

Cheesman Tower West Reserve Study



Reserve Study Update
Project No. 13049

Prepared for
Cheesman Tower West Condominium Association
Denver, Colorado

Prepared by
Borne Consulting
P.O. Box 3890
Parker, Colorado 80134

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Introduction

Borne Consulting has been commissioned by Cheesman Tower West Condominium Association to prepare a Reserve Study update. The purpose of this Reserve Study update is to evaluate the common-area components for major repair, maintenance and replacement that are the responsibility of the Association. This Study provides a limited-scope evaluation of the existing condition and remaining life of the common-area components. The Study also includes estimated costs for the major repair, maintenance and/or replacement of the items to enable the Association to establish an adequate level of reserve funds for the upkeep of the property. Major repair, maintenance and/or replacement items are defined as anything that costs over \$1,000.

Community Description

The Association consists of one building that houses 73 condominium-style residences. The building envelope consists of brick veneer, low sloped roof area, common doors and windows, a subsurface garage and one community deck. The site contains parking on the north elevation of the building, concrete sidewalks, community privacy fencing and irrigated areas. The building mechanical systems include two boilers with associated pumps and a rooftop chiller. There are interior corridors at each level, two stairwells and two passenger elevator systems. The Association also owns unit number 204 and number 103. There is one swimming pool with associated mechanical equipment, a steam room, a party room, a billiards area and an exercise room with several pieces of exercise equipment. The building is approximately 47 years old.

Approach

To prepare this Reserve Study Projection, Borne Consulting has completed the necessary research, the component report, the cost estimates, the financial projections, and the projection interpretation.

The projections were assembled using the cash flow method. This method develops a reserve funding plan where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different reserve funding plans are tested against the anticipated schedule of reserve expenses until a desired funding program is achieved.

Reference Material

The following references were provided to Borne Consulting for this Reserve Study update by the client:

- 2013 financial information
- Interest rate earned on invested capital funds
- Historical expense and past capital project information

Exclusions

Items not included in this Projection Update are:

- Non- common area components.
- Association components that have estimated costs below the reserve component threshold

amount of \$1,000.

- Long lasting items with estimated economic lives exceeding 30 years, such as sanitary sewers or building structural components. However, these items are included if they are known to have a fairly predictable anticipated useful life that falls within the term of the Study.
- Normal operating items, i.e., taxes, insurance, snow plowing, utilities, cleaning and landscape maintenance, etc.

Disclaimer

This Reserve Study was prepared specifically for Cheesman Tower West Condominium Association. The information contained within this document has been assembled in conjunction with the client and is intended to assist the client with its reserve planning and funding. Borne Consulting does not guarantee, either explicitly or implied, that all repair and replacement items have been identified, the accuracy of the probable costs or the component lives.

In providing the opinions of probable replacement costs, the client understands that Borne Consulting has no control over costs or the price of labor, equipment or materials, or over the contractor's method of pricing, and that the opinions of probable replacement costs provided herein are made on the basis of Borne Consulting's qualifications and experience. Borne Consulting makes no warranty, expressed or implied, as to the accuracy of such opinions as compared to actual bid or construction costs.

All comments made are based on conditions seen at the time of the site visit. We do not accept any responsibility for unknown or unknowable conditions within the existing site or structures.

Cheesman Tower West RA Detail Report by Category

Maintain and replace damaged sections - 2018

Asset ID	A01.1	1 UT	@ \$1,000.00
Topography, Grading and Drainage		Asset Cost	\$1,000.00
Site Grading		Percent Replacement	100%
Placed in Service	June 2012	Future Cost	\$1,125.51
Useful Life	7		
Adjustment	-1		
Replacement Year	2018		
Remaining Life	4		



Description: The community utilizes zero-scape sloped grade and rock to move moisture to the collection systems. There is an irrigated lawn area on the south side of the property.

Condition: Satisfactory condition.

Action(s):

- Cyclically regrade a portion of the zero-scape sloped areas every seven years, starting in 2018.

Site Grading - Total Current Cost

\$1,000

Cheesman Tower West RA Detail Report by Category

Replace deck coating system - 2029

Asset ID	B01.1	5,000 SF	@ \$20.00
Paving		Asset Cost	\$100,000.00
Concrete Driving Area		Percent Replacement	100%
Placed in Service	June 2009	Future Cost	\$155,796.74
Useful Life	20		
Replacement Year	2029		
Remaining Life	15		



Description: Concrete surface over the subsurface parking garage.

Condition: Good condition.

Action(s):

- Remove and replace deck coating system in 2029.

Concrete Driving Area - Total Current Cost

\$100,000

Cheesman Tower West RA Detail Report by Category

Maintain and replace damaged sections - 2014

Asset ID	C01.1	1 UT	@ \$3,500.00
	Flatwork	Asset Cost	\$3,500.00
Sidewalks/ Concrete Pavement		Percent Replacement	100%
Placed in Service	June 2007	Future Cost	\$3,500.00
Useful Life	8		
Adjustment	-1		
Replacement Year	2014		
Remaining Life	0		



Description: The concrete sidewalks and pavement are presumed to be on-grade, non-reinforced slabs.

Condition: Good condition in most areas, the walkway in front of main building entrance has significant cracks.

Action(s):

- Cyclically remove and replace damaged sections of the concrete areas every eight years, starting in 2014.

Sidewalks/ Concrete Pavement - Total Current Cost

\$3,500

Cheesman Tower West RA Detail Report by Category

Maintain and replace damaged sections - 2020

Asset ID	C02.1	1 UT	@ \$1,500.00
	Flatwork	Asset Cost	\$1,500.00
Landscape Courtyard Pavers		Percent Replacement	100%
Placed in Service	June 2013	Future Cost	\$1,791.08
Useful Life	8		
Adjustment	-1		
Replacement Year	2020		
Remaining Life	6		



Description: 2' x 2' x 2-1/2" concrete pavers set on adjustable pedestals over a waterproof membrane.

Condition: Good condition, some of the pavers are loose and unstable and a few are cracked.

Action(s):

- Cyclically remove and replace damaged concrete pavers every 8 years, starting in 2020

Replace waterproof membrane - 2015

Asset ID	C02.2	1 UT	@ \$125,000.00
	Flatwork	Asset Cost	\$125,000.00
Landscape Courtyard Pavers		Percent Replacement	100%
Placed in Service	June 2007	Future Cost	\$128,750.00
Useful Life	20		
Adjustment	-12		
Replacement Year	2015		
Remaining Life	1		

Cheesman Tower West RA Detail Report by Category

Replace waterproof membrane continued...



Description: 2' x 2' x 2-1/2" concrete pavers set on adjustable pedestals over a waterproof membrane.

Condition: Membrane leaks down into the parking garage below.

Action(s):

- Remove and replace the waterproof membrane below the concrete paver system in 2015

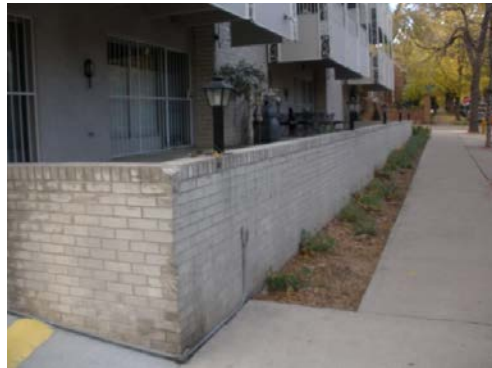
Landscape Courtyard Pavers - Total Current Cost

\$126,500

Cheesman Tower West RA Detail Report by Category

Maintain and tuckpoint free standing brick walls - 2014

Asset ID	D02.1	1 UT	@
Landscaping and Appurtenances		Asset Cost	
Retaining Wall		Percent Replacement	100%
Placed in Service	June 2008	Future Cost	
Useful Life	6		
Replacement Year	2014		
Remaining Life	0		



Description: Brick wall separating the first floor patio decks and Humboldt Street sidewalk. There are pole light units mounted on the top of the wall.

