Rusted roof – typical condition



Rusted roof – typical condition



Rusted roof edge

Siding, Concrete and Masonry

Sanitation Central II office building exterior comprises 11,150 square feet of masonry units and the salt dome exterior comprises 9,350 square feet of painted concrete. The useful life of painting and masonry/concrete repairs is 15 years. Based on condition, the City of Milwaukee anticipates to conduct the following work by 2019:

- Partial depth concrete repairs: 155 square feet
- Full depth concrete repairs: 50 square feet
- Crack fill w rout/sealant: 200 linear feet
- Crack repair w epoxy ejection: 100 linear feet
- Paint application salt dome
- Caulk windows/door/louvers

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Masonry	11,150	6	Unknown	7	2019
Concrete	9,350	5	Unknown	7	2019
Caulk (LF)	1,370	6	Unknown	7	2019



Damaged salt dome



Cracked masonry

Siding, Metal

Sanitation Central II contains 2,950 square feet of metal panel siding, louvers, entrance soffit, and metal fascia. This quantity includes the access door at the salt dome. The inspection revealed isolated occurrences of damaged/bent/rusted siding. The useful life of exterior siding is up to 35 years. The City of Milwaukee should anticipate its replacement by 2024. Interim repairs and replacements should be funded from O +M funds.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Louvers (EA)	9	7	Unknown	12	2024
Metal Panels (EA)	6	5	Unknown	12	2024
Fascia (LF)	790	7	Unknown	12	2024
Soffit (SF)	160	7	Unknown	12	2024



Panel siding and fascia



Rusted access door at salt dome



Typical louver

Windows, Replacement

Sanitation Central II comprises 690 square feet of aluminum frame glass windows. Typical useful life expectancy for windows is up to 35 years. The aluminum windows are at an age of 22 years. The City of Milwaukee anticipates aluminum frame window replacement by 2024, in conjunction with siding replacement.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Aluminum Windows	690	6	22	12	2024



Typical aluminum frame windows

Offices, Equipment and Furniture

Sanitation Central II comprises offices and finished meeting spaces. The City of Milwaukee anticipates the next furniture and equipment replacement to occur in conjunction with the next interior renovation by 2020. Interim replacement of computers, printers, copiers should be funded from department O+M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Chairs	80	7	9	8	2020
Desks	20	7	9	8	2020
Tables	8	7	9	8	2020
Televisions	4	6	9	8	2020
Printers/Copiers	3	N/A	Unknown	8	2020
Computers	10	N/A	Unknown	Varies	2020
Telephones	13	N/A	Unknown	10	2020



Typical furniture



Meeting room

Offices, Interior Renovations

Sanitation Central II comprises interior finishes including carpet, vinyl tile, acoustic ceiling tile, painted walls, cabinets, light fixtures. The finishes also include the kitchenette components. These components are associated with the offices, kitchenette, meeting rooms, and hallways. The useful life of interior renovations is up to 20 years.

The inspection revealed that the interior spaces were in satisfactory condition. Paint finish deterioration and acoustic ceiling tile damage was observed. The City of Milwaukee plans for the next interior renovation of the offices, kitchens, and hallways by 2020. This project should be coordinated with rest room renovations, and equipment and furniture replacements.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Acoustic Tile Ceiling (SF)	3,090	6	Unknown	8	2020
Painted Walls/Ceiling (SF)	4,360	6	Unknown	8	2020
Ceramic Tile (SF)	25	6	Unknown	8	2020
Vinyl Tile (SF)	3,170	6	Unknown	8	2020
Light Fixtures, Fluorescent	40	6	Unknown	8	2020
Light Fixtures, Recessed	2	6	Unknown	8	2020
Drinking Fountain	1	6	Unknown	8	2020
Microwave	2	6	Unknown	8	2020
Refrigerator	1	6	Unknown	8	2020
Sink	1	6	Unknown	8	2020
Counters (LF)	14	6	Unknown	8	2020
Cabinets (LF)	9	6	Unknown	8	2020



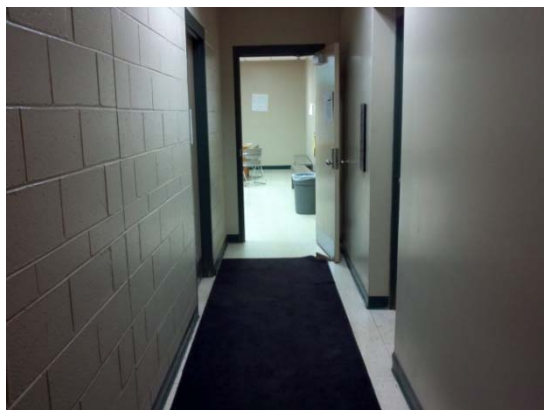
Acoustic ceiling tile missing



Worn paint at wall ledge



Kitchenette



Hallway

Garage/Storage Room, Light Fixtures

Sanitation Central II contains 20 light fixtures throughout the garages and storage rooms. The light fixtures are in satisfactory condition and have a useful life of up to 35 years. The City of Milwaukee plans room renovation in conjunction with electrical upgrades by 2025.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Light Fixtures	20	6	22	13	2025



Garage light fixtures



Storage room light fixture – replace damaged tile from O + M funds

Rest Rooms/Locker Rooms, Renovations

Sanitation Central II comprises two rooms. The rest rooms are in satisfactory condition. Rest rooms have a useful life of up to 25 years. The City of Milwaukee plans room room renovation in conjunction with other interior renovations by 2020.

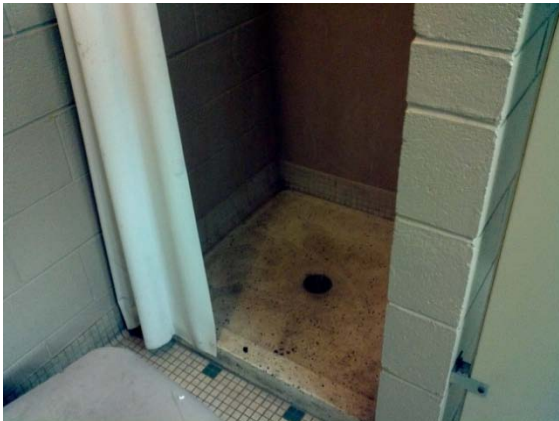
Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Paint Walls/Ceilings (SF)	1,115	6	22	8	2020
Acoustic Tile Ceiling (SF)	344	6	22	8	2020
Ceramic Tile Floor (SF)	344	6	22	8	2020
Light Fixtures, Strip	4	6	22	8	2020
Light Fixtures, Recessed	5	6	22	8	2020
Toilet	5	6	22	8	2020
Urinal	1	6	22	8	2020
Sink	3	6	22	8	2020
Partition	4	6	22	8	2020
Showers	2	6	22	8	2020
Mirrors	2	6	22	8	2020



Toilet partitions



Tile floor/sinks



Shower stall

Building Automation System

The mechanical system controls at Sanitation Central II are integrated into the City of Milwaukee Building Automation System. These controls are scheduled for hardware and software upgrades by 2025.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
BAS	1	7	2	13	2025

Electrical

Sanitation Central II contains secondary distribution and branch circuit electrical equipment. The equipment is at an age of 22 years. Secondary distribution has a useful life of up to 40 years and is long-lived. Primary circuits have a useful life of up to 30 years, The City of Milwaukee plans replacement of the branch circuits by 2020 and replacement of the secondary distribution by 2030.

Inventory (LS)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Secondary Distribution	1	7	22	18	2030
Circuit Branches	1	7	22	8	2020



Secondary distribution



Branch circuit

Fire Warning System

Sanitation Central II fire warning system is comprised of exit/emergency lights, and associated wiring. The system is at an age of approximately nine years. Fire warning systems have a useful life of up to 25 years. Replacement of the fire warning system is anticipated by 2020.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Emergency Lights	8	6	Unknown	8	2020
Exit Lights	6	6	Unknown	8	2020



Emergency/Exit light fixture

Security System

Sanitation Central II contains access management and video surveillance systems. The information is provided by the Security Operations Manager.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Access Management	1	7	Unknown	9	2021
Video Surveillance	1	6	Unknown	4	2016

Split Systems

Sanitation Central II comprises three split systems. Each split system comprises an internal forced air furnace and an external condensing unit. The useful life of split systems is up to 20 years. The City of Milwaukee anticipates their replacement by 2030. Interim partial replacements and repairs are funded by O + M.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Split System #1					
Furnace (MBH)	80	8	2	18	2030
Condenser (Tons)	3.5	8	2	18	2030
Split System #2					
Furnace (MBH)	80	8	2	18	2030
Condenser (Tons)	3.5	8	2	18	2030
Split System #3					
Furnace (MBH)	60	8	2	18	2030
Condenser (Tons)	3	8	2	18	2030



Interior forced air furnace

Asphalt Pavement

Sanitation Central II contains 5,040 SY of asphalt pavement. The pavement is in fair overall condition. The inspection revealed concentrations of failed pavement and alligator cracks. Interim asphalt pavement maintenance, including crack filling and partial replacements, is conducted in conjunction with seal coat applications every five years beginning by 2012.

Complete replacement of the asphalt pavement system (pavement and catch basin) is anticipated by 2017. The replacement includes funds for redesign and installation of the rain garden located adjacent to the north gate. Interrelated components, such as partial concrete replacement, should be conducted in conjunction with asphalt replacement.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Asphalt Pavement (SY)	5,040	5	Unknown	10	2017
Catch Basins (EA)	2	5	Unknown	10	2017



Cracked/failed pavement



Cracked/failed pavement



Cracked/failed pavement



Pavement/concrete threshold



Northwest pavement – relatively good condition



Rain garden



Settled catch basin

Bollards

Sanitation Central II contains vehicle impact bollards located between garage doors. The bollards are in satisfactory good with only minor rust observed. The useful life of bollards is up to 40 years. The city of Milwaukee should coordinate their replacement by 2017 in conjunction with asphalt pavement replacement.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Bollards	29	7	22	15	2027



Bollard with surface rust

Concrete, Partial Replacements

Sanitation Central II contains 19,200 SF of concrete flatwork throughout the property including sidewalks and driveways. The concrete is in fair condition overall. Cracked concrete driveways were observed during the inspection. Periodic replacement of up to 3,850 square feet of concrete is recommended in conjunction with asphalt pavement maintenance by 2012, 2017 and 2027.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Concrete Sidewalks	1,000	7	22	0	2012
Concrete Driveways	18,200	5	22	0	2012



Cracked driveway near rain garden



Cracked concrete at entrance drive



Cracked driveway near salt dome

Fence, Chain Link

Sanitation Central II perimeter is enclosed by a 730 linear foot chain link fence and gates. The fence is in fair overall condition at an unknown age. The useful life of chain link fences is up to 35 years. City of Milwaukee plans fence replacement 2027. The estimated cost includes funds for replacement of the gates and gate operators.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Chain Link Fence (LF)	680	7	Unknown	15	2027
Gate (50 LF Total)	2	7	Unknown	15	2027
Gate Operator	2	Unknown	Unknown	15	2027



Rusted/Misaligned chain link fence



Gates and operators

Light Poles and Fixtures

Sanitation Central II property includes two light poles and fixtures. These components are in fair condition with evidence of rust. The useful life of light poles and fixtures is up to 35 years. City of Milwaukee anticipates their replacement in conjunction with the asphalt pavement system by 2017.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Light Pole and Fixtures	2	5	22	5	2017