Condition: The brick wall is in fair condition with a few chipped bricks and discoloration.

Action(s):

- Cyclically inspect, tuck point the mortar joints and replace damaged bricks every six years, starting in 2014, as a maintenance item.

Replace damaged sections - 2016

Asset ID	D01.1	1,250 LF	@ \$3.75
Landscaping and Appurtenances		Asset Cost	\$2,390.62
Retaining Wall		Percent Replacement	51%
Placed in Service	June 2006	Future Cost	\$2,536.21
Useful Life	10		
Replacement Year	2016		
Remaining Life	2		

Cheesman Tower West RA Detail Report by Category

Replace damaged sections continued...



Description: Reinforced, cast-in-place, concrete retaining wall.

Condition: Good condition with no visual signs of failure. The control joints in the retaining wall on the east side of the property were caulked in 2006. Typically cracks that are 1/8" or larger should be routed and crackfilled with an epoxy injected to prevent any further damage to the structure.

Action(s):

- Remove and replace the sealant in the control joints every 10 years, starting in 2016.
- Cyclically inspect, maintain and repair the concrete retaining wall every three years starting in 2015, as a maintenance item.

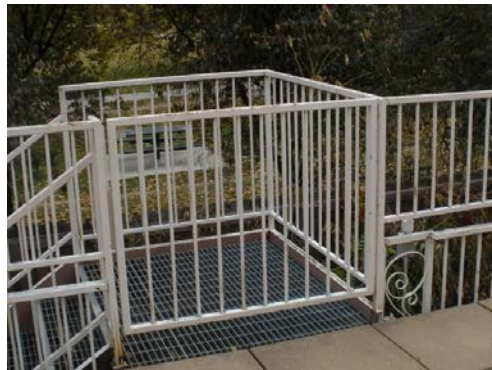
Retaining Wall - Total Current Cost

\$2,391

Cheesman Tower West RA Detail Report by Category

Paint the deck and balcony railings - 2018

Asset ID	D03.2	5,200 LF	@ \$7.00
	Façade	Asset Cost	\$36,400.00
	Metal Railings	Percent Replacement	100%
Placed in Service	June 1966	Future Cost	\$40,968.52
Useful Life	12		
Adjustment	40		
Replacement Year	2018		
Remaining Life	4		



Description: Metal railings on balcony decks and between masonry archways at the buildings entrance.

Condition: Fair to poor condition.

Railings on the 1st-4th floors have been fixed.

The balcony railings are in poor condition with signs of corrosion on the horizontal and vertical members.

The paint on the existing wrought iron and steel framing for the balcony railing system is in poor condition. The paint condition is worse as the bottom of the panels and along the top of the hand rail. At these locations, there are many areas where the paint has completely flaked off of the surface, exposing the underlying metal, which is rusting. Paint in better condition is beginning to crack and peel. The bottom steel of some of the railing panels is severely rusted and deteriorated. It is not uncommon to find spots that have rusted through the metal. The deterioration has affected the structural integrity of the steel frame. Significant surface preparation will be required simply to apply a new coat of paint. Products exist that can stop the rust and help consolidate the rust to improve the structural integrity of the deteriorated steel component; however, the repair will not fully restore the steel to its original condition.

The metal railings between the brick archways on the first level south of the main

Cheesman Tower West RA Detail Report by Category

Paint the deck and balcony railings continued...

entrance are in good condition.

Action(s):

- Cyclically scrape, rust proof and paint the metal railings every 12 years, starting in 2018.

Metal Railings - Total Current Cost

\$36,400

Cheesman Tower West RA Detail Report by Category

Maintain wood fencing - 2014

Asset ID	D04.1	160 LF	@
	Façade	Asset Cost	
	Wood Fencing	Percent Replacement	100%
		Future Cost	
Placed in Service	June 2006		
Useful Life	8		
Replacement Year	2014		
Remaining Life	0		



Description: 6-foot, wood privacy fencing.

Condition: Good condition. We were informed that the fence was installed in 2006.

Action(s):

- None. We were informed that the cost for maintenance of this component is funded from the operating budget.

Wood Fencing - Total Current Cost

\$0

Cheesman Tower West RA Detail Report by Category

Maintain and tuckpoint brick veneer - 2018

Asset ID	E01.1	16,800 SF	@ \$4.00
	Façade	Asset Cost	\$67,200.00
	Brick Veneer	Percent Replacement	100%
Placed in Service	June 2009	Future Cost	\$75,634.19
Useful Life	10		
Adjustment	-1		
Replacement Year	2018		
Remaining Life	4		



Description: Brick facade with mortar joints that are coated.

Condition: Good condition, the mortar joints were in fair condition with some minor deterioration in various locations.

Action(s):

- Cyclically power wash and repair damaged mortar joints every ten years, starting in 2018.

Brick Veneer - Total Current Cost

\$67,200

Cheesman Tower West RA Detail Report by Category

Replace composite paneling, deck and railings - 2024

Asset ID	E02.1	21,000 SF	@ \$56.00
	Façade	Asset Cost	\$147,000.00
	Composite Paneling	Percent Replacement	12.5%
Placed in Service	June 1966	Future Cost	\$197,555.71
Useful Life	1		
Adjustment	57		
Replacement Year	2024		
Remaining Life	10		



Description: Based on the age of the building, we presume the curtain wall panels are made of a composite type of material.

For a building of this age, it has been our experience that these panels could potentially be made of an asbestos material. Special care and environmental testing should be taken when these panels are removed and replaced. Typically an industrial hygienist and abatement contractor contract directly with the owner so we really do not have a cost basis to project from.

Metal railings on balcony decks and between masonry archways at the buildings entrance.

Railings on the 1st-4th floors have been fixed.

The balcony railings are in poor condition with signs of corrosion on the horizontal and vertical members.

The paint on the existing wrought iron and steel framing for the balcony railing system is in poor condition. The paint condition is worse as the bottom of the panels and along the top of the hand rail. At these locations, there are many areas where the paint has completely flaked off of the surface, exposing the underlying metal, which is rusting. Paint in better condition is beginning to crack and peel. The bottom steel of some of the railing panels is severely rusted and deteriorated. It is not uncommon to find spots that have rusted through the metal. The deterioration has affected the structural integrity of the steel frame. Significant surface preparation will

Cheesman Tower West RA Detail Report by Category

Replace composite paneling, deck and railings continued...

be required simply to apply a new coat of paint. Products exist that can stop the rust and help consolidate the rust to improve the structural integrity of the deteriorated steel component; however, the repair will not fully restore the steel to its original condition.

The metal railings between the brick archways on the first level south of the main entrance are in good condition.

Condition: Poor condition.

Action(s):

- Remove and and replace half of the composite paneling, on each side, each year, over eight years starting in 2024.
- Remove and replace half of the metal railings, on each side, each year, over eight years starting in 2024.

Composite Paneling - Total Current Cost

\$147,000

Cheesman Tower West RA Detail Report by Category

Replace the garage doors - 2025

Asset ID	E04.1	6 EA	@ \$2,500.00
	Façade	Asset Cost	\$4,950.00
	Garage Doors	Percent Replacement	33%
		Future Cost	\$6,851.96
Placed in Service	June 2010		
Useful Life	16		
Adjustment	-1		
Replacement Year	2025		
Remaining Life	11		



Description: Panelized metal garage door.

Condition: Good condition. We were informed that all of the garage doors are in good operating condition.

Action(s):

- Replace a portion of the metal panel garage doors every 16 years, as required, starting in 2025.

Garage Doors - Total Current Cost

\$4,950

Cheesman Tower West RA Detail Report by Category

Maintain and replace sealant joints at windows - 2025

Asset ID	E05.1	4,600 LF	@
	Façade	Asset Cost	
	Windows and Doors	Percent Replacement	100%
Placed in Service	June 2010	Future Cost	
Useful Life	15		
Replacement Year	2025		
Remaining Life	11		

Description:

- Common windows are fixed, aluminum casement windows.
- Common doors include the glass entry doors, subsurface garage man door, restroom doors and the manager's office door.

Condition: The common doors and windows are in good condition.

Action(s):

- Cyclically remove and replace the sealant and gasket joints in the store front windows around the indoor pool area every 15 years, this is a maintenance item.

Replace common windows - 2023

Asset ID	E05.3	30 EA	@ \$500.00
	Façade	Asset Cost	\$15,000.00
	Windows and Doors	Percent Replacement	100%
Placed in Service	June 1990	Future Cost	\$19,571.60
Useful Life	34		
Adjustment	-1		
Replacement Year	2023		
Remaining Life	9		

Description:

- Common windows are fixed, aluminum casement windows.
- Common doors include the glass entry doors, subsurface garage man door, restroom doors and the manager's office door.

Condition: The common doors and windows are in good condition.

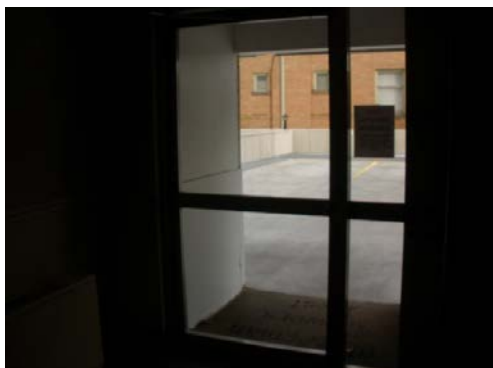
Action(s):

- Replace the common windows in 2023.

Cheesman Tower West RA Detail Report by Category

Replace office doors - 2020

Asset ID	E05.2	2 EA	@ \$1,600.00
	Façade	Asset Cost	\$3,200.00
Windows and Doors		Percent Replacement	100%
Placed in Service	June 1990	Future Cost	\$3,820.97
Useful Life	30		
Replacement Year	2020		
Remaining Life	6		



Description:

- Common windows are fixed, aluminum casement windows.
- Common doors include the glass entry doors, subsurface garage man door, restroom doors and the manager's office door.

Condition: The common doors and windows are in good condition.

Action(s):

- Remove and replace the garage man door and manager's office doors 2020

Windows and Doors - Total Current Cost

\$18,200

Cheesman Tower West RA Detail Report by Category

Replace high profile lighting - 2019

Asset ID	E06.1	12 LF	@ \$1,000.00
	Façade	Asset Cost	\$12,000.00
Exterior Lighting Units		Percent Replacement	100%
Placed in Service	June 2007	Future Cost	\$13,911.29
Useful Life	12		
Replacement Year	2019		
Remaining Life	5		



Description:

- High profile lighting – Metal light pole with top mounted lighting unit.

Condition: Good condition with no major cracking or deterioration noted.

Action(s):

- Cyclically replace the high profile lighting every 12 years starting in 2019.

Replace wall mounted lighting - 2020

Asset ID	E06.2	6 LF	@ \$250.00
	Façade	Asset Cost	\$1,500.00
Exterior Lighting Units		Percent Replacement	100%
Placed in Service	June 2007	Future Cost	\$1,791.08
Useful Life	15		
Adjustment	-2		
Replacement Year	2020		
Remaining Life	6		

Cheesman Tower West RA Detail Report by Category

Replace wall mounted lighting continued...



Description:

- Wall mounted lighting – Metal pole mechanically attached to the top of the brick wall with single lighting unit mounted to the top.

Condition: Good condition with no major cracking or deterioration noted.

Action(s):

- Cyclically replace the wall mounted lighting every 15 years starting in 2020.

Exterior Lighting Units - Total Current Cost	\$13,500
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Cheesman Tower West RA Detail Report by Category

Replace the low sloped roof areas - 2039

Asset ID	F01.1	1 UT	@ \$90,000.00
	Roofing	Asset Cost	\$90,000.00
	Roofing	Percent Replacement	100%
		Future Cost	\$188,440.01
Placed in Service	June 2010		
Useful Life	30		
Adjustment	-1		
Replacement Year	2039		
Remaining Life	25		



Description: Built up roof. Appeared to be a modified bitumen system with a granulated cap sheet.

Condition: The mechanically attached roof system is in good condition.

Action(s):

- Remove and replace the low sloped roof areas in 2039.

Roofing - Total Current Cost

\$90,000

Cheesman Tower West RA Detail Report by Category

Repair mortar joints - 2017

Asset ID	F02.1	1 UT	@ \$1,000.00
	Roofing	Asset Cost	\$1,000.00
	Chimney	Percent Replacement	100%
Placed in Service	June 2006	Future Cost	\$1,092.73
Useful Life	10		
Adjustment	1		
Replacement Year	2017		
Remaining Life	3		



Description: Brick chimney with clay flue.

Condition: The brick chimney appears to be in good condition. We are unable to determine the internal condition of the chimney flue. If this chimney is active, we recommend that the Association contract with a professional engineering/contracting company to evaluate the flue and fireplace construction and operation.

Action(s):

- Cyclically power wash and repair damaged mortar joints every ten years, starting in 2017.

Chimney - Total Current Cost

\$1,000

Cheesman Tower West RA Detail Report by Category

Replace damaged sections - 2020

Asset ID	G01.1	1,644 SF	@ \$20.00
Substructure		Asset Cost	\$2,630.40
Concrete Parking Surface		Percent Replacement	8%
Placed in Service	June 2013	Future Cost	\$3,140.83
Useful Life	8		
Adjustment	-1		
Replacement Year	2020		
Remaining Life	6		

Description: Presumed to be on-grade, reinforced concrete slab.

Condition: Good condition. We noted some minor cracking.

Action(s):

- Cyclically remove and replace damaged sections of the concrete surface in the subsurface parking garage every eight years, starting in 2020.

Concrete Parking Surface - Total Current Cost **\$2,630**

Cheesman Tower West RA Detail Report by Category

Remodel community room - 2023

Asset ID	H01.1	1 UT	@ \$12,000.00
	Interior	Asset Cost	\$12,000.00
	Community Room	Percent Replacement	100%
Placed in Service	June 2000	Future Cost	\$15,657.28
Useful Life	20		
Adjustment	3		
Replacement Year	2023		
Remaining Life	9		



Description: The community room consists of various pieces of furniture, a small kitchen area with a microwave, sink with garbage disposal and a small refrigerator. The walls and ceilings are painted; there is a brick fireplace and carpeted floors. Additionally, there is a billiards table in front of the main entrance to the community room.

Condition: Good condition.

Action(s):

- Remodel the community room in 2023.

Community Room - Total Current Cost	\$12,000
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Cheesman Tower West RA Detail Report by Category

Paint corridors - 2015

Asset ID	H02.1	13,440 SF	@ \$0.65
	Interior	Asset Cost	\$4,368.00
Corridor Walls and Ceilings		Percent Replacement	50%
Placed in Service	June 2010	Future Cost	\$4,499.04
Useful Life	5		
Replacement Year	2015		
Remaining Life	1		



Description: Painted walls and ceilings. There is a small brick wall at the main entrance to the building.

Condition: Good condition.

Action(s):

- Cyclically paint the corridors, in phases, every five years, starting in 2015.