Light pole and fixture



Light pole and fixture w rusted base

Sanitation Central II

	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	CRDM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Sanitation Office Building																			
Building Envelope Components																			
Doors, Pedestrian	1	LS	\$20,000	\$20,000	35	12	\$28,000	2024	\$0										
Doors, Garage, Phased	4	EA	\$11,000	\$44,000	15	4	\$237,000	2016	\$0					\$49,000				\$54,000	
Gutters and Downspouts	470	LF	\$15.00	\$7,050	20	7	\$8,000	2019	\$0								\$8,000		
Roof, EPDM w Ballast, Office #1	4,612	SF	\$12.50	\$57,650	20	7	\$69,000	2019	\$0								\$69,000		
Roof, EPDM w Ballast, Office #3	2,210	SF	\$12.50	\$27,625	20	7	\$33,000	2019	\$0								\$33,000		
Roof, Metal, Office #2	4,264	SF	\$16.00	\$68,224	35	10	\$89,000	2022	\$0										
Roof, Metal, Office #4	1,329	SF	\$16.00	\$21,264	35	10	\$28,000	2022	\$0										
Roof, Metal, Office #5	929	SF	\$16.00	\$14,864	35	10	\$19,000	2022	\$0										
Roofs, Metal, Office #6-#9	776	SF	\$16.00	\$12,416	35	10	\$16,000	2022	\$0										
Siding, Concrete and Masonry	1	LS	\$36,000	\$36,000	15	7	\$43,000	2019	\$0								\$43,000		
Siding, Metal	2,950	SF	\$14.50	\$42,775	35	12	\$59,000	2024	\$0										
Windows, Replacement	1	LS	\$72,000	\$72,000	35	12	\$99,000	2024	\$0										
Building Interior Components																			
Offices, Equipment and Furniture, Replacement	1	LS	\$52,000	\$52,000	20	8	\$64,000	2020	\$0									\$64,000	
Offices, Interior Renovations	1	LS	\$84,000	\$84,000	20	8	\$104,000	2020	\$0									\$104,000	
Garage/Storage Rooms, Renovations	1	LS	\$20,000	\$20,000	35	13	\$28,000	2025	\$0										
Rest Rooms/Locker Rooms, Renovations	1	LS	\$35,000	\$35,000	25	8	\$43,000	2020	\$0									\$43,000	
Building Control Components																			
Building Automation System, Upgrade	1	LS	\$10,000	\$10,000	15	13	\$14,000	2025	\$0										
Electrical, Branch Circuits	1	LS	\$60,000	\$60,000	30	8	\$74,000	2020	\$0									\$74,000	
Electrical, Secondary Distribution	1	LS	\$132,000	\$132,000	40	18	\$213,000	2030	\$0										
Fire Warning System	1	LS	\$8,000	\$8,000	25	8	\$10,000	2020	\$0									\$10,000	
Security System, Access Management	1	LS	\$25,000	\$25,000	10	9	\$73,000	2021	\$0										\$32,000
Security System, Video Surveillance	1	LS	\$11,000	\$11,000	8	4	\$27,000	2016	\$0					\$12,000					
Split Systems	3	EA	\$9,000	\$27,000	20	18	\$44,000	2030	\$0										
Salt Dome																			
Doors, Garage, Phased	1	EA	\$11,000	\$11,000	15	4	\$59,000	2016	\$0					\$12,000				\$14,000	
Gutters and Downspouts	430	LF	\$15.00	\$6,450	20	7	\$8,000	2019	\$0								\$8,000		
Roof, EPDM	110	SF	\$20.25	\$2,228	20	7	\$3,000	2019	\$0								\$3,000		
Roofs, Metal, Salt Dome #1-#4	5,395	SF	\$16.00	\$86,320	35	10	\$113,000	2022	\$0										
Siding, Concrete and Masonry	1	LS	\$30,000	\$30,000	15	7	\$36,000	2019	\$0								\$36,000		
Site Features																			
Asphalt Pavement, Maintenance	5,040	SY	\$1.00	\$5,040	3-5	0	\$20,000	2012	\$5,000	\$5,000									
Asphalt Pavement System, Replacement	5,040	SY	\$37.00	\$186,480	20	5	\$213,000	2017	\$0						\$213,000				
Bollards	29	EA	\$1,250	\$36,250	40	15	\$54,000	2027	\$0										
Concrete, Partial Replacements	3,800	SF	\$8.00	\$30,400	20	0	\$110,000	2012	\$30,000	\$30,000					\$35,000				
Fence, Chain Link (incl. gates/operators)	730	LF	\$54.00	\$39,420	35	15	\$59,000	2027	\$0										
Fence, Operators, Proposed	4	EA	\$3,800.00	\$15,200	12	1	\$37,000	2013	\$0		\$16,000								
Light Poles and Fixtures	2	EA	\$8,500	\$17,000	35	5	\$19,000	2017	\$0						\$19,000				

							Total 20 Year Cost	\$2,153,000	Total Annual Cost	\$35,000	\$16,000	\$0	\$0	\$73,000	\$267,000	\$0	\$200,000	\$363,000	\$32,000
									Office Building CRV	\$1,324,975	\$1,361,000	\$1,397,000	\$1,435,000	\$1,474,000	\$1,514,000	\$1,555,000	\$1,597,000	\$1,640,000	\$1,684,000
									FCI	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.10	0.21	0.02
									Salt Dome CRV	\$492,450	\$506,000	\$519,000	\$533,000	\$548,000	\$563,000	\$578,000	\$593,000	\$609,000	\$626,000
									FCI	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.08	0.02	0.00

- Notes**
- 1) FY is Fiscal Year. FY is the calendar year.
 - 2) UL is Useful Life and RUL is Remaining Useful Life
 - 3) The annual building materials inflation rate estimate is estimated at 2.70%
 - 4) Current Replacement Value (CRV) is the 2012 replacement value w/ an annual inflation rate of 2.70%
 - 5) Facility Condition Index (FCI) is the CRDM Building divided by the CRV, or CRDM Building/CRV
 - 6) 2011 Energy Usage: BTUs/SF = 52,766; KW = 96,360; Therms = 6,122. Building Operations: 6am-3:30pm
 - 7) 2011 Water Usage: 116 Ccf

12/1/2011



FACILITIES
CONDITION
ASSESSMENT
PROGRAM

SOUTHWEST SHOP

Facilities Development | Management

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Introduction

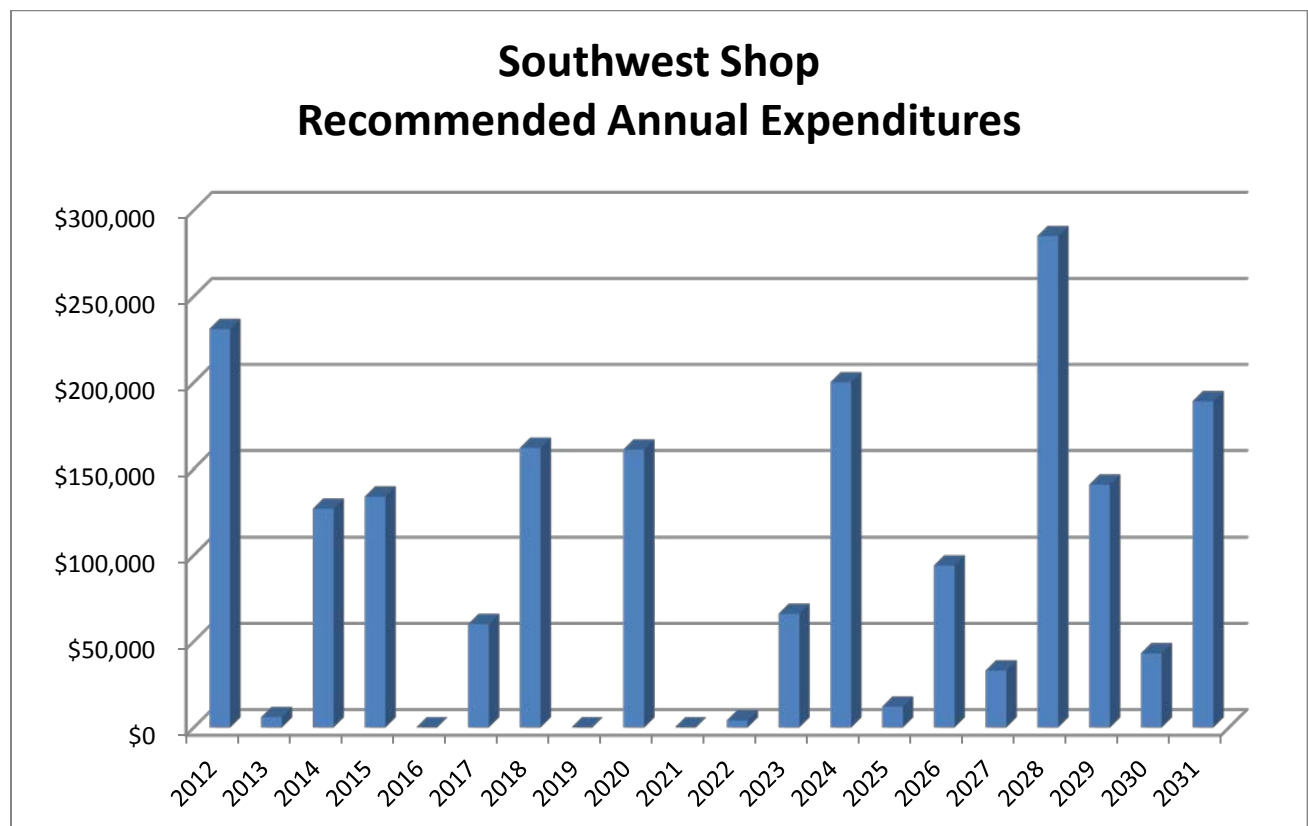
Executive Summary

The Southwest Shop is located at 2657 South 31st Street. The Southwest Shop is bounded by private property to the north, 31st Street to the east, 32nd Street to the west and Cleveland Avenue to the south. The structure was developed in 1914.

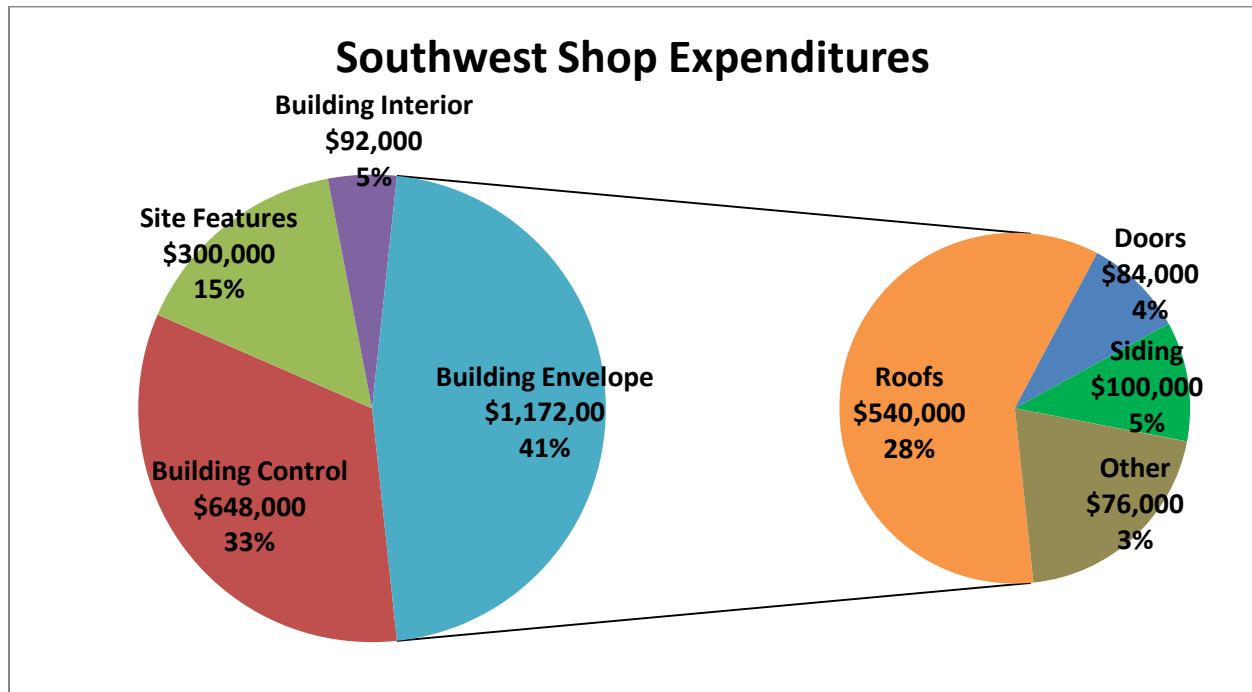
The building was originally used as a vehicle repair and body shop. Those operations were relocated in 2003. The Southwest Shop comprises approximately 21,275 square feet of mixed use floor space. The building was vacant for several years and is now used for storage and as the cart repair site for Sanitation. In 2011 there were major repairs to the roof system.

The Facility Condition Index rating is 0.12.

Annual expenditures for Southwest Shop vary from year- to -year as indicated from the graph below.



The most significant category of Southwest Shop expenditures pertains to building envelope repairs as shown below. Building envelope Roof repairs is the most significant single component.



Component Inventory

The property components at Southwest Shop are categorized as follows:

City of Milwaukee Capital Expenditures

Building Envelope Components

- Doors
 - Pedestrian
 - Garage
- Gutters and Downspouts
- Roofs, EPDM
- Siding, Concrete and Masonry
- Windows
 - Clerestory
 - Glass Block

Building Interior Components

- Offices

- Equipment and Furniture
- Interior Renovations
- Rest Rooms

Building Control Components

- Boilers, Building Heat
- Electrical
 - Branch Circuits
 - Secondary Distribution
- Fire Warning System
- Make-Up Air Units
- Security System, Access Management
- Unit Heaters

Site Features

- Asphalt Pavement
 - Maintenance
 - Replacement
- Concrete Driveway
- Fence, Chain Link (including gates)

O+M Responsibility

- Light Fixtures, Exterior Wall Mounted
- Exhaust Fans
- Water Heater
- Paint Finishes, Touch-Up
- Other Items Normally Funded by O+M

Long Lived

- Foundation
- Pipes, HVAC, Water and Waste
- Structural Frames

Others Responsibility

- Paint Spray Booth (Abandoned)

Doors, Pedestrian

Southwest Shop exterior includes four metal doors for access into the facility. The inspection revealed that the metal doors exhibited minor rust at the base.