Corridor Walls and Ceilings - Total Current Cost

\$4,368

Cheesman Tower West RA Detail Report by Category

Replace lighting - 2021

Asset ID	H03.1	1 UT	@ \$15,000.00
	Interior	Asset Cost	\$15,000.00
	Corridor Lighting	Percent Replacement	100%
Placed in Service	June 2000	Future Cost	\$18,448.11
Useful Life	20		
Adjustment	1		
Replacement Year	2021		
Remaining Life	7		



Description: Wall mounted lighting.

Condition: Good condition.

Action(s):

- Remove and replace the corridor lighting starting in 2021.

Corridor Lighting - Total Current Cost

\$15,000

Cheesman Tower West RA Detail Report by Category

Replace carpeting - 2017

Asset ID	H04.1	4,100 SF	@ \$4.50
	Interior	Asset Cost	\$18,450.00
	Flooring	Percent Replacement	100%
Placed in Service	June 2006	Future Cost	\$20,160.81
Useful Life	12		
Adjustment	-1		
Replacement Year	2017		
Remaining Life	3		



Description: Commercial grade carpeting.

Condition: Good condition.

Action(s):

- Cyclically replace the corridor carpeting every 12 years, starting in 2017.

Flooring - Total Current Cost

\$18,450

Cheesman Tower West RA Detail Report by Category

None - 2045

Asset ID	H05.1	1 UT	@
	Interior	Asset Cost	
	Mailboxes	Percent Replacement	100%
Placed in Service	June 2000	Future Cost	
Useful Life	40		
Adjustment	5		
Replacement Year	2045		
Remaining Life	31		



Description: There are two metal mailbox clusters.

Condition: Good condition.

Action(s):

- None. The mail box clusters should exceed the term of this Study.

Mailboxes - Total Current Cost

\$0

Cheesman Tower West RA Detail Report by Category

Replace exercise equipment - 2018

Asset ID	I01.1	1 UT	@ \$5,000.00
Amenities		Asset Cost	\$5,000.00
Exercise Equipment		Percent Replacement	100%
Placed in Service	April 2003	Future Cost	\$5,627.54
Useful Life	12		
Adjustment	3		
Replacement Year	2018		
Remaining Life	4		



Description: The exercise equipment includes:

- Life Cycle cross trainer.
- Life Cycle 9500 HR stationary bike.
- PreCor C964 Treadmill.
- Hoist V4 Weight Machine.
- Various hand weights and exercise balls.
- Wall mounted JVC television with built in VCR.

The exercise equipment sits on rubberized mats. The exercise room has a carpeted floor.

Condition: Good condition.

Action(s):

- Cyclically replace a portion of the exercise equipment.

Exercise Equipment - Total Current Cost

\$5,000

Cheesman Tower West RA Detail Report by Category

Recoat pool interior - 2018

Asset ID	I02.2	1 UT	@ \$9,500.00
Amenities	Pool	Asset Cost	\$9,500.00
Placed in Service	June 2010	Percent Replacement	100%
Useful Life	8	Future Cost	\$10,692.33
Replacement Year	2018		
Remaining Life	4		



Description: The swimming pool is a cast-in-place concrete basin with a plaster finish.

Condition: The pool deck, plaster basin and pool coping are in good condition. We were informed that the pool was re-plastered in 1995.

Action(s):

- Cyclically recoat the pool interior every 8 years starting in 2018.

Pool - Total Current Cost

\$9,500

Cheesman Tower West RA Detail Report by Category

RegROUT tile surfaces - 2015

Asset ID	I03.1	1 UT	@ \$1,500.00
Amenities		Asset Cost	\$1,500.00
Steam Room		Percent Replacement	100%
Placed in Service	June 2008	Future Cost	\$1,545.00
Useful Life	7		
Replacement Year	2015		
Remaining Life	1		



Description: The steam room has a tile floor, tile walls and ceilings. There are two showers located directly across from the steam room. The showers have tile floors, walls and ceilings and a glass door.

Condition: Good condition. The steam room was remodeled in 2002.

Action(s):

- Cyclically clean and re-grout the tile surfaces every 7 years starting in 2015.

Replace steam generator - 2028

Asset ID	I03.2	1 UT	@ \$2,500.00
Amenities		Asset Cost	\$2,500.00
Steam Room		Percent Replacement	100%
Placed in Service	June 2013	Future Cost	\$3,781.47
Useful Life	15		
Replacement Year	2028		
Remaining Life	14		

**Cheesman Tower West
RA Detail Report by Category**

Replace steam generator continued...



Description: The steam room has a tile floor, tile walls and ceilings. There are two showers located directly across from the steam room. The showers have tile floors, walls and ceilings and a glass door.

Condition: Good condition.

Action(s):

- Remove and replace the steam generator in 2028.

Steam Room - Total Current Cost	\$4,000
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Cheesman Tower West RA Detail Report by Category

Paint Association Unit - 2018

Asset ID	I04.1	1 UT	@
Amenities	Association Unit	Asset Cost	
Placed in Service	June 2011	Percent Replacement	100%
Useful Life	7	Future Cost	
Replacement Year	2018		
Remaining Life	4		



Description: The Association owns one unit. Unit 103 is a guest suite buffet that has two beds, bathroom with a shower; a small kitchenette with a sink stove, oven and small refrigerator.

Condition: Good condition. Unit #103 was renovated in 2005.

Action(s):

- Paint Unit #103 every 7 years starting in 2018, as a maintenance item.

Association Unit - Total Current Cost

\$0

Cheesman Tower West RA Detail Report by Category

Remodel restrooms - 2023

Asset ID	I05.1	2 UT	@ \$4,000.00
	Amenities	Asset Cost	\$8,000.00
	Restrooms	Percent Replacement	100%
Placed in Service	June 2010	Future Cost	\$10,438.19
Useful Life	15		
Adjustment	-2		
Replacement Year	2023		
Remaining Life	9		



Description: Men's and women's restrooms include tile floors, painted walls and ceilings, sink and commode.

Condition: Good condition. The restrooms were remodeled in 2002.

Action(s):

- Remodel the men's and women's restrooms every 15 years starting in 203.

Restrooms - Total Current Cost

\$8,000

Cheesman Tower West RA Detail Report by Category

Replace boilers - 2039

Asset ID	J01.1	1 EA @ \$175,000.00
	Mechanical	Asset Cost \$175,000.00
	Boilers	Percent Replacement 100%
Placed in Service	June 2009	Future Cost \$366,411.14
Useful Life	30	
Replacement Year	2039	
Remaining Life	25	



Description: There are three boilers that provide heat for the building.

Condition: Satisfactory condition.

Action(s):

- Remove and replace the Boilers in 2039.

Replace hot water boiler - 2022

Asset ID	J01.3	1 EA @ \$12,000.00
	Mechanical	Asset Cost \$12,000.00
	Boilers	Percent Replacement 100%
Placed in Service	June 2004	Future Cost \$15,201.24
Useful Life	18	
Replacement Year	2022	
Remaining Life	8	

Cheesman Tower West RA Detail Report by Category

Replace hot water boiler continued...



Description: There is one RayPak hot water boiler.

Condition: Satisfactory condition.

Action(s):

- Remove and replace the hot water boiler in 2022.

Replace pool boiler - 2022

Asset ID	J01.2	1 EA	@ \$12,000.00
	Mechanical	Asset Cost	\$12,000.00
	Boilers	Percent Replacement	100%
Placed in Service	June 2004	Future Cost	\$15,201.24
Useful Life	18		
Replacement Year	2022		
Remaining Life	8		



Description: There is one RayPak pool boiler.

Condition: Satisfactory condition.

Cheesman Tower West RA Detail Report by Category

Replace pool boiler continued...

Action(s):

- Remove and replace the pool boiler in 2022.

Replace sump pumps - 2018

Asset ID	J01.4	2 EA	@ \$900.00
	Mechanical	Asset Cost	\$1,800.00
	Boilers	Percent Replacement	100%
Placed in Service	June 1996	Future Cost	\$2,025.92
Useful Life	15		
Adjustment	7		
Replacement Year	2018		
Remaining Life	4		



Description: Sump pumps.