The useful life of doors is up to 35 years. Based on condition, the City of Milwaukee plans replacement/refurbishment by 2025.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Metal	4	6	Unknown	13	2025

Doors, Garage

Southwest Shop includes three overhead garage doors. The garage doors appear in fair overall condition. With damage noted. The useful life of garage doors with limited use is up to 15 years. The city of Milwaukee anticipates replacement of the garage doors 2017 and again by 2031.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
14' x 14'	1	5	Unknown	5	2017
13' x 11'	2	5	Unknown	5	2017



Damaged garage door panel



Typical garage door

Gutters and Downspouts

Southwest Shop includes 130 linear feet of gutters and 40 linear feet of downspouts. The useful life of gutters and downspouts is 20 years. Replacement of gutters and downspouts should be conducted with roof replacements by 2014 and again by 2031.

Inventory (LF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Gutters	130	5	Unknown	2	2014
Downspouts	40	5	Unknown	2	2014



Gutter



Downspout

Roofs, EPDM

Southwest Shop contains four EPDM roofs. The roofs are inspected and maintained by a third party. The last inspection occurred in 2008. At that time, roof #2 was recommended for immediate replacement and the remaining roofs were recommended for replacement by 2014. This information is incorporated within the funding plan.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
#1	8,179	4	Unknown	2	2014
#2	11,318	3	Unknown	0	2012
#3	1,407	4	Unknown	2	2014
#4	292	4	Unknown	2	2014



Roof detail



Floating insulation underneath membrane



Damaged coping



Plant growth at drain



Standing water and detached membrane

Siding, Concrete and Masonry

Southwest Shop building exterior comprises 11,500 square feet of masonry and 1,600 square feet of concrete. The useful life for masonry/concrete repairs is 15 years. Based on condition, the City of Milwaukee anticipates the following work by 2018:

- Partial depth concrete repairs: 31 square feet
- Full depth concrete repairs: 31 square feet
- Crack fill w rout/sealant: 100 linear feet
- Masonry replacement: 350 square feet
- Masonry Repointing: 920 square feet
- Caulk windows/door/louvers
- Paint exposed metal surfaces

The actual scope of work will be verified by inspection. The above information is for budgeting purposes.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Masonry	11,500	6	Unknown	6	2018
Concrete	1,600	6	Unknown	6	2018
Caulk (LF)	1,340	6	Unknown	6	2018



Typical rusted lintel



Cracked/deteriorated concrete



Cracked mortar



Cracked concrete sill

Windows

Southwest Shop comprises 690 square feet of aluminum frame glass windows 1,560 square feet of glass block windows. The clerestory windows are cracked and thermally inefficient and require replacement. The glass block windows appear to have been recently replaced. Although, many individual blocks are damaged. The damaged blocks should be replaced from the operating budget.

Typical useful life expectancy for windows is up to 35 years. The City of Milwaukee anticipates clerestory/frame window replacement in 2012 and glass block window replacement by 2026.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Clerestory/Frame	630	6	Unknown	0	2012
Glass Block	1560	5	Unknown	14	2026



Cracked clerestory windows



Cracked glass block windows

Offices, Equipment and Furniture

Southwest Shop comprises an industrial interior with limited furnishings. The City of Milwaukee anticipates the next furniture and equipment replacement to occur in conjunction with the next interior renovation by 2020. Interim replacement of computers, printers, copiers should be funded from department O+M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Chairs	17	6	Unknown	8	2020
Desks	9	6	Unknown	8	2020
Printers/Copiers	2	N/A	Unknown	8	2020
Computers	2	N/A	Unknown	8	2020
Telephones	2	N/A	Unknown	8	2020
Refrigerator	1	N/A	Unknown	8	2020
Microwave	2	N/A	Unknown	8	2020
Lockers	2	N/A	Unknown	8	2020



Furnishings



Office

Interior Renovations

Southwest Shop comprises minimal interior finishes including floor coverings, paint finishes and light fixtures. The useful life of interior renovations is up to 20 years.

The inspection revealed that the interior spaces were in satisfactory condition. Paint finish deterioration and acoustic tile ceiling damage was observed. The City of Milwaukee plans for the next interior renovation of the offices, kitchens, and hallways by 2020. This project should be coordinated with rest room renovations, and equipment and furniture replacements.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Painted Walls/Ceiling (SF)	32,200	6	Unknown	8	2020
Ceramic Tile (SF)	240	6	Unknown	8	2020
Wood Floor (SF)	250	6	Unknown	8	2020
Light Fixtures	30	6	Unknown	8	2020

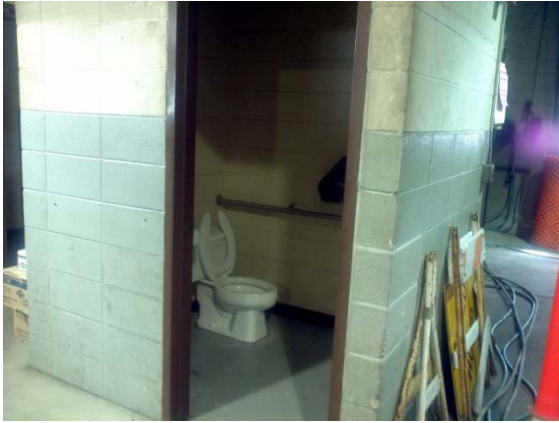


Interior w painted ceiling

Rest Rooms, Renovations

Southwest Shop comprises two rest rooms. The rest rooms are in satisfactory condition. Rest rooms have a useful life of up to 25 years. The City of Milwaukee plans rest room renovation in conjunction with other interior renovations by 2020.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Paint Walls/Ceilings (SF)	1,115	6	22	8	2020
Acoustic Tile Ceiling (SF)	344	6	22	8	2020
Ceramic Tile Floor (SF)	344	6	22	8	2020
Light Fixtures, Strip	4	6	22	8	2020
Light Fixtures, Recessed	5	6	22	8	2020
Toilet	5	6	22	8	2020
Urinal	1	6	22	8	2020
Sink	3	6	22	8	2020
Partition	4	6	22	8	2020
Showers	2	6	22	8	2020
Mirrors	2	6	22	8	2020



Small rest room



Large rest room

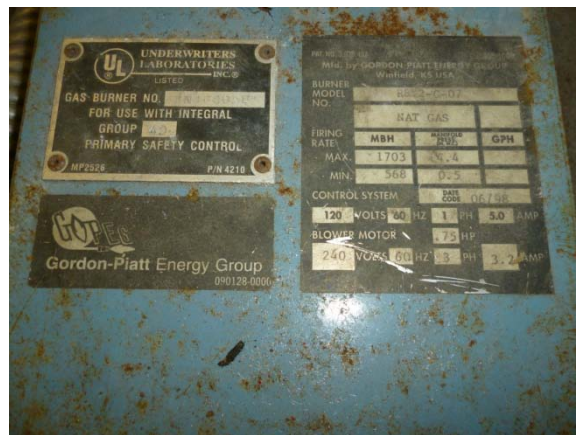
Boilers, Heat

Southwest Shop comprises two building heat boilers in the mechanical room. Each boiler has a capacity of 1,703 MBH. The boilers were replaced in 1998. The useful life of boilers in this capacity is up to 30 years. The City of Milwaukee anticipates their replacement by 2028.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Boilers (1,703MBH)	2	6	14	16	2028



Building heat boilers



Boiler casing w onset of rust

Electrical

Southwest Shop contains secondary distribution and branch circuit electrical equipment. The equipment is at an age of 23 years. Secondary distribution has a useful life of up to 40 years and is long-lived. Primary circuits have a useful life of up to 30 years. The City of Milwaukee conducted partial replacements to branch circuit components in 2004. Complete replacement of the branch circuits is anticipated by 2020 and complete replacement of the secondary distribution is anticipated by 2028.

Inventory (LS)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Secondary Distribution	1	7	23	16	2028
Circuit Branches	1	6	23	8	2020



Secondary distribution



Branch circuit

Fire Warning System

Southwest Shop fire warning system is comprised of exit lights, heat/smoke detectors, annunciators, pull boxes, a control panel, and associated wiring. The system is in good operational condition at an unknown age. Fire warning systems have a useful life of up to 25 years. Replacement of the fire warning system is anticipated by 2030.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Smoke/Heat Detectors	21	7	7	18	2030
Exit Lights	5	7	7	18	2030
Annunciators	11	7	7	18	2030
Pull Boxes	3	7	7	18	2030
Control Panel	1	7	7	18	2030

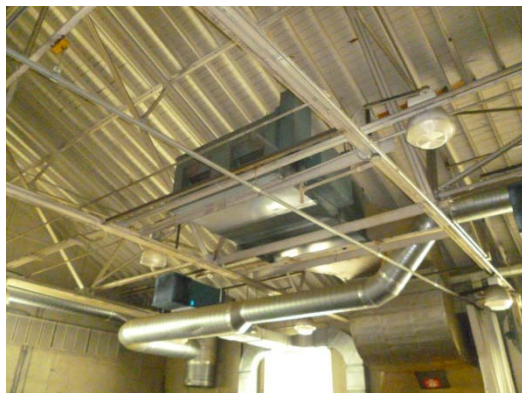


Control panel

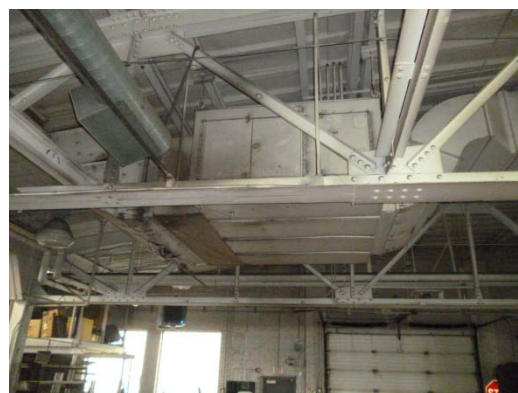
Make-Up Air Units

Southwest Shop contains two make-up units located in the second floor mezzanine and storage areas. Both units are at an age of 32 years. The useful life of an air handling unit is up to 35 years. The City of Milwaukee should anticipate replacement of the air handling units by 2015. Interim repairs and replacements should be funded from O+M.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
MUA #1 and MUA #2					
Furnace (MBH)	432	5	32	3	2015
Motor Size (HP)	2	5	32	3	2015
MUA #3					
Furnace (MBH)	337	5	32	3	2015
Motor Size (HP)	2	5	32	3	2015
MUA #4					
Furnace (MBH)	1,123	5	32	3	2015
Motor Size (HP)	5	5	32	3	2015



Make-Up air unit



Make-Up air unit

Security System

Southwest Shop contains a card access management security system. Information regarding the security system is derived from the Security Operations Manager.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Access Management	1	7		5	2017

Unit Heaters

Southwest Shop contains 13 unit heaters. The unit heaters are at an age of 32 years and have a useful life of 35 years. The City of Milwaukee anticipates their replacement by 2023. Interim repairs and replacements are funded by O + M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
90 MBH	3	6	32	11	2023
139 MBH	1	6	32	11	2023
140 MBH	2	6	32	11	2023
184 MBH	1	6	32	11	2023
198 MBH	3	6	32	11	2023
209 MBH	1	6	32	11	2023
210 MBH	2	6	32	11	2023



Unit heater



Unit heater

Asphalt Pavement

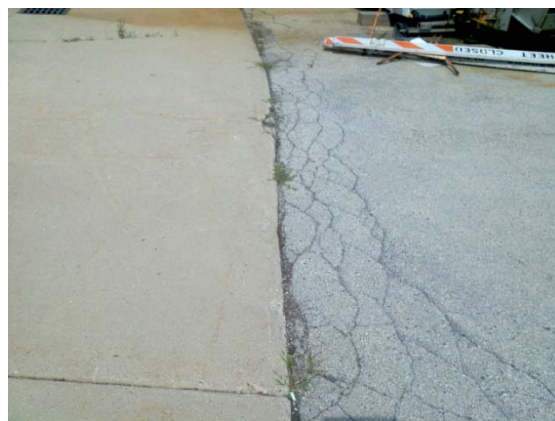
Southwest Shop contains 5,870 SY of asphalt pavement. The pavement is in satisfactory condition. The inspection revealed isolated locations of failed pavement and edge raveling. Interim asphalt pavement maintenance, including crack filling and partial replacements, is conducted in conjunction with seal coat applications every five years beginning by 2013.

Complete replacement of the asphalt pavement system (pavement and catch basin) is anticipated by 2024.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Asphalt Pavement (SY)	5,870	6	Unknown	12	2024
Catch Basins (EA)	1	6	Unknown	12	2024



Typical asphalt pavement



Cracked/failed pavement

Concrete Driveway

Southwest Shop includes a 3,300 SF concrete driveway. The concrete is in good condition overall. The useful life of concrete is up to 50 years. The City of Milwaukee should anticipate driveway replacement by 2031 and conduct interim partial replacements from the operating budget.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Concrete Driveway	3,300	7	Unknown	19	2031



Concrete driveway



Concrete driveway

Fence, Chain Link

Southwest Shop contains two asphalt pavement lots each enclosed by a separate chain link fence. The lot adjacent to the building comprises a chain link fence of 510 linear feet and the remote lot includes a chain link fence of 535 linear feet. The fences are in poor overall condition with multiple sections damaged/rusted sections. These locations can be repaired through O + M funds to increase the overall fence condition.