Condition: Satisfactory condition.

Action(s):

- Remove and replace sump pumps in 2018.

Boilers - Total Current Cost \$200,800

Cheesman Tower West RA Detail Report by Category

None - 2037

Asset ID	J02.1	1 EA	@
	Mechanical	Asset Cost	
	Chiller	Percent Replacement	100%
		Future Cost	
Placed in Service	June 2008		
Useful Life	30		
Adjustment	-1		
Replacement Year	2037		
Remaining Life	23		



Description: Chiller.

Condition: New in 2008.

Action(s):

- None. The new chiller, and cooling tower equipment should exceed the term of this Study.

Chiller - Total Current Cost

\$0

Cheesman Tower West RA Detail Report by Category

Replace the booster pump - 2025

Asset ID	J03.2	1 EA	@ \$8,000.00
		Asset Cost	\$8,000.00
	Mechanical	Percent Replacement	100%
	Pumps	Future Cost	\$11,073.87
Placed in Service	June 2003		
Useful Life	20		
Adjustment	2		
Replacement Year	2025		
Remaining Life	11		



Description:

- Berkely Multistage pump DMV-1

Condition: Good condition.

Action(s):

- Cyclically replace the booster pump every 20 years, starting in 2025.

Replace the circulation pump motors - 2020

Asset ID	J03.1	3 EA	@ \$1,200.00
		Asset Cost	\$1,800.00
	Mechanical	Percent Replacement	50%
	Pumps	Future Cost	\$2,149.29
Placed in Service	June 2013		
Useful Life	5		
Adjustment	2		
Replacement Year	2020		
Remaining Life	6		

Cheesman Tower West RA Detail Report by Category

Replace the circulation pump motors continued...



Description:

- There are two US Electric 5-hp and one US Electric 7.5-hp pump for the domestic hot water, heat and snowmelt systems.

Condition: We were informed that these units are in good working condition.

Action(s):

- Cyclically replace the motors in the circulation pumps every five years, starting in 2020.

Pumps - Total Current Cost

\$9,800

Cheesman Tower West RA Detail Report by Category

Replace hot water storage tanks - 2026

Asset ID	J04.1	4 UT	@ \$4,500.00
	Mechanical	Asset Cost	\$9,000.00
Hot Water Storage Tanks		Percent Replacement	50%
Placed in Service	June 2012	Future Cost	\$12,831.85
Useful Life	15		
Adjustment	-1		
Replacement Year	2026		
Remaining Life	12		



Description: There are four 115 gallon hot water storage tanks for the domestic hot water system.

Condition: We were informed these storage tanks are in good condition.

Action(s):

- Replace the Blue 115 gallon storage tanks in 2024 and the remaining 2 tanks in 2026.

Hot Water Storage Tanks - Total Current Cost

\$9,000

Cheesman Tower West RA Detail Report by Category

Replace expansion tanks - 2020

Asset ID	J05.1	2 UT	@ \$2,500.00
	Mechanical	Asset Cost	\$5,000.00
	Expansion Tanks	Percent Replacement	100%
Placed in Service	June 2007	Future Cost	\$5,970.26
Useful Life	10		
Adjustment	3		
Replacement Year	2020		
Remaining Life	6		



Description: There are two expansion tanks that are various in size used for the domestic hot water, heat and snowmelt systems.

Condition: We were informed that these units are in good working condition.

Action(s):

- Replace the expansion tanks in 2020.

Expansion Tanks - Total Current Cost	\$5,000
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Cheesman Tower West RA Detail Report by Category

Replace pool filter - 2020

Asset ID	J06.1	1 UT	@ \$1,200.00
		Asset Cost	\$1,200.00
	Mechanical	Percent Replacement	100%
	Pool Filter	Future Cost	\$1,432.86
Placed in Service	June 2009		
Useful Life	10		
Adjustment	1		
Replacement Year	2020		
Remaining Life	6		



Description: System3 hi-rate sand filtration systems. The filter has a filter area of 450 square feet.

Condition: We were informed that the unit is in good operating condition.

Action(s):

- Replace the pool filter in 2020.

Pool Filter - Total Current Cost

\$1,200

Cheesman Tower West RA Detail Report by Category

Replace garage heating units - 2018

Asset ID	J07.1	4 EA	@ \$800.00
	Mechanical	Asset Cost	\$3,200.00
	Garage Heater Units	Percent Replacement	100%
		Future Cost	\$3,601.63
Placed in Service	June 2004		
Useful Life	15		
Adjustment	-1		
Replacement Year	2018		
Remaining Life	4		



Description: There are four Beacon/Morris heating units. The heat is provided from the main boiler loops.

Condition: We were informed that these units are in satisfactory operating condition.

Action(s):

- Replace the garage heater units every 15 years, starting in 2018.

Garage Heater Units - Total Current Cost **\$3,200**

Cheesman Tower West RA Detail Report by Category

Replace Heating/Cooling Units - 2022

Asset ID	J08.1	2 UT	@ \$1,500.00
	Mechanical	Asset Cost	\$3,000.00
Heating/Cooling Units		Percent Replacement	100%
Placed in Service	June 2002	Future Cost	\$3,800.31
Useful Life	15		
Adjustment	5		
Replacement Year	2022		
Remaining Life	8		



Description: United Technologies heating and cooling units.

Condition: We were informed that these units are in good operating condition. These units were installed during the remodel in 2002.

Action(s):

- Replace the heating/cooling units every 15 years, starting in 2022.

Heating/Cooling Units - Total Current Cost

\$3,000

Cheesman Tower West RA Detail Report by Category

Replace fire command system - 2015

Asset ID	K01.1	1 UT	@ \$15,000.00
Fire and Safety		Asset Cost	\$15,000.00
Fire Notification System		Percent Replacement	100%
Placed in Service	June 1996	Future Cost	\$15,450.00
Useful Life	20		
Adjustment	-1		
Replacement Year	2015		
Remaining Life	1		



Description: Notifier AFP-200 Fire Detection and Alarm System.

Condition: Good condition. The system was upgraded in 2002. The upgrade included new wiring; smoke sensors in the hallways, new strobes and a new pull station.

Action(s):

- Replace the fire notification in 2015.

Fire Notification System - Total Current Cost

\$15,000

Cheesman Tower West RA Detail Report by Category

Replace and modernize the elevator cabs - 2023

Asset ID	L02.1	2 EA	@ \$5,000.00
	Elevators	Asset Cost	\$10,000.00
	Elevators	Percent Replacement	100%
		Future Cost	\$13,047.73
Placed in Service	June 2002		
Useful Life	20		
Adjustment	1		
Replacement Year	2023		
Remaining Life	9		



Description: The passenger elevator cabs are finished with composite paneling and tile floor.

Condition: Good condition. We were informed that the elevator cabs were modernized in 2002 during the lobby remodel.

Action(s):

- Cyclically remodel the elevator cabs every 20 years starting in 2023.

Replace and modernize the elevator systems - 2039

Asset ID	L01.1	1 UT	@ \$194,000.00
	Elevators	Asset Cost	\$194,000.00
	Elevators	Percent Replacement	100%
		Future Cost	\$406,192.92
Placed in Service	June 2008		
Useful Life	30		
Adjustment	1		
Replacement Year	2039		
Remaining Life	25		

Cheesman Tower West RA Detail Report by Category

Replace and modernize the elevator systems continued...



Description: Elevator Control Systems

Condition: Good condition.

Action(s):

- Replace elevator control systems in 2039.