The useful life of chain link fences is up to 35 years. City of Milwaukee plans fence replacement 2027. The estimated cost includes funds for replacement of the gates and gate operators.

Inventory (LF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Chain Link Fence, Adjacent	510	5	Unknown	6	2018
Chain Link Fence, Remote	535	4	Unknown	6	2018
Gates	2	5	Unknown	6	2018



Rusted/damaged fence at adjacent lot



Damaged fence at remote lot



Damaged fence post at remote lot

Southwest Shop

	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	CRDM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Building Envelope Components																			
Doors, Pedestrian	1	LS	\$11,500	\$11,500	35	13	\$16,000	2025	\$0										
Doors, Garage	3	EA	\$12,000	\$36,000	15	5	\$101,000	2017	\$0						\$41,000				
Gutters and Downspouts	170	LF	\$15.00	\$2,550	20	2	\$7,000	2014	\$0			\$3,000							
Roof, EPDM, #1	8,179	SF	\$12.50	\$102,238	20	2	\$278,000	2014	\$0			\$108,000							
Roof, EPDM, #2	11,318	SF	\$12.50	\$141,475	20	0	\$364,000	2012	\$141,000	\$141,000									
Roof, EPDM, #3	1,407	SF	\$12.50	\$17,588	20	2	\$48,000	2014	\$0			\$19,000							
Roof, EPDM, #4	292	SF	\$12.50	\$3,650	35	2	\$15,000	2014	\$0			\$4,000							
Siding, Concrete and Masonry	1	LS	\$100,000	\$100,000	15	6	\$117,000	2018	\$0							\$117,000			
Windows, Clerestory	1	LS	\$90,000	\$90,000	35	0	\$90,000	2012	\$90,000	\$90,000									
Windows, Glass Block	1	LS	\$94,000	\$94,000	35	14	\$136,000	2026	\$0										
Building Interior Components																			
Offices, Equipment and Furniture, Replacement	1	LS	\$17,000	\$17,000	20	8	\$21,000	2020	\$0										\$21,000
Offices, Interior Renovations	1	LS	\$45,000	\$45,000	20	8	\$56,000	2020	\$0										\$56,000
Rest Rooms, Renovations	1	LS	\$30,000	\$30,000	25	8	\$37,000	2020	\$0										\$37,000
Building Control Components																			
Boilers, Building Heat	2	EA	\$75,000	\$150,000	30	16	\$230,000	2028	\$0										
Electrical, Branch Circuits	1	LS	\$69,000	\$69,000	30	8	\$85,000	2020	\$0										\$85,000
Electrical, Secondary Distribution	1	LS	\$129,000	\$129,000	40	16	\$198,000	2028	\$0										
Fire Warning System	1	LS	\$43,000	\$43,000	25	18	\$69,000	2030	\$0										
Make-Up Air Units	1	LS	\$134,000	\$134,000	35	3	\$145,000	2015	\$0				\$145,000						
Security System, Access Management	1	LS	\$21,000	\$21,000	35	3	\$23,000	2015	\$0				\$23,000						
Unit Heaters	1	LS	\$66,000	\$66,000	35	11	\$88,000	2023	\$0										
Site Features																			
Asphalt Pavement, Maintenance	5,870	SY	\$1.00	\$5,870	3-5	1	\$22,000	2013	\$0		\$6,000					\$7,000			
Asphalt Pavement System, Replacement	5,870	SY	\$34.00	\$199,580	20	12	\$275,000	2024	\$0										
Concrete Driveway	3,300	SF	\$8.00	\$26,400	50	19	\$44,000	2031	\$0										
Fence, Chain Link (incl. gates)	1,045	LF	\$54.00	\$56,430	30	6	\$66,000	2018	\$0							\$66,000			

Total 20 Year Cost							\$2,531,000	Total Annual Cost		\$231,000	\$6,000	\$134,000	\$168,000	\$0	\$41,000	\$190,000	\$0	\$199,000	\$0
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Notes	CRV	\$1,874,411	\$1,925,000	\$1,977,000	\$2,030,000	\$2,085,000	\$2,141,000	\$2,199,000	\$2,259,000	\$2,320,000	\$2,382,000
	FCI	0.12	0.00	0.07	0.08	0.00	0.02	0.05	0.00	0.09	0.00

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- 2) UL is Useful Life and RUL is Remaining Useful Life
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- 4) Current Replacement Value (CRV) is the 2012 estimated replacement value for the buildings w/ an annual inflation rate of 2.70%
- 5) Facility Condition Index (FCI) is the CRDM Building divided by the CRV, or CRDM Building/CRV
- 6) 2011 Energy Usage: BTUs/SF = 7,323; KW = 55,480; Therms = 13,625. Building Operations: 6am-3:30pm
- 7) 2011 Water Usage: 33 Ccf

Southwest Shop

	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Building Envelope Components																		
Doors, Pedestrian	1	LS	\$11,500	\$11,500	35	13	\$16,000	2025				\$16,000						
Doors, Garage	3	EA	\$12,000	\$36,000	15	5	\$101,000	2017										\$60,000
Gutters and Downspouts	170	LF	\$15.00	\$2,550	20	2	\$7,000	2014										\$4,000
Roof, EPDM, #1	8,179	SF	\$12.50	\$102,238	20	2	\$278,000	2014										\$170,000
Roof, EPDM, #2	11,318	SF	\$12.50	\$141,475	20	0	\$364,000	2012								\$223,000		
Roof, EPDM, #3	1,407	SF	\$12.50	\$17,588	20	2	\$48,000	2014										\$29,000
Roof, EPDM, #4	292	SF	\$12.50	\$3,650	35	2	\$15,000	2014	\$5,000									\$6,000
Siding, Concrete and Masonry	1	LS	\$100,000	\$100,000	15	6	\$117,000	2018										
Windows, Clerestory	1	LS	\$90,000	\$90,000	35	0	\$90,000	2012										
Windows, Glass Block	1	LS	\$94,000	\$94,000	35	14	\$136,000	2026					\$136,000					
Building Interior Components																		
Offices, Equipment and Furniture, Replacement	1	LS	\$17,000	\$17,000	20	8	\$21,000	2020										
Offices, Interior Renovations	1	LS	\$45,000	\$45,000	20	8	\$56,000	2020										
Rest Rooms, Renovations	1	LS	\$30,000	\$30,000	25	8	\$37,000	2020										
Building Control Components																		
Boilers, Building Heat	2	EA	\$75,000	\$150,000	30	16	\$230,000	2028							\$230,000			
Electrical, Branch Circuits	1	LS	\$69,000	\$69,000	30	8	\$85,000	2020										
Electrical, Secondary Distribution	1	LS	\$129,000	\$129,000	40	16	\$198,000	2028							\$198,000			
Fire Warning System	1	LS	\$43,000	\$43,000	25	18	\$69,000	2030									\$69,000	
Make-Up Air Units	1	LS	\$134,000	\$134,000	35	3	\$145,000	2015										
Security System, Access Management	1	LS	\$21,000	\$21,000	35	3	\$23,000	2015										
Unit Heaters	1	LS	\$66,000	\$66,000	35	11	\$88,000	2023		\$88,000								
Site Features																		
Asphalt Pavement, Maintenance	5,870	SY	\$1.00	\$5,870	3-5	1	\$22,000	2013							\$9,000			
Asphalt Pavement System, Replacement	5,870	SY	\$34.00	\$199,580	20	12	\$275,000	2024			\$275,000							
Concrete Driveway	3,300	SF	\$8.00	\$26,400	50	19	\$44,000	2031										\$44,000
Fence, Chain Link (incl. gates)	1,045	LF	\$54.00	\$56,430	30	6	\$66,000	2018										

Total 20 Year Cost \$2,531,000 **Total Annu** \$5,000 \$88,000 \$275,000 \$16,000 \$136,000 \$0 \$437,000 \$223,000 \$69,000 \$313,000

Notes
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 7) 2011 Water Usage: 33 Ccf

12/1/2011



FACILITIES
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TOW LOT

Facilities Development | Management

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Introduction

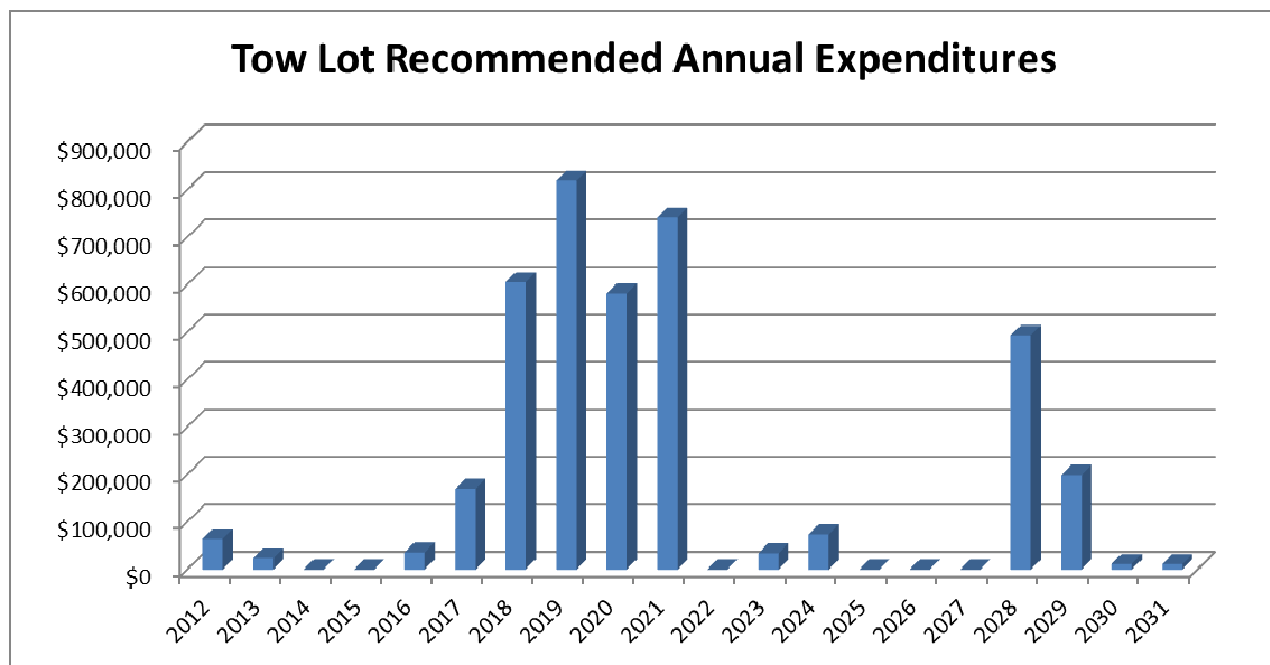
Executive Summary

The Tow Lot Office is located at 3811 West Lincoln Avenue. The Tow Lot Office is bounded by Lincoln Avenue to the north, Lincoln Avenue Distribution Building to the east, Lincoln Avenue Garage to the west and Sanitation’s Self –Help Yard to the south. The structure was developed in 1965.

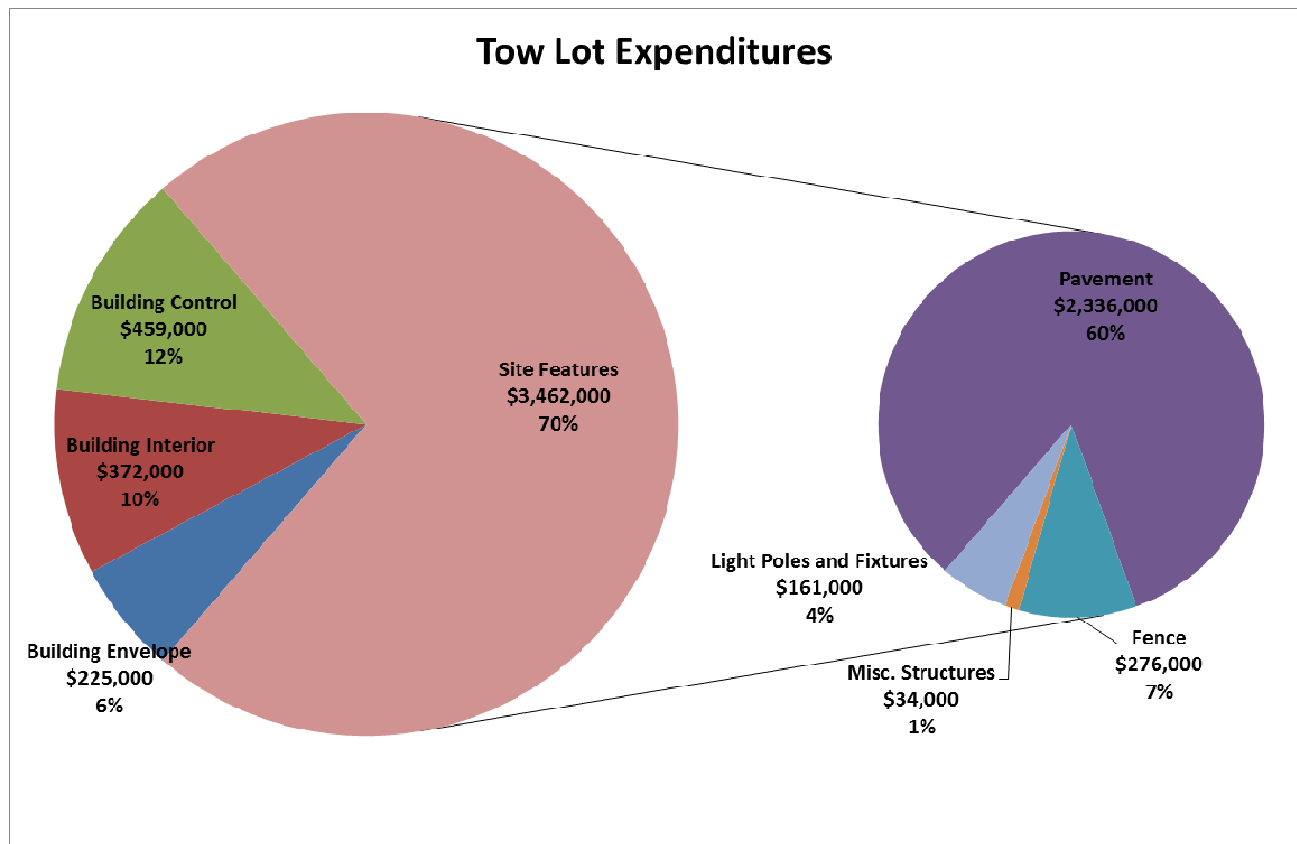
The building was originally the Engineers Testing Laboratory. It was remodeled in 1998 when DPW Parking took over the building for use as the Tow Lot Office. The Tow Lot Office comprises approximately 9,440 square feet of mixed use floor space. The building was renovated in 2010 adding another 600 square feet of offices to the north elevation.

The Facility Condition Index rating of 0.00.

Annual expenditures for Tow Lot vary from year– to –year as indicated from the graph below.



The most significant category of expenditures pertains to site features as shown below. Pavement is the most significant single component.



Component Inventory

The property components at Tow Lot are categorized as follows:

City of Milwaukee Capital Expenditures

Building Envelope Components

- Doors
 - Pedestrian
 - Garage
- Light Fixtures
- Roofs, EPDM
- Siding, Metal
- Windows

Building Interior Components

- Kitchen, Renovation
- Offices
 - Equipment and Furniture
 - Offices, Lobby and Hallways
- Rest Rooms

Building Control Components

- AHUs
 - Garage Loft
 - South Offices
- Building Automation System
- Electrical
 - Branch Circuits
 - Secondary Distribution
- Fire Warning System
- Security System

Site Features

- Asphalt Pavement
 - Maintenance
 - Replacement
- Canopy, Pedestrian
- Carport
- Concrete
- Fence, Chain Link (including gates and operators)
- Light Poles and Fixtures

O+M Responsibility

- Light Fixtures, Exterior Wall Mounted
- Exhaust Fans
- Water Heater
- Unit Heaters
- Other Items Normally Funded by O+M

Long Lived

- Foundation
- Pipes, HVAC, Water and Waste
- Structural Frame
- Windows
 - Glass Black
 - Mirrored

Others Responsibility

- None

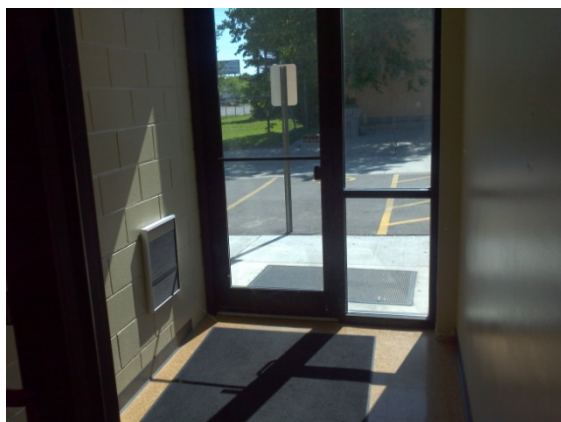
Doors, Pedestrian

Tow Lot Office exterior contains two pedestrian doors. Three doors are metal with metal frames and one door is glass with an aluminum frame. The age of the metal doors is 15 years. The glass door is at an age of two year.

The metal doors and frame exhibited the onset of rust at the lower third exterior surface. Paint finishes should be conducted by O+M.

The useful life of both metal and glass entrance doors to 35 years with proper maintenance. The City of Milwaukee plans complete replacement of the doors and frames by 2031.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Metal	3	6	19	15	2031
Glass	1	9	19	2	2031



Glass entrance door

Doors, Garage

Tow Lot Office exterior contains two overhead garage doors and operators. The garage doors measure 12' x 12' each. The age of the garage doors is unknown.

Garage doors have a useful life of up to 15 years with proper maintenance. The City of Milwaukee plans complete replacement of the garage doors by 2019.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
12' x 12'	2	5	Unknown	7	2019



Garage door



Garage overview

Light Fixtures

Tow Lot building exterior contains 23 exterior wall mounted light fixtures. The light fixtures are metal glass. The age of the light fixtures at the north elevation are one year and the remaining light fixtures are at an unknown age.

Light fixtures have a useful life of up to 20 years with proper maintenance. The City of Milwaukee plans complete replacement of the light fixtures by 2019. Complete replacement is planned to maintain light fixture unity.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Light Fixtures	23	6	Varies	7	2019



Wall mounted light fixture

Roofs, EPDM

Tow Lot roof is comprised of three sections. Two sections are EPDM and are described in fair condition by the third party roof inspection/repair company. City of Milwaukee anticipates their replacement by 2019.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
#1, EPDM	5,297	5	Unknown	7	2019
#2, EPDM	4,750	5	Unknown	7	2019



Roof 1



Roof 1 w/ membrane bulges



Roof 2



Roof 2 w/ vegetation growth

Siding, Metal

Tow Lot building exterior contains 2,650 square feet of metal siding and 1,450 square feet of metal fascia.

Damaged siding was noted adjacent to the garage door openings. At the rear elevation of the building, the fascia was damaged.

Metal siding has a useful life of up to 35 years with proper maintenance. The City of Milwaukee plans complete replacement of the siding by 2019.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Siding	2,650	5	Unknown	7	2019
Fascia	1,450	5	Unknown	7	2019



Damaged metal siding



Damaged fascia at rear elevation

Windows, Replacement

Tow Lot building exterior contains 1,300 square feet of windows. This quantity includes glass block, mirrored, and single pane windows. The glass block windows vary in age. The remaining windows are at an unknown age.

The single pane windows are located at the east, south, and west elevation. They exhibit repairs at the frames. Furthermore, single pane windows provide less efficient thermal benefits than double pane windows.

Windows have a useful life of up to 35 years with proper maintenance. Based on the condition of the single pane panes, City of Milwaukee recommends their replacement by 2019 in conjunction with siding replacement. The glass block and mirrored windows are considered long-lived.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Glass Block	750	7	Unknown	N/A	N/A
Mirrored	100	7	Unknown	N/A	N/A
Single Pane	450	4	Unknown	7	2019



Single pane windows



Mirrored windows

Kitchen, Renovation

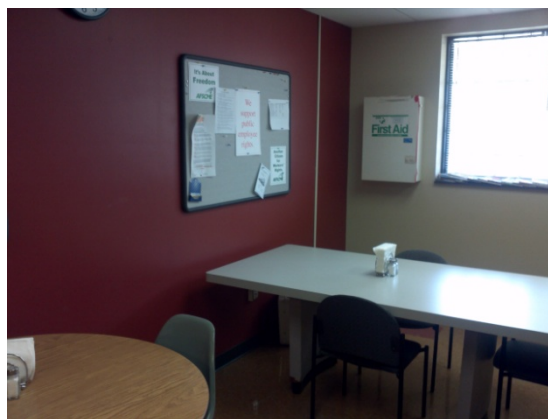
Tow Lot kitchen contains interior finishes including vinyl tile, paint, acoustic tile ceilings, counters, cabinets, and appliances. Additionally, the kitchen includes tables and chairs. The kitchen was renovated in 2010

Kitchen renovations have a useful life of up to 20 years. City of Milwaukee recommends their replacement by 2028 in conjunction with other interior renovations.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Vinyl Tile	250	8	1	16	2028
Paint Finishes	250	8	1	16	2028
Ceiling Tile	250	8	1	16	2028
Counters (LF)	10	8	1	16	2028
Cabinets (LF)	10	8	1	16	2028
Microwave	2	7	1	16	2028
Refrigerator	1	7	1	16	2028
Range	1	7	1	16	2028



Kitchen interior



Kitchen interior

Offices, Equipment and Furniture

Tow Lot comprises offices on the first floor. City of Milwaukee anticipates the next furniture and equipment replacement to occur in conjunction with the next interior renovation by 2020. Interim replacement of computers, printers, copiers should be funded from department O+M funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Cubicles	17	7	9	8	2020
Chairs	94	7	9	8	2020
Desks	66	7	9	8	2020
File Cabinets	18	7	9	8	2020
Tables	14	7	9	8	2020
Televisions	4	6	9	8	2020
Printers/Copiers	14	N/A	Unknown	8	2020
Computers	27	N/A	Unknown	Varies	2020
Telephones	33	N/A	Unknown	10	2020



Typical equipment furniture in offices



Tire shop office

Offices, Equipment and Furniture

Tow Lot building offices comprise cubicles/desks, chairs, computers, copiers, telephones, counters, and cabinets. They are at an age of one year.

Interior office equipment and furniture has a useful life of up to 20 years. Interim computer/printer/copier replacements should be funded from the Tow Lot operating budget. Comprehensive renovation of the office interior is anticipated by 2028.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Cubicles/Desks	20	8	1	16	2028
Chairs	20	8	1	16	2028
Computers	20	8	1	16	2028
Copiers	3	8	1	16	2028
Telephones	20	8	1	16	2028
Counters (LF)	10	8	1	16	2028
Cabinets (LF)	10	8	1	16	2028



Typical equipment furniture in offices



Cubicle



Office furniture



Copiers

Offices, Lobby, and Hallway Renovation

Tow Lot building offices interiors include carpet, vinyl tile, paint finishes, acoustic tile ceiling, and light fixtures. The interior finishes are at an age of one year.

The inspection noted a stained ceiling tiles in the office area. These tiles should be replaced from operating budget funds. Begrimed wall surfaces were also observed.

Interior finishes have a useful life of up to 20 years. Interim repairs including partial carpet replacements, acoustic tile replacements, and touch-up painting should be funded from operating budget funds. Comprehensive renovation of the office interior is anticipated by 2028.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Acoustic Tile Ceiling	5,225	7	1	16	2028
Paint Finishes	10,575	7	1	16	2028
Carpet (SY)	350	7	1	16	2028
Vinyl Tile (SF)	1,375	8	1	16	2028
Light Fixtures, Fluorescent	50	8	1	16	2028



Typical office interior finishes including carpet, paint, and ceiling tile



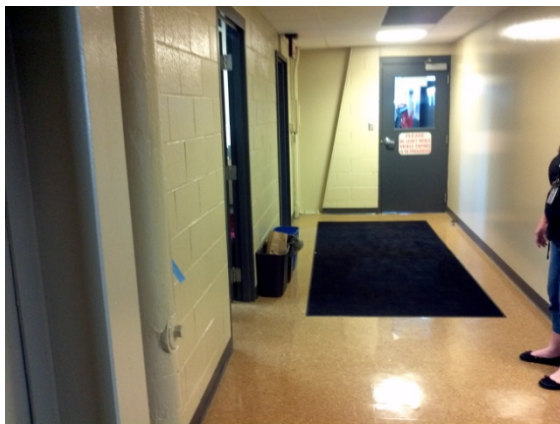
Water stained acoustic tile ceiling



Begrimed wall surface



Typical lobby interior finishes including vinyl tile, paint, and ceiling tile



Hallway finishes include vinyl tile, paint and ceiling tile

AHU, Garage Loft

Tow Lot includes an air handling unit within the loft accessible from the garage. The AHU contains a 250 MBH furnace, a 12.5 ton condenser unit, and a variable frequency drive (VFD). This equipment is 13 years of age. It is reported in good operational condition.

The air handling units and components have a useful life of up to 20 years. City of Milwaukee anticipates replacement by 2019 in conjunction with siding replacement. The glass block and mirrored windows are considered long-lived.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Furnace (MBH)	250	6	13	5	2017
Condenser (tons)	12.5	6	13	5	2017
VFD (HP)	10	6	13	5	2017



Air handling unit and variable frequency drive at the garage loft

AHU, South Offices

Tow Lot includes a rooftop air handling unit that serves the south offices. The AHU contains a 40-MBH furnace and a 2-ton condenser unit. This equipment is at an age of one year. It is reported in good operational condition.