Elevators - Total Current Cost

\$204,000

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Description										
Site Grading										
Maintain and replace damaged sections					1,126					
Site Grading Total:					1,126					
Concrete Driving Area										
Replace deck coating system										
Concrete Driving Area Total:										
Sidewalks/ Concrete Pavement										
Maintain and replace damaged sections	3,500								4,434	
Sidewalks/ Concrete Pavement Total:	3,500								4,434	
Landscape Courtyard Pavers										
Maintain and replace damaged sections							1,791			
Replace waterproof membrane		128,750								
Landscape Courtyard Pavers Total:		128,750					1,791			
Retaining Wall										
Maintain and tuckpoint free standing brick walls										
Replace damaged sections			2,536							
Retaining Wall Total:			2,536							
Metal Railings										
Paint the deck and balcony railings					40,969					
Metal Railings Total:					40,969					
Wood Fencing										
Maintain wood fencing										
Wood Fencing Total:										
Brick Veneer										
Maintain and tuckpoint brick veneer					75,634					
Brick Veneer Total:					75,634					

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Description										
Composite Paneling										
Replace composite paneling, deck and railings										
Composite Paneling Total:										
Garage Doors										
Replace the garage doors										
Garage Doors Total:										
Windows and Doors										
Maintain and replace sealant joints at windows										
Replace common windows										19,572
Replace office doors							3,821			
Windows and Doors Total:							3,821			19,572
Exterior Lighting Units										
Replace high profile lighting						13,911				
Replace wall mounted lighting							1,791			
Exterior Lighting Units Total:						13,911	1,791			
Roofing										
Replace the low sloped roof areas										
Roofing Total:										
Chimney										
Repair mortar joints				1,093						
Chimney Total:				1,093						
Concrete Parking Surface										
Replace damaged sections							3,141			
Concrete Parking Surface Total:							3,141			
Community Room										
Remodel community room										15,657
Community Room Total:										15,657

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Description										
Corridor Walls and Ceilings										
Paint corridors		4,499					5,216			
Corridor Walls and Ceilings Total:		4,499					5,216			
Corridor Lighting										
Replace lighting								18,448		
Corridor Lighting Total:								18,448		
Flooring										
Replace carpeting				20,161						
Flooring Total:				20,161						
Mailboxes										
None										
Exercise Equipment										
Replace exercise equipment					5,628					
Exercise Equipment Total:					5,628					
Pool										
Recoat pool interior					10,692					
Pool Total:					10,692					
Steam Room										
RegROUT tile surfaces		1,545							1,900	
Replace steam generator										
Steam Room Total:		1,545							1,900	
Association Unit										
Paint Association Unit										
Association Unit Total:										
Restrooms										
Remodel restrooms										10,438
Restrooms Total:										10,438

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Description										
Boilers										
Replace boilers										
Replace hot water boiler									15,201	
Replace pool boiler									15,201	
Replace sump pumps					2,026					
Boilers Total:					2,026				30,402	
Chiller										
None										
Chiller Total:										
Pumps										
Replace the booster pump										
Replace the circulation pump motors							2,149			
Pumps Total:							2,149			
Hot Water Storage Tanks										
Replace hot water storage tanks										
Hot Water Storage Tanks Total:										
Expansion Tanks										
Replace expansion tanks							5,970			
Expansion Tanks Total:							5,970			
Pool Filter										
Replace pool filter							1,433			
Pool Filter Total:							1,433			
Garage Heater Units										
Replace garage heating units					3,602					
Garage Heater Units Total:					3,602					
Heating/Cooling Units										
Replace Heating/Cooling Units									3,800	
Heating/Cooling Units Total:									3,800	

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Description										
Fire Notification System										
Replace fire command system		15,450								
Fire Notification System Total:		15,450								
Elevators										
Replace and modernize the elevator cabs										13,048
Replace and modernize the elevator systems										
Elevators Total:										13,048
Year Total:	3,500	150,244	2,536	21,254	139,676	13,911	25,312	18,448	40,537	58,715

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Description										
Site Grading										
Maintain and replace damaged sections		1,384							1,702	
Site Grading Total:		1,384							1,702	
Concrete Driving Area										
Replace deck coating system					155,797					
Concrete Driving Area Total:					155,797					
Sidewalks/ Concrete Pavement										
Maintain and replace damaged sections							5,616			
Sidewalks/ Concrete Pavement Total:							5,616			
Landscape Courtyard Pavers										
Maintain and replace damaged sections					2,269					
Replace waterproof membrane										
Landscape Courtyard Pavers Total:					2,269					
Retaining Wall										
Maintain and tuckpoint free standing brick walls										
Replace damaged sections			3,408							
Retaining Wall Total:			3,408							
Metal Railings										
Paint the deck and balcony railings										
Metal Railings Total:										
Wood Fencing										
Maintain wood fencing										
Wood Fencing Total:										
Brick Veneer										
Maintain and tuckpoint brick veneer					101,646					
Brick Veneer Total:					101,646					

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Description										
Composite Paneling										
Replace composite paneling, deck and railings	197,556	203,482	209,587	215,874	222,351	229,021	235,892	242,969		
Composite Paneling Total:	197,556	203,482	209,587	215,874	222,351	229,021	235,892	242,969		
Garage Doors										
Replace the garage doors		6,852								
Garage Doors Total:		6,852								
Windows and Doors										
Maintain and replace sealant joints at windows										
Replace common windows										
Replace office doors										
Windows and Doors Total:										
Exterior Lighting Units										
Replace high profile lighting								19,834		
Replace wall mounted lighting										
Exterior Lighting Units Total:								19,834		
Roofing										
Replace the low sloped roof areas										
Roofing Total:										
Chimney										
Repair mortar joints				1,469						
Chimney Total:				1,469						
Concrete Parking Surface										
Replace damaged sections					3,979					
Concrete Parking Surface Total:					3,979					
Community Room										
Remodel community room										
Community Room Total:										

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Description										
Corridor Walls and Ceilings										
Paint corridors		6,046					7,009			
Corridor Walls and Ceilings Total:		6,046					7,009			
Corridor Lighting										
Replace lighting										
Corridor Lighting Total:										
Flooring										
Replace carpeting						28,744				
Flooring Total:						28,744				
Mailboxes										
None										
Exercise Equipment										
Replace exercise equipment							8,024			
Exercise Equipment Total:							8,024			
Pool										
Recoat pool interior			13,545							
Pool Total:			13,545							
Steam Room										
RegROUT tile surfaces						2,337				
Replace steam generator					3,781					
Steam Room Total:					3,781	2,337				
Association Unit										
Paint Association Unit										
Association Unit Total:										
Restrooms										
Remodel restrooms										
Restrooms Total:										

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Description										
Boilers										
Replace boilers										
Replace hot water boiler										
Replace pool boiler										
Replace sump pumps										3,156
Boilers Total:										3,156
Chiller										
None										
Chiller Total:										
Pumps										
Replace the booster pump										
Replace the circulation pump motors										
Pumps Total:										
Hot Water Storage Tanks										
Replace hot water storage tanks										
Hot Water Storage Tanks Total:										
Expansion Tanks										
Replace expansion tanks										
Expansion Tanks Total:										
Pool Filter										
Replace pool filter										
Pool Filter Total:										
Garage Heater Units										
Replace garage heating units										5,611
Garage Heater Units Total:										5,611
Heating/Cooling Units										
Replace Heating/Cooling Units										
Heating/Cooling Units Total:										

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Description										
Fire Notification System										
Replace fire command system										
Fire Notification System Total:										
Elevators										
Replace and modernize the elevator cabs										
Replace and modernize the elevator systems										
Elevators Total:										
Year Total:	197,556	231,330	239,372	217,343	334,026	415,899	269,379	262,803	1,702	8,768