The air handling units and components have a useful life of up to 20 years. City of Milwaukee anticipates replacement by 2030.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Furnace (MBH)	40	9	1	18	2030
Condenser (tons)	2	9	1	18	2030



Air handling unit at south offices

Building Automation System

The mechanical system controls at Tow Lot are integrated into the City of Milwaukee Building Management System. The hardware and software components are planned for upgrades by 2015 and again by 2030.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
BAS, Upgrades	1	7	4	11	2015

Electrical

Tow Lot contains secondary distribution and branch circuit electrical equipment. The equipment is at an age of 15 years. The exception is that the Main Service and Main Distribution Panel at Square D of the Secondary Distribution system were replaced in 2008. The Secondary distribution has a useful life of up to 40 years. Primary circuits have a useful life of up to 30 years, The City of Milwaukee plans replacement of the electrical services in conjunction with interior renovations by 2028.

Inventory (LS)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Secondary Distribution	1	6	15	16	2028
Circuit Branches	1	6	15	16	2028



Secondary distribution



Typical branch circuit

Fire Warning System

Tow Lot fire warning system comprises smoke/heat detectors, emergency/exit lights, and a control panel. This equipment is at an age of one year. It is reported in good operational condition.

A fire warning system has a useful life of up to 25 years. City of Milwaukee anticipates replacement by 2028 in conjunction with interior renovations.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Control Panel	1	8	1	16	2028
Heat/Smoke Detectors	4	8	1	16	2028
Emergency/Exit Lights	15	8	1	16	2028

Security System

Tow Lot fire security comprises cameras and a recording station. This equipment is at an age of approximately seven years. It is reported in good operational condition.

A security system has a useful life of up to 12 years. City of Milwaukee anticipates security system replacement by replacement by 2017.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Cameras	32	6	7	5	2017
Recording Station	1	6	7	5	2017

Asphalt Pavement

The Tow Lot property comprises 64,000 square yards of asphalt pavement. The pavement is primarily within the rear vehicle staging lot. However, the front entrances and parking stalls contain asphalt pavement. The pavement is in fair condition, overall. The inspection revealed locations of failed pavement including transverse cracks, alligator cracks, potholes, and settlement. Evidence of prior pavement patches was noted.

Asphalt pavement maintenance in the form of seal coat, crack repairs and partial replacements is recommended every 3-5 years to address defective pavement. Regular maintenance maximizes the useful life of the pavement, thereby deferring capital expenditures to a later date.

Asphalt pavement has a useful life of 20 years. Based on the quantity and varied conditions of the pavement, the City of Milwaukee anticipates phased replacement from 2018 to 2021.

Inventory		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Asphalt Pavement (SY)	64,000	5	Varies	0	2018



Typical cracked pavement at west lot



Failed pavement



Prior patch w/ adjacent failed pavement



Transverse crack at eastern edge of Tow Lot



Settled storm water inlet and failed pavement



Settled asphalt pavement adjacent to catch basin



Settled storm water inlet and failed pavement



Settled asphalt pavement adjacent to catch basin

Canopy, Pedestrian

Tow Lot includes an enclosed structure pedestrian canopy located at the east elevation. The canopy comprises 340 square feet and is in good condition at an unknown age. The inspection revealed that a mechanics lamp is used as a light fixture.

The useful life of an exterior canopy is 20 years. City of Milwaukee anticipates pedestrian canopy replacement by 2024.

Inventory (SF)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Pedestrian Canopy	340	7	Unknown	12	2024



Pedestrian canopy



Mechanics lamp used as light fixture

Carport

Tow Lot includes a carport located at the west elevation of the building. The carport comprises 600 square feet, 12 light fixtures, and a fabric covering. It is in fair condition at an unknown age. The inspection revealed rusted base plates, missing base plate fasteners, and damaged columns.

The useful life of a carport is 20 years. City of Milwaukee anticipates carport replacement by 2019.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Carport	600	5	Unknown	7	2019



Carport



Rusted base plate with missing fasteners

Concrete, Partial Replacements

Tow Lot includes 29,200 square feet of concrete pavement located around/near the office building. The concrete is in fair condition overall. Cracked and deteriorated concrete was observed. Periodic replacement of up to 3,000 square feet of concrete is recommended every five years beginning by 2013.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Concrete	29,200	5	Unknown	7	2019



Concrete location



Damaged concrete with asphalt patches



Damaged concrete with asphalt patches



Partial concrete replacement

Fence, Chain Link

Tow Lot perimeter includes a 4,950 linear foot chain link fence with barbed wire that is approximately six feet high. The fence is in satisfactory overall condition at an unknown age. Tow Lot management reports that an additional six-foot high fence is scheduled for installation atop the existing fence. The result is a 12 foot high fence. This augmentation is planned to occur in phases on an annual basis as funds are available.

The useful life of chain link fences is up to 35 years. City of Milwaukee plans phased fence replacement in conjunction with phased asphalt pavement replacement from 2018 through 2021 due to the interrelated nature of these components.

Tow Lot also includes five gates and operators. These components are included in the phased replacement cost. Interim replacements should be funded from the operating budget funds.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Chain Link Fence (LF)	4,950	6	Unknown	6-9	2018
Gates	5	6	Unknown	6-9	2018
Gate Operator	5	6	Unknown	6-9	2018



Damaged barbed wire



Gate and operator

Light Poles and Fixtures

Tow Lot contains 23 light poles and fixtures to laminate the property grounds. The light poles and fixtures are in good overall condition at an unknown age. The preliminary suggestion is to coordinate their replacement with the asphalt pavement repaving and conduct this capital expenditure by 2021.

Inventory (EA)		Condition Rating	Age (Years)	RUL (Years)	1st Year of Capital Expenditure
Light Pole and Fixtures	23	7	Unknown	9	2021

Tow Lot	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	CRDM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Building Envelope Components																			
Doors, Pedestrian	1	LS	\$11,000	\$11,000	35	19	\$18,000	2031	\$0										
Doors, Garage	2	EA	\$7,000	\$14,000	15	7	\$17,000	2019	\$0								\$17,000		
Light Fixtures	23	EA	\$300	\$6,900	20	7	\$8,000	2019	\$0								\$8,000		
Roof 1, EPDM	5,297	SF	\$12.50	\$66,213	20	7	\$80,000	2019	\$0								\$80,000		
Roof 2, EPDM	4,750	SF	\$12.50	\$59,375	20	7	\$72,000	2019	\$0								\$72,000		
Siding, Metal (Including fascia)	4,100	SF	\$10.50	\$43,050	35	7	\$52,000	2019	\$0								\$52,000		
Windows, Single Pane	450	SF	\$55.00	\$24,750	35	7	\$30,000	2019	\$0								\$30,000		
Building Interior Components																			
Kitchen, Renovation	1	LS	\$16,000	\$16,000	20	16	\$25,000	2028	\$0										
Offices, Equipment and Furniture, Replacement	1	LS	\$220,000	\$220,000	20	16	\$337,000	2028	\$0										
Offices, Lobby, and Hallways, Renovations	1	LS	\$100,000	\$100,000	20	16	\$153,000	2028	\$0										
Rest Rooms, Renovations	1	LS	\$36,000	\$36,000	25	4	\$40,000	2016	\$0					\$40,000					
Building Control Components																			
AHU, Garage Loft	1	LS	\$35,000	\$35,000	20	5	\$40,000	2017	\$0						\$40,000				
AHU, South Offices	1	EA	\$11,000	\$11,000	20	18	\$18,000	2030	\$0										
Building Automation System, Upgrades	1	EA	\$10,000	\$10,000	15	11	\$13,000	2023	\$0										
Electrical, Branch Circuits	1	LS	\$62,000	\$62,000	30	16	\$95,000	2028	\$0										
Electrical, Secondary Distribution, Partial	1	LS	\$55,000	\$55,000	40	16	\$84,000	2028	\$0										
Fire Warning System	1	EA	\$16,000	\$16,000	25	16	\$25,000	2028	\$0										
Security System	1	EA	\$135,000	\$135,000	12	5	\$366,000	2017	\$0						\$154,000				
Site Features																			
Asphalt Pavement, Maintenance	64,000	SY	\$1.00	\$64,000	3-5	0	\$253,000	2012	\$64,000	\$64,000									
Asphalt Pavement, Phased Replacement	16,000	SY	\$32.00	\$512,000	20	6	\$2,503,000	2018	\$0							\$601,000	\$617,000	\$634,000	\$651,000
Canopy, Pedestrian	340	SF	\$30.00	\$10,200	20	12	\$14,000	2024	\$0										
Carpport	600	EA	\$40.00	\$24,000	20	7	\$24,000	2019	\$0								\$24,000		
Concrete, Partial Replacements	3,000	SF	\$8.00	\$24,000	50	1	\$122,000	2013	\$0		\$25,000				\$28,000				
Fence, Chain Link, Phased Replacements	1,250	LF	\$55.00	\$68,750	30	6	\$336,000	2018	\$0						\$81,000	\$83,000	\$85,000	\$87,000	
Light Poles and Fixtures	23	EA	\$7,000	\$161,000	35	9	\$205,000	2021	\$0										\$205,000

Total 20 Year Cost							\$4,930,000	Total Annual Cost		\$64,000	\$25,000	\$0	\$0	\$40,000	\$194,000	\$710,000	\$983,000	\$719,000	\$943,000
								CRV	\$924,869	\$950,000	\$975,000	\$1,002,000	\$1,029,000	\$1,057,000	\$1,085,000	\$1,114,000	\$1,145,000	\$1,145,000	\$1,175,000
								FCI	0.00	0.00	0.00	0.00	0.04	0.18	0.00	0.23	0.00	0.00	0.00

- Notes**
- 1) FY is Fiscal Year. FY is the calendar year.
 - 2) UL is Useful Life and RUL is Remaining Useful Life
 - 3) The annual building materials inflation rate estimate is estimated at 2.70%
 - 4) Current Replacement Value (CRV) is the 2012 estimated replacement value for the buildings w/ an annual inflation rate of 2.70%
 - 5) Facility Condition Index (FCI) is the CRDM Building divided by the CRV, or CRDM Building/CRV
 - 6) 2011 Energy Usage: BTUs/SF = 172,264; KW = 184,400; Therms = 9,970. Building Operations:24hrs

Tow Lot	Quantity	Units	2012 Unit Cost	2012 Capital Cost	UL	RUL	20 Year Total Cost	First Capital Expense	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Building Envelope Components																		
Doors, Pedestrian	1	LS	\$11,000	\$11,000	35	19	\$18,000	2031										\$18,000
Doors, Garage	2	EA	\$7,000	\$14,000	15	7	\$17,000	2019										
Light Fixtures	23	EA	\$300	\$6,900	20	7	\$8,000	2019										
Roof 1, EPDM	5,297	SF	\$12.50	\$66,213	20	7	\$80,000	2019										
Roof 2, EPDM	4,750	SF	\$12.50	\$59,375	20	7	\$72,000	2019										
Siding, Metal (Including fascia)	4,100	SF	\$10.50	\$43,050	35	7	\$52,000	2019										
Windows, Single Pane	450	SF	\$55.00	\$24,750	35	7	\$30,000	2019										
Building Interior Components																		
Kitchen, Renovation	1	LS	\$16,000	\$16,000	20	16	\$25,000	2028							\$25,000			
Offices, Equipment and Furniture, Replacement	1	LS	\$220,000	\$220,000	20	16	\$337,000	2028							\$337,000			
Offices, Lobby, and Hallways, Renovations	1	LS	\$100,000	\$100,000	20	16	\$153,000	2028							\$153,000			
Rest Rooms, Renovations	1	LS	\$36,000	\$36,000	25	4	\$40,000	2016										
Building Control Components																		
AHU, Garage Loft	1	LS	\$35,000	\$35,000	20	5	\$40,000	2017										
AHU, South Offices	1	EA	\$11,000	\$11,000	20	18	\$18,000	2030									\$18,000	
Building Automation System, Upgrades	1	EA	\$10,000	\$10,000	15	11	\$13,000	2023		\$13,000								
Electrical, Branch Circuits	1	LS	\$62,000	\$62,000	30	16	\$95,000	2028							\$95,000			
Electrical, Secondary Distribution, Partial	1	LS	\$55,000	\$55,000	40	16	\$84,000	2028							\$84,000			
Fire Warning System	1	EA	\$16,000	\$16,000	25	16	\$25,000	2028							\$25,000			
Security System	1	EA	\$135,000	\$135,000	12	5	\$366,000	2017								\$212,000		
Site Features																		
Asphalt Pavement, Maintenance	64,000	SY	\$1.00	\$64,000	3-5	0	\$253,000	2012			\$88,000					\$101,000		
Asphalt Pavement, Phased Replacement	16,000	SY	\$32.00	\$512,000	20	6	\$2,503,000	2018										
Canopy, Pedestrian	340	SF	\$30.00	\$10,200	20	12	\$14,000	2024			\$14,000							
Carpport	600	EA	\$40.00	\$24,000	20	7	\$24,000	2019										
Concrete, Partial Replacements	3,000	SF	\$8.00	\$24,000	50	1	\$122,000	2013		\$32,000				\$37,000				
Fence, Chain Link, Phased Replacements	1,250	LF	\$55.00	\$68,750	30	6	\$336,000	2018										
Light Poles and Fixtures	23	EA	\$7,000	\$161,000	35	9	\$205,000	2021										