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Description										
Site Grading										
Maintain and replace damaged sections						2,094				
Site Grading Total:						2,094				
Concrete Driving Area										
Replace deck coating system										
Concrete Driving Area Total:										
Sidewalks/ Concrete Pavement										
Maintain and replace damaged sections					7,115					
Sidewalks/ Concrete Pavement Total:					7,115					
Landscape Courtyard Pavers										
Maintain and replace damaged sections			2,874							
Replace waterproof membrane		232,537								
Landscape Courtyard Pavers Total:		232,537	2,874							
Retaining Wall										
Maintain and tuckpoint free standing brick walls										
Replace damaged sections			4,581							
Retaining Wall Total:			4,581							
Metal Railings										
Paint the deck and balcony railings										
Metal Railings Total:										
Wood Fencing										
Maintain wood fencing										
Wood Fencing Total:										
Brick Veneer										
Maintain and tuckpoint brick veneer					136,604					
Brick Veneer Total:					136,604					

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Description										
Composite Paneling										
Replace composite paneling, deck and railings										
Composite Paneling Total:										
Garage Doors										
Replace the garage doors								10,995		
Garage Doors Total:								10,995		
Windows and Doors										
Maintain and replace sealant joints at windows										
Replace common windows										
Replace office doors										
Windows and Doors Total:										
Exterior Lighting Units										
Replace high profile lighting										28,279
Replace wall mounted lighting		2,790								
Exterior Lighting Units Total:		2,790								28,279
Roofing										
Replace the low sloped roof areas						188,440				
Roofing Total:						188,440				
Chimney										
Repair mortar joints				1,974						
Chimney Total:				1,974						
Concrete Parking Surface										
Replace damaged sections			5,040							
Concrete Parking Surface Total:			5,040							
Community Room										
Remodel community room										28,279
Community Room Total:										28,279

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Description										
Corridor Walls and Ceilings										
Paint corridors		8,126					9,420			
Corridor Walls and Ceilings Total:		8,126					9,420			
Corridor Lighting										
Replace lighting								33,319		
Corridor Lighting Total:								33,319		
Flooring										
Replace carpeting								40,983		
Flooring Total:								40,983		
Mailboxes										
None										
Exercise Equipment										
Replace exercise equipment									11,440	
Exercise Equipment Total:									11,440	
Pool										
Recoat pool interior	17,158								21,735	
Pool Total:	17,158								21,735	
Steam Room										
RegROUT tile surfaces			2,874							3,535
Replace steam generator										5,891
Steam Room Total:			2,874							9,426
Association Unit										
Paint Association Unit										
Association Unit Total:										
Restrooms										
Remodel restrooms					16,262					
Restrooms Total:					16,262					

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Description										
Boilers										
Replace boilers						366,411				
Replace hot water boiler							25,879			
Replace pool boiler							25,879			
Replace sump pumps										
Boilers Total:						366,411	51,758			
Chiller										
None										
Chiller Total:										
Pumps										
Replace the booster pump										
Replace the circulation pump motors			3,349				3,882			
Pumps Total:			3,349				3,882			
Hot Water Storage Tanks										
Replace hot water storage tanks								19,992		
Hot Water Storage Tanks Total:								19,992		
Expansion Tanks										
Replace expansion tanks							10,783			
Expansion Tanks Total:							10,783			
Pool Filter										
Replace pool filter							2,588			
Pool Filter Total:							2,588			
Garage Heater Units										
Replace garage heating units										
Garage Heater Units Total:										
Heating/Cooling Units										
Replace Heating/Cooling Units				5,921						
Heating/Cooling Units Total:				5,921						

**Cheesman Tower West
RA Annual Expenditure Spread Sheet**

	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Description										
Fire Notification System										
Replace fire command system		27,904								
Fire Notification System Total:		27,904								
Elevators										
Replace and modernize the elevator cabs										23,566
Replace and modernize the elevator systems						406,193				
Elevators Total:						406,193				23,566
Year Total:	17,158	274,706	15,369	7,894	159,981	963,138	78,431	105,289	33,175	89,549

**Cheesman Tower West
RA Annual Expenditure Detail**

Description	Expenditures
Replacement Year 2014	
Sidewalks/ Concrete Pavement	
Maintain and replace damaged sections	3,500
Retaining Wall	
Maintain and tuckpoint free standing brick walls	
Wood Fencing	
Maintain wood fencing	
Total for 2014	\$3,500
Replacement Year 2015	
Landscape Courtyard Pavers	
Replace waterproof membrane	128,750
Corridor Walls and Ceilings	
Paint corridors	4,499
Steam Room	
RegROUT tile surfaces	1,545
Fire Notification System	
Replace fire command system	15,450
Total for 2015	\$150,244
Replacement Year 2016	
Retaining Wall	
Replace damaged sections	2,536
Total for 2016	\$2,536
Replacement Year 2017	
Chimney	
Repair mortar joints	1,093
Flooring	
Replace carpeting	20,161
Total for 2017	\$21,254
Replacement Year 2018	
Site Grading	
Maintain and replace damaged sections	1,126

**Cheesman Tower West
RA Annual Expenditure Detail**

Description	Expenditures
<i>Replacement Year 2018 continued...</i>	
Metal Railings	
Paint the deck and balcony railings	40,969
Brick Veneer	
Maintain and tuckpoint brick veneer	75,634
Exercise Equipment	
Replace exercise equipment	5,628
Pool	
Recoat pool interior	10,692
Association Unit	
Paint Association Unit	
Boilers	
Replace sump pumps	2,026
Garage Heater Units	
Replace garage heating units	3,602
Total for 2018	<u>\$139,676</u>
Replacement Year 2019	
Exterior Lighting Units	
Replace high profile lighting	13,911
Total for 2019	<u>\$13,911</u>
Replacement Year 2020	
Landscape Courtyard Pavers	
Maintain and replace damaged sections	1,791
Retaining Wall	
Maintain and tuckpoint free standing brick walls	
Windows and Doors	
Replace office doors	3,821
Exterior Lighting Units	
Replace wall mounted lighting	1,791
Concrete Parking Surface	
Replace damaged sections	3,141
Corridor Walls and Ceilings	
Paint corridors	5,216

**Cheesman Tower West
RA Annual Expenditure Detail**

Description	Expenditures
<i>Replacement Year 2020 continued...</i>	
Pumps	
Replace the circulation pump motors	2,149
Expansion Tanks	
Replace expansion tanks	5,970
Pool Filter	
Replace pool filter	1,433
Total for 2020	\$25,312
 Replacement Year 2021	
Corridor Lighting	
Replace lighting	18,448
Total for 2021	\$18,448
 Replacement Year 2022	
Sidewalks/ Concrete Pavement	
Maintain and replace damaged sections	4,434
Wood Fencing	
Maintain wood fencing	
Steam Room	
RegROUT tile surfaces	1,900
Boilers	
Replace hot water boiler	15,201
Replace pool boiler	15,201
Heating/Cooling Units	
Replace Heating/Cooling Units	3,800
Total for 2022	\$40,537
 Replacement Year 2023	
Windows and Doors	
Replace common windows	19,572
Community Room	
Remodel community room	15,657
Restrooms	
Remodel restrooms	10,438

**Cheesman Tower West
RA Annual Expenditure Detail**

Description	Expenditures
<i>Replacement Year 2023 continued...</i>	
Elevators	
Replace and modernize the elevator cabs	13,048
Total for 2023	\$58,715
Replacement Year 2024	
Composite Paneling	
Replace composite paneling, deck and railings	197,556
Total for 2024	\$197,556
Replacement Year 2025	
Site Grading	
Maintain and replace damaged sections	1,384
Composite Paneling	
Replace composite paneling, deck and railings	203,482
Garage Doors	
Replace the garage doors	6,852
Windows and Doors	
Maintain and replace sealant joints at windows	
Corridor Walls and Ceilings	
Paint corridors	6,046
Association Unit	
Paint Association Unit	
Pumps	
Replace the booster pump	11,074
Replace the circulation pump motors	2,492
Total for 2025	\$231,330
Replacement Year 2026	
Retaining Wall	
Maintain and tuckpoint free standing brick walls	
Replace damaged sections	3,408
Composite Paneling	
Replace composite paneling, deck and railings	209,587
Pool	
Recoat pool interior	13,545