Total 20 Year Cost							\$4,930,000	Total Annu	\$0	\$45,000	\$102,000	\$0	\$0	\$0	\$756,000	\$313,000	\$18,000	\$18,000
									\$1,207,000	\$1,240,000	\$1,273,000	\$1,308,000	\$1,343,000	\$1,379,000	\$1,416,000	\$1,455,000	\$1,494,000	\$1,534,000
									0.00	0.01	0.00	0.00	0.00	0.00	0.51	0.15	0.01	0.01

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Safety Academy Main Building and Site Features		Quantity	Units	2012 Unit Cost	2012 Replacement Cost	UL	RUL	First Capital Expense	Backlog	CRDM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Building Envelope Components																									
Doors, Entrances		16	EA	\$1,800	\$28,800	35	11	2023		\$0												\$38,607			
Roof 1, EPDM		3,744	SF	\$9	\$33,696	20	4	2016		\$0					\$37,485										
Roof 2, EPDM Ballasted		5,760	SF	\$9	\$51,840	20	4	2016		\$0					\$57,670										
Roof 3, EPDM Ballasted		14,758	SF	\$9	\$132,822	20	4	2016		\$0					\$147,758										
Roof 4, EPDM		12,032	SF	\$9	\$108,288	20	5	2017		\$0						\$123,718									
Roof 5, EPDM		3,900	SF	\$9	\$35,100	20	5	2017		\$0						\$40,101									
Roof 6, EPDM		375	SF	\$9	\$3,375	20	5	2017		\$0						\$3,856									
Roof 7, EPDM		2,104	SF	\$9	\$18,936	20	6	2018		\$0							\$22,218								
Roof 8, EPDM		6,533	SF	\$9	\$58,797	20	6	2018		\$0							\$68,989								
Roof 9, EPDM		13,800	SF	\$9	\$124,200	20	6	2018		\$0							\$145,728								
Roof 10, EPDM, Canopy		1,539	SF	\$9	\$13,851	20	6	2018		\$0							\$16,252								
Roof 11, EPDM, Canopy		712	SF	\$9	\$6,408	20	6	2018		\$0							\$7,519								
Sealants		3,600	LF	\$13	\$45,000	15	7	2019		\$0								\$54,226							
Siding, Concrete and Masonry, Repairs		30,000	SF	\$3	\$90,000	12	0	2011	1	\$90,000	\$90,000											\$90,000			
Windows, Curtain Wall, Replacement		600	SF	\$250	\$175,000	45	0	2011	1	\$175,000	\$175,000														
Interior Building Components																									
Aesbestos Abatement		1	LS	\$160,000	\$160,000	25	0	2011	1	\$160,000	\$160,000												\$220,275		
Ceiling, Acoustic Tile, Class Rooms		75,000	SF	\$5	\$337,500	25	12	2024		\$0													\$464,643		
Ceiling, Acoustic Tile, Hallways		58,000	SF	\$5	\$261,000	25	21	2033		\$0															
Floors, Carpet		7,500	SY	\$35	\$262,500	15	8	2020		\$0															
Floors, Wood, Gymnasium, Refinish		6,000	SF	\$3	\$18,000	15	7	2019		\$0								\$21,690	\$324,857						
Floors, Wood, Gymnasium, Replacement		6,000	SF	\$16	\$96,000	45	20	2032		\$0															
Light Fixtures		380	EA	\$190	\$72,200	25	22	2034		\$0															
Update, Locker Rooms		2	EA	\$135,000	\$270,000	25	16	2028		\$0															
Update, Rest Rooms, Phased		3	EA	\$7,800	\$23,400	25	3	2015		\$0				\$25,347									\$28,959		
Update, Shooting Range		1	LS	\$210,000	\$210,000	20	8	2020		\$0													\$259,886		
Walls, Paint, Phased		85,000	SF	\$1	\$63,750	10	3	2015		\$0				\$69,054									\$78,894		
Building Controls Components																									
AHUs/Condensers , Reaplacement, Phased		9	EA	\$26,000	\$234,000	25	0	2011	1	\$234,000	\$234,000				\$260,314								\$297,406		
Boilers, Heat, Replacement		4	EA	\$89,000	\$356,000	25	24	2036		\$0															
Boilers, Hot Water Including Storage Tank		1	LS	\$42,000	\$42,000	20	11	2023		\$0													\$56,302		
Chiller, Replacement		1	EA	\$655,000	\$655,000	25	20	2032		\$0															
Cooling Tower, Replacement		1	EA	\$42,000	\$42,000	25	20	2032		\$0															
Electrical, Upgrade, Remaining		1	LS	\$350,000	\$350,000	50	14	2026		\$0															
Exhaust Fans, Phased		13	EA	\$800	\$10,400	15	4	2016		\$0					\$11,570	\$11,882	\$12,203								
Fire Warning System		1	LS	\$285,000	\$285,000	25	9	2021		\$0													\$362,225		
Pipes, Building Heat, Replacement, Partial		1	LS	\$50,000	\$50,000	65+	13	2025		\$0															
Pipes, Water & Waste, Replacement, Partial		1	LS	\$50,000	\$50,000	65+	13	2025		\$0															
Pumps, Phased (Minimum 7.5HP)		2	EA	\$15,000	\$30,000	30	7	2019		\$0								\$36,151					\$41,302		
Site Components																									
Asphalt Pavement, Maintenance		16,700	SY	\$1	\$16,700	3-5	0	2011	1	\$16,700	\$16,700			\$18,090				\$20,124					\$22,387		
Asphalt Pavement, Replacement, Phased		8,350	SY	\$33	\$275,550	20	7	2019		\$0								\$332,042					\$369,382		
Fence, Chain Link		1,400	LF	\$35	\$49,000	25	9	2021		\$0													\$62,277		
Landscape Improvements		1	LS	\$50,000	\$50,000	12	4	2016		\$0					\$55,623										
Light Poles and Fixtures		6	EA	\$4,300	\$25,800	25	11	2023		\$0													\$34,586		
Notes										Total Annual Cos		\$675,700	\$675,700	\$0	\$0	\$112,491	\$570,419	\$179,557	\$272,909	\$464,233	\$692,596	\$721,909	\$0	\$611,263	\$726,219
1) The annual building materials inflation rate estimate is								CRV			\$25,900,000	\$26,599,300	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	
2) FY is Fiscal Year. FY is the calendar year.								FCI			0.03	0.00	0.00	0.00	0.02	0.01	0.01	0.02	0.03	0.03	0.00	0.02	0.03		
3) UL is Useful Life and RUL is Remaining Useful Life																									
4) Current Replacment Value (CRV) growth rate is				2.70%																					
5) Facility Condition Index (FCI) is the CRDM Building divided by the CRV, or CRDM Building/CRV																									
6) Backlog is time in years that project has been identified but unfunded																									

Safety Academy Main Building and Site Features		Quantity	Units	2012 Unit Cost	2012 Replacement Cost	UL	RUL	First Capital Expense	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037		
Building Envelope Components																							
Doors, Entrances		16	EA	\$1,800	\$28,800	35	11	2023															
Roof 1, EPDM		3,744	SF	\$9	\$33,696	20	4	2016										\$60,552					
Roof 2, EPDM Ballasted		5,760	SF	\$9	\$51,840	20	4	2016										\$93,157					
Roof 3, EPDM Ballasted		14,758	SF	\$9	\$132,822	20	4	2016										\$238,682					
Roof 4, EPDM		12,032	SF	\$9	\$108,288	20	5	2017											\$199,848				
Roof 5, EPDM		3,900	SF	\$9	\$35,100	20	5	2017											\$64,778				
Roof 6, EPDM		375	SF	\$9	\$3,375	20	5	2017											\$6,229				
Roof 7, EPDM		2,104	SF	\$9	\$18,936	20	6	2018												\$18,936	\$18,936		
Roof 8, EPDM		6,533	SF	\$9	\$58,797	20	6	2018												\$58,797	\$58,797		
Roof 9, EPDM		13,800	SF	\$9	\$124,200	20	6	2018												\$124,200	\$124,200		
Roof 10, EPDM, Canopy		1,539	SF	\$9	\$13,851	20	6	2018												\$13,851	\$13,851		
Roof 11, EPDM, Canopy		712	SF	\$9	\$6,408	20	6	2018												\$6,408	\$6,408		
Sealants		3,600	LF	\$13	\$45,000	15	7	2019										\$80,865					
Siding, Concrete and Masonry, Repairs		30,000	SF	\$3	\$90,000	12	0	2011											\$166,097				
Windows, Curtain Wall, Replacement		600	SF	\$250	\$175,000	45	0	2011															
Interior Building Components																							
Aesbestos Abatement		1	LS	\$160,000	\$160,000	25	0	2011															
Ceiling, Acoustic Tile, Class Rooms		75,000	SF	\$5	\$337,500	25	12	2024															
Ceiling, Acoustic Tile, Hallways		58,000	SF	\$5	\$261,000	25	21	2033									\$456,688						
Floors, Carpet		7,500	SY	\$35	\$262,500	15	8	2020												\$484,451			
Floors, Wood, Gymnasium, Refinish		6,000	SF	\$3	\$18,000	15	7	2019															
Floors, Wood, Gymnasium, Replacement		6,000	SF	\$16	\$96,000	45	20	2032								\$163,561							
Light Fixtures		380	EA	\$190	\$72,200	25	22	2034												\$129,744			
Update, Locker Rooms		2	EA	\$135,000	\$270,000	25	16	2028				\$413,515											
Update, Rest Rooms, Phased		3	EA	\$7,800	\$23,400	25	3	2015	\$33,085						\$37,799					\$43,185			
Update, Shooting Range		1	LS	\$210,000	\$210,000	20	8	2020															
Walls, Paint, Phased		85,000	SF	\$1	\$63,750	10	3	2015	\$90,136						\$102,979					\$117,652			
Building Controls Components																							
AHUs/Condensers , Reaplacement, Phased		9	EA	\$26,000	\$234,000	25	0	2011		\$339,783					\$388,199					\$443,513	\$455,488		
Boilers, Heat, Replacement		4	EA	\$89,000	\$356,000	25	24	2036												\$674,747	\$692,965		
Boilers, Hot Water Including Storage Tank		1	LS	\$42,000	\$42,000	20	11	2023															
Chiller, Replacement		1	EA	\$655,000	\$655,000	25	20	2032								\$1,115,964				\$1,241,458	\$1,274,977		
Cooling Tower, Replacement		1	EA	\$42,000	\$42,000	25	20	2032								\$71,558				\$79,605	\$81,754		
Electrical, Upgrade, Remaining		1	LS	\$350,000	\$350,000	50	14	2026		\$508,223													
Exhaust Fans, Phased		13	EA	\$800	\$10,400	15	4	2016										\$18,689	\$19,193	\$19,712	\$20,244		
Fire Warning System		1	LS	\$285,000	\$285,000	25	9	2021															
Pipes, Building Heat, Replacement, Partial		1	LS	\$50,000	\$50,000	65+	13	2025	\$70,695			\$76,577			\$82,948					\$89,850			
Pipes, Water & Waste, Replacement, Partial		1	LS	\$50,000	\$50,000	65+	13	2025	\$70,695			\$76,577			\$82,948					\$89,850			
Pumps, Phased (Minimum 7.5HP)		2	EA	\$15,000	\$30,000	30	7	2019															
Site Components																							
Asphalt Pavement, Maintenance		16,700	SY	\$1	\$16,700	3-5	0	2011			\$24,904				\$27,705					\$30,820			
Asphalt Pavement, Replacement, Phased		8,350	SY	\$33	\$275,550	20	7	2019															
Fence, Chain Link		1,400	LF	\$35	\$49,000	25	9	2021															
Landscape Improvements		1	LS	\$50,000	\$50,000	12	4	2016				\$76,577								\$92,276			
Light Poles and Fixtures		6	EA	\$4,300	\$25,800	25	11	2023															
Notes									Total Annual Cos		\$264,610	\$848,006	\$24,904	\$643,245	\$0	\$140,778	\$581,801	\$1,351,083	\$456,688	\$801,390	\$1,224,531	\$2,681,226	\$2,747,620
1) The annual building materials inflation rate estimate is									CRV	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	\$25,900,000	
2) FY is Fiscal Year. FY is the calendar year.									FCI	0.01	0.03	0.00	0.02	0.00	0.01	0.02	0.05	0.02	0.03	0.05	0.10	0.11	
3) UL is Useful Life and RUL is Remaining Useful Life																							
4) Current Replacment Value (CRV) growth rate is										2.70%													
5) Facility Condition Index (FCI) is the CRDM Building divided by the CRV, or CRDM Building/CRV																							
6) Backlog is time in years that project has been identified but unfunded																							

Safety Academy Main Building and Site Features	Quantity	Units	2011 Unit Cost	2011 Replacement Cost	First Year		Deferred Maintenance	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
					UL	RUL															Funds Requested
Building Envelope Components																					
Doors, Entrances	16	EA	\$1,800.00	\$28,800	35	12	2023	\$0												\$41,062	
Roof 1, EPDM	3,744	SF	\$7.50	\$28,080	20	5	2016	\$0					\$32,552								
Roof 2, EPDM Ballasted	5,760	SF	\$7.50	\$43,200	20	5	2016	\$0					\$50,081								
Roof 3, EPDM Ballasted	14,758	SF	\$7.50	\$110,685	20	5	2016	\$0					\$128,314								
Roof 4, EPDM	12,032	SF	\$7.50	\$90,240	20	6	2017	\$0						\$107,751							
Roof 5, EPDM	3,900	SF	\$7.50	\$29,250	20	6	2017	\$0						\$34,926							
Roof 6, EPDM	375	SF	\$7.50	\$2,813	20	6	2017	\$0						\$3,358							
Roof 7, EPDM	2,104	SF	\$7.50	\$15,780	20	7	2018	\$0							\$19,407						
Roof 8, EPDM	6,533	SF	\$7.50	\$48,998	20	7	2018	\$0							\$60,261						
Roof 9, EPDM	13,800	SF	\$7.50	\$103,500	20	7	2018	\$0							\$127,292						
Roof 10, EPDM, Canopy	1,539	SF	\$7.50	\$11,543	20	7	2018	\$0							\$14,196						
Roof 11, EPDM, Canopy	712	SF	\$7.50	\$5,340	20	7	2018	\$0							\$6,568						
Sealants	3,600	LF	\$12.50	\$45,000	15	8	2019	\$0								\$57,005					
Siding, Concrete and Masonry, Repairs	30,000	SF	\$3.00	\$90,000	12	0	2011	\$90,000	\$90,000											\$90,000	
Windows, Curtain Wall, Replacement	600	SF	\$250.00	\$175,000	45	0	2011	\$175,000	\$175,000												
Interior Building Components																					
Aesbestos Abatement	1	LS	\$160,000.00	\$160,000	25	0	2011	\$160,000	\$160,000												
Ceiling, Acoustic Tile, Class Rooms	75,000	SF	\$4.50	\$337,500	25	13	2024	\$0													
Ceiling, Acoustic Tile, Hallways	58,000	SF	\$4.50	\$261,000	25	22	2033	\$0													
Floors, Carpet	7,500	SY	\$35.00	\$262,500	15	9	2020	\$0												\$342,503	
Floors, Wood, Gymnasium, Refinish	6,000	SF	\$3.00	\$18,000	15	8	2019	\$0								\$22,802					
Floors, Wood, Gymnasium, Replacement	6,000	SF	\$16.00	\$96,000	45	21	2032	\$0													
Light Fixtures	380	EA	\$190.00	\$72,200	25	23	2034	\$0													
Update, Locker Rooms	2	EA	\$135,000.00	\$270,000	25	17	2028	\$0													
Update, Rest Rooms, Phased	3	EA	\$7,800.00	\$23,400	25	4	2015	\$0				\$26,337								\$30,532	
Update, Shooting Range	1	LS	\$210,000.00	\$210,000	20	9	2020	\$0												\$274,002	
Walls, Paint, Phased	85,000	SF	\$0.75	\$63,750	10	4	2015	\$0				\$71,751								\$83,179	
Mechanical Systems Components																					
AHUs/Condensers , Reaplacement, Phased	9	EA	\$26,000.00	\$234,000	25	0	2011	\$234,000	\$234,000				\$271,270							\$314,476	
Boilers, Heat, Replacement	4	EA	\$89,000.00	\$356,000	25	25	2036	\$0													
Boilers, Hot Water Including Storage Tank	1	LS	\$42,000.00	\$42,000	20	12	2023	\$0												\$59,882	
Chiller, Replacement	1	EA	\$655,000.00	\$655,000	25	0	2011	\$655,000	\$655,000												
Cooling Tower, Replacement	1	EA	\$42,000.00	\$42,000	25	0	2011	\$42,000	\$42,000												
Electrical, Upgrade, Remaining	1	LS	\$350,000.00	\$350,000	50	15	2026	\$0													
Exhaust Fans, Phased	13	EA	\$800.00	\$10,400	15	5	2016	\$0					\$12,056	\$12,418	\$12,791						
Fire Warning System	1	LS	\$285,000.00	\$285,000	25	10	2021	\$0												\$383,016	
Pipes, Building Heat, Replacement, Partial	1	LS	\$50,000.00	\$50,000	65+	14	2025	\$0													
Pipes, Sprinkler System, Installation	3	EA	\$150,000.00	\$450,000	65+	0	2011	\$450,000	\$450,000												
Pipes, Water & Waste, Replacement, Partial	1	LS	\$50,000.00	\$50,000	65+	14	2025	\$0													
Pumps, Phased (Minimum 7.5HP)	2	EA	\$15,000.00	\$30,000	30	8	2019	\$0								\$38,003					
Site Components																					
Asphalt Pavement, Seal Coat/Repair	16,700	SY	\$1.50	\$25,050	3-5	0	2011	\$25,050	\$25,050			\$28,194				\$31,733				\$35,715	
Asphalt Pavement, Overlay, Phased	8,350	SY	\$14.00	\$116,900	20	8	2019	\$0							\$148,085					\$166,671	
Fence, Chain Link	1,400	LF	\$35.00	\$49,000	25	10	2021	\$0											\$65,852		
Landscape Improvements	1	LS	\$50,000.00	\$50,000	12	5	2016	\$0				\$57,964									
Light Poles and Fixtures	6	EA	\$4,300.00	\$25,800	25	12	2023	\$0												\$36,785	
Total Annual Cost								\$1,831,050	\$1,831,050	\$0	\$0	\$0	\$126,282	\$552,238	\$158,454	\$240,514	\$297,628	\$730,216	\$763,345	\$0	\$430,115

Notes
1) The annual building materials inflation rate estimate is 3.00%
2) FY is Fiscal Year. FY is the calendar year.
3) UL is Useful Life and RUL is Remaining Useful Life
4) Current Replacment Value (CRV) growth rate is 2.70%

CRV FCI \$25,900,000 \$26,599,300 \$27,317,481 \$28,055,053 \$28,812,540 \$29,590,478 \$30,389,421 \$31,209,935 \$32,052,604 \$32,918,024 \$33,806,811 \$34,719,594 \$35,657,023

Safety Academy Main Building and Site Features	Quantity	Units	2011 Unit Cost	2011 Replacement Cost	First Year Funds			2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
					UL	RUL	Requested													
Building Envelope Components																				
Doors, Entrances	16	EA	\$1,800.00	\$28,800	35	12	2023													
Roof 1, EPDM	3,744	SF	\$7.50	\$28,080	20	5	2016											\$55,418		
Roof 2, EPDM Ballasted	5,760	SF	\$7.50	\$43,200	20	5	2016											\$85,259		
Roof 3, EPDM Ballasted	14,758	SF	\$7.50	\$110,685	20	5	2016											\$218,446		
Roof 4, EPDM	12,032	SF	\$7.50	\$90,240	20	6	2017												\$183,439	
Roof 5, EPDM	3,900	SF	\$7.50	\$29,250	20	6	2017												\$59,459	
Roof 6, EPDM	375	SF	\$7.50	\$2,813	20	6	2017												\$5,717	
Roof 7, EPDM	2,104	SF	\$7.50	\$15,780	20	7	2018												\$15,780	
Roof 8, EPDM	6,533	SF	\$7.50	\$48,998	20	7	2018												\$48,998	
Roof 9, EPDM	13,800	SF	\$7.50	\$103,500	20	7	2018												\$103,500	
Roof 10, EPDM, Canopy	1,539	SF	\$7.50	\$11,543	20	7	2018												\$11,543	
Roof 11, EPDM, Canopy	712	SF	\$7.50	\$5,340	20	7	2018												\$5,340	
Sealants	3,600	LF	\$12.50	\$45,000	15	8	2019											\$88,811		
Siding, Concrete and Masonry, Repairs	30,000	SF	\$3.00	\$90,000	12	0	2011												\$182,951	
Windows, Curtain Wall, Replacement	600	SF	\$250.00	\$175,000	45	0	2011													
Interior Building Components																				
Aesbestos Abatement	1	LS	\$160,000.00	\$160,000	25	0	2011	\$234,965												
Ceiling, Acoustic Tile, Class Rooms	75,000	SF	\$4.50	\$337,500	25	13	2024	\$495,630												
Ceiling, Acoustic Tile, Hallways	58,000	SF	\$4.50	\$261,000	25	22	2033								\$500,103					
Floors, Carpet	7,500	SY	\$35.00	\$262,500	15	9	2020												\$533,608	
Floors, Wood, Gymnasium, Refinish	6,000	SF	\$3.00	\$18,000	15	8	2019													
Floors, Wood, Gymnasium, Replacement	6,000	SF	\$16.00	\$96,000	45	21	2032								\$178,588					
Light Fixtures	380	EA	\$190.00	\$72,200	25	23	2034											\$142,493		
Update, Locker Rooms	2	EA	\$135,000.00	\$270,000	25	17	2028				\$446,269									
Update, Rest Rooms, Phased	3	EA	\$7,800.00	\$23,400	25	4	2015		\$35,395				\$41,032						\$47,567	
Update, Shooting Range	1	LS	\$210,000.00	\$210,000	20	9	2020													
Walls, Paint, Phased	85,000	SF	\$0.75	\$63,750	10	4	2015		\$96,428				\$111,786						\$129,591	
Mechanical Systems Components																				
AHUs/Condensers , Reaplacement, Phased	9	EA	\$26,000.00	\$234,000	25	0	2011			\$364,564				\$422,630					\$489,944	
Boilers, Heat, Replacement	4	EA	\$89,000.00	\$356,000	25	25	2036												\$745,385	
Boilers, Hot Water Including Storage Tank	1	LS	\$42,000.00	\$42,000	20	12	2023													
Chiller, Replacement	1	EA	\$655,000.00	\$655,000	25	0	2011												\$1,371,425	
Cooling Tower, Replacement	1	EA	\$42,000.00	\$42,000	25	0	2011												\$87,939	
Electrical, Upgrade, Remaining	1	LS	\$350,000.00	\$350,000	50	15	2026			\$545,289										
Exhaust Fans, Phased	13	EA	\$800.00	\$10,400	15	5	2016										\$20,525	\$21,141	\$21,775	
Fire Warning System	1	LS	\$285,000.00	\$285,000	25	10	2021													
Pipes, Building Heat, Replacement, Partial	1	LS	\$50,000.00	\$50,000	65+	14	2025		\$75,629			\$82,642		\$90,306				\$98,679		
Pipes, Sprinkler System, Installation	3	EA	\$150,000.00	\$450,000	65+	0	2011		\$680,665			\$743,781		\$812,750				\$888,114		
Pipes, Water & Waste, Replacement, Partial	1	LS	\$50,000.00	\$50,000	65+	14	2025		\$75,629			\$82,642		\$90,306				\$98,679		
Pumps, Phased (Minimum 7.5HP)	2	EA	\$15,000.00	\$30,000	30	8	2019	\$44,056												
Site Components																				
Asphalt Pavement, Seal Coat/Repair	16,700	SY	\$1.50	\$25,050	3-5	0	2011				\$40,198			\$45,243					\$50,921	
Asphalt Pavement, Overlay, Phased	8,350	SY	\$14.00	\$116,900	20	8	2019													
Fence, Chain Link	1,400	LF	\$35.00	\$49,000	25	10	2021													
Landscape Improvements	1	LS	\$50,000.00	\$50,000	12	5	2016				\$82,642								\$101,640	
Light Poles and Fixtures	6	EA	\$4,300.00	\$25,800	25	12	2023													
Total Annual Cost								\$774,652	\$963,747	\$909,853	\$40,198	\$1,437,977	\$0	\$152,818	\$1,461,234	\$178,588	\$500,103	\$1,696,426	\$1,316,036	\$2,901,627

Notes
1) The annual building materials inflation rate estimate is 3.00%
2) FY is Fiscal Year. FY is the calendar year.
3) UL is Useful Life and RUL is Remaining Useful Life
4) Current Replacment Value (CRV) growth rate is 2.70%

CRV FCI \$36,619,763 \$37,608,497 \$38,623,926 \$39,666,772 \$40,737,775 \$41,837,695 \$42,967,313 \$44,127,430 \$45,318,871 \$46,542,480 \$47,799,127 \$49,089,704 \$50,415,126