**Cheesman Tower West
RA Annual Expenditure Detail**

Description	Expenditures
<i>Replacement Year 2026 continued...</i>	
Hot Water Storage Tanks	
Replace hot water storage tanks	12,832
Total for 2026	\$239,372
Replacement Year 2027	
Composite Paneling	
Replace composite paneling, deck and railings	215,874
Chimney	
Repair mortar joints	1,469
Total for 2027	\$217,343
Replacement Year 2028	
Landscape Courtyard Pavers	
Maintain and replace damaged sections	2,269
Brick Veneer	
Maintain and tuckpoint brick veneer	101,646
Composite Paneling	
Replace composite paneling, deck and railings	222,351
Concrete Parking Surface	
Replace damaged sections	3,979
Steam Room	
Replace steam generator	3,781
Total for 2028	\$334,026
Replacement Year 2029	
Concrete Driving Area	
Replace deck coating system	155,797
Composite Paneling	
Replace composite paneling, deck and railings	229,021
Flooring	
Replace carpeting	28,744
Steam Room	
RegROUT tile surfaces	2,337
Total for 2029	\$415,899

**Cheesman Tower West
RA Annual Expenditure Detail**

Description	Expenditures
Replacement Year 2030	
Sidewalks/ Concrete Pavement	
Maintain and replace damaged sections	5,616
Wood Fencing	
Maintain wood fencing	
Composite Paneling	
Replace composite paneling, deck and railings	235,892
Corridor Walls and Ceilings	
Paint corridors	7,009
Exercise Equipment	
Replace exercise equipment	8,024
Pumps	
Replace the circulation pump motors	2,888
Expansion Tanks	
Replace expansion tanks	8,024
Pool Filter	
Replace pool filter	1,926
Total for 2030	\$269,379
Replacement Year 2031	
Composite Paneling	
Replace composite paneling, deck and railings	242,969
Exterior Lighting Units	
Replace high profile lighting	19,834
Total for 2031	\$262,803
Replacement Year 2032	
Site Grading	
Maintain and replace damaged sections	1,702
Retaining Wall	
Maintain and tuckpoint free standing brick walls	
Association Unit	
Paint Association Unit	
Total for 2032	\$1,702

**Cheesman Tower West
RA Annual Expenditure Detail**

Description	Expenditures
Replacement Year 2033	
Boilers	
Replace sump pumps	3,156
Garage Heater Units	
Replace garage heating units	5,611
Total for 2033	\$8,768
Replacement Year 2034	
Pool	
Recoat pool interior	17,158
Total for 2034	\$17,158
Replacement Year 2035	
Landscape Courtyard Pavers	
Replace waterproof membrane	232,537
Exterior Lighting Units	
Replace wall mounted lighting	2,790
Corridor Walls and Ceilings	
Paint corridors	8,126
Pumps	
Replace the circulation pump motors	3,349
Fire Notification System	
Replace fire command system	27,904
Total for 2035	\$274,706
Replacement Year 2036	
Landscape Courtyard Pavers	
Maintain and replace damaged sections	2,874
Retaining Wall	
Replace damaged sections	4,581
Concrete Parking Surface	
Replace damaged sections	5,040
Steam Room	
RegROUT tile surfaces	2,874
Total for 2036	\$15,369

**Cheesman Tower West
RA Annual Expenditure Detail**

Description	Expenditures
Replacement Year 2037	
Chimney	
Repair mortar joints	1,974
Chiller	
None	
Heating/Cooling Units	
Replace Heating/Cooling Units	5,921
Total for 2037	\$7,894
Replacement Year 2038	
Sidewalks/ Concrete Pavement	
Maintain and replace damaged sections	7,115
Retaining Wall	
Maintain and tuckpoint free standing brick walls	
Wood Fencing	
Maintain wood fencing	
Brick Veneer	
Maintain and tuckpoint brick veneer	136,604
Restrooms	
Remodel restrooms	16,262
Total for 2038	\$159,981
Replacement Year 2039	
Site Grading	
Maintain and replace damaged sections	2,094
Roofing	
Replace the low sloped roof areas	188,440
Association Unit	
Paint Association Unit	
Boilers	
Replace boilers	366,411
Elevators	
Replace and modernize the elevator systems	406,193
Total for 2039	\$963,138

**Cheesman Tower West
RA Annual Expenditure Detail**

Description	Expenditures
Replacement Year 2040	
Corridor Walls and Ceilings	
Paint corridors	9,420
Boilers	
Replace hot water boiler	25,879
Replace pool boiler	25,879
Pumps	
Replace the circulation pump motors	3,882
Expansion Tanks	
Replace expansion tanks	10,783
Pool Filter	
Replace pool filter	2,588
Total for 2040	\$78,431
Replacement Year 2041	
Garage Doors	
Replace the garage doors	10,995
Corridor Lighting	
Replace lighting	33,319
Flooring	
Replace carpeting	40,983
Hot Water Storage Tanks	
Replace hot water storage tanks	19,992
Total for 2041	\$105,289
Replacement Year 2042	
Exercise Equipment	
Replace exercise equipment	11,440
Pool	
Recoat pool interior	21,735
Total for 2042	\$33,175
Replacement Year 2043	
Exterior Lighting Units	
Replace high profile lighting	28,279

**Cheesman Tower West
RA Annual Expenditure Detail**

Description	Expenditures
<i>Replacement Year 2043 continued...</i>	
Community Room	
Remodel community room	28,279
Steam Room	
RegROUT tile surfaces	3,535
Replace steam generator	5,891
Elevators	
Replace and modernize the elevator cabs	23,566
Total for 2043	<u>\$89,549</u>

Cheesman Tower West RA Preliminary Reserve Study Summary

Report Date February 25, 2013

Budget Year Beginning January 01, 2014

Budget Year Ending December 31, 2014

Report Parameters

Inflation 3.00%

Interest Rate on Reserve Deposit 0.25%

2014 Beginning Balance \$78,000.00

Preliminary Funding Model Summary of Calculations

Required Monthly Contribution \$4,500.00

Average Net Monthly Interest Earned \$21.64

Total Monthly Allocation to Reserves \$4,521.64

**Cheesman Tower West
RA Preliminary Reserve Study Projection**

Beginning Balance: \$78,000

Year	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2014	54,000	260	3,500	128,760	779,958	16%
2015	55,620	22	150,244	34,157	711,145	4%
2016	57,289	157	2,536	89,066	790,322	11%
2017	59,007	250	21,254	127,070	851,534	14%
2018	60,777	51	139,676	48,222	800,859	6%
2019	62,601	171	13,911	97,083	867,009	11%
2020	64,479	267	25,312	136,516	927,765	14%
2021	66,413	386	18,448	184,867	996,323	18%
2022	68,406	454	40,537	213,190	1,044,482	20%
2023	70,458	482	58,715	225,415	1,077,014	20%
2024	72,571	168	197,556	100,599	1,170,752	8%
2025	74,749		231,330	-55,983	1,237,998	-4%
2026	76,991		239,372	-218,364	1,304,609	-16%
2027	79,301		217,343	-356,406	1,399,997	-25%
2028	81,680		334,026	-608,752	1,389,121	-43%
2029	84,130		415,899	-940,521	1,310,223	-71%
2030	86,654		269,379	-1,123,246	1,386,211	-81%
2031	89,254		262,803	-1,296,795	1,476,964	-87%
2032	91,931		1,702	-1,206,566	1,328,612	-90%
2033	94,689		8,768	-1,120,644	1,424,011	-78